

**IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT
OF THE STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS**

IN RE: SRBA	)	Subcase Nos. 03-10022 et al. (Consolidated)
	)	(Nez Perce Tribe Instream Flow Claims)
)	
)	
CASE NO. 39576.)	
	)	AFFIDAVIT OF DUDLEY W. REISER, PH.D.
)	
_____)	

My name is Dudley W. Reiser and I am a senior fish biologist with the company R2 Resource Consultants, Inc. (R2) of Redmond, Washington. I am also the President of R2 which specializes in environmental and engineering consulting with a special focus on fisheries and aquatic ecology (both in rivers and lakes), instream flow assessments, habitat assessments and restoration.

Qualifications and Experience: I have been actively working in the areas of fisheries and instream flow needs assessments for over 22 years, during which time, I have directed and/or participated in such studies in 15 states and in the province of Alberta, Canada. I received my Ph.D. degree in Forestry, Wildlife and Range Sciences (major in fishery resources) from the University of Idaho in 1981, a Masters of Science degree from the University of Wyoming in Water Resources in 1976, and a Bachelor of Arts degree in Zoology from Miami University in Oxford, Ohio in 1971. Both my doctorate and masters research were focused on evaluating the relationship of streamflows on certain life history stages of salmonids. My Master's work

involved determining physical and hydraulic characteristics of brown and brook trout spawning areas. My doctorate work focused on assessing the effects of streamflow reductions, flow fluctuations and dewatering, and sedimentation on chinook salmon and steelhead trout egg incubation and fry survival. From 1981 to the present I have been involved in environmental consulting. Over my career, I have been employed as a fisheries scientist by a number of large consulting and engineering firms including Camp Dresser and McKee (Denver, Colorado) (1980-1982); Bechtel Corporation (San Francisco, California) (1982-1987); EA Engineering, Science and Technology (Lafayette, California/Redmond, Washington) (1987-1992; Vice President); and R2 Resource Consultants, Inc. (Redmond, Washington) (1992-present; President). During this period, I have worked on a variety of projects that have involved stream and lake systems. The types of projects have been diverse and have included instream flow studies, fish passage investigations (to evaluate fish passage options at hydroelectric projects), fish population studies (to monitor long-term trends in fish abundance and distribution within a given stream), aquatic ecology studies (to evaluate overall habitat and ecosystem conditions (including food production) within streams to establish baseline conditions), habitat surveys (to assess habitat type, condition and quantity within streams), and habitat enhancement and restoration projects (to enhance existing or create new habitats within a given river or stream). As noted, I have worked on many projects that have had a direct focus on defining the instream flow and water needs for fish, including most recently, the Snake River Basin Adjudication (SRBA) in Idaho, the upper Klamath Basin Adjudication in Oregon, instream flow studies for the Duck Valley Indian Reservation in southern Idaho and northern Nevada, an instream flow study on the Lostine River in Oregon, and instream flow

studies on the Madison and Missouri rivers in Montana (as part of Federal Energy Regulatory Commission relicensing).

I have published numerous articles and reports pertaining to fish ecology and habitat requirements, and presented many papers at technical symposia. I have served for over seven years on the Editorial Board of the journal "Rivers: Studies in the Science, Environmental Policy, and Law of Instream Flow." In addition, I have been an active member of the American Fisheries Society (AFS) for over 18 years and have been certified as a Fisheries Scientist since 1981 (certification number 1447). A copy of my vitae can be found as an attachment to this affidavit.


Since 1989, I have been under contract as the Principal Investigator for the United States for the purposes of quantifying instream flows necessary to restore and sustain fish populations in certain hydrologic basins at issue in the SRBA in Idaho. This culminated in the development and submittal of instream flow claims for 1,133 basins in Idaho in March 1993, and submittal of (subsequent to the completion of further studies) an amended set of claims in April of 1998. I have prepared two previous affidavits (June 22, 1995 and April 24, 1998) that describe in more detail the overall process and work completed to support the development of both the original and amended instream flow claims.

**ANALYSIS OF FISH LIFE HISTORY STRATEGIES AND FLOW DEPENDENT
HABITAT REQUIREMENTS**

Most recently, I was asked to provide my expert opinion regarding the life history strategies and habitat requirements of salmonids within the overall study area, in the context of their streamflow dependencies. I was further asked to define the geographic range of habitats I believe are needed to sustain viable fish populations within streams and tributaries historically and presently used by the Nez Perce Tribe for fishing. The results of my analysis including my opinions and conclusions are presented in the attached report that is hereby incorporated by reference as part of this affidavit.¹

Further Affiant Sayeth Not.

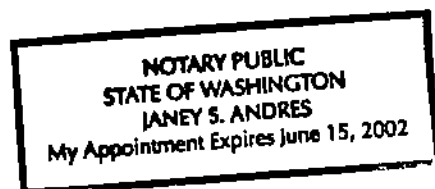
Dated this ~~10th~~ day of September, 1998


Dudley W. Reiser, Ph.D.

Subscribed and sworn before me this 10th day of September, 1998

Notary Public

My Commission Expires 15 June 2002



¹See attached report of Dr. Dudley W. Reiser entitled Why Fish Need Water: Life History Strategies and Habitat Requirements of Salmonid Populations in the Snake, Salmon, and Clearwater River Basins of Idaho. Report prepared for the Department of Justice and Bureau of Indian Affairs, September 10, 1998.



DUDLEY W. REISER, Ph.D. - PRESIDENT
Senior Fisheries Scientist

Dr. Reiser is a fisheries scientist with more than 20 years experience designing, implementing, and managing fisheries and aquatic ecology projects, surface water studies, and instream flow assessments. His particular areas of expertise include fish ecology (anadromous and resident species), habitat assessments and criteria development, endangered species evaluations, assessments of flow regulation on salmonid populations and habitats, fisheries habitat enhancement, fisheries engineering, instream flow studies, flushing flow studies (related to sediment deposition), and hydraulic modeling.

EDUCATION

Ph.D. (Fishery resources) University of Idaho, 1981
M.S. (Water resources) University of Wyoming, 1976
B.A. (Zoology) Miami University, Ohio, 1972

PROFESSIONAL AFFILIATIONS AND CERTIFICATIONS

Certified SCUBA DIVER - PADI and YMCA
Certified USFWS IFIM Course - Computer Modeling (201), IFIM:IFG210,SNTEMP (310)
Certified USFWS Course - Expert Witness Seminar
American Fisheries Society (AFS), Certified Fisheries Scientist
Society of Environmental Toxicology and Chemistry
Co-Chairman, AFS Water Development and Streamflow Committee (1986-89)
Secretary-Treasurer, Western Division, American Fisheries Society, 1987-88.
Member, Editorial Board, "Rivers: Studies in the Science, Environmental Policy, and Law of Flowing Waters"
Co-editor, Sustainable Fisheries Symposium Proceedings, Victoria, B.C., Book to be published in 1998.

EXPERIENCE

Endangered Species Issues: Direct experience in working on endangered species issues related to resource developments. Project Manager of technical studies on bull trout for Seattle Water Department; assisted in coordination of studies for integration into SWD Habitat Conservation Plan (HCP); represented SWD on ESA task force focused on listing status of species of special concern related to SWD facility operations. Project Manager for development of restoration plans for reintroducing the federally listed endangered Snake River chinook salmon into the Panther Creek drainage in Idaho; worked with federal and state agencies in developing plan compatible with mandates of ESA and state and federal directives relative to reintroduction strategies. Project Manager for bull trout evaluation for the Seattle City Light in connection with the Boundary Hydroelectric Project and Ross Lake Project. Assessed Snake River salmon recovery plan options and mandates in the context of instream flow recommendations formulated on behalf of the Nez Perce Tribe, as part of the Snake River Basin Adjudication.

Habitat Modeling, Instream Flow and Flushing Flow Determinations: Extensive experience in the area of habitat and instream flow assessments in Alaska, California, Colorado, Idaho, Montana, New York, Vermont, Oregon, Washington, and Wyoming. Has applied a variety of IF methods including the USFWS IFIM/PHABSIM, Tennant (Montana) Method, Wetted Perimeter (WP), Trout Cover Rating (TCR), R-2 Cross Method, and the New England Method. Served as the Project Manager and Principal-in-charge of the largest instream flow study conducted in North America; the study was conducted for the BIA and included over 1100 basins within the Salmon and Clearwater basins of Idaho. Other recent instream flow projects directed by Dr. Reiser include, an assessment of instream flow requirements below Madison Dam, Montana (conducted for the Montana Power Company), determination of flow recommendations for the Duck Valley Indian Reservation (Nevada and Idaho)(for the BIA), and instream flow recommendations related to the Klamath River Basin. Recently completed a comprehensive survey of North America to obtain information on instream flow methodology use and research needs on a State or Province basis. Completed four studies related to flushing flows, including the development of guidelines for recommending flushing flows, and formulation of specific flow recommendations for two California streams and two major river systems in Montana.

Habitat Assessments and Habitat Suitability Curve Development: Principal investigator of a comparative habitat study evaluating limiting factors within a large Rocky Mountain river system. Applied a variety of habitat quantification methods including IFIM, Habitat Quality Index (HQI), Habitat Suitability Index system (HSI), and Trout Cover Rating (TCR). Collected, analyzed and developed habitat suitability (Category II) curves for brown and brook trout, bull trout, chinook salmon, pink salmon, chum salmon, and steelhead trout. Invited participant in bull trout experts meeting to develop Habitat Suitability Curves (Category I) for bull trout spawning, juvenile rearing, adult holding, and fry. Organized and conducted two habitat suitability curve workshops for the Bureau of Indian Affairs (BIA) designed to review and develop Category I curves for anadromous and resident salmonid species for drainages in Oregon and Idaho. Principal investigator of a microhabitat study to define habitat utilization of coho and chinook salmon, and steelhead trout in the White River, Washington; data were collected by direct observation using snorkeling techniques.

Fisheries Habitat Enhancement: Project manager for a mine reclamation fishery habitat enhancement project for the Bonneville Power Administration (BPA) for Panther Creek, Idaho; a fisheries engineering habitat enhancement project on the Yankee Fork of the Salmon River, Idaho, for the Shoshone- Bannock Indian Tribes; a habitat enhancement project on the East Fork Salmon River Idaho for the Shoshone Bannock Tribes, a tributary improvement study for Pacific Gas and Electric Company (PG&E) in California, a feasibility study for developing an artificial spawning channel in Montana, a gravel supplementation study to evaluate options for increasing brown and rainbow trout spawning success within the Madison River below Madison Dam (for MPC), and most recently, development of habitat restoration options designed to restore runs of chinook salmon back to Panther Creek (conducted for NMFS). Enhancement measures included instream structures, bank stabilization, spawning channel development, spawning gravel supplementation, rearing pond development (low-technology and natural), and barrier removal, mine tailings pond stabilization, and dam removal.

Fish Passage: Awarded Outstanding Technical Paper award (Bechtel) for work involving the development of a procedure for assessing fish passage problems at low head hydro projects. Evaluated passage problems and barrier potential (chinook salmon and steelhead) of Lake Redding project in California. Developed conceptual designs of fish passage facilities for salmon (Atlantic salmon) at two

hydro projects in Connecticut. Assessed barrier potential (chinook salmon and steelhead) of falls in two Idaho streams and formulated plans for removal of an abandoned power dam in the East Fork Salmon River drainage in Idaho. Involved in the development of concepts for upstream and downstream fish passage (steelhead trout) on the Carmel River in California. Reviewed and assessed suitability of upstream and downstream passage facilities for the Milford Dam on the Penobscot River.

Book and Manuscript Reviews: Technical manuscript reviewer for Fisheries, Rivers, Transactions of the American Fisheries Society, and the North American Journal of Fisheries Management. Has reviewed technical reports for the U.S. Fish and Wildlife Service, the U.S. Forest Service, and various State resource agencies. Member of the Editorial Board for "Rivers," a journal focused on addressing instream flow issues. Published several formal reviews of books in "Rivers" and "Fisheries."

SELECTED PUBLICATIONS AND PRESENTATIONS

- Reiser, D.W., A. Olson, and K. Binkley. 1998. Sediment deposition in fry emergence traps, a confounding factor in estimating survival to emergence. *North American Journal of Fisheries Management*. (accepted for publication).
- Reiser, D.W. 1998. Sediment in gravel bed rivers: ecological and biological considerations. Invited paper presented for Gravel Bed Rivers IV Workshop, 1996; *In Proceedings of* (in press).
- Reiser, D.W., M.P. Ramey and P. DeVries. 1998. Development of options for the reintroduction and restoration of chinook salmon into Panther Creek, Idaho. Paper presented at speciality conference on Towards Sustainable Fisheries, Victoria, British Columbia, 1996; *In Proceedings of Sustainable Fisheries Conference* (in press).
- Reiser, D.W., E. Connor, K. Binkley, K. Lynch, and D. Paige. 1997. An evaluation of spawning habitat used by bull trout in the Cedar Watershed, Washington. *In Proceedings of Friends of the Bull trout conference, Trout Unlimited, Calgary, Alberta.*
- Connor, E., D. Reiser, K. Binkley, K. Lynch, and D. Paige. 1997. Life history and ecology of an unexploited bul trout population in the Cedar River watershed, Washington. *In Proceedings of Friends of the Bull trout conference, Trout Unlimited, Calgary, Alberta.*
- Reiser, D.W. 1996. Ecological and biological considerations in river restoration. Invited paper presented at ASCE conference, Anaheim, California. *In Proceedings of*, 1996.
- Reiser, D.W. 1996. Characteristics of bull trout spawning habitat in the upper Cedar Watershed. Invited Paper presented at the Salvelinus confluentus Curiosity Society meeting. October 17, 1996. Eugene, Oregon.
- Reiser, D.W., M.P. Ramey, S. Beck, J. Barrett, P. DeVries, and J. Templeton. 1995. Assessment of fish impacts in the lower Flathead River from Kerr Dam operations proposed by the Montana Power Company and Interior 4(e) Conditions. Report prepared by R2 Resource Consultants for Montana Power Company.

- Reiser, D.W. 1995. Expert Report of Dudley W. Reiser, U.S. District Court, District of Montana, Helena, Montana, State of Montana v. Atlantic Richfield Company, No. CF-83-317-HLN-PGH.
- Reiser, D.W. 1995. Hazardous substance impacts on fish resources: problems in quantifying injuries on fisheries. Session chair and presenter at Law Seminars International, Natural Resource Damages Conference, Bellevue, Washington, September 21-22, 1995.
- Reiser, D.W., E. Connor, and K. Oliver. 1994. Evaluation of factors potentially limiting aquatic species abundance and distribution in the San Francisco/Sacramento-San Joaquin Estuary. Draft Report prepared by R2 Resource Consultants, Inc. for the California Urban Water Agencies, Sacramento, California.
- Reiser, D.W., K.M. Binkley, and P. DeVries. 1994. Evaluation of potential effects of the proposed EPA salinity standard on the biological resources of the San Francisco/Sacramento-San Joaquin Estuary. Draft Report prepared by R2 Resource Consultants, Inc. for the California Urban Water Agencies, Sacramento, California.
- Reiser, D.W. and E. Connor. 1994. Review and evaluation of foundational literature and data related to the proposed EPA salinity standard. Draft Report prepared by R2 Resource Consultants, Inc. for the California Urban Water Agencies, Sacramento, California.
- Connor, E. C. and D. W. Reiser. 1994. An assessment of macroinvertebrate communities in the lower Madison River, Montana. Final Report prepared by R2 Resource Consultants, for Montana Power Company. Project C1494.
- Reiser, D.W., M.P. Ramey, P. Cernera, and C. Richards. 1994. Conversion of remnant dredge mine ponds into chinook salmon rearing habitat: from feasibility to construction. pp 208-225 *In* Proceedings of Rehabilitation of Inland Fisheries and Mass Removal of Fishes, University of Hull, North Humberside, UK.
- Reiser, D.W., 1994. A regional approach to planning instream flow studies: applicability to the Northern River Basins Study. Prepared for Northern River Basins Study, Alberta Environment, February 14, 1994.
- Reiser, D.W. E. Connor, and P. DeVries. 1993. Site specific habitat suitability curves for the White River, Washington. Final Report. Prepared by R2 Resource Consultants for Perkins Coie, Washington.
- Reiser, D.W. and J.B. Bradley. 1993. Fine sediment intrusion and salmonid habitat, Paper presented at Advances in Hydroscience and Engineering; Symposium Sponsored by ASCE, Washington, D.C. June 1993.
- Ramey, M.P., S.M. Beck, and D.W. Reiser. 1993. Determination of flushing flow needs - Madison and upper Missouri Rivers. Supplemental Report. Prepared by R2 Resource Consultants for Montana Power Company, Butte, Montana.

- Reiser, D.W., E. Connor, S. Beck, and K. Oliver. 1993. Evaluation of instream flow needs below Madison Dam, Montana - 1992: Madison River Instream flow studies. Report prepared by R2 Resource Consultants for Montana Power Company, Butte, Montana.
- Richards, C., P. Cernera, M. Ramey, and D.W. Reiser. 1992. Development of off-channel habitats for use by juvenile chinook salmon. *North American Journal of Fisheries Management*. 12:721-727.
- Bjornn, T.C. and D.W. Reiser. 1991. Habitat requirements of salmonids. Chapter 4. *In* W. Meehan, and R. Kendall, editors. Influences of Forest and rangeland management on salmonid fishes and their habitats; spec. publication of the American Fisheries Society.
- Reiser, D.W. and R.G. White. 1990. Effects of streamflow reduction on chinook salmon egg incubation and fry quality. *Rivers, Studies in the Science, Environmental Policy and Law of Instream Flow*. (Vol 1 No. 2, pp 110-118).
- Reiser, D.W., M.P. Ramey, S.K. Beck, T.R. Lambert, and R.E. Geary. 1989. Flushing flow recommendations for maintenance of salmonid spawning gravels in a steep, regulated stream. *Regulated Rivers: Research and Management*, (Vol.3,267-275).
- Reiser, D.W., M.P. Ramey, and T.A. Wesche. 1988. Flushing flows. *In* J. Gore and G. Petts, editors. *Alternatives in regulated river management*. CRC Press, Inc. (1989).
- Reiser, D.W., T.A. Wesche, and C. Estes. 1989. Status of instream flow legislation and practices in North America. *Fisheries*. Vol.14, No.2, pp.22-29.
- Reiser, D.W. and R.G. White. 1988. Comparison of effects of two sediment-size classes on steelhead trout and chinook salmon egg incubation and quality of juveniles. *N. Amer. Journal Fish Management* Vol.8. No. 4.
- Wesche, T.A., D.W. Reiser, V. Hasfurther, D. Skinner, and W. Hubert. 1989. A new method of measuring intragravel fine sediment deposition in streams, *N. Amer. Journal Fish Management* (Vol 9, No. 2).
- Reiser, D.W., M.P. Ramey, and J.M. Peters. 1987. Enhancement of walleye spawning habitat through flow regulation associated with a hydroelectric power project. *In* Proceedings of Water Power 87, Portland, Oregon.
- Reiser, D.W., M.P. Ramey, and T. Lambert. 1987. Considerations in assessing flushing flow needs in regulated stream systems, *In* *Advances in Regulated Stream Ecology* (J. Craig, ed.). Plenum Pub.
- Reiser, D.W. and R. Peacock. 1985. A technique for assessing upstream fish passage problems at small-scale hydropower developments, *In* *Symposium on Small Hydro and Fisheries*, Denver, Colorado, pp 423-432. Special Publication American Fisheries Society, Bethesda, MD.

- Reiser, D.W. and R.G. White. 1983. Effects of complete redd dewatering on salmonid egg hatching success and development of juveniles. *Trans. Amer. Fish. Soc.* 112:532-540.
- Reiser, D.W. and R.G. White. 1981. Incubation of trout and salmon eggs in a moist environment. *The Progressive Fish-Culturist* 43(3):131-134.
- Reiser, D.W. 1981. Effects of Stream Flow Reduction, Flow Fluctuation, and Flow Cessation on Salmonid Egg Incubation and Fry Quality. Ph.D. dissertation, University of Idaho. 236 pp.
- Reiser, D.W. and T.C. Bjornn. 1979. Habitat requirements of anadromous salmonids. Gen. Tech. Rept. PNW-96. U.S. Forest Service, 54 pp.
- Reiser, D.W. and T.A. Wesche. 1979. *In situ* freezing as a cause of mortality of brown trout eggs. *Progressive Fish- Culturist* 41(2):58-60.
- Reiser, D.W. 1979. The migration and homing behavior of salmon and trout. *Idaho Forester Magazine*.
- Wesche T.A., D.W. Reiser, W.F. Wichers, and D.L. Wichers. 1977. Fishery resources and instream flow recommendations for streams to be impacted by Cheyenne's proposed Phase II development. Wyoming Water Resources Research Institute, Cheyenne.
- Reiser, D.W., R. Ugeruaga, and J. Easterbrooks. 1977. Instream flow needs for aquatic life. *Idaho Forester Magazine*.
- Reiser, D.W. and T.A. Wesche. 1977. Determination of physical and hydraulic preferences of brown and brook trout in the selection of spawning locations. Water Resources Series 64. Wyoming Water Resources Research Institute.
- Wesche, T.A. and D.W. Reiser. 1976. A literature summary on flow related trout habitat components. Paper presented at Earth Science Symposium, Fresno, Calif.
- Reiser, D.W. 1976. The determination of physical and hydraulic preferences of brown and brook trout in the selection of spawning locations. M.S. thesis, University of Wyoming.
- Reiser, D.W. 1992. Sedimentation impacts on the aquatic ecosystems; instructor for short course for state and federal agencies, and industry. Bellevue, Washington.
- Reiser, D.W. 1992. Instream flow needs (IFN) practices in North America. Invited paper presented at the IFN Special Session sponsored by Alberta Environment, Edmonton, Alberta.

PRESENTATIONS/SEMINARS/WORKSHOPS

- Reiser, D.W. 1997. Determining basin wide instream flow needs of anadromous and resident salmonid stocks in the Salmon and Clearwater drainages of Idaho. Paper presented at 127th Annual Meeting of the American Fisheries Society, Monterey, California.

- DeVries, D.W. Reiser, and M. Loftus. 1997. Evaluating carrying capacity and habitat limitations with data envelopes. Paper presented at 127th Annual meeting of the American Fisheries Society, Monterey, California.
- Reiser, D.W., P. DeVries, and M. Loftus. 1997. Defining scientifically defensible and rational baselines for quantifying injury in freshwater ecosystems for NRD assessments. Invited paper presented at 18th Annual Meeting of the Society of Environmental Toxicology and Chemistry, San Francisco, California.
- Reiser, D.W. 1997. Application of PHABSIM in evaluating the effects of spawning gravel supplementation in the Madison River, Montana Paper Presented at the Annual Meeting of the North Pacific Division of the American Fisheries Society. Everett, Washington.
- Reiser, D.W. 1996. Presentation on "instream flows"; technical session presented to a group of Japanese engineers and hydrologists; hosted by Washington Department of Fish and Wildlife; December 6, 1996.
- Reiser, D.W. 1996. Characteristics of bull trout spawning habitat in the upper Cedar Watershed. Invited Paper presented at the Salvelinus confluentus Curiosity Society meeting. October 17, 1996. Eugene, Oregon.
- Reiser, D.W. 1996. Presentation to the State of Idaho and other water user groups on the development of instream flow recommendations/claims for the Salmon and Clearwater Basins, Idaho, on behalf of the Department of Justice and Bureau of Indian Affairs.
- Reiser, D.W. 1996. Review of the "Alberta IFN Method" for determining instream flows in Alberta. Presentation to Alberta Environment, Calgary, Alberta.
- Reiser, D.W. 1996. Presentation to Trout Unlimited (Montana Chapter) regarding factors influencing trout populations in the Clark Fork River, Montana.
- Reiser, D.W. 1995. Hazardous substance impacts on fish resources: problems in quantifying injuries on fisheries. Session chair and presenter at Law Seminars International, Natural Resource Damages Conference, Bellevue, Washington, September 21-22, 1995.
- Reiser, D.W. 1995. Presentation on flushing flow requirements in the Madison River, Montana; presentation to agencies and stakeholders; work conducted in support of the relicensing of the Madison - Missouri Hydroelectric Project, Montana Power Company.
- Reiser, D.W. 1994. Provided testimony to California State Water Resources Control Board regarding "other factors" influencing aquatic ecosystem of San Francisco Bay - Delta system. Testimony prepared on behalf of California Urban Water Agencies.
- Reiser, D.W. 1994. Served as technical representative of California Urban Water Agencies on interagency committee to review technical basis of proposed EPA salinity standard for the San Francisco Bay - Delta system.

- Reiser, D.W. 1994. Served as technical representative of California Urban Water Agencies on interagency committee to evaluate and develop monitoring programs for San Francisco Bay - Delta system.
- Reiser, D.W. and E. Connor. 1994. Invited presenters at Cedar River Watershed - Bull trout workshop. Seattle Water Department. November 18, 1994.
- Reiser, D.W., E. Connor, K. Binkley, K. Lynch, and D. Paige. 1994. An evaluation of spawning habitat used by bull trout in the Cedar Watershed, Washington. Paper presented at "Friends of the Bull trout" conference, Calgary, Alberta.
- Connor, E., D. Reiser, K. Binkley, K. Lynch, and D. Paige. 1994. Life history and ecology of an unexploited bul trout population in the Cedar River watershed, Washington. Paper presented at "Friends of the Bull trout" conference, Calgary, Alberta.
- Reiser, D.W. and J. B. Bradley. 1993. Fine sediment intrusion and salmonid habitat, Paper presented at Advances in Hydrosience and Engineering; Symposium Sponsored by ASCE, Washington, D.C. June 1993.
- Reiser, D.W. and A. Olson. 1992. Sediment Deposition within fry emergence traps: a confounding factor in estimating survival to emergence (STE). Paper presented at the Annual Meeting of the Western Division of the American Fisheries Society, Fort Collins, Colorado.
- Reiser, D.W. 1992. Sedimentation Impacts on the Aquatic Ecosystems; Instructor for Short Course for state and federal agencies, and industry. Bellevue, Washington.
- Reiser, D.W. 1992. Instream flow needs (IFN) practices in North America. Invited paper presented at the IFN Special Session sponsored by Alberta Environment, Edmonton, Alberta.
- Reiser, D.W. 1992. Technical considerations related to Natural Resource Damage Assessments. Paper presented to Tacoma Chamber of Commerce, Environmental Concerns Committee. Tacoma, Washington.
- Gift, J.J., D.F. Ludwig, and D.W. Reiser. 1991. Key issues related to Natural Resource Damage Assessments. Paper Presented at short course sponsored by Preston, Thorgrimson, Shindler, Gates and Ellis, Seattle, Washington.
- Reiser, D.W. 1991. Impacts of sedimentation on salmonid ecology. Instructor for Short Course presented to the Tongass National Forest, Alaska.
- Reiser, D.W., M.P. Ramey, S.K. Beck, T.R. Lambert, and R.E. Geary. 1989. Flushing flow recommendations for maintenance of salmonid spawning gravels in a steep, regulated stream. Paper presented at the Fifth (5th) International Symposium on Regulated Streams; University of Loughborough, England.

- Reiser, D.W. 1989. Use of the Whitlock - Vibert Box for monitoring fine sediment deposition in streams. Paper presented at the Annual Meeting of the Montana Chapter American Fisheries Society; Warm Springs, Montana.
- Reiser, D.W. and M.P. Ramey. 1989. Yankee Fork Habitat Restoration. Paper presented at the Annual Review meeting of the Bonneville Power Administration (BPA), Columbia Basin Fish and Wildlife Program Portland, Oregon.
- Reiser, D.W., P. DeVries, and G. Lewis. 1989. Application of the IFIM for assessing the benefits of sediment reduction on anadromous fish habitat. Paper presented at the Annual meeting of the Western Division of the American Fisheries Society, Seattle, Washington, July 1-9, 1989.
- Reiser, D.W. 1988. Instream Flow Legislation in North America. Poster Session - National Meeting of the American Fisheries Society; Toronto, Canada.
- Reiser, D.W., T.A. Wesche, and S. Running. 1987. Use of Whitlock-Vibert Boxes for quantifying intergravel sediment deposition in salmonid spawning gravels. Paper presented at the 23rd Annual Meeting of the California-Nevada Chapter of the American Fisheries Society, Ventura, California, February 4-6, 1988
- Reiser, D.W., and M.P. Ramey. 1987. Panther Creek Habitat Restoration. Paper presented at the Annual Review meeting of the Bonneville Power Administration (BPA), Columbia Basin Fish and Wildlife Program, Portland, Oregon
- Reiser, D.W., M.P. Ramey, and T. Lambert. 1987. Considerations in assessing flushing flow requirements in regulated rivers. Paper presented at the Fourth (4th) International Symposium on Regulated Rivers. Edmonton, Alberta.
- Reiser, D.W. 1986. Invited Panel Member - Land use activities and impacts to fisheries - mining; twenty fifth (25) Annual Meeting of the Idaho Chapter of the American Fisheries Society Meeting.
- Reiser, D.W. 1986. Panther Creek Habitat Rehabilitation; Paper presented at the twenty fourth (24) Annual Meeting of the Idaho Chapter of the American Fisheries Society, Boise, Idaho.
- Reiser, D.W. 1986. Fish passage considerations at small hydroelectric projects. Invited seminar presented to the Fisheries Engineering Session, Washington State University, Pullman, Washington.
- Reiser, D.W. and R. Peacock. 1985. A technique for assessing upstream fish passage problems at small-scale hydropower developments. Paper presented at the Symposium on Small Hydro and Fisheries, Denver, Colorado.
- Reiser, D.W. and M.P. Ramey. 1985. Integration of the IFIM with reservoir operation studies for assessing impacts of water withdrawals on anadromous salmonids. Paper presented at the 12th Annual meeting of the Alaska Chapter of the American Fisheries Society, Kodiak, Alaska. November 18-22, 1985.

- Reiser, D.W. 1984. Design and implementation of instream flow studies: the consultants perspective. Paper presented at the California Trout Instream Flow Symposium; Sacramento, California.
- Reiser, D.W. 1983. Stream flow regulation below dams: effects on salmonid egg incubation and fry development. Paper presented at the 45th Annual Meeting of the Pacific Fishery Biologists Conference. Dalles, Oregon.
- Reiser, D.W., M.W. Vitter and J. Todd. 1982. Reclamation of a Colorado stream impacted by acid mine drainage. Paper presented at the Seventeenth Annual Meeting of the Colorado-Wyoming Chapter of the American Fisheries Society.
- Reiser, D.W., M.W. Vitter and J. Todd. 1982. Re-establishment of fish and aquatic invertebrate populations in a stream severely impacted by acid mine drainage. Paper presented at the 1982 Western Division American Fisheries Society Meeting, Las Vegas, Nevada.
- Reiser, D. W. 1982. Best Management Practices for riparian habitat resources: Mining. Paper presented at the Land Resources Technical Session of the Annual Conference of the Western Association of Fish and Wildlife Agencies, Las Vegas, Nevada.
- Reiser, D.W., M.W. Vitter, J. Todd and G. Andes. 1982. Treatment of acid mine drainage effluent entering a Colorado stream. Paper presented at the Trace Element Mobilization in Western Energy Regions Symposium, Denver, Colorado.
- Reiser, D.W. and R.G. White. 1981. The effects of hydroelectric power peaking on chinook salmon egg incubation and fry quality. Paper presented at the 1981 National Meeting of the American Fisheries Society, Albuquerque, New Mexico.
- Reiser, D.W. 1980. Effects of chronic low streamflow on chinook salmon egg incubation and fry quality. Paper presented at the Eighteenth Annual Meeting of the Idaho Chapter of the American Fisheries Society.
- Reiser, D.W. 1980. *In situ* dewatering of salmonid eggs: effects on hatching success and fry quality. Paper presented at the 1980 Western Div. American Fisheries Society Meeting, Kalispel, Montana.
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EMPLOYMENT HISTORY

R2 Resource Consultants, Inc., President, Senior Fisheries Scientist, 1992-Present
EA Engineering, Science, and Technology, Vice President, Senior Fisheries Scientist, 1987-1992
Bechtel, Corporation, Senior Fisheries Scientist, 1982-1987
Camp Dresser and McKee Inc., Senior Fisheries Scientist, 1980-1982
Idaho Cooperative Fishery Research Unit, 1977-1980
Wyoming Water Resources Research Institute, 1974-1977



Why Fish Need Water:
Life History Strategies and
Habitat Requirements of Salmonid
Populations in the Snake, Salmon, and
Clearwater River Basins of Idaho

Prepared by:

Dudley W. Reiser Ph.D.
R2 Resource Consultants, Inc.
15250 N.E. 95th Street
Redmond, Washington 98052-2518
Phone: (425) 556-1288
Fax: (425) 556-1290
E-mail: dreiser@R2usa.com

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EXECUTIVE SUMMARY

In January of 1993, the United States, through the Bureau of Indian Affairs (BIA) and acting on behalf of the Nez Perce Tribe (Tribe) filed an application for instream flow claims with the State of Idaho for 1,133 stream reaches within the Salmon, Clearwater, and portions of the Snake, Weiser and Payette river basins (Project Area). These claims were directed at preserving and restoring necessary streamflows to those systems, which would protect the Nez Perce Tribe's treaty guaranteed reserved rights (Treaty of 1855) of taking fish, hunting, and gathering. The claims were developed to protect all components of the ecosystem necessary to provide for the rights guaranteed under the 1855 Treaty between the United States and the Tribe, and were thus focused on providing for and preserving both in-channel and out-of-channel processes that collectively function to create and shape habitats suitable for the long term propagation of fish populations. In simple terms, fish need water in order to propagate and flourish and the tribal right to fishing presupposes that all of the necessary ingredients to produce fish are present and protected within the respective streams and tributaries historically and presently used by the Tribe for fishing. It has been reported to me that the Nez Perce Tribe historically relied upon fish in streams within the Project Area for both subsistence and ceremonial purposes and that there were certain segments of streams that were specifically used for fishing, termed Usual and Accustomed (U&A) fishing places. In most cases, the U&As comprise entire reaches of streams and rivers which would be directly protected by the instream flow claims for those specific locations/reaches. However, there are many, primarily smaller streams within the Project Area which are located above the U&As. However, because of the connectivity of different streams and rivers from upper headwater systems downstream to larger, mainstem rivers, the instream flow claims that we developed for those upper sites are as biologically important and necessary as the claims directly attached to the U&A. Fish populations that have evolved within these systems, including both resident and anadromous species, have developed around and are dependent upon a variety of life history strategies unconstrained by arbitrary boundaries within the stream. Thus, I have concluded that fulfillment of the Nez Perce Tribe's treaty rights to harvest fish from U&A fishing places requires more than just suitable habitat conditions within the immediate areas of the U&A places. Indeed, because of the differing life history strategies and species-life stage reliance on a variety of habitat types, the need exists to protect all habitats that factor prominently into the species life cycle. This includes habitats that may be located upstream from specific U&A places, including streams within the upper segments of a given watershed. The provision of flows that will spatially and temporally protect the full range of habitats needed to protect all life history stages of important fish populations was the primary reason we developed the instream flow claims for streams in the Project Area.

1. INTRODUCTION AND PURPOSE

In January of 1993, the United States, through the Bureau of Indian Affairs (BIA) and acting on behalf of the Nez Perce Tribe (Tribe) filed an application for instream flow claims with the State of Idaho for 1,133 stream reaches within the Salmon, Clearwater, and portions of the Snake, Weiser and Payette river basins (hereinafter referred to as the Project Area) (Figure 1-1). These claims were directed at preserving and restoring necessary streamflows to those systems, which would protect the Nez Perce Tribe's treaty guaranteed reserved rights (Treaty of 1855) of taking fish, hunting, and gathering.

1.1 OBJECTIVES OF THE INSTREAM FLOW CLAIMS

The claims were developed to protect all components of the ecosystem necessary to provide for the rights guaranteed under the 1855 Treaty between the United States and the Tribe. Thus, as mentioned in my affidavit of June 22, 1995¹ and April 24, 1998² the instream flow claims were focused on providing for and preserving both in-channel and out-of-channel processes that collectively function to create and shape habitats suitable for the long term propagation of fish populations. In simple terms, fish need water in order to propagate and flourish. The tribal right to fishing presupposes that all of the necessary ingredients to produce fish are present and protected within the respective streams and tributaries historically and presently used by the Tribe for fishing. Thus, it is possible to evaluate and define the quantity of streamflow (temporal) that should remain in the channel in order to protect and preserve the diversity and complexity of habitats to which fish populations have evolved.

Evaluating and defining such flows has been the primary objective of the work I directed on behalf of the United States from 1989 to 1998. That work resulted in the development and submittal (in March 1993) of instream flow claims for the United States and the Nez Perce Tribe, for 1,133 different stream reaches within the Project Area. The claims were subsequently amended in April 1998 following the completion of additional technical studies and analyses.

¹ Affidavit of Dudley W. Reiser, dated June 22, 1995; Submitted on behalf of the United States to the District Court of the Fifth Judicial District of the State of Idaho, Case No. 39576.

² Affidavit of Dudley W. Reiser, dated April 24, 1998; Submitted on behalf of the United States to the District Court of the Fifth Judicial District of the State of Idaho, Case No. 39576.

Drainage Network within Project Area

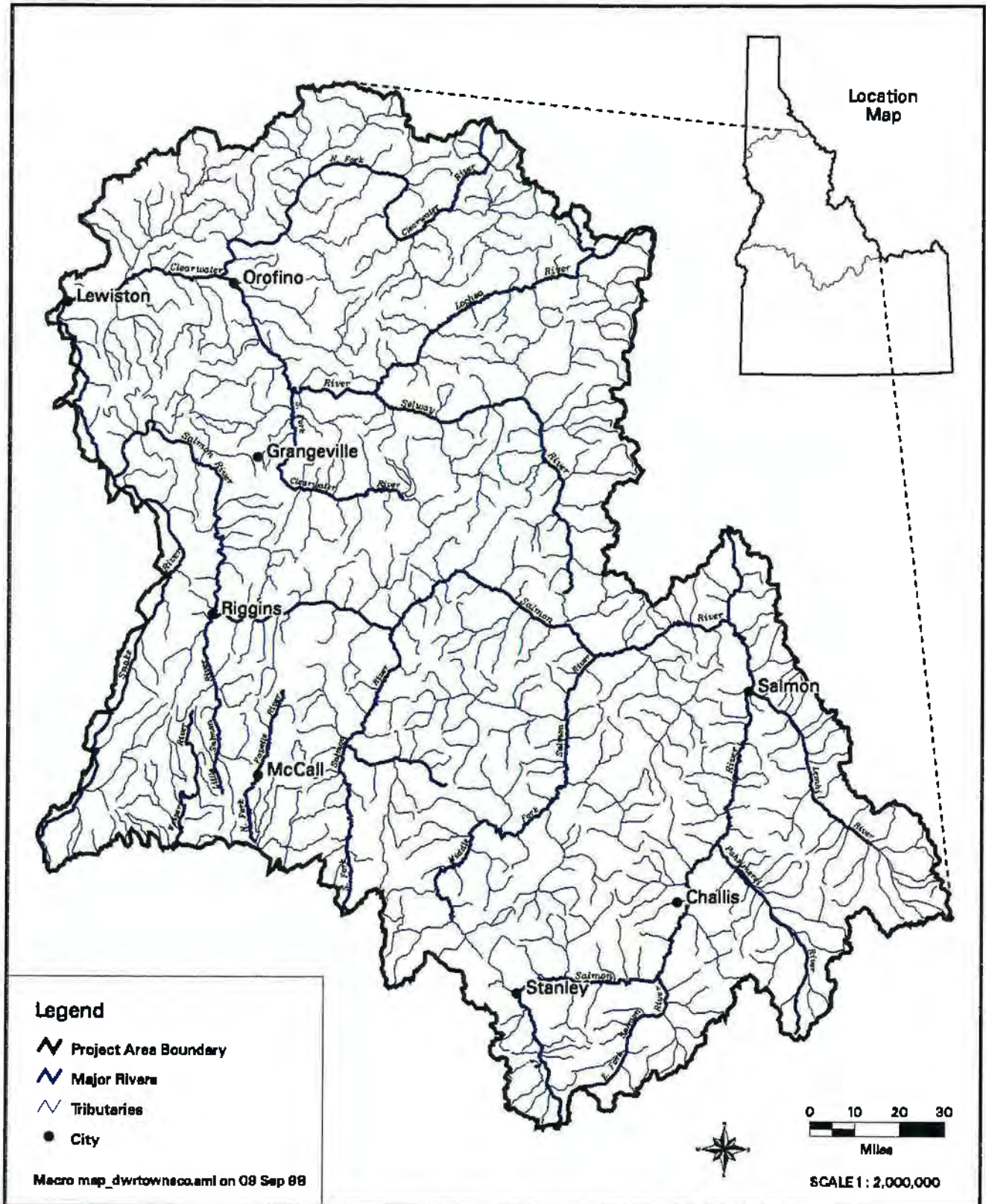


Figure 1-1. Location map depicting drainage network within the Project Area of central Idaho.

1.2 METHODOLOGICAL APPROACH UTILIZED IN DEVELOPING INSTREAM FLOW CLAIMS

The methods used in developing the instream flow claims are best described as a series of steps that progress generally from those related to planning and data compilation and review, to field data collection and analysis, to the actual development of instream flow claims for a given site. In my affidavit of June 22, 1995, I described 11 separate steps that occurred in the development of the claims. These included:

- Step 1 - Basin Delineation and Stratification
- Step 2 - Selection of Study Reaches and Study Sites
- Step 3 - Field Data Collection and Modeling
- Step 4 - Development of Species Habitat Suitability Index Curves
- Step 5 - Determine Species Distribution and Periodicity
- Step 6 - Basis of Instream Flow Requirements – Species and Life Stage Prioritization
- Step 7 - Determination of Instream Flow Requirements for In-Channel Habitat (measured sites)
- Step 8 - Determination of Downstream Passage Flows for Fish
- Step 9 - Determination of Instream Flow Claims for In-channel Habitat (unmeasured sites)
- Step 10 - Determination of Fish Habitat Forming and Maintenance Flow Claims
- Step 11 - Determination of Riparian Maintenance Flow Requirements.

Specific details of each of these steps and the methods used in developing the claims are contained in my 1995 and 1998 affidavits.

It should be noted that the development of the instream flow claims was a major effort and required the commitment of resources and technical personnel from a number of government agencies and institutions, universities, and private industry. These included, among others, the U.S. Geological Survey (USGS), U.S. Forest Service (USFS), U.S. Fish and Wildlife Service

(USFWS), and the Bureau of Indian Affairs (BIA). Information and data were likewise obtained from a number of state agencies and institutions including the Idaho Department of Fish and Game (IDFG), Idaho Department of Natural Resources (IDNR), Idaho Department of Health and Welfare – Division of Environment (IDHW-DOE), Idaho Department of Environmental Quality (IDEQ), University of Idaho, and Idaho State University. In developing the claims, I directed a multi-disciplinary team of experts recognized in the fields of fish ecology (habitat requirements, population biology, fish distributions, life history patterns and requirements), hydrology and hydraulic modeling, geomorphology, sediment transport, riparian and wetlands ecology, and in the application of instream flow methodologies. In addition, outside experts were also brought in to the project to provide special expertise and peer review relative to certain aspects of the claims; e.g., downstream fish passage, habitat suitability curve development, and habitat maintenance flow claim development.

1.3 USUAL AND ACCUSTOMED (U&A) FISHING PLACES

It has been reported to me that the Nez Perce Tribe historically relied upon fish in streams within the Project Area for both subsistence and ceremonial purposes. Species of fish reportedly used by the Tribe as discussed in the affidavit of T. Weber Greiser³ included both anadromous and resident fish. Anadromous fish species included; chinook salmon (*O. tshawytscha*), coho salmon (*O. kisutch*), sockeye salmon (*Oncorhynchus nerka*), steelhead trout (*O. mykiss*) (the migratory form of rainbow trout), Pacific lamprey (*Entosphenus tridentatus*) and white sturgeon (*Acipenser transmontanus*); resident species included rainbow trout (*O. mykiss*), cutthroat trout (*O. clarki*), bull char (*Salvelinus confluentus*), and various sucker species (*Catostomus sp.*). Fulton (1970) provided an excellent overview of the historical and present-day (circa 1970s) distribution of many of the above species. Murphy and Metsker (1962) described the distribution of salmon and steelhead in the Clearwater drainage of Idaho, with a focus on assessing available spawning areas, while Mallet (1974) provided a more detailed summary of fish species presence and relative abundance for Idaho's anadromous fish bearing streams. One of the most comprehensive sources of present-day fish species distribution information is contained in the IDFG Idaho Rivers Information System (IRIS) (IDFG 1989), an electronic database that we used, in part, to identify stream-specific fish species composition.

Today, several of the above species (chinook salmon, sockeye salmon, and most recently steelhead) are listed as either being threatened or endangered under the federal Endangered

³See affidavit of T. Weber Greiser, dated September 8, 1998

Species Act (ESA)⁴ due to declines in population abundance. One of the species, coho salmon, has become extinct within its native streams in Idaho, including the Clearwater River and Snake River drainages (Nehlsen et al. 1991). The major causes associated with the declines of salmon and steelhead include the degradation and loss of extensive areas of spawning and rearing habitat (due to dams, and agriculture (e.g., irrigation), forestry, and urbanization practices), construction and operation of downstream dams on the Columbia and Snake rivers, and ocean and terminal fisheries (NMFS 1995). The Committee on Protection and Management of Pacific Northwest Anadromous Salmonids (CPMPNAS 1996) included hatchery operations, along with the causes noted above as having adverse impacts on native salmon and steelhead populations. The listings of Snake River salmon and steelhead under the ESA have prompted the development of a Snake River salmon recovery plan which is directed toward the restoration of the health of the Columbia and Snake River ecosystem and the recovery of listed Snake River salmon stocks (NMFS 1995). The listings have also prompted the curtailment of harvest by the Tribe of any chinook and sockeye salmon within the basins; steelhead harvest is directed toward hatchery stocks only.

As noted above, instream flow claims were made for each of 1,133 stream reaches. Many of these reaches encompassed or were proximal to specific sections of or sites on rivers and streams which were historically used by the Tribe for fishing. Such areas or sites are defined by Greiser (1998) as usual and accustomed places (U&A's) within Idaho, and are depicted on Figure 1-2.

In most cases, the U&As comprise entire reaches of streams and rivers which, according to Greiser (1998) and based on historical accounts of a number of tribal elders were used by the Nez Perce Tribe for fishing. In these cases, the instream flow claims we developed for those streams would serve to protect important fish habitats directly within those U&A places. However, as noted in Figure 1-2, there are many, primarily smaller streams within the Project Area which are above the U&As. For example, the upper segments of the East Fork Salmon River are about 10-15 miles above the nearest U&A for that system. Likewise, many of the tributaries to the Middle Fork Salmon River, the upper Salmon River, the Lemhi River, and the Pahsimeroi River are upstream from the U&A places inclusive of the respective mainstem systems. Nevertheless, the instream flow claims that we developed for those sites are as biologically important and necessary as the claims directly attached to the U&A. This is because of the connectivity of different streams and rivers from upper headwater systems downstream to larger, mainstem

⁴The Endangered Species Act of 1973 established a mechanism whereby species which have become so depleted in numbers they are in danger of extinction can be designated as either threatened or endangered by the Secretary of Interior or the Secretary of Commerce. Species present within the Project Area which have been classified under the ESA include: sockeye salmon – endangered, spring/summer and fall chinook salmon – endangered; steelhead trout – threatened; bull trout – threatened.

Nez Perce Tribe Usual and Accustomed Fishing Places

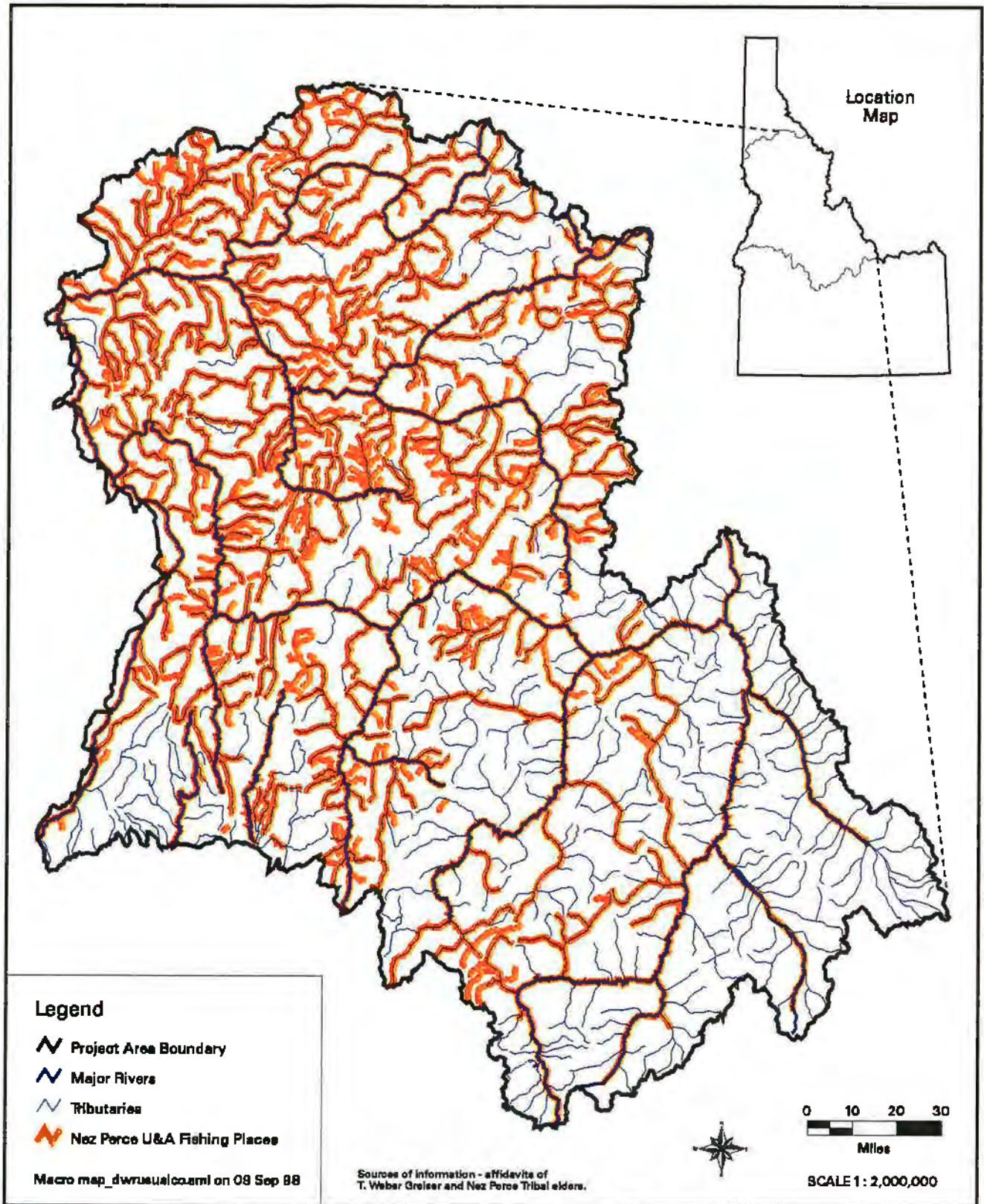


Figure 1-2. Location map depicting Nez Perce Tribe usual and accustomed (U&A) fishing places.

rivers. Fish populations that have evolved within these systems, including both resident and anadromous species, have developed around and are dependent upon a variety of life history strategies unconstrained by arbitrary boundaries within the stream. Within a given fish population, certain life history stages may utilize widely different habitat types and locations from others. For example, it is not uncommon for cutthroat trout adults who reside in larger, mainstem rivers during the majority of the year, to migrate, sometimes long distances (greater than 50-75 miles) into smaller tributaries to spawn. The resulting fry and juveniles may in turn reside in the same tributaries for several years, at which time they mature and then migrate downstream to the mainstem river to reside. This type of life history strategy is defined as "fluvial," and is typical of many of the populations of westslope cutthroat and bull trout found in drainages within the Project Area. These and other life history strategies are more fully described in Section 2 of this report. The point of their mention here is to illustrate that in order for there to be fish present at a specific U&A fishing place requires the provision of suitable habitat conditions that meet certain life history functions of the population that may be distal to the actual U&A location (Figure 1-3). The instream flow claims that were developed on behalf of the Tribe and that are described in my 1995 and 1998 affidavits provide for such habitats.

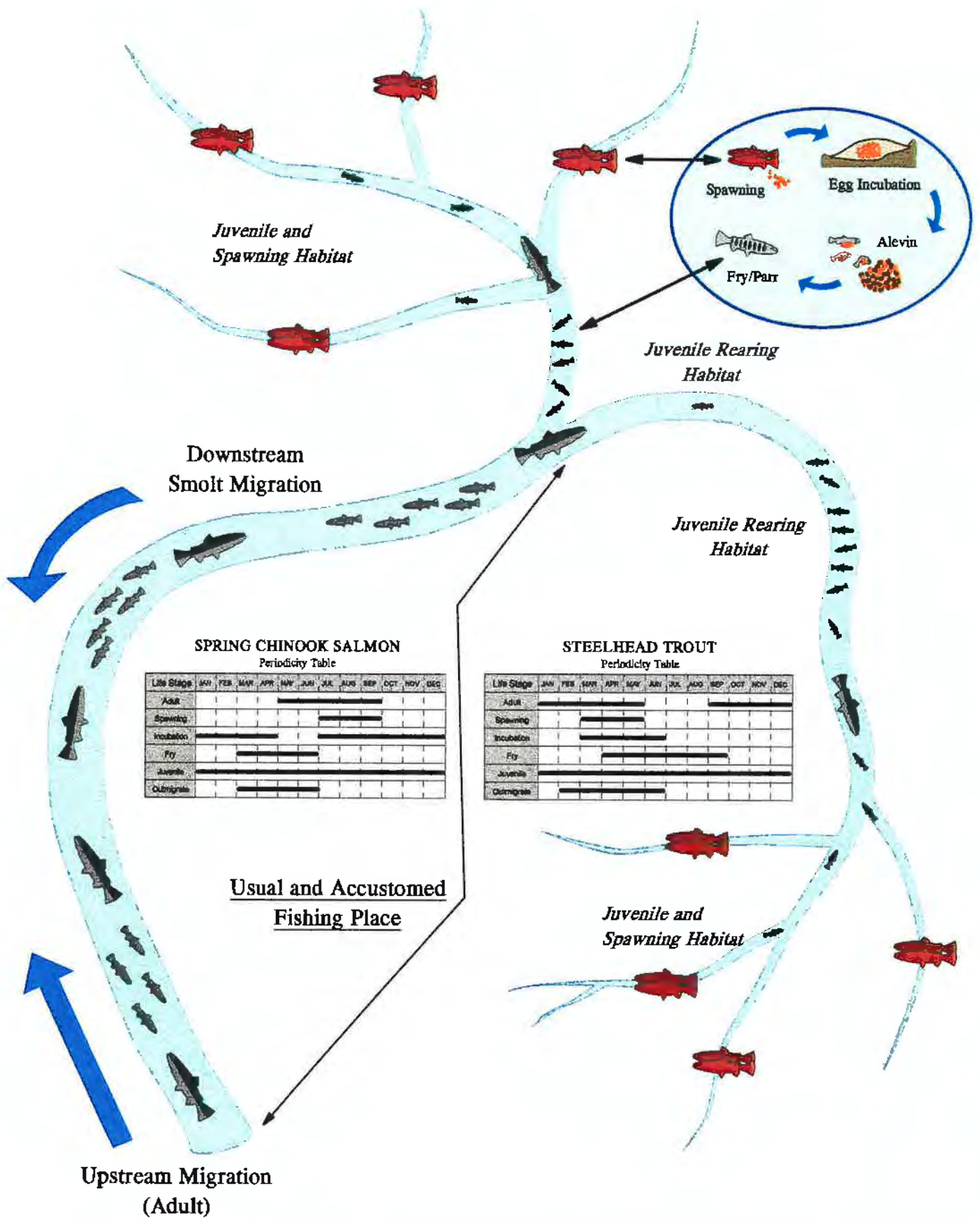


Figure 1-3. Schematic depicting typical migration pathways (upstream and downstream) for adult spawning (upstream) and juvenile/smolt outmigrations (downstream) from upper watershed habitats.

2. LIFE HISTORY STRATEGIES OF SALMONIDS WITHIN STREAMS OF THE PROJECT AREA

All of the instream flow claims developed on behalf of the Tribe were based on various salmonid fish species, including chinook salmon, coho salmon, steelhead trout, sockeye salmon, westslope cutthroat trout, redband/rainbow trout, and bull char. The historical distributions of chinook salmon and steelhead trout within the Project Area streams are depicted in Figures 2-1 and 2-2; distributions of sockeye salmon, coho salmon, westslope cutthroat and redband/rainbow trout, and bull char are contained in Appendix A and depicted in Figures A-1 through A-5. Data on fish distributions within the Project Area were compiled from a number of sources including the Idaho Rivers Information System (IRIS) (IDFG 1997), Mallet (1974), Fulton (1970), and Evermann (1896), as well as personal contacts and observations provided by biologists with the USFS, IDFG, and the Tribe. Historical information and data were compiled from the recorded accounts of Nez Perce tribal elders and members who were able to recall specific streams that were fished by the Tribe.

2.1 ANADROMOUS STOCKS

Of the salmonids historically or currently present within the Project Area, the salmon and steelhead are what are termed diadromous species meaning they are migratory between the ocean and freshwater (McDowall 1987). Salmon and steelhead exhibit a certain type of diadromy termed anadromous, based on their reproductive strategy. Anadromous fish spend the majority of their life cycle in the ocean, and then migrate into freshwater to spawn (McDowall 1987, Meehan and Bjornn 1991) (Figure 2-3). This contrasts with catadromous species (e.g., eels; Anguillidae) which spend most of their life cycle in freshwater, and then migrate to the ocean to spawn. The length of time that the progeny of anadromous salmonids spend in freshwater can be quite variable (depending on stock type) ranging literally from a few weeks to several years (Randall et al. 1987; Healy 1991). During the period of freshwater existence, the young fish are dependent upon the physical, hydraulic and chemical conditions that exist within rivers and in the case of sockeye salmon, lakes, for necessary food and shelter. During this freshwater rearing period, the young fish continue to grow until a point at which physiological changes occur that trigger a directed outmigratory response in the fish (Mills 1971; Hoar 1953; McCormick and Saunders 1987). This change marks the period of smoltification in which the fish begin their transition to an ocean existence. The period of outmigration typically overlaps with portions of the normal runoff period from Idaho's mountains, the high flows of which serve to minimize the necessary energy expenditure of the smolts in reaching the downstream Columbia River estuary

Fish Species Distribution - Chinook Salmon (*Oncorhynchus tshawytscha*)

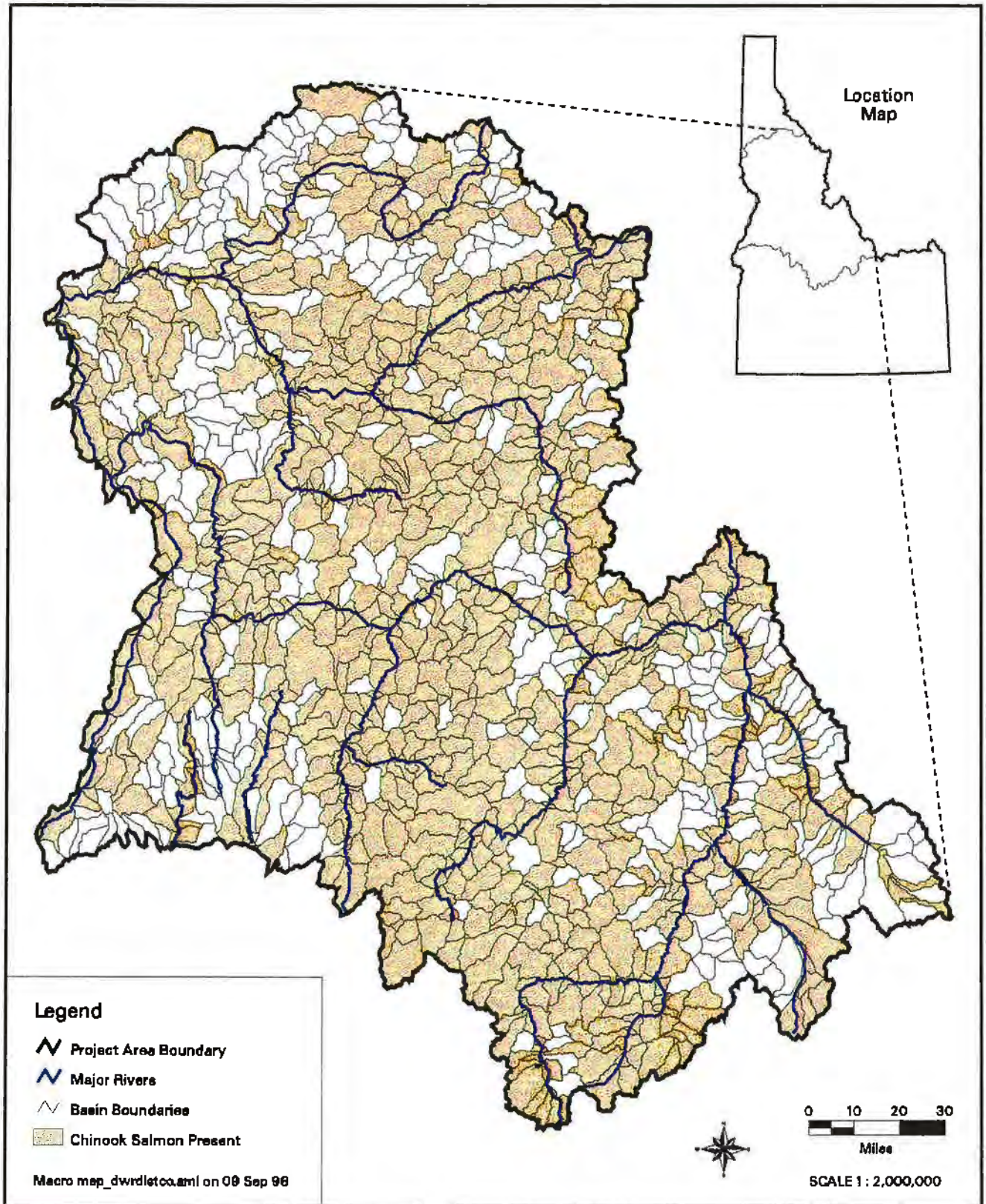


Figure 2-1. Distribution of chinook salmon in the Snake, Salmon, and Clearwater river basins, Idaho.

Fish Species Distribution - Steelhead Trout (*Oncorhynchus mykiss*)

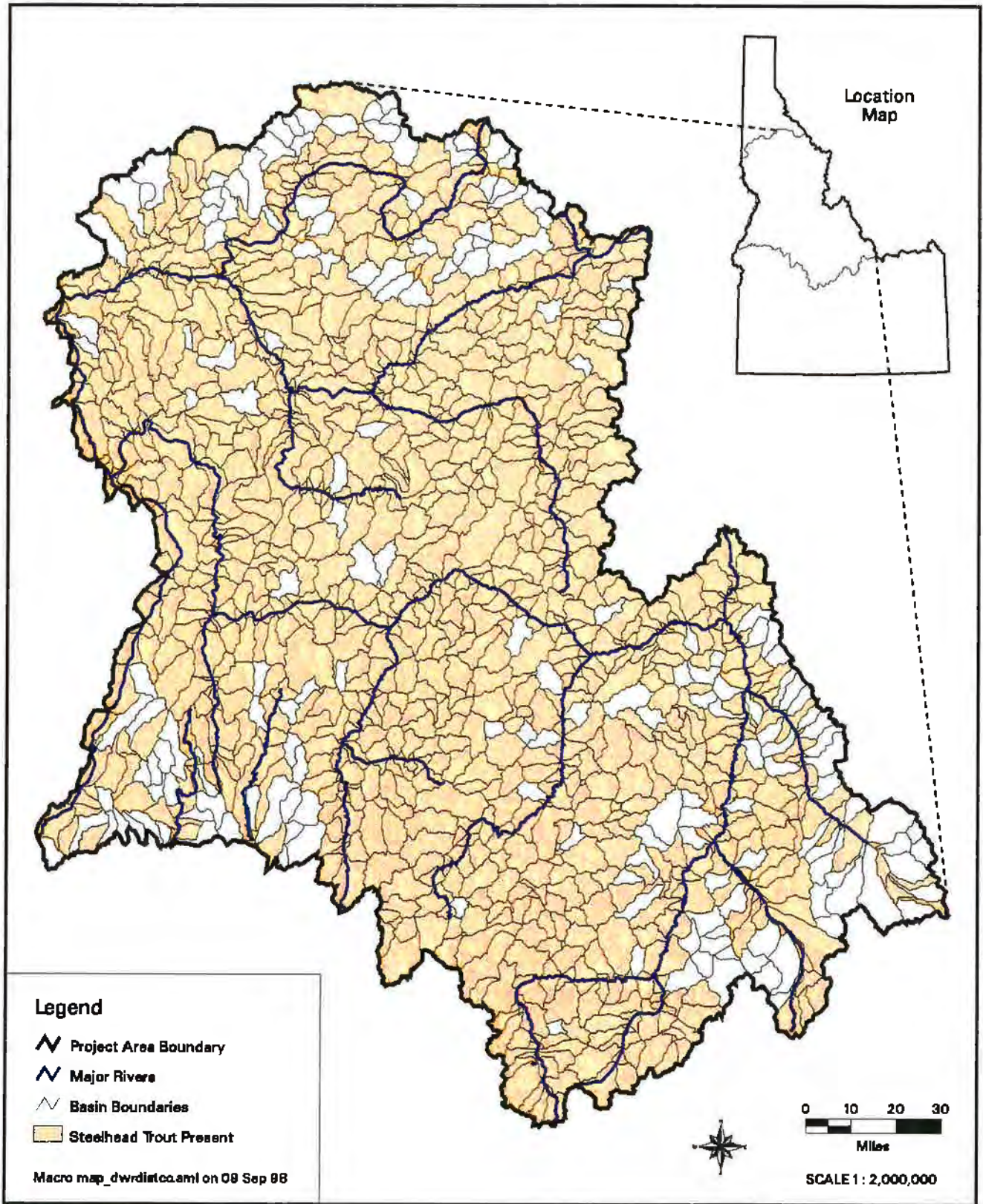


Figure 2-2. Distribution of steelhead trout in the Snake, Salmon, and Clearwater river basins, Idaho.

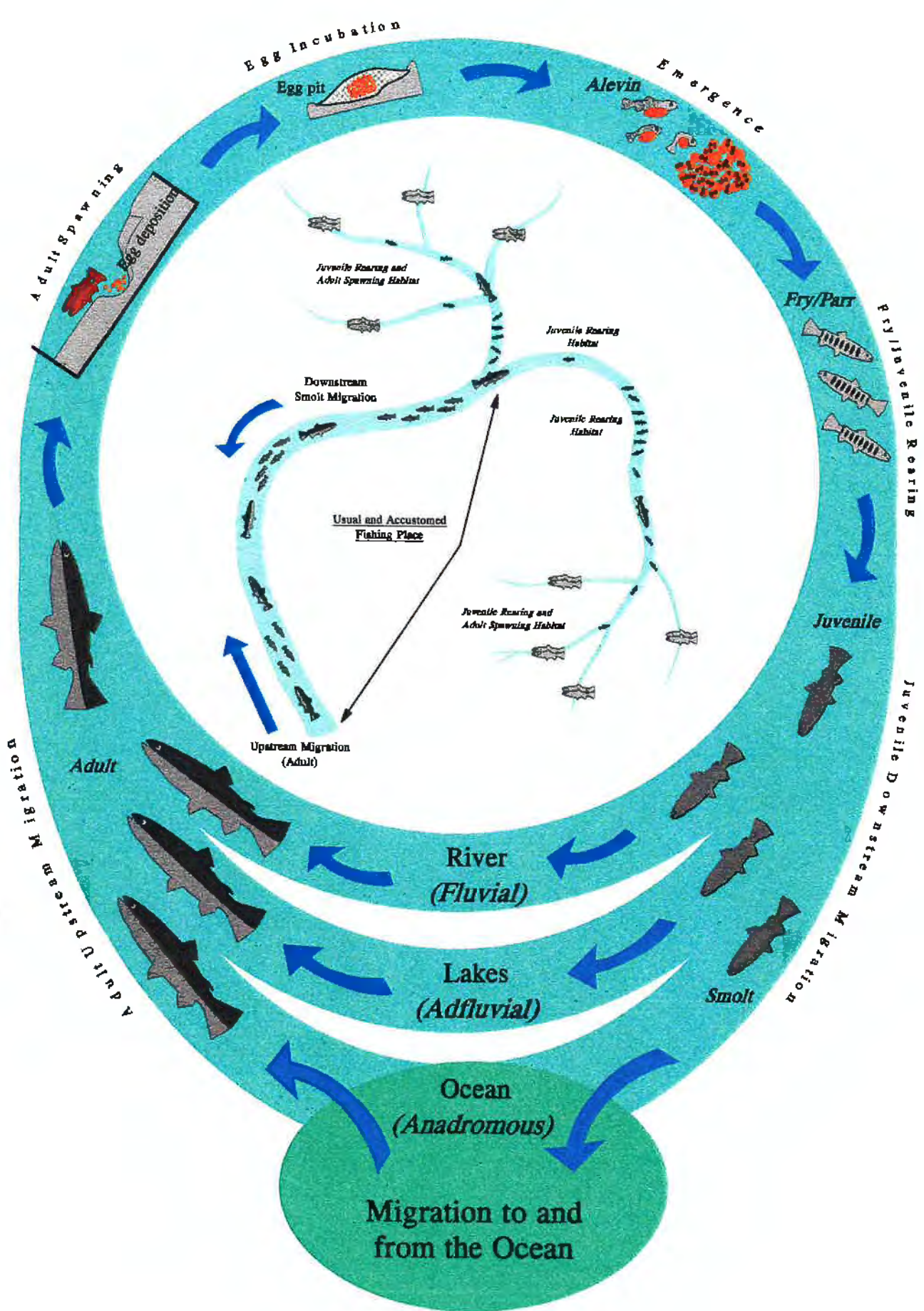


Figure 2-3. Generalized life history strategies of salmonid species, illustrating upstream and downstream migration patterns and life stage linkages to various habitats.

Figure 2-3. Generalized life history strategies of salmonid species, illustrating upstream and downstream migration patterns and life stage linkages to various habitats within a watershed.

and ocean. Mundy and Watson (1997) hypothesized that this behavior was energy conservation related and that the emigrants moving during high flows were placed into bioenergetic refugia where the kinetic energy of the water was substituted for the chemical energy of their bodies.

A general description of the life history strategies of individual fish species found with streams of the Project Area is provided below. The description for chinook salmon is presented first, since that species is geographically widespread within the Project Area, and is significant to the Tribe for ceremonial and subsistence purposes. Additionally, chinook historically provided important non-Indian commercial and sport fisheries (IDFG 1992). Moreover, the life cycle strategy presented for chinook is similar in many respects to that used by coho and sockeye salmon, and steelhead trout, and therefore will serve as the basis from which only differences from that strategy will be noted for those specific species.

2.1.1 Chinook Salmon

There are three races of chinook salmon (spring, summer, and fall) that utilize various streams and rivers within the Project Area, with differences in nomenclature being a reflection of when the adults first enter freshwater. That is, spring chinook enter the Columbia River in the spring, summer chinook enter slightly later during the summer, and fall chinook enter freshwater in the fall. These life history strategies have resulted in the development of at least two different behavioral forms, distinguished by the length of time spent in freshwater. Healey (1991) credited the original definitions to Gilbert (1913) who designated the forms as "stream-type" and "ocean-type." The "stream-type" chinook, which is characteristic of both spring and summer chinook salmon in the Salmon and Clearwater drainages, spend one or more years as fry and parr in freshwater before migrating to the ocean. In contrast, the period of time "ocean type" chinook spend in freshwater is relatively low, with the outmigration of fry generally occurring within three or four months following emergence. "Ocean-type" chinook are representative of the Snake River fall chinook salmon. In general, the "stream-type" chinook tend to migrate to open ocean waters for rearing and maturation, while "ocean-type" chinook are more closely associated with coastal areas (CPMPNAS 1996).

Like all of the Pacific salmon species, chinook are what are termed semelparous, meaning they spawn only once and die shortly thereafter. This type of reproductive strategy provides secondary benefits to the often pristine and pure waters in which spawning occurs, in the form of added nutrients via the decomposition of post-spawned carcasses (Cederholm and Peterson 1985; Bilby et al. 1996). Thus, although salmon do not provide direct parental care to their progeny, a type of indirect care is provided posthumously via the addition of nutrients from the dead adults. Such nutrients contribute to the development of aquatic invertebrate communities that serve as

important food bases for fry and parr. The fact that reproduction occurs only once (for a given year class) increases the overall importance of prevailing habitat conditions during spawning and all subsequent freshwater rearing phases. Factors which result in the reduction in habitat quality or quantity during any of the freshwater phases can result in lowered survival and/or growth of a given life stage and contribute to an overall reduction in number of returning adults.

Such factors in combination are often termed "limiting factors" or "bottlenecks" to the population. Murphy and Meehan (1991) defined "bottlenecks" as the most restrictive phase of the life cycle of the salmon. Bottlenecks therefore limit production and must be removed before the carrying capacity of the stream can increase. Murphy et al. (1986), Koski et al. (1984) and Bisson et al. (1987) provide excellent examples of how "bottlenecks" can occur due to different land use activities. For chinook salmon and indeed for many salmonid species, such bottlenecks can occur seasonally and spatially. For example, streamflows that are insufficient to provide suitable depths and velocities over spawning gravels within important spawning habitats would create a "bottleneck" in the production of a given year class. Likewise, increased water temperatures during the summer resulting from decreased streamflows or loss of riparian vegetation may provide a bottleneck to juvenile production. "Bottlenecks" can also occur during the winter months when fish are less active and they tend to utilize the crevices and interstitial spaces of large substrates for cover (Reiser 1997; Morrill and Bjornn 1972). In that case, if substrates are filled-in with sediments (due to land use practices or reductions in streamflow), then overwintering habitat may become the "bottleneck." The important point is that because salmon only reproduce once in their lifetime, the prevailing habitat quality and quantity during each of the life history stages should be allowed to achieve levels that are regulated only by what is provided under natural conditions.

According to Mallet (1974) as cited in IDFG (1992), the Snake River basin (inclusive of the Salmon, Clearwater and upper Snake River drainages) historically produced about 39% of the total spring chinook salmon, 45% of the total summer chinook, and 5% of the fall chinook salmon in the entire Columbia River Basin. Using Chapman's (1986) estimates of spring and summer chinook for the entire Columbia Basin (2.5-3 million fish), Bevan et al. (1994) estimated that the total annual production of spring and summer chinook in the Snake River drainage exceeded 1.5 million fish annually in the late 1800s. The current contributions of these different stocks is far below these estimates; recent estimates of returning natural fish were 3,410 in 1991, 3,493 in 1992, and 7,901 in 1993.

2.1.1.1 Spring and Summer Chinook

In general, the earlier spring chinook are slightly smaller in size than the summer and fall chinook, and therefore are capable of migrating further upstream into smaller headwater systems for spawning. Spring chinook salmon typically enter the Columbia River and begin their upstream migrations from March to May, with spawning occurring from late July through September (Figure 2-4; IDFG 1985). Spring chinook are found throughout the Salmon and Clearwater drainages.

Summer chinook enter the Columbia River and migrate into Idaho's rivers and streams from May through July; spawning occurs generally in August and September (IDFG 1985). Summer chinook are found primarily in the Salmon River drainage, with the South Fork Salmon River being the main producer (IDFG 1985); a few summer chinook are mixed within Clearwater River spring chinook.

The eggs of spring and summer chinook salmon incubate and hatch during the winter months (October - February). At that time, the newly hatched salmon are considered as alevins (Hubbs 1943) and possess characteristic yolk sacs which serve as the only source of nutrition until the fry emerge, become free swimming, and actively feed. Upon yolk sac absorption, the timing of which is closely linked to water temperatures, the fish emerge from the gravels and are then considered fry. Fry emergence of spring and summer chinook typically occurs in early spring (March - May) (Figure 2-4). The exact periods of egg incubation and timing of emergence is stream specific and highly dependent on its water temperature regime. Upon emergence, the fry take up territories, reside and grow within riverine habitats in the general proximity of the spawning areas. As "stream-type" fish, the period of juvenile rearing in streams occurs for about one year. Thus, progeny resulting from eggs deposited in the gravels in August of one year, would rear in freshwater during the entire next year (upon emergence), and smolt and outmigrate to the ocean during the spring of the following year. Some early (pre-smolt) downstream movement of juveniles from small, headwater streams to larger rivers has been observed during the late fall and winter, and is thought to be responsive to decreasing water temperatures and the fish seeking cover among and within large substrates in which to overwinter (Morrill and Bjornn 1972).

2.1.1.2 Fall Chinook

Fall chinook salmon enter the Columbia River and begin migrating toward Idaho from August through October, with spawning occurring in late October and into November. Fall chinook were historically widespread throughout the mainstem Snake River, but are currently limited to

SPRING CHINOOK SALMON

Periodicity Table

Life Stage	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Adult					—————								
Spawning						—————							
Incubation	—————					—————							
Fry		—————											
Juvenile	—————												
Outmigrate		—————											

STEELHEAD TROUT

Periodicity Table

Life Stage	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Adult	—————					—————						
Spawning			—————									
Incubation		—————										
Fry			—————									
Juvenile	—————											
Outmigrate		—————										

Figure 2-4. Periodicity tables depicting the timing of various life history stages of spring chinook salmon (upper figure), and steelhead trout (lower figure) in portions of Salmon River drainage.

sections of the river below Hells Canyon Dam and a small reach of the lower Clearwater River (IDFG 1985). Fall chinook are generally the largest of the three races of chinook, and hence are morphologically adapted to spawning in mainstem rivers. Within the remaining free flowing segments of the Snake River below Hells Canyon Dam, spawning has been documented between the upper end of Lower Granite Reservoir and Hells Canyon Dam, within the tailwaters of Lower Monumental Dam and in the lower segment of the Clearwater River (Garcia et al. 1995). Reiser and White (1981) observed fall chinook redds in the Snake River at river mile 196 and river mile 222 located 52 and 25 miles below Hells Canyon Dam.

Fall chinook are considered an "ocean type" fish, and hence, begin outmigrating to the ocean shortly after emergence. Connor et al. (1995) reported peak emergence times extending from late April to late May. Nearshore rearing has been reported by Connor et al. (1995) to occur from mid-March through mid-July. As water temperatures increase and flows decline, the sub-yearling fish begin migrating downstream. This process may take several months during which time the fish are actively feeding on available food resources. The construction of four lower Snake River dams has prolonged the outmigration times (Raymond 1979) and also changed much of the mainstem habitats from riverine (river habitat, flowing water) to essentially lacustrine (lake type habitat, imperceptible water movement).

2.1.2 Coho Salmon

Coho salmon were once found within certain drainages of both the Salmon and Clearwater rivers (Appendix A), although little historical information exists. Today, coho are considered extinct in Idaho's waters (IDFG 1992), although the Nez Perce Tribe is actively pursuing a program of reintroduction and restoration.

In general, the life history strategy described for the "stream type" chinook salmon (spring and summer chinook) would likely be representative of that for coho. A comprehensive review of coho salmon life history characteristics is provided in Sandercock (1991).

2.1.3 Sockeye Salmon

According to Bevan et al. (1994), the Snake River sockeye represent the southernmost remaining population of sockeye in the world. Historically, runs of Snake River sockeye were found within five lakes in the Stanley Basin of the upper Salmon River drainage, and in Big Payette Lake located on the North Fork Payette River (Bjornn et al. 1968, Evermann 1896, Fulton 1970, Simpson and Wallace 1978). The lakes of the Stanley Basin that contained sockeye salmon included Redfish Lake, Alturas Lake, Pettit Lake, Stanley Lake, and Yellow Belly Lake

(Chapman et al. 1990). Today, the sockeye salmon is listed as endangered under the ESA, with declines in abundance being attributed primarily to dam construction. In the case of sockeye destined for the Stanley Basin lakes (Redfish, Alturas, etc.), the construction and operation of Sunbeam Dam from 1911 to 1934 has been considered the major factor leading to the loss of those runs. The Sunbeam Dam had no functioning fish passage facilities and, according to Chapman et al. (1990) would have blocked the river for enough years to eliminate any wholly anadromous population units of sockeye. An irrigation diversion on Alturas Creek would at times result in the complete dewatering of the channel, and thereby completely block sockeye salmon from reaching Alturas Lake (Chapman et al. 1990).

The freshwater life history strategy employed by sockeye salmon is unique to that species. Of particular distinction is the reliance of sockeye fry and juveniles upon a lake system as a nursery and rearing area, prior to smoltification and outmigration (Burgner 1991). Bevan et al. (1994) described two common forms of sockeye, including an anadromous form called sockeye, and a non-anadromous (resident) form referred to as kokanee. A third form termed "residual" was also described by Bevan et al. (1994) as being comprised of progeny from sockeye but being non-anadromous. In general, the major distinguishing characteristic between sockeye and kokanee is the difference in size; sockeye are larger.

Three patterns of spawning (used by both sockeye and kokanee) have been reported in conjunction with the lacustrine system; spawning in an inlet tributary to the lake, spawning in outlet tributary of the lake, and spawning within shoal/shorelines areas within the lake. In the case of the first and second strategies, the resulting fry have little difficulty in reaching the lake system; inlet spawned fry can simply migrate with the current downstream to the lake system. However, the fry resulting from outlet spawning must be able to migrate upstream from the spawning areas to reach the lake. This process can be prolonged and is usually accomplished by the fry moving upstream along the stream banks (Brannon 1972). Snake River sockeye are fall spawners with spawning occurring from late September through November (Simpson and Wallace 1978; Bevan et al. 1994). The cycle from egg incubation to fry emergence is similar to that described for chinook salmon (see Section 2.1.1).

Sockeye fry and juveniles typically rear in the lake environment from one to two years prior to smoltification and outmigration. Bjornn et al. (1968) reported variability in outmigration timing from Redfish Lake extending from early April through mid-May. The sizes of age I and II migrants ranged from 70-113 mm for age I fish, and 96-163 mm for age II fish (Bjornn et al. 1968). Chapman et al. (1990) considered the sizes of these outmigrants to be relatively small giving them a survival disadvantage associated with predation and downstream dam passage.

2.1.4 Steelhead Trout

Steelhead trout, like chinook salmon were historically widely distributed within waters of the Project Area (Figure 2-2). Today, their distribution remains widespread but the abundance of wild/natural fish has decreased to levels that have recently caused its listing as threatened under the ESA (August 18, 1997 [67 FR 43937]). Idaho steelhead are considered summer steelhead based on the time at which they enter freshwater (Figure 2-4). According to the IDFG (1985), the majority of steelhead migrate upstream into Idaho's rivers and streams during the fall, with some remaining in the Columbia and Snake rivers overwinter before migrating upstream in the spring to spawn. The fish that arrived in Idaho's streams in the fall subsequently overwinter in those waters, and then migrate further upstream to spawn.

There are two distinct groups of summer steelhead in Idaho, "A-run" and "B-run," with the distinction based on the timing of passing of Bonneville Dam. Steelhead crossing Bonneville Dam prior to August 25 are designated as "A run" steelhead, those passing from August 26 to October 31 are classified as "B run" fish (IDFG 1985, 1992). The A-run fish are generally smaller (since they typically spend only one year in the ocean and migrate into freshwater earlier than B-run fish), and are found predominantly within the Salmon and Snake River drainages. The B-run steelhead generally spend two years in the ocean and originate primarily in the Clearwater drainage.

Unlike Pacific salmon, adult steelhead trout do not always die after spawning; post spawned adults are termed kelts. However, post-spawning mortality is reportedly quite high (Robertson et al. 1961), with data on successful repeat spawning generally lacking. Spawning occurs in rivers and streams in areas containing suitably sized spawning gravels. The life cycle for steelhead closely follows that described for chinook, the major difference being one of timing. Steelhead are spring spawners with spawning occurring during the months of March-May. Eggs incubate in the gravels from April to early June, with fry emerging in May - early July. Juvenile steelhead rear in the streams and rivers in which they were produced for upwards of 3-4 years prior to smoltification (Meehan and Bjornn 1991). Habitats vary with fish size but invariably involve the presence of cobble and coarse gravels, substrates that have been shown to be used by steelhead for cover and overwintering habitat (Hartman 1965; Chapman and Bjornn 1969). Steelhead, like chinook salmon, exhibit a tendency during the fall and early winter months to migrate downstream into larger river systems where they utilize large substrates in which to hide and overwinter. Chapman and Bjornn (1969) concluded that such patterns of movement were controlled largely by decreasing water temperatures and influenced by substrate size (winter cover).

2.1.5 White Sturgeon (non-salmonid)

Although a non-salmonid, white sturgeon is an anadromous species (when given the opportunity), and do represent an important species to the Nez Perce Tribe. In Idaho, it is native to the Snake River upstream to Shoshone Falls, the lower Salmon River, and the Kootenai River in the extreme northern end of the state (Simpson and Wallace 1978). There are also reports of white sturgeon having used sections of the Clearwater River upstream as far as Lowell.⁵ Historically, white sturgeon entering Idaho's waters were able to freely migrate to and from the ocean, thereby maintaining their anadromous life history pattern. However, with the construction of the mainstem and Columbia dams, the white sturgeon populations in the Snake, Salmon and Clearwater rivers are relegated to an entirely freshwater existence.

According to Simpson and Wallace, sexual maturity in white sturgeon is probably not reached until the fish are 10-15 years old. The white sturgeon can be long-lived; Scott and Crossman (1975) suggest that some of the larger specimens (e.g., greater than 150-200 lbs) are over 100 years old. White sturgeon typically spawn in May and June, with spawning occurring over gravels in swift waters (Simpson and Wallace 1978). According to Nancy Hoefs (personal communication with Paul DeVries, May 12, 1997) water temperatures appear to be an important determinant of white sturgeon spawning; spawning is successful up to about 16°C, with mortality to embryos occurring at temperatures above about 18°C.

2.2 POTAMODROMOUS STOCKS

The trout and char species that reside within streams in the Project Area are what are termed potamodromous species, with their life cycle being completed entirely within freshwater systems (Lagler et al. 1962). The exception to this is the steelhead trout noted above, which is the anadromous form of rainbow trout.

Among the three species of salmonids that are discussed below, each is capable of exhibiting three different life history strategies/forms. These are classified as resident, fluvial, and adfluvial and I have defined them as follows:

- Resident-populations which typically reside in smaller tributaries in which they are able to complete their entire life cycle, including spawning and rearing.

⁵Personal Communication by Paul DeVries of R2 Resource Consultants with Nancy Hoefs, Nez Perce Tribe, May 12, 1997.

- Fluvial-migratory populations that utilize different habitats and sections of rivers in order to complete their life cycle; typically, the adult component of the population resides in larger river systems – adults migrate upstream into smaller tributaries in which to spawn – fry and juveniles may rear within the smaller tributaries for 2-3 years prior to maturation at which time they migrate downstream and assume residency in the larger rivers.
- Adfluvial-migratory populations that utilize different habitats in order to complete their life cycle; typically, the adult component of the population resides in a lake or reservoir system – adults migrate upstream (and in some cases downstream) into rivers and tributaries in which to spawn – fry and juveniles may rear within the tributaries for several years prior to maturation, at which time they migrate downstream and assume residency in the lake; alternatively or in combination, the fry and/or juveniles may outmigrate directly to the lake and rear within.

Examples of these life history forms are illustrated in Figure 2-3. All three of these life history forms likely occur within some drainages of the Project Area.

A commonality within the two migratory forms (fluvial, adfluvial) involves directed movement of adults to spawning areas. In many cases, there is a high degree of fidelity associated with these migrations with adults essentially “homing” to their natal streams and spawning areas (Thurrow and Guzevich 1997). McKeown (1984) suggested that such migrations may be in response to the general lack of spawning-type habitat in the areas inhabited by adults, with the tributaries providing the proper combinations of suitable substrates for egg deposition and fry emergence, proper water temperature regimes, and dissolved oxygen concentrations. An additional factor could relate to the conditions that exist after eggs have hatched and fry emerged; smaller, upstream tributaries may provide better nursery habitat due to an absence of large predators and availability of food suitable for young fish (McKeown 1984). Another common feature relates to the directed downstream migration of adults post-spawning, which could be in response to changing conditions that render the habitats less suitable for adults; e.g., decreasing streamflows, lack of food for large fish, changing water temperatures, etc.

McKeown (1984) further suggests that upstream spawning migrations may occur due to differential energy costs between adult and juvenile fish. From an energy expenditure perspective, there is less of a cost associated with upstream migrations completed by adults, versus juveniles. Thus, directed movement of juvenile fish to feeding areas is most efficiently accomplished via a downstream movement with the current.

Even with the variations noted above, there is a strong connection between the populations and a diversity of habitats, both temporally and spatially. In the case of fluvial populations, although the adult phase may reside in large river systems, there is a connection to smaller tributaries during migrations and spawning, and subsequent rearing of fry and juveniles. This connection transcends any specific location that may be defined by a U&A, since the latter has no biological significance other than fish were historically captured at that location.

Rieman and McIntyre (1993) noted that in the case of bull trout and also for other freshwater salmonids, both resident and migratory forms can coexist and give rise to one another. They cited the work of Berg (1985), Foote et al. (1992), and Schmitz (1992) who have demonstrated that resident-type populations of salmonids can retain migratory phenotypes that can express themselves under differing conditions. Rieman and McIntyre (1993) indicated that a diversity of life history strategies is important for ensuring population stability and persistence, especially given the year to year variability in climatic conditions which may favor/dis-favor various species and life stages. Moreover, Rieman and McIntyre (1993) introduced the concept of metapopulation as defined by Hanski and Gilpin (1991) as an important mechanism which influences non-anadromous salmonid population stability. Metapopulations are subpopulations or local populations within larger or regional populations which tend to spread the risk of population loss due to varying environmental conditions. By having local populations spread over a range of habitats and environmental conditions, the loss of all populations due to a single event or climatological condition is reduced.

In a sense, the differing life history strategies exhibited by potamodromous species described above are similar to the diversity of habitats and life history strategies exhibited by anadromous species. The cause of such diversity is likely the same, genetic adaptation and diversification in part in response to widely varying environmental and climatic conditions, with the intent of increasing population survival and decreasing population risk. Species interactions and niche partitioning have also likely influenced such diversification. The results are exhibited in temporal and spatial variability in life history function and location that occurs within a given population of fish. As an example, the period of spawning within a fluvial population of bull trout (or westslope cutthroat trout) may be prolonged over a 2-3 month period, with a portion of the population spawning in the upper watershed, and a later segment spawning much lower down. Thus, resulting fry are distributed over a much longer extent of the stream which increases the overall chances for the population to survive localized perturbations.

2.2.1 Redband/Rainbow Trout

Genetically, Behnke (1992) classifies the form of rainbow trout in Idaho as redband trout (*O. mykiss gairdneri*) which is included within the Columbia River basin, reserving the use of rainbow trout to those populations of coastal origin. In this report I designate the species as redband/rainbow trout to acknowledge the most current taxonomic designation, while preserving the more commonly applied nomenclature of rainbow trout. According to Simpson and Wallace (1978) redband/rainbow trout are the most important gamefish species in Idaho, having a broad geographic distribution and being easily cultured (Appendix A). Redband/rainbow trout have been successfully raised in hatcheries for many years with outplantings of hatchery fish to many streams and lakes in Idaho to supplement sportfishing opportunities. Genetically, the resident redband/rainbow trout is essentially identical to the anadromous steelhead trout, and it is not uncommon for streams to harbor both forms in the same waters. In these cases, it is generally visually impossible to distinguish between the two, until such time that the steelhead undergo smoltification and assume a distinct "silvery" appearance.

With the exception of the upstream migration of adults and downstream migration of smolts, portions of the freshwater life history strategy of redband/rainbow trout are similar to that of the steelhead, although variations do exist. These can range from populations that reside entirely within a localized section of a stream (hereinafter termed – resident populations), to populations that spend the majority of time within a lake and migrate into inlet or outlet tributaries to spawn (referred to as – adfluvial populations), to populations that generally reside within relatively large river systems but migrate upstream into smaller tributaries to spawn (referred to as – fluvial populations). Lindsey et al. (1959) described the adfluvial behavior of redband/rainbow trout in a lake system in British Columbia, in which adult fish utilized both inlet and outlet streams for spawning. These same type of life history strategies are utilized by other potamodromous species in Idaho, including cutthroat trout and bull char, which are described below.

Redband/rainbow trout spawn in tributaries and rivers that range widely in size and morphology. These can include some of the larger streams and rivers in the state such as the upper Salmon and Clearwater rivers, to relatively small, steep headwater streams found in upper forested watersheds and wilderness areas. Like cutthroat and bull char, it is not uncommon to find resident populations of redband/rainbow trout in tributaries that at first glance would appear to be too small and too steep to contain viable fish populations. Such populations have evolved around and adapted to the local conditions and their continuance will require protection of their habitats and the resources (e.g., streamflows, riparian vegetation, etc.) that combine to create such.

Like steelhead, redband/rainbow trout are spring spawners with spawning occurring from March-June, egg incubation extending from April to early July, and fry emerging from May to early August. Young redband/rainbow trout utilize a variety of habitat conditions and locations in streams which will vary by the age of the fish, time of year, time of day, and functional mandate. Thus, shifts in habitat use likely occur relative to day-night cycles (diel variation), seasonal cycles, periods of feeding, periods of rest, and in response to sympatric species segregation (i.e., occurrence of two species in a stream that possess similar habitat requirements). Chapman and Bjornn (1969) discussed many of these changes in habitat use and behaviors among different species, including steelhead/redband/rainbow trout.

2.2.2 Westslope Cutthroat Trout

The cutthroat trout found in the lower Snake River basin and particularly in the Clearwater and Salmon River drainages are classified as westslope cutthroat (*O. clarki lewisi*) (Behnke 1992). Other cutthroat trout sub-species exist in Idaho, but are generally located in different drainage systems (e.g., Snake River cutthroat, Bonneville cutthroat, Bear Lake cutthroat).

Cutthroat are spring spawners, with spawning occurring from April to July, egg incubation from April to September, and fry emergence occurring from June to October. Because there is overlap in spawning times, cutthroat trout have been at least exposed to hybridization with sympatric⁶ populations of redband/rainbow trout. However, according to Behnke (1992), the westslope cutthroat trout populations in many of the tributaries to the Salmon and Clearwater river drainages show little or no outward sign of hybridization. Behnke (1992) suggested that because the two species, westslope cutthroat and redband/rainbow have co-evolved in sympatry for thousands of years, there has likely developed ecological distinctions that favor reproductive isolation. Thus, there may be slight differences in the habitat characteristics or temperature/flow conditions sought between the two species during the spawning period that ensures asynchronous reproduction and reduces the potential for hybridization.

The life history strategies of westslope cutthroat have been described by Liknes and Graham (1988) for Montana streams, which parallel those occurring in Idaho's waters. These correspond to those described above; i.e., resident - non-migratory populations which complete their entire life cycle within a given tributary; fluvial-migratory populations that reside in larger river systems and migrate to tributaries to spawn and for juvenile rearing; and adfluvial-migratory

⁶Sympatric populations are those that coexist with another population of fish of a different species; e.g., redband/rainbow populations are often sympatric with cutthroat trout populations.

populations that reside in lakes and migrate to tributaries to spawn and for fry and juvenile rearing.

Westslope cutthroat trout have been observed to migrate a substantial distance to spawn. Bjornn and Mallett (1964) reported that adult cutthroat trout in the Middle Fork Salmon River migrated an average of about 20 miles to reach spawning habitats; the maximum distance recorded was 80 miles. In studies conducted in the upper Flathead River in Montana, Shepard et al. (1984) observed cutthroat trout migrating an average of about 28 miles to reach spawning habitats; maximum migration distance was 188 miles. Larkin⁷ observed cutthroat trout moving from the upper Lemhi River valley to the mainstem Salmon River, a distance of 46 miles.

2.2.3 Bull Trout

Bull trout are char and members of the genus *Salvelinus*, which is shared with several other common salmonid species, including the brook trout (*Salvelinus fontinalis*) and the lake trout (*Salvelinus namayacush*). Bull trout have recently received a tremendous amount of attention from resource agencies and research institutions, primarily because both the Columbia River basin and Klamath River basin stocks have been listed as threatened under the federal ESA by the U.S. Fish and Wildlife Service (50 CFR Part 17, Volume 63, No. 111).

Bull trout within the streams of the Project Area likely exhibit all three of the aforementioned life history strategies/forms - "resident," "fluvial," and "adfluvial." Indeed, overlap of these forms may occur within a given segment of river, either representing distinct or separate populations (Jakober 1992, as cited in Rieman and McIntyre 1993).

Bull trout are fall spawners with the majority of spawning activity occurring from September to early November (Appendix B). Studies have shown that bull trout can migrate long distances to reach spawning areas. Bjornn and Mallett (1964) reported an average migration distance of about 22 miles for bull trout migrating within the Middle Fork Salmon River; maximum distance noted was over 190 miles. Shepard et al. (1984) and Fraley and Shepard (1989) reported migration distances averaging 93 miles (maximum migration distance observed was 188 miles) for adfluvial bull trout populations in the upper Flathead River, Montana. Elle⁸ observed bull trout moving into Rapid River (from the Little Salmon River) in late May through July, with spawning

⁷Personal communication by Michael Gagner of R2 Resource Consultants with Mike Larkin of the Idaho Department of Fish and Game, Salmon, Idaho, October 1, 1997.

⁸Personal communication by Michael Gagner of R2 Resource Consultants with Steve Elle of the Idaho Department of Fish and Game, Nampa, Idaho, October 20, 1997.

occurring throughout September. Movement of bull trout during this period ranged from 25-75 miles. Thurow and Guzevich (1997) reported on the results of radiotagging studies of bull trout in Rapid River and noted a "home" range that exceeded 60 miles. Clearly, bull trout are a species that can and reportedly does migrate long distances in which to spawn.

The pattern in which juvenile bull trout emigrate from upstream nursery and rearing habitats is likewise variable. Shepard et al. (1984) reported several age classes of bull trout emigrating from tributaries to the upper Flathead River. Reiser et al. (1997) observed newly emerged bull trout fry outmigrating from the upper Cedar River in Washington to Lake Chester Morse. Studies conducted by McPhail and Murray (1979) suggested bull trout emigration encompasses two outmigration periods, a spring migration consisting of newly emerged fry and fall migration comprised of one and two year old (1+ and 2+) juveniles. Pratt's (1992) studies and review of bull trout ecology indicated three seasons of outmigration including spring, summer, and fall. The variability in timing of bull trout fry and juvenile outmigrations is likely another adaptation to environmental conditions which are continually changing. An extended outmigration period (several months) is more likely to ensure the survival of the population than if all outmigration was completed within a relatively narrow time frame (several days/a couple of weeks). In the latter condition, a single climatological event such as a flooding, could essentially eliminate an entire year class from the population.

The life history strategies that bull trout and other freshwater salmonids have developed are necessarily complex and were manifest in direct response to the inherently variable environmental conditions that have occurred over the tens to hundreds of thousands, indeed millions of years to which the species have evolved. As noted above, this has created several, oftentimes overlapping life history strategies which are collectively designed to reduce population risk and increase population survival. The strategies require that populations utilize a mosaic of habitat forms and types in order to achieve the greatest chances for survival. Clearly, measures that will ensure the long term sustainment and maintenance of the different species should be directed at protecting the full range of habitat conditions and types to which the species have evolved. The instream flow claims developed for streams and rivers in the SRBA were formulated to provide for such conditions and protect the variability in conditions to which the species have evolved.

3. SUMMARY OF HABITAT REQUIREMENTS OF SALMON AND TROUT WITH EMPHASIS ON FLOW DEPENDENCIES

The life history strategies described above serve to illustrate the importance of connectivity between different habitat types and their occurrence in different locations within the watershed to the propagation of healthy, abundant populations of salmon and trout. Taken in the context of the established U&A locations (as noted in Figure 1-2), it is apparent that the production of harvestable fish populations at a given location, requires that suitable conditions exist within all sections of the watershed, in which the fish available for harvest at that location rely, for adult passage, spawning and egg incubation, fry and juvenile rearing, and juvenile/smolt downstream passage. In this section, I briefly summarize important habitat components that relate to each and illustrate their relationship to flow.

3.1 UPSTREAM MIGRATION

Populations of both salmon and trout exhibit long migrations in streams and rivers to reach their natal spawning streams. In the case of salmon and steelhead, (and many stocks of fluvial and adfluvial trout) a strong "homing" instinct results in the adults seeking and finding the same streams and in many cases the same locations (spawning areas) within those streams in which they were produced. This homing capability has been shown to be linked to olfactory imprinting⁹ that occurs around the time of smoltification and downstream movement of juveniles.

As noted by Bjornn and Reiser (1991), adult salmonids returning to streams to spawn must do so at the proper time and with sufficient energy to complete their life cycle. Although salmon and trout stocks have evolved such that successful migrations can usually occur under a variety of conditions (owing to differences in migration timing), man-induced and in some cases natural events can result in sufficient delays in migration to impact at least a portion of the spawning population and hence reduced egg and fry production.

Successful upstream migration is dependent on a variety of factors, all of which are related to streamflow. These include streamflow, water temperature, dissolved oxygen, turbidity, and physical barriers (Bjornn and Reiser 1991), which are briefly described below.

⁹ Olfactory imprinting is associated with stream specific odors imparted to the waters that result from watershed characteristics such as soils, flora and fauna.

3.1.1 Streamflow – Water Depth and Water Velocity

Without sufficient streamflow in a stream or river, adult fish can not successfully migrate upstream to spawning areas. The quantity of such flows necessary for passage has been evaluated by a number of investigators who have assessed passage requirements on the basis of the percentage of the average annual flow (Baxter 1961) and on specific water depths and water velocities adult fish are capable of migrating through (Thompson 1972). For trout and salmon, these were defined in terms of minimum water depths and maximum water velocities and ranged from 0.4 to 0.8 ft, and 4.0 to 8.0 ft/sec respectively (Thompson 1972). These represent minimum depth and maximum velocity criteria and must be evaluated in the context of applying such to stream reaches that pose as potential migration barriers, such as shallow riffles.

In general, the degree to which streamflow conditions may become problematic to upstream migrating adults relates directly to their migration period. Thus, stocks that migrate during the spring under high streamflow conditions (e.g., steelhead) would be less likely to encounter flow related impediments, than stocks that migrate later in the year, such as chinook salmon. Low flow conditions (resulting from a combination of drought and irrigation withdrawals) have already reportedly occurred in the upper Salmon River drainage within the Lemhi River basin that have on occasion, rendered adult upstream migrations impossible. In these cases, the IDFG has resorted to capturing and transporting adults around dewatered sections of the stream. This has prompted several studies that evaluated more efficient irrigation practices (Ott Water Engineers 1986), as well as the formation of watershed associations whose objective is to more effectively manage irrigation practices, with consideration for the needs of anadromous fish (Idaho Soil Conservation Commission 1996).

3.1.2 Water Temperature

Because salmon and trout are poikilotherms (cold blooded), their metabolism and life history functions are closely linked to water temperatures. In the case of upstream migrations, water temperatures that are too warm or too cold have been reported to influence migration timing and may result in delays (Hallock et al. 1970; Bjornn and Reiser 1991).

Factors that can lead to altered thermal regimes in streams include removal of riparian vegetation and forest canopy, irrigation withdrawals, irrigation return flows, releases of water from deep reservoirs (e.g., Dworshak Reservoir on the N. Fork Clearwater River), and in some instances, release of cooling water from processing and/or power plants. In general, the effect of the first three alterations is to increase water temperatures, while deepwater reservoir releases tend to decrease downstream temperatures. Such effects of course vary seasonally.

3.1.3 Dissolved Oxygen

Adult migrating fish have been shown to be adversely affected by reductions in dissolved oxygen (Davis et al. 1963). Dissolved oxygen concentrations in water are directly influenced by the temperature of water (warmer water can hold less DO than coldwater), so that the alterations noted above (section 3.1.2.) that result in elevated water temperatures can have a double effect relative to reduced DO concentrations.

Dissolved oxygen in streams and rivers is a product of atmospheric exchange with the water surface. The concentrations of DO in river waters are influenced by surface agitation and resulting reoxygenation that typically occurs in riffles and cascades. Streamflow can increase or decrease the degree of reoxygenation associated in these areas.

3.1.4 Turbidity

According to Bjornn and Reiser (1991), high turbidity in rivers may delay migrations (as reported by Bell [1986] and Cordone and Kelly [1961]), but turbidity alone does not seem to affect the homing ability of adults (as noted by Whitman et al. 1982). In general, the highest turbidities associated with a stream or river occur in conjunction with high streamflows, which, in the case of the Salmon and Clearwater basins are temporally related to run-off patterns in the spring (April-early June). High turbidities can occur at other times and are generally related to man-induced activities such as timbering, road construction, and agricultural practices.

3.1.5 Physical Barriers

Physical barriers such as waterfalls, debris jams, and artificial structures (e.g., dams, irrigation flow deflectors) can delay or prevent upstream migration of adults. Salmon and trout have certain swimming and jumping capabilities that vary by species (Bell 1986; Reiser and Peacock 1985). Darting speeds (maximum speeds attainable over a short period of time [secs]) reportedly range from about 6 ft/sec for certain trout species to over 26 ft/sec for steelhead trout (Bell 1986). Calculated jumping capabilities range from about 2.5 ft for brown trout to over 11 ft for steelhead (Reiser and Peacock 1985).

Streamflow can directly influence the passage conditions at potential barriers. For example, under conditions of low flow, a particular falls may have a total height that creates conditions greater than the combined jumping and swimming capabilities of salmon and trout, and hence, serves as a barrier to upstream migration. Under higher flow conditions, the height of the falls can be reduced (because of increased water surface elevations in the plunge pool) to levels in

which adult passage can occur. I have personally observed such conditions at a set of falls on the Yankee Fork of the Salmon River; i.e., the falls would likely pose a complete barrier under low flow conditions but would be passable under high flow conditions. In that case, there was direct evidence that adults were passing the falls, since I observed numerous redds in the section of river upstream from the debris jams/falls. The important point here is that what appears to be a barrier under one set of conditions, may be passable under different flows.

3.2 SPAWNING AND EGG INCUBATION

The habitat conditions that meet the reproductive requirements of salmon and trout can arguably be considered as one if not the most important relative to sustainment of fish populations. The conditions that exist during the period in which eggs are deposited in the gravels, embryos incubate and hatch, and fry subsequently emerge are primary determinants of what is termed "year-class-strength" and the ultimate numbers of fish that may be recruited into the population and return as adults. This year-class-strength can vary widely interannually due to specific combinations of physical and hydraulic characteristics determined largely by stochastic variation in natural climatic conditions. However, anthropogenic impacts (i.e., those caused or influenced by man) related to land-use and water development projects (e.g., flow depletion due to irrigation withdrawals, water quality changes, flow regulation below dams, road construction, timbering, etc.) can likewise impact spawning and egg incubation success regardless of climatic variation. Many of these impacts are associated with changes in streamflow and a review of important flow dependent components that influence spawning and egg incubation success is provided below.

3.2.1 Streamflow

The influence of streamflow on spawning habitat occurs in both a quantitative and qualitative manner. Quantitatively, streamflow plays a direct role in determining the areal extent of habitats that can be used by adult fish for spawning. The magnitude of streamflow also has an influence on the quality of the spawning gravels and on maintaining suitable conditions for incubating eggs within such gravels.

As noted above, streamflow regulates the amount of spawning habitat/area within a stream by determining the extent to which spawning gravels are wetted with the proper combinations of water depth and water velocity. Several methods have been developed to determine the relationship of flow to spawning habitat, including those of Thompson (1972), Collings (1972, 1974), and the Physical Habitat Simulation (PHABSIM) method developed by Bovee and Milhous (1978) and described in detail in Bovee (1982, 1986), and Trihey and Wegner (1981). This latter method is the most widely applied of all instream flow methods (Reiser et al. 1989)

and was the method utilized in developing the United States/Nez Perce Tribe instream flow claims for streams in the Project Area. These methods rely on an understanding of the water depths, water velocities and substrate sizes that are typically utilized by salmon and trout for spawning. Thus, researchers have collected these type of data directly over spawning areas or nests, which are termed redds. I have personally collected hundreds of such measurements over redds of salmon and steelhead in a variety of streams within the Project Area (Reiser and White 1981). These data are then linked with specific hydraulic and habitat models from which habitat:flow relationships can then be determined. In general, there is a consistent three stage pattern that is represented in such relationships; 1) an initial increase in habitat with increasing flows as more spawning area is wetted and combinations of water depth and velocity remain suitable; 2) a leveling off of habitat as flows continue to increase and ultimately; 3) a decrease in spawning habitat as flows continue to increase as water depths and velocities begin to exceed those utilized by salmon and trout.

Discharge also plays an important role in providing and maintaining the quality of the spawning gravels. This typically occurs as part of the runoff cycle in association with high flows resulting from snowmelt. These flows typically serve, among other things to mobilize and transport fine sediments from spawning gravels which is important for increasing gravel permeability and facilitating the interchange of surface and intragravel flows. This interchange is critical for the successful incubation of deposited eggs since the flows result in the transport of oxygen to and removal of metabolic wastes from the embryos. The significance of the interchange of surface with intragravel flows has been demonstrated by Sheridan (1962) and Wells and McNeil (1970). Reiser and White (1981), Wickett (1954) and Chapman et al. (1982) noted relationships between surface flows and intragravel water velocities suggesting that reductions in the former could reduce the latter (Figure 3-1). The flushing of fine sediments that occurs in conjunction with high runoff in the spring, thus serves to increase the quality of the spawning gravels and enhances potential survival to emergence of fry. However, such flows and the benefits related to sediment transport are not limited to spawning alone; benefits are also accrued to rearing habitat, including areas of invertebrate production. Reiser (1997) and Waters (1996) summarized the overall impacts of sedimentation on aquatic biota, including fish and invertebrate habitats. Natural runoff processes that annually and seasonally provide high flows within a stream are extremely important for transporting sediments (from riffles and pools), maintaining channel conveyance, creating and maintaining physical habitat structure in the channel, and providing connectivity with the riparian zone and vegetation thereof.

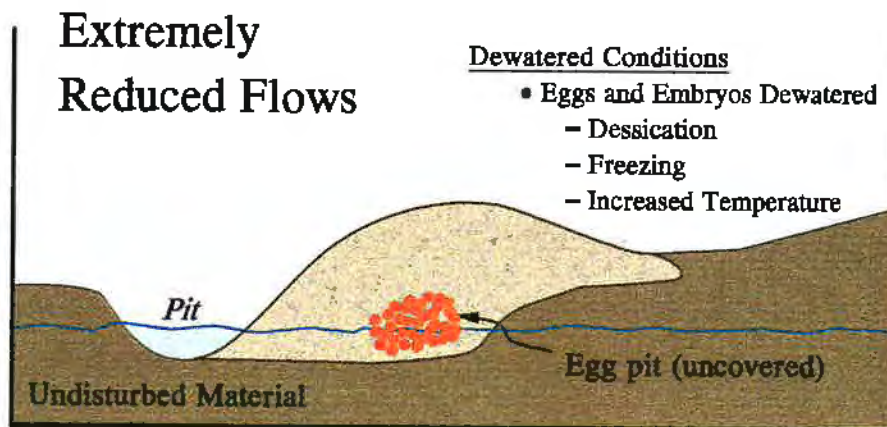
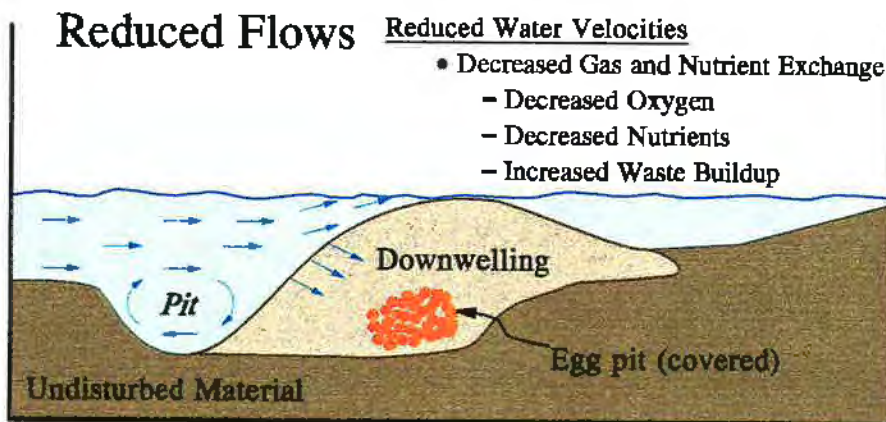
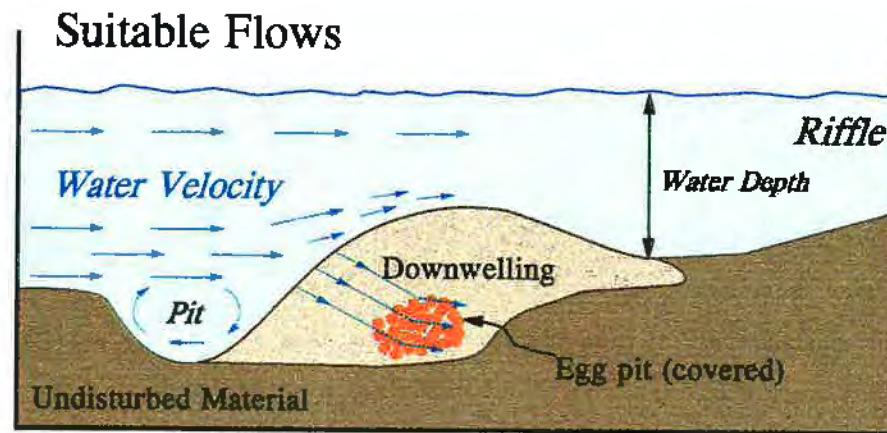


Figure 3-1. Conceptual diagram of salmonid spawning nests illustrating generalized effects of streamflow reductions on the intragravel environment.

3.2.2 Water Temperature

The timing of spawning of salmon and trout in streams is closely linked to water temperatures (Bjornn and Reiser 1991). In the streams within the Project Area of Idaho, water temperatures are likely primary determinants of when fish spawn, how long the eggs incubate (development is directly related to water temperature), and when fry emerge. Factors that may alter such temperatures and therefore affect spawning and incubation have been described earlier and include; flow regulation, flow depletions/diversion, loss of riparian vegetation and thermal alteration due to cooling water discharge.

3.2.3 Cover

Adult fish utilize or are associated with cover both during their upstream migrations and during spawning. Cover may be in the form of deep pools, surface turbulence, and undercut banks and overhanging vegetation (Bjornn and Reiser 1991). Such cover can protect the fish from disturbance, predation, high water velocities, and also provide shade for holding fish. All of these cover components are influenced by streamflow.

3.3 FRY AND JUVENILE REARING HABITAT

As noted in section 2, both anadromous and non-anadromous salmonids spend a portion of their early lives rearing in freshwater. The habitats that constitute rearing areas are diverse and perhaps more complex than any other life history stage. For some stocks of salmon and trout, the upper drainages represent spawning and initial rearing areas, where fry and juveniles can grow in relatively protected areas that are generally free from large predators, and that contain excellent water quality characteristics.

The conditions afforded to fry and juvenile fish in many instances establish the overall carrying capacity of the stream and therefore factor directly into defining numbers of returning adults. Several studies have shown that the abundance of fry or juveniles within a stream can and does regulate the abundance of older fish. Bjornn's (1978) study of Big Springs Creek in the upper Lemhi Drainage of Idaho illustrated that there was an upper threshold/carrying capacity of the stream; seeding of steelhead fry into the drainage above a particular rate did not result in any further increases in the density of juvenile steelhead, indicating the streams' carrying capacity had been reached. Not surprisingly, one of the primary determinants of carrying capacity in streams is the quantity and quality of streamflow. That, along with several other components of rearing habitat that factor into its creation and maintenance are discussed below.

3.3.1 Streamflow

As in spawning, streamflow is the primary determinant of a number of specific factors that contribute to defining suitable rearing habitat. These factors include but are not limited to water depth, water velocity, pool volume, water temperature, dissolved oxygen, substrate quality, and in many instances, physical structure and habitat such as large woody debris (LWD). These factors can be divided similarly to those for spawning into those imparting a quantitative effect and those that are qualitative.

The amount of flow in a river has a direct influence on the distribution and quantity of water depths and associated velocities that are most often utilized by fry and juvenile salmonids. Chapman (1966) considered velocity to be perhaps the most important of the two factors, noting that without suitable velocities, no fish will be present. Studies have shown that fry of salmon and trout typically utilize velocities less than 0.3 ft/sec (Chapman and Bjornn 1969; Everest and Chapman 1972; Griffith 1972). As fish grow, they become stronger and are often associated with higher water velocities (Smith and Li 1983). Shifts in velocity usage by fish have been observed seasonally, presumably in response to water temperature changes. The shifts are generally from higher velocities in the summer feeding periods to lower velocities during the winter holding periods (Chisholm et al. 1987; Tschaplinski and Hartman 1983).

Water depths used by fry and juveniles can be quite variable depending on the factors associated with such depths, e.g., substrates, cover, food, velocity, predator density. Newly hatched fry often utilize the extreme edge habitats of a stream where velocities are low and there are few predators. As fish grow they are capable of using deeper waters with limits of use generally related to some other interrelated parameter such as water velocity. Bjornn and Reiser (1991) noted that some salmonids are found in higher densities in pools than other habitat types as a result of space availability. Again, there are probably other factors acting to regulate such densities, for example the presence of LWD or overhanging vegetation can have a direct, positive benefit on increasing the carrying capacity of a given pool. Conceptually, streamflow can and does regulate the carrying capacity of rearing habitats as illustrated in Figure 3-2. Under suitable/normal conditions, the rearing areas encompassing pool:run:riffle habitats will afford living space for a certain density of fish as set by the limits of food availability, space, cover, and water quality characteristics. Reductions in flow concomitantly can translate into reductions in certain of those parameters which result in a reduced carrying capacity, as has been demonstrated experimentally by White et al. (1981).

Qualitatively, the amount of discharge in a stream has similar effects on rearing habitat as for spawning habitats. When high flows occur during the normal runoff cycle, they transport

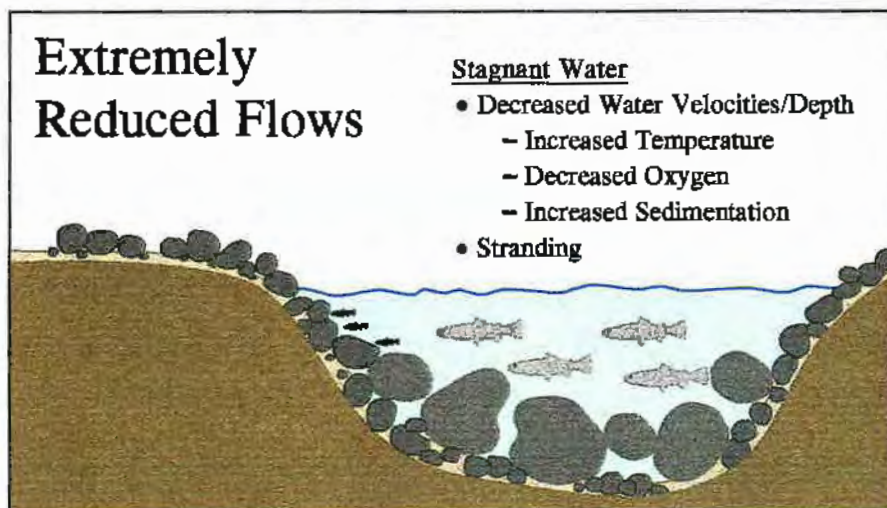
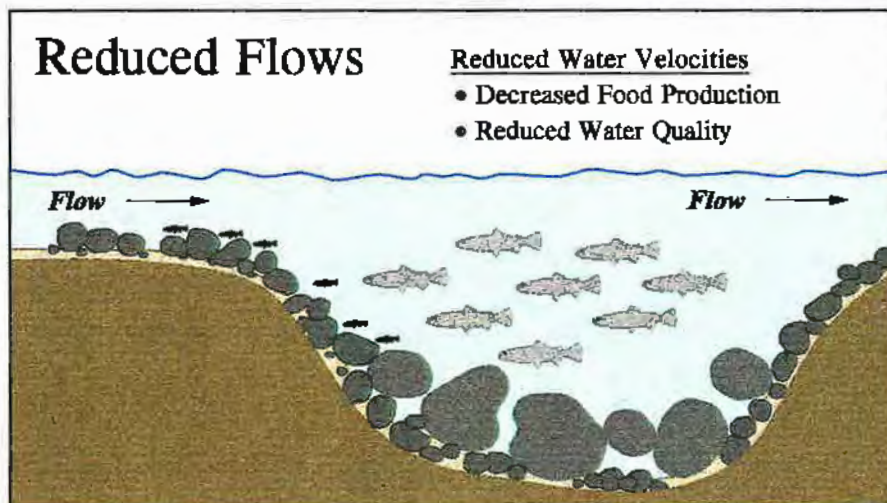
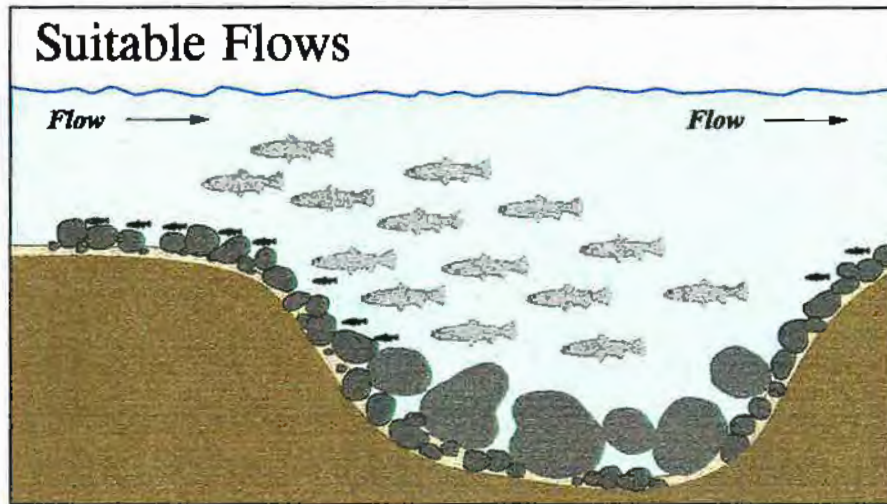


Figure 3-2. Conceptual diagram of salmonid rearing habitat illustrating concept of carrying capacity as it relates to streamflow quantity.

sediments from pools (maintain rearing space) and riffle habitats (maintain food production areas), move and recruit new structure into the channel (e.g., LWD, boulders), and inundate important riparian and floodplain vegetation that serve to increase bank stability, provide shade and contribute allochthonous (out of stream) materials/nutrients to the stream. Additionally, as discussed below, the high flows provide an avenue for the downstream migration of smolts and sub-yearling fish.

3.3.2 Water Temperature

Water temperature has a direct influence on the survival and growth of fry and juvenile salmon and trout. Temperatures in rearing habitats can vary daily, seasonally, annually, and spatially, with the degree of variation often associated with an anthropogenic impact such as logging (removal of forest canopy) or irrigation withdrawals (flow depletion). Bjornn and Reiser (1991) reviewed the literature on temperature effects on juvenile salmonids and compiled data that describe lower lethal, upper lethal, and preferred temperatures of various trout and salmon species. In general, the upper lethal temperatures for species of fish found in streams in the Project Area ranged from about 23°C for cutthroat trout to about 26°C for chinook salmon. Water temperatures influence the behavior of salmonids, most notably in the fall and winter months. During these periods, juvenile salmon and steelhead have been observed moving into large substrate materials for cover and overwintering habitat. Bjornn (1971) observed young steelhead and chinook moving out of summer rearing areas downstream into the larger Salmon River to overwinter. Bjornn (1971) observed some of the chinook salmon moving downstream into the Snake River to overwinter prior to continuing their outmigration to the ocean during the following spring.

Water temperatures are influenced by the quantity of discharge in streams and rivers. Thus, water withdrawals that remove a substantial amount of flow can impart large changes (increase temperatures) to the downstream thermal regime of a river. Based on my review of information and my familiarity with the streams in the Project Area, I would expect such changes to have already been imparted to rivers in regions having extensive irrigation diversions, such as the Lemhi and Pahsimeroi rivers in the Salmon River drainage, and the Weiser River.

3.3.3 Cover – Riparian Vegetation

There are a broad range of physical features that individually and collectively can afford cover to fry and juvenile salmon and trout. These include such things as substrate (e.g., boulders and cobbles), water depth, water turbulence, turbidity, and the more tangible items such as fallen logs (i.e., LWD) and branches, overhanging vegetation, and undercut banks. In Idaho's forested

streams and rivers, there is a strong linkage between the availability of cover in the form of LWD and the surrounding riparian vegetation. The importance of LWD as cover has been demonstrated in a number of studies which have shown reductions in salmon production in a given stream in response to reductions in LWD (Dollof 1983; Bisson et al. 1987). Hicks et al. (1991) noted that the abundance of salmonids is often closely linked to the abundance of woody debris, especially in the winter, as reported by Tschaplinski and Hartman (1983) and Murphy et al. (1986).

Vegetative communities that border streams and rivers are typically referred to as riparian vegetation. These communities provide a variety of important elements that contribute to a healthy ecosystem that can sustain salmon and trout production. Obvious benefits include shading from solar input (thereby keeping water temperatures cool), cover for salmon and trout in the form of overhanging vegetation, recruitment of both LWD and smaller debris which serves as cover, input of what is termed "leaf litter" (i.e., deciduous leaf fall, conifer needles) and other organic materials that provide nutrient input (for invertebrate production) to the stream, bank stability and therefore decreased erosion, and sources of terrestrial insect input which serves as a food supply (Murphy and Meehan 1991; Platts 1991). There are many land-use activities that can directly destroy or reduce the effectiveness of riparian vegetation. These include livestock grazing, agricultural land development, logging (buffer zones are generally required in all commercially logged forests), road construction, mining, and regulation of streamflows.

The regulation and reduction of streamflows can alter the vegetative communities (density, diversity, species composition) within the riparian zone, in some cases resulting in the complete collapse of the native riparian plant communities (Rood et al. 1995; Scott et al. 1997, Stromberg and Patten 1991). The long-term health of native riparian plant communities depends on flood flows to recharge alluvial aquifers, provide sites for seedling establishment, transport and deposit seeds on the floodplain, and replenish nutrients in floodplain soils. Sufficient in-channel flows are often also important for maintaining the alluvial aquifer within or near the rooting zone of riparian plants through the growing season. Riparian species are typically hydrophytic plants (i.e., occur in soils saturated or inundated for extended periods during the growing season), and require relatively high levels of soil moisture throughout the growing season, in contrast to adjacent upland plant communities. As a result of the various flow needs of the riparian zone, reduction in the frequency and magnitude of flood flows or reduced in-channel flows can cause the riparian zone to become smaller (both in width and in stature), less diverse, or even eliminated. All of these effects on the riparian zone in turn have negative consequences for fish habitat due to increases in water temperature, reductions in cover, and lower or altered trophic inputs. This is illustrated in Figure 3-3.

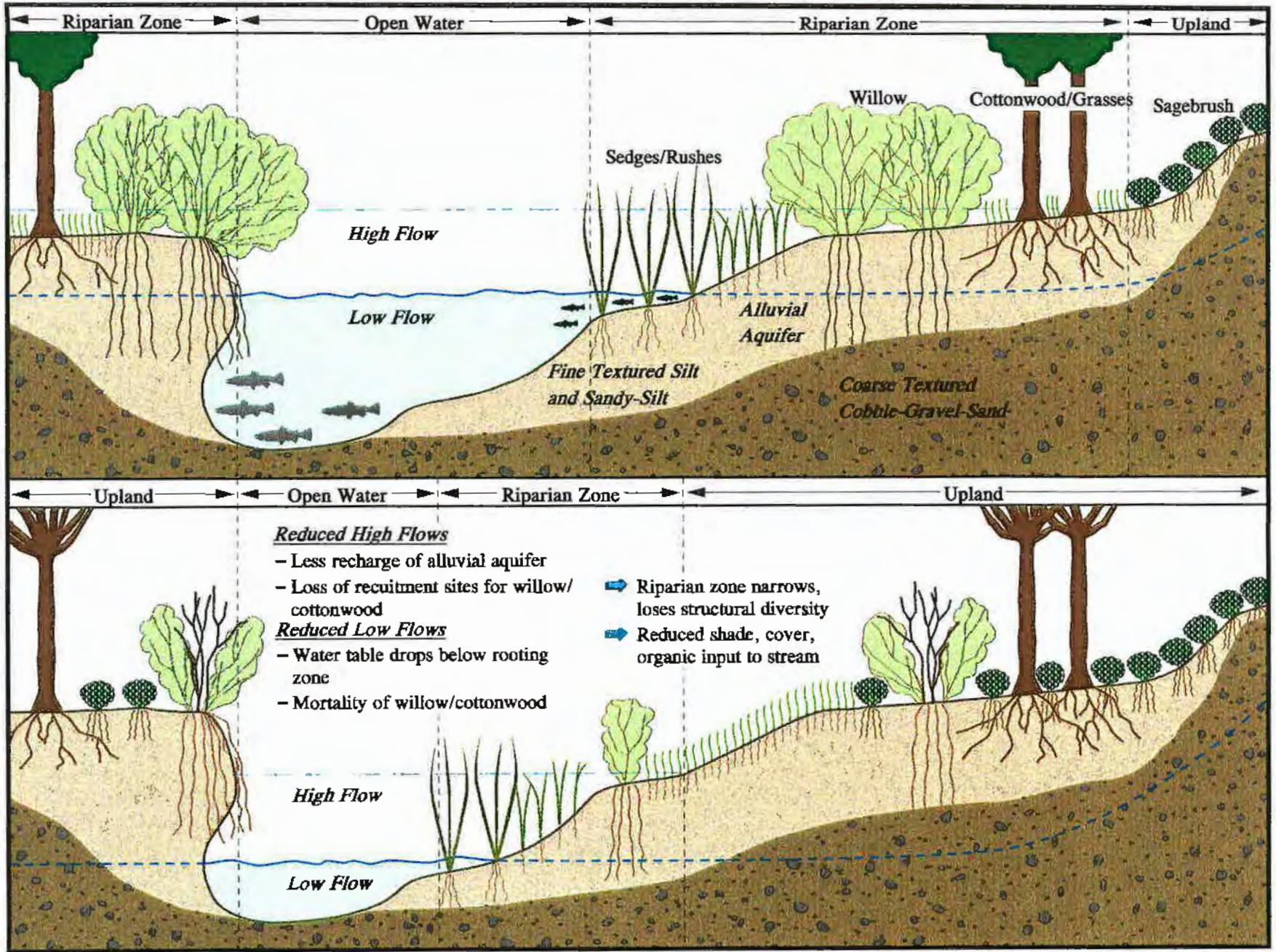


Figure 3-3. Relationship of high and low flows to riparian plants and soils under natural flow regime (above) and reduced flow regime (below) showing potential effects of reduced flows.

3.3.4 Food Production

Food production is of course critical to the rearing phase of salmonids, inasmuch as this stage represents the period of initial growth that will determine the fitness of the fish for surviving the downstream migration to the ocean or locations in the mainstem river. Food production is really an oversimplification of the overall energy supply and processing cycle that occurs in all streams and rivers. Two sources of energy are provided to streams, those that occur internal to the stream (termed autochthonous), and those that occur from outside the stream (allochthonous) (Hynes 1970; Murphy and Meehan 1991). Examples of the former include the macrophytes, periphyton (e.g., algae) and phytoplankton that rely on photosynthesis; examples of the latter include leaf litter and other organic materials entering from the riparian zones, soil erosion, and to some extent materials entering from the groundwater (Murphy and Meehan 1991). Collectively, these sources of materials when in sufficient quantity provide the necessary ingredients for the production of a complex community of benthic (bottom dwelling) organisms that include aquatic invertebrates such as mollusks, worms, crustaceans, and perhaps most importantly, aquatic insects. The invertebrate communities in streams are comprised of a diverse assemblage of organisms that vary in size, shape, color, feeding habits, and method of motility. Fry and juvenile salmon and trout actively feed and rely on these organisms for necessary growth. Factors that influence either or both autochthonous and allochthonous production will also affect food production and the quality of rearing habitats available to young fish.

3.4 JUVENILE AND SMOLT DOWNSTREAM PASSAGE

Characteristic of salmon and steelhead and stocks of fluvial and adfluvial trout and char is a period during which juvenile fish begin a directed movement downstream. In the case of salmon and steelhead, this process is preceded and triggered by physiological changes occurring in the fish that are known as smoltification, a process that is essentially readying the fish for transition to salt water. For non-anadromous fish, physiological changes may not be evident, but there is nevertheless a directed movement downstream.

In unregulated streams in Idaho, the timing of the seaward migration of salmon and steelhead has apparently evolved in concert with the cycle of runoff from adjoining mountains and hills, and has done so as a means to increase the survival rates of the fish. The outmigration typically occurs during the spring and for most stocks of fish in Idaho, in the months of March-May (see Appendix B – species periodicities). As noted earlier, the high flows that occur during this period likely benefit the survival of smolts in both a direct and indirect manner. The high flows allow the smolts to conserve energy since most of the “work” is done by the stream in the form of kinetic energy. This can have a direct influence on the smolt travel time and its ultimate

condition when it reaches the ocean and its ability to survive the transition to saltwater. The increased turbidities that are generally associated with high flows also afford the smolts protection from predators during downstream passage. These and other benefits associated with high flows during passage can affect the travel time of smolt passage, as has been demonstrated by the IDFG (Buettner 1991; Buettner and Brimmer 1993; Kiefer and Forster 1991) for selected Idaho streams.

In streams whose flows have been regulated (e.g., dam construction-creation of reservoirs; transbasin diversions of water; large irrigation withdrawals, etc.), the downstream passage of smolts and juveniles can be adversely affected. In cases where a dam has been constructed and a large reservoir formed (such as the dams on the Snake and Columbia rivers), the smolts have a difficult time locating velocity cues to guide them down through the reservoir. This increases their passage time and renders them more susceptible to predation. In addition, too long of a delay can reduce or eliminate their instinct to migrate and the fish may simply cease migration and take up residency (i.e., residualize) in one of the reservoirs. Clearly, the problems associated with dam construction and operation and smolt outmigration survival will continue to be investigated at the mainstem Snake and Columbia river dams with the goal of making a recommendation as to the continued operation of the mainstem dams by 1999, as a part of the recovery process mandated by the ESA.

That mainstem river flows during the emigration period of smolts can influence subsequent adult returns was demonstrated by Petrosky (1993) for the Snake River. In that study, Petrosky (1993) detected a trend suggesting better smolt-to-adult returns occurred when river flows were high. The efficacy of short-term pulse flows as stimulators for downstream movement of juvenile salmon, has been receiving increasing evaluation. Cramer and Demko (1993) conducted short-term pulse flow tests in the Stanislaus River in California and concluded that such flows did stimulate the outmigration of some juvenile chinook salmon, but not on a sustained basis. They further concluded that the stimulus for outmigration is at least in part controlled by the size of the fish and its physiological readiness to outmigrate. Two of the major factors that have been cited as influencing this physiological readiness of juveniles to commence outmigrations are photoperiod (the duration of daylight hours; Bjornn 1971), and water temperature (Jonsson and Ruud-Hansen [1985] as cited in Bjornn and Reiser [1991]). Recent tests conducted on the Green River, Washington below Howard Hanson Dam indicated that the release of artificial freshets had a positive influence on the outmigration of juvenile chinook salmon (Unpublished data from R2 Resource Consultants, Inc.; P. Hilgert and E. Jeanes, 1998). Such tests further illustrate the importance of streamflow to the outmigration of salmonid juveniles and smolts.

The ISG (1996) conducted a critical review of the literature and data pertaining to juvenile outmigration survival for the Columbia River ecosystem. Their analysis indicated that the relationship between flow and survival of juvenile salmonids is exceedingly complex, and can be influenced by a variety of factors, including water temperatures, predation responses to flows, biotic relationships associated with riparian and reservoir ecosystems, turbidity, and gas supersaturation. As a means to integrate all of these components into a healthy ecosystem, the ISG (1996) promoted the concept of a "normative" river system, which fundamentally suggests that regulated rivers such as the Snake and Columbia should be managed in a fashion as close as possible to that of unregulated systems. As noted by the ISG (1996),

"The many interrelated features of a river system that lead to high salmonid production occur normally in a river basin unaffected by human alterations." "By restoring key features of the system such as seasonal high flows and recognizing key migration attributes of juvenile salmon (such as surface orientation, need for feeding habitats and appropriate food, and tendency to follow flows), aspects of the river basin can be managed or reengineered to accommodate the key functional features."

An integral component of the normative river concept is variability. The ISG (1996) suggests that

"The most favorable flow strategy for a diverse assemblage of salmonids would be one that varies, favoring some stocks at one time and other stocks another time. In the normative river concept, this variability should mimic natural variability, although replacing a climate-driven variability with a planned one....."

Under this construct, the flow regime in regulated systems should be managed in a fashion that promotes and closely approximates key functions of natural river ecosystems, while the goal of managing unregulated systems should be focused on preservation of the key functions of the natural regime.

4. IMPORTANCE OF HABITAT LINKAGES TO U&A FISHING PLACES FOR PROVIDING SUSTAINABLE FISHERIES

The life history strategies that I have reviewed and summarized in this report include those of both anadromous and non-anadromous forms. The strategies and habitat requirements are necessarily complex and were manifest in direct response to the inherently variable environmental conditions that have occurred over the tens to hundreds of thousands, indeed millions of years, during which the different species and stocks of fish have evolved. As noted above, this has created several, oftentimes overlapping life history strategies which are collectively designed to reduce population risk and increase population survival. The strategies require that populations utilize a mosaic of habitat forms and types in order to achieve the greatest chances for survival. Clearly, measures that will ensure the long term sustainment and maintenance of the different species should be directed at protecting the full range of habitat conditions and types to which the species have evolved. The instream flow claims developed for streams and rivers in the SRBA were formulated to provide for such conditions as well as protect the variability of those conditions to which the species have evolved.

From this review, I have concluded that fulfillment of the Nez Perce Tribe's treaty rights to harvest fish from U&A fishing places requires more than just suitable habitat conditions within the immediate areas of the U&A. Indeed, because of the differing life history strategies and species-life stage reliance on a variety of habitat types, the need exists to protect all habitats that factor prominently into the species life cycle. This includes habitats that may be located upstream from specific U&A places, including streams within the upper segments of a given watershed. The provision of flows that will spatially and temporally protect the full range of habitats needed to protect all life history stages of important fish populations was the primary reason we developed the instream flow claims for streams in the Project Area. It is my opinion that if the instream flow claims are adjudicated and implemented, such habitats will be protected in perpetuity.

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APPENDIX A

FISH DISTRIBUTIONS MAPS

**Coho Salmon
Sockeye Salmon
Redband/Rainbow Trout
Westslope Cutthroat Trout
Bull Trout**

Fish Species Distribution - Sockeye Salmon (*Oncorhynchus nerka*)

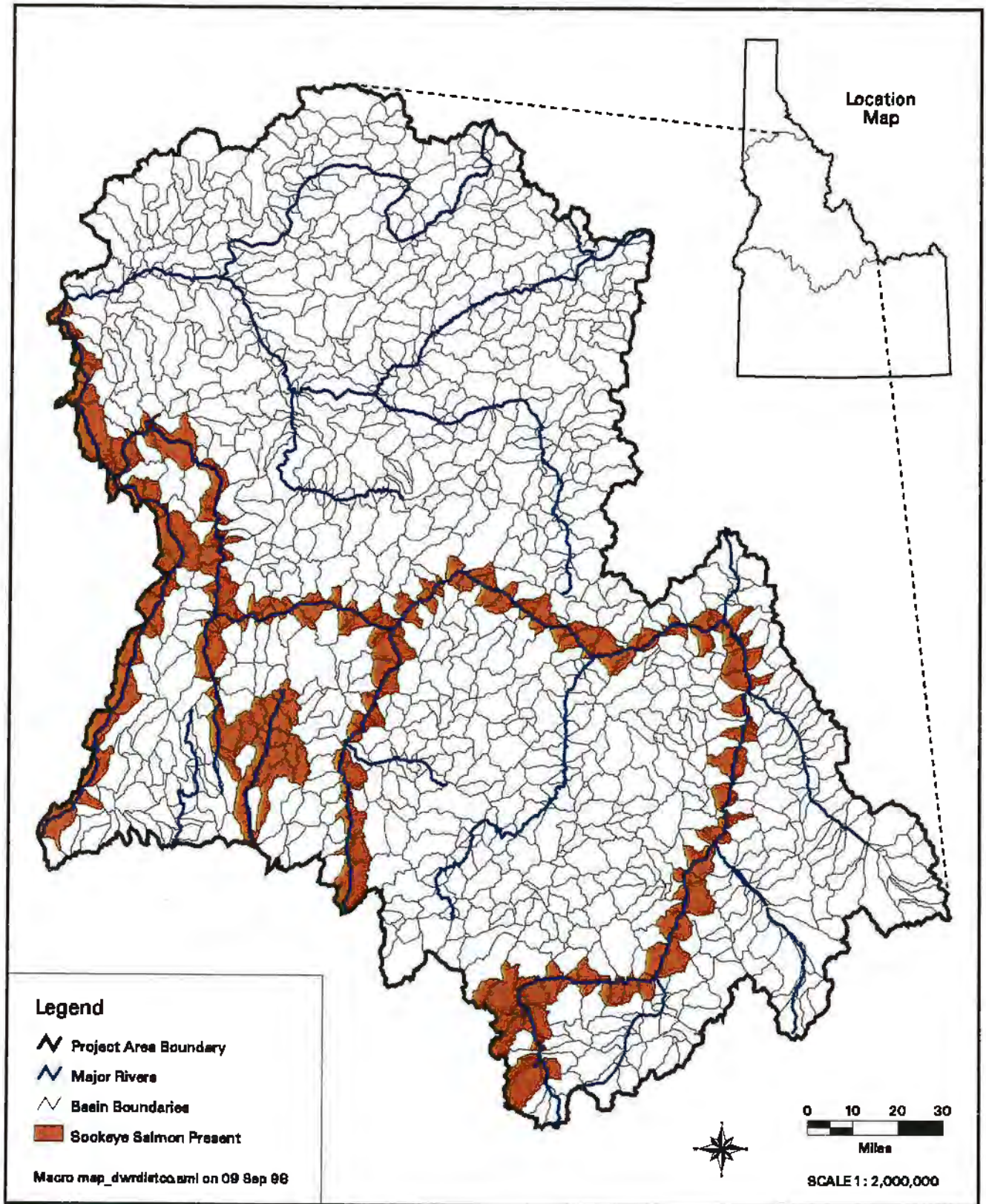


Figure A-1. Distribution of sockeye salmon in the Snake, Salmon, and Clearwater river basins, Idaho.

Fish Species Distribution - Coho Salmon (*Oncorhynchus kisutch*)

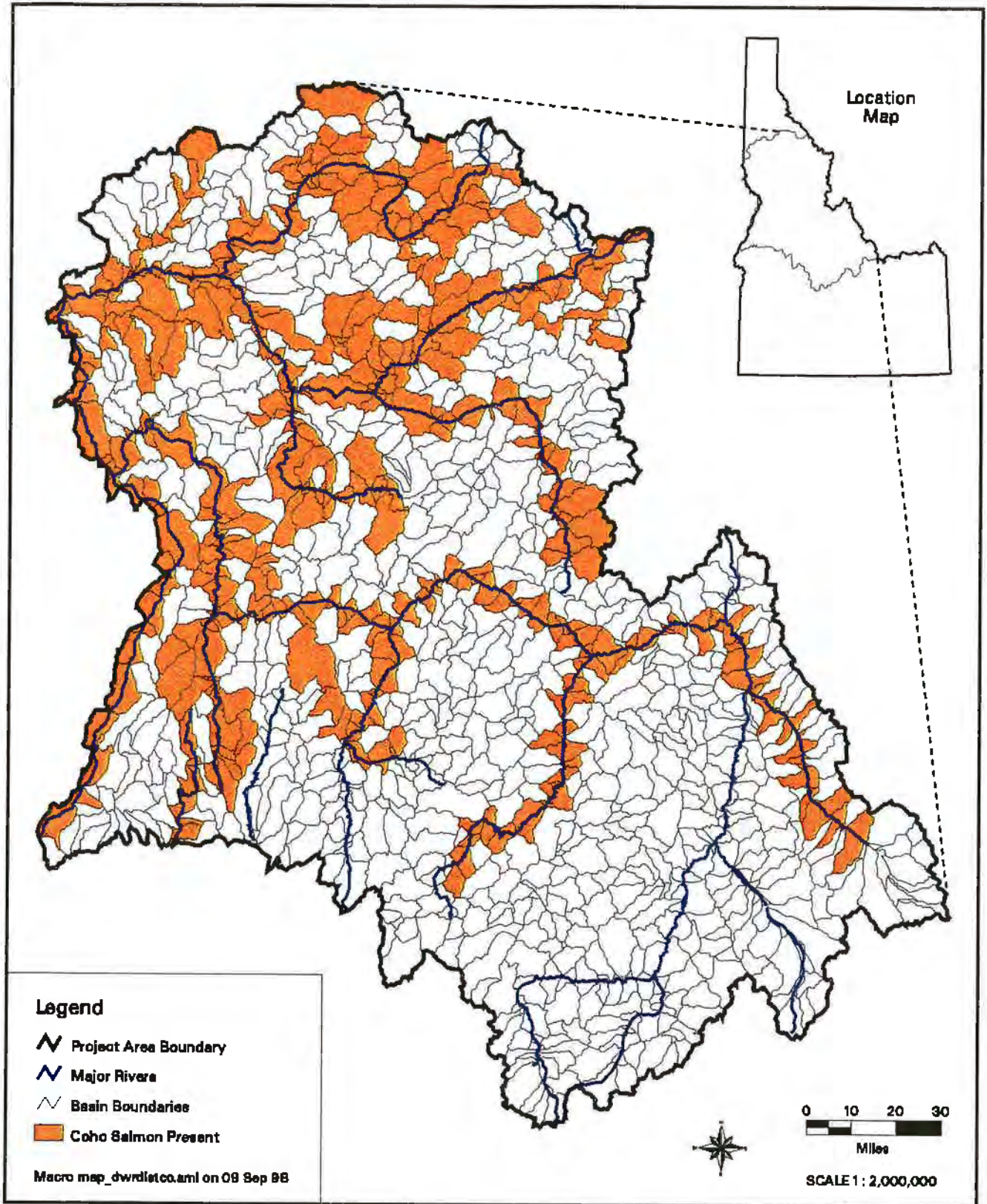


Figure A-2. Distribution of coho salmon in the Snake, Salmon, and Clearwater river basins, Idaho.

Fish Species Distribution - Redband/Rainbow Trout (*Oncorhynchus mykiss*)

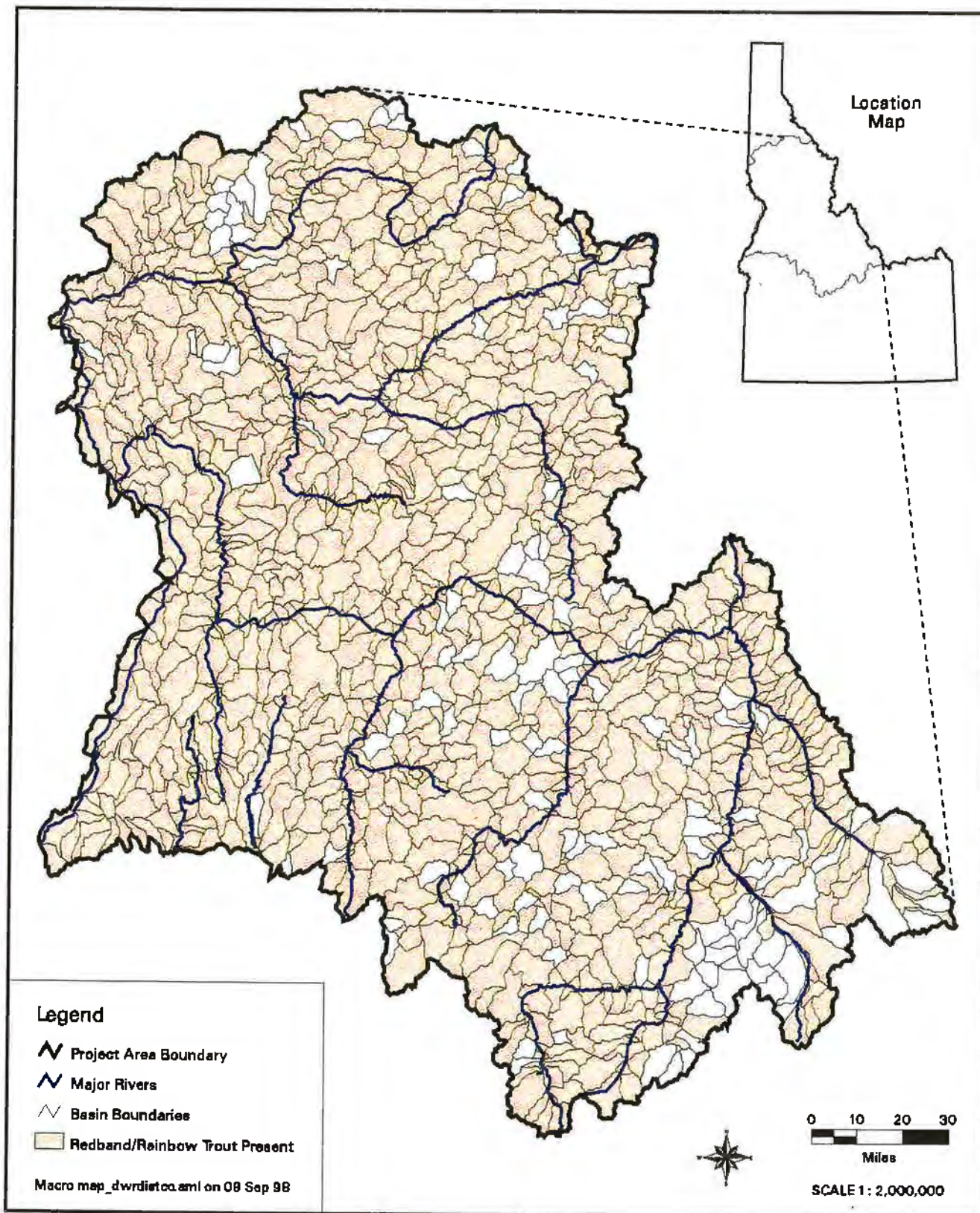


Figure A-3. Distribution of redband/rainbow trout in the Snake, Salmon, and Clearwater river basins, Idaho.

Fish Species Distribution - Cutthroat Trout (*Oncorhynchus clarki*)

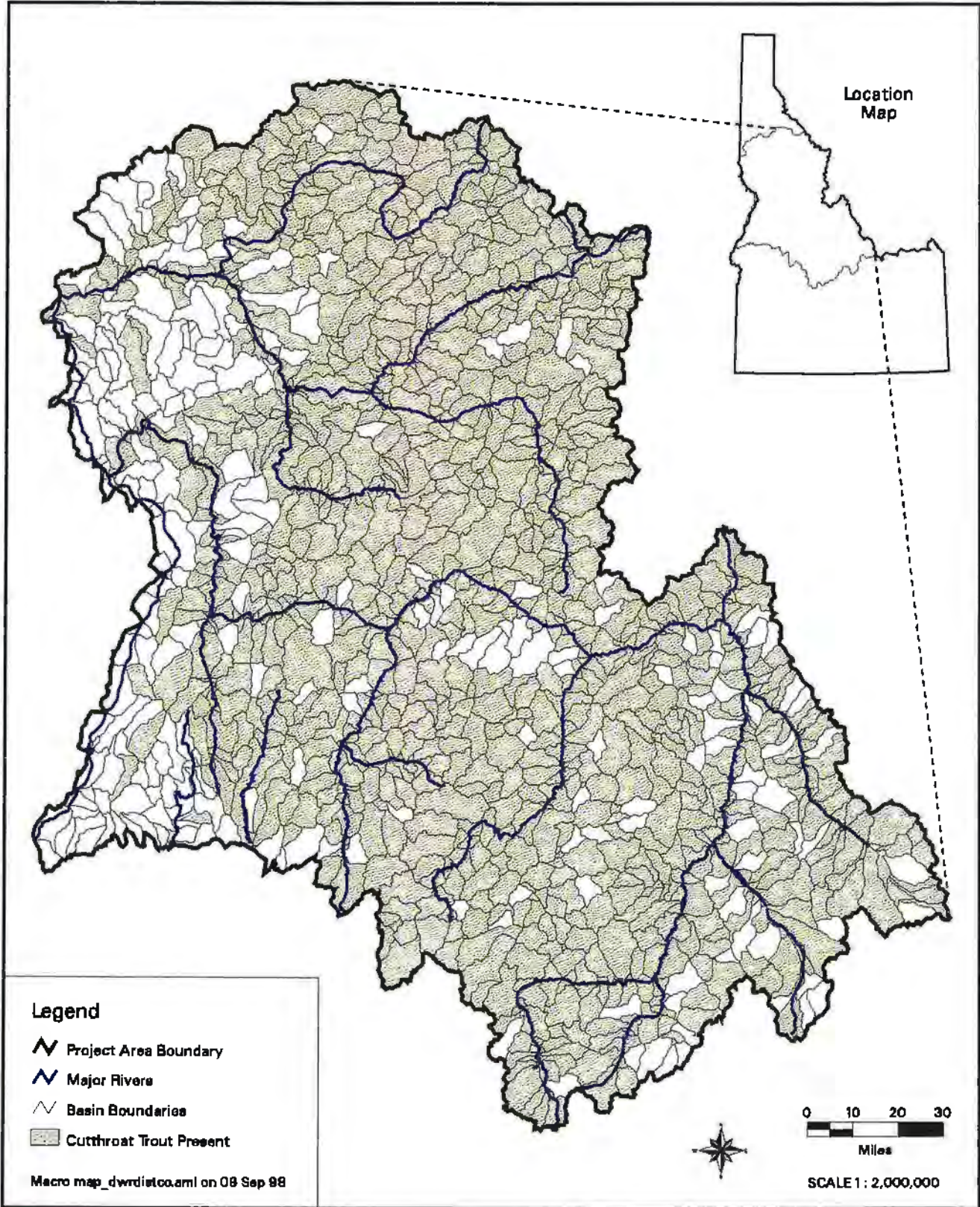


Figure A-4. Distribution of cutthroat trout in the Snake, Salmon, and Clearwater river basins, Idaho.

Fish Species Distribution - Bull Trout (*Salvelinus confluentus*)

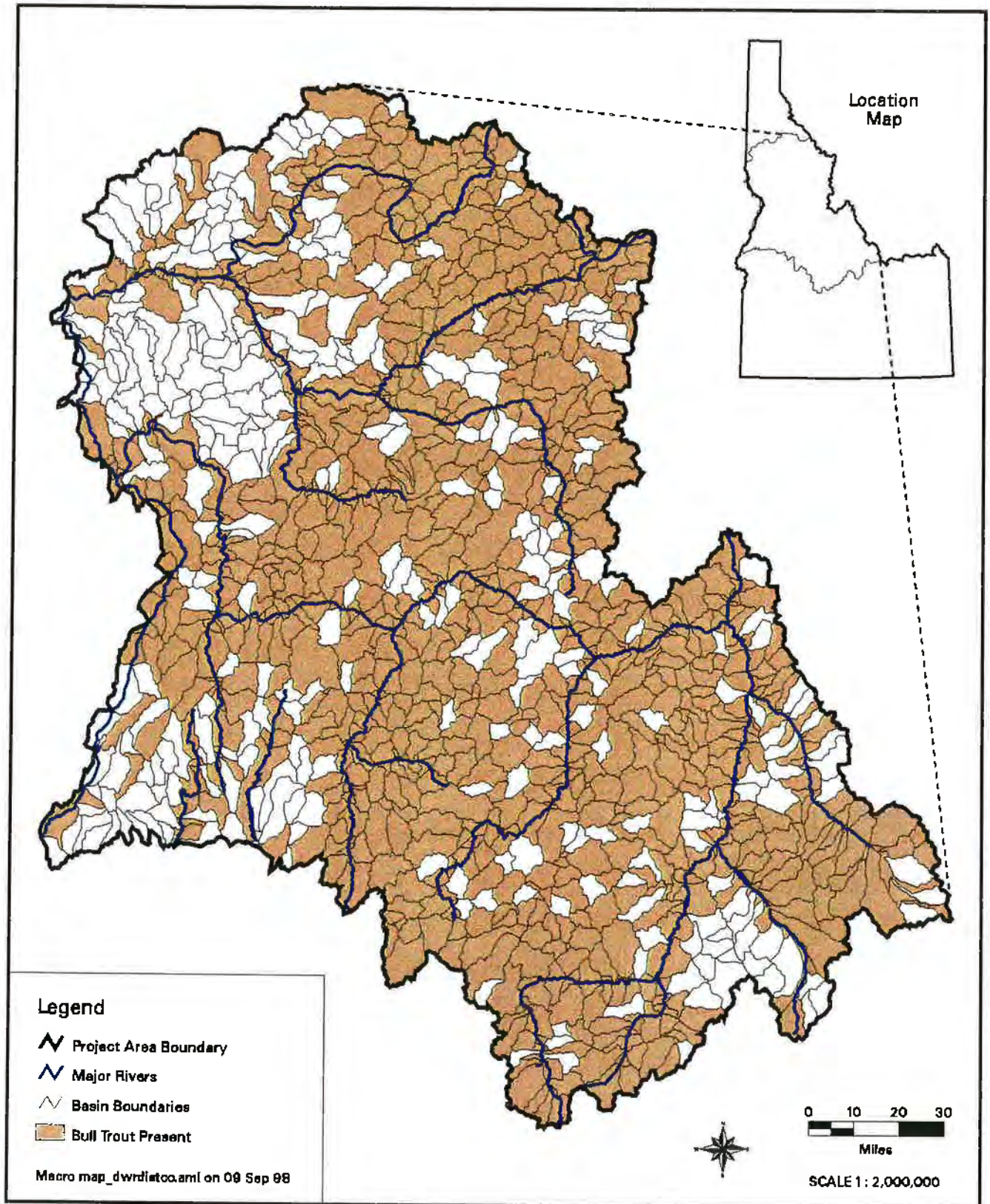


Figure A-5. Distribution of bull trout in the Snake, Salmon, and Clearwater river basins, Idaho.

**APPENDIX B
FISH PERIODICITIES**

List of Species

BULL TROUT
ALL BASINS

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult	MSH	MSH									MSH	MSH
Spawning									TR3	TR3		
Incubation												
Fry												
Juvenile												
Outmigrate												

TR3: Found only in 1st to 3th order tributary streams.

MSH: At altitudes above 3,000 ft., adults found only in 2nd order and larger streams.

CHINOOK SALMON BY RACE CLEARWATER RIVER SUB-BASIN

Spring Chinook Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult					TR3							
Spawning							TR4*	TR4*	TR4*			
Incubation												
Fry												
Juvenile												
Outmigrate												

Summer Chinook Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult												
Spawning							TR5	TR5	TR5			
Incubation												
Fry												
Juvenile												
Outmigrate												

Fall Chinook Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult												
Spawning												
Incubation												
Fry												
Juvenile												
Outmigrate												

TR3: Found in 3rd order or greater streams only
 TR4*: Spawn in 1st to 4th order basins, plus some 5th order basins.
 TR5: Spawn in 1st to 5th order basins.

CHINOOK SALMON BY RACE
SNAKE, LOWER AND SOUTH FORK SALMON RIVER, LITTLE SALMON
WEISER, and PAYETTE RIVER SUB-BASINS

Spring Chinook Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult												
Spawning							TR4	TR4	TR4			
Incubation												
Fry												
Juvenile												
Outmigrate												

Summer Chinook Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult												
Spawning							TR4	TR4	TR4			
Incubation												
Fry												
Juvenile												
Outmigrate												

CHINOOK SALMON BY RACE UPPER AND MIDDLE FORK SALMON RIVER SUB-BASINS

Spring Chinook Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult												
Spawning							TR4	TR4	TR4			
Incubation												
Fry												
Juvenile												
Outmigrate												

Summer Chinook Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult												
Spawning							TR4	TR4	TR4			
Incubation												
Fry												
Juvenile												
Outmigrate												

TR4: Spawn only in 1st to 4th order tributary streams.

FALL CHINOOK SALMON

SNAKE RIVER SUB-BASIN

Fall Chinook Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult									■	■	■	■
Spawning										■	■	■
Incubation	■	■	■	■	■					■	■	■
Fry				■	■	■	■					
Juvenile							■	■				
Outmigrate					■	■	■	■				

LOWER SALMON RIVER SUB-BASIN

(NOT PRESENT IN LITTLE SALMON, MF SALMON, UPPER SALMON, WEISER, PAYETTE)

Fall Chinook Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult									■	■	■	■
Spawning										■	■	■
Incubation	■	■	■	■	■					■	■	■
Fry						■						
Juvenile							■	■				
Outmigrate					■	■	■	■				

TR4*: Spawn in 1st to 4th order basins.

COHO SALMON ALL BASINS

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult												
Spawning										TR3	TR3	
Incubation												
Fry												
Juvenile												
Outmigrate												

TR3: Spawn only in 1st to 3rd order tributary streams.

CUTTHROAT TROUT CLEARWATER RIVER SUB-BASINS

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult	MSH	MSH									MSH	MSH
Spawning				TR3	TR3	TR3						
Incubation												
Fry												
Juvenile												
Outmigrate												

TR3: Spawn only in 1st to 3rd order tributary streams.

MSH: At altitudes above 3,000 ft., adults found only in 2nd order and larger streams.

CUTTHROAT TROUT
UPPER, MIDDLE, AND SOUTH FORK SALMON RIVER,
LITTLE SALMON, WEISER and PAYETTE SUB-BASINS

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult	MSH	MSH									MSH	MSH
Spawning					TR3	TR3	TR3					
Incubation												
Fry												
Juvenile												
Outmigrate												

TR3: Found only in 1st to 3rd order tributary streams.

MSH: At altitudes above 3,000 ft., adults found only in 4th order and larger mainstem rivers.

CUTTHROAT TROUT
SNAKE AND LOWER SALMON RIVER SUB-BASINS

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult	MSH	MSH									MSH	MSH
Spawning			TR3	TR3	TR3	TR3						
Incubation												
Fry												
Juvenile												
Outmigrate												

TR3: Spawn only in 1st to 3rd order tributary streams.

MSH: At altitudes above 3,000 ft., adults found only in 2nd order and larger streams.

REDBAND/RAINBOW TROUT
UPPER, SOUTH FORK, AND MIDDLE FORK SALMON RIVER SUB-BASINS
 (Plus French Creek and Little French Creek)

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult	MSH	MSH									MSH	MSH
Spawning				TR3	TR3	TR3						
Incubation												
Fry												
Juvenile												
Outmigrate												

TR3: Found only in 1st to 3rd order tributary streams.

MSH: At altitudes above 3,000 ft., adults found only in 2nd order and larger mainstem streams.

REDBAND/RAINBOW TROUT
SNAKE AND LOWER SALMON RIVER SUB-BASINS

(d/s of S. Fk. Salmon River)

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult	MSH	MSH									MSH	MSH
Spawning			TR3	TR3	TR3							
Incubation												
Fry												
Juvenile												
Outmigrate												

MSH: At altitudes above 3,000 ft., adults found only in 2nd order and larger streams.

TR3: Spawn only in 1st to 3th order streams.

REDBAND/RAINBOW TROUT
UPPER CLEARWATER RIVER SUB-BASINS
 (u/s of Lawyer Cr.)

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult	MSH	MSH									MSH	MSH
Spawning				TR3	TR3	TR3						
Incubation												
Fry												
Juvenile												
Outmigrate												

MSH At altitudes above 3,000 ft., adults found only in 2nd order and larger streams.

TR3: Spawn only in 1st to 3th order streams.

* Exclusions to this group include certain Cottonwood Cr., Threemile Cr., and Butcher Cr. drainage basins.

*Includes certain N. Fk. Clearwater River and Lolo Cr. drainage basins.

REDBAND/RAINBOW TROUT
LOWER CLEARWATER RIVER SUB-BASINS*

(d/s of Lawyer Cr.)

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult	MSH	MSH									MSH	MSH
Spawning			TR3	TR3	TR3							
Incubation												
Fry												
Juvenile												
Outmigrate												

MSH: At altitudes above 3,000 ft., adults found only in 2nd order and larger streams.

TR3: Spawn only in 1st to 4th order streams.

* Exclusions to this group include certain N. Fk. Clearwater River and Lolo Cr. drainage basins.

* Includes certain Cottonwood Cr., Threemile Cr., and Butcher Cr. drainage basins.

SOCKEYE SALMON UPPER SALMON RIVER SUB-BASINS

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult												
Spawning									TR3	TR3	TR3	
Incubation												
Fry												
Juvenile												
Outmigrate												

TR3: Found only in 1st to 3rd order tributary streams.

Note: No adult or fry S.I. curves are available for sockeye.

*Spawning, Incubation and Fry only in selected basins.

STEELHEAD TROUT
UPPER CLEARWATER RIVER SUB-BASINS
(u/s of Lawyer Cr.)

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult												
Spawning				TR4	TR4	TR4						
Incubation												
Fry												
Juvenile												
Outmigrate												

MS: Found only in 4th order and larger mainstem rivers.

TR4: Spawn only in 1st to 4th order streams. (Plus portions of mainstem M.F. Clearwater River reaches)

* Exclusions to this group include Cottonwood Cr., Threemile Cr., and Butcher Cr. drainage basins.

*Includes the N. Fk. Clearwater River and Lolo Cr. drainage basins.

STEELHEAD TROUT
MIDDLE, SOUTH FORK, LITTLE SALMON RIVER,
WEISER RIVER AND N.F. PAYETTE RIVER SUB-BASINS

(Plus French Creek & Little French Creek)

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult	MS	MS							MS	MS	MS	MS
Spawning				TR4	TR4	TR4						
Incubation												
Fry												
Juvenile												
Outmigrate												

MS: Found only in 4th order and larger mainstem rivers.

TR4: Spawn only in 1st to 4th order streams.

STEELHEAD TROUT

UPPER SALMON RIVER

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult												
Spawning				TR4	TR4	TR4						
Incubation												
Fry												
Juvenile												
Outmigrate												

TR4: Spawn only in 1st to 4th order streams.

STEELHEAD TROUT SNAKE RIVER & LOWER SALMON RIVER SUB-BASINS

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult	MS	MS							MS	MS	MS	M6
Spawning			TR4	TR4	TR4							
Incubation												
Fry												
Juvenile												
Outmigrate												

MS: Found only in 4th order and larger mainstem rivers.
 TR4: Spawn only in 1st to 4th order streams.

STEELHEAD TROUT
LOWER CLEARWATER RIVER SUB-BASINS*
(d/s of Lawyer Cr.)

Periodicity Table

Life Stage	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Adult	MS	MS							MS	MS	MS	MS
Spawning			TR4	TR4	TR4							
Incubation												
Fry												
Juvenile												
Outmigrate												

MS: Found only in 4th order and larger mainstem rivers.

TR4: Spawn only in 1st to 4th order streams.

* Exclusions to this group include certain N. Fk. Clearwater River and Lolo Cr. drainage basins.

* Includes some Cottonwood Cr., Threemile Cr., and Butcher Cr. drainage basins.

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Roderick Sprague
Northwest Anthropological Research Notes
Laboratory of Anthropology
University of Idaho
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NORTHWEST ANTHROPOLOGICAL RESEARCH NOTES

VOLUME 29

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NUMBER 1

ALICE CUNNINGHAM FLETCHER'S "ETHNOLOGIC GLEANINGS AMONG THE NEZ PERCES"

ROBERT LEE SAPPINGTON
CAROLINE D. CARLEY
University of Idaho

Abstract

Alice Cunningham Fletcher was the first anthropologist to work among the Nez Perce Indians. She was sent as a Special Agent of the U. S. government to facilitate the allotment of the Nez Perce Reservation in north-central Idaho. Based on her fieldwork from 1889 to 1892, she prepared two ethnological manuscripts concerning diverse aspects of traditional Nez Perce culture, but neither study was ever published. This article represents the publication of Alice Fletcher's "Ethnologic Gleanings Among the Nez Perces." Comments and clarifications have been provided by the editors as indicated.

Editors' Introduction

Alice Cunningham Fletcher (1838-1923) was an eminent anthropologist in the late nineteenth and early twentieth centuries. Her involvement in anthropology spanned the time when the discipline developed from a self-taught endeavor into a scientific profession. Fletcher was earning her living as a public lecturer in the early 1880s when she began informal tutoring with Professor Frederic W. Putnam of Harvard University and the Peabody Museum. Throughout her career she was a member and leader of such professional societies as the American Anthropological Society, the Anthropological Society of Washington, the American Folklore Society, and the American Association for the Advancement of Science. She published a multitude of scholarly monographs, popular articles, and books describing the life of American Indians. Her best-known work, published in collaboration with Francis LaFlesche on the Omaha, is still widely used today (Fletcher and LaFlesche 1911). Alice Fletcher, also an Indian Reformer, was instrumental in creating the Dawes Severalty Act of 1887 and was responsible for implementing allotment among the Omaha, Winnebago, and Nez Perce (Mark 1988).

Fletcher arrived in the Pacific Northwest in 1889 as a Special Agent, employed by the Bureau of Indian Affairs to allot parcels of land to the Nez Perce Indians as specified by the Severalty Act. For each of the next four years from early spring to early winter Fletcher traversed the rugged country of the Nez Perce Reservation to complete nearly 2000 allotments (Figs. 1, 2). She was accompanied by E. Jane Gay¹, companion, cook, and unofficial photographer. She employed Nez Perce tribal member James Stuart² as interpreter and driver and hired Edson Briggs³ as the official surveyor. The party traveled to every part of the Reservation by horse and wagon, canoe, or on foot, transporting tent and supplies to register every Nez Perce, to allot each a parcel of land. Fletcher and her party often worked with inadequate equipment, encountered

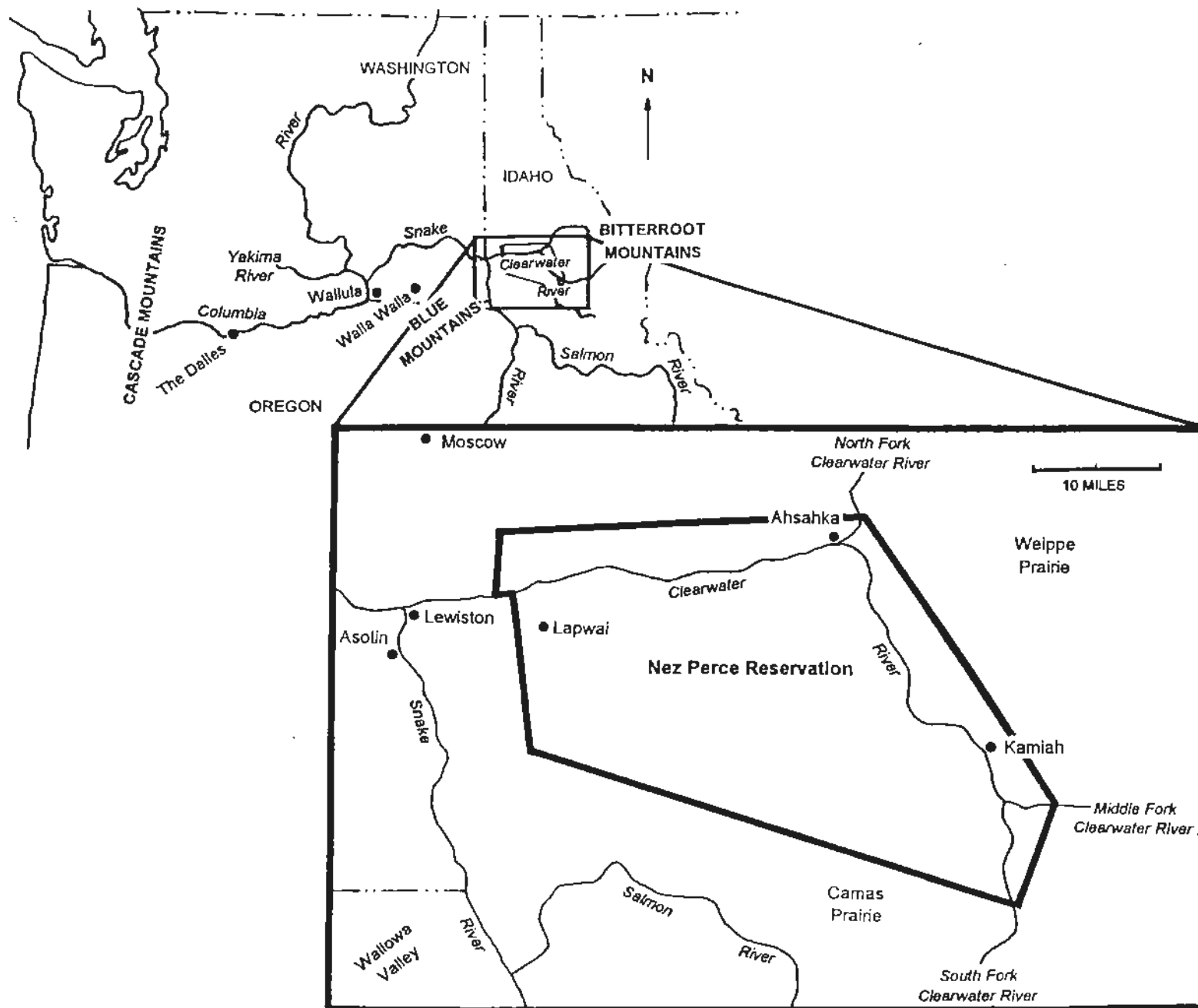


Fig. 1. Map of Nez Perce Reservation and surrounding area with locations mentioned in Alice Fletcher's "Ethnologic Gleanings Among the Nez Percés."

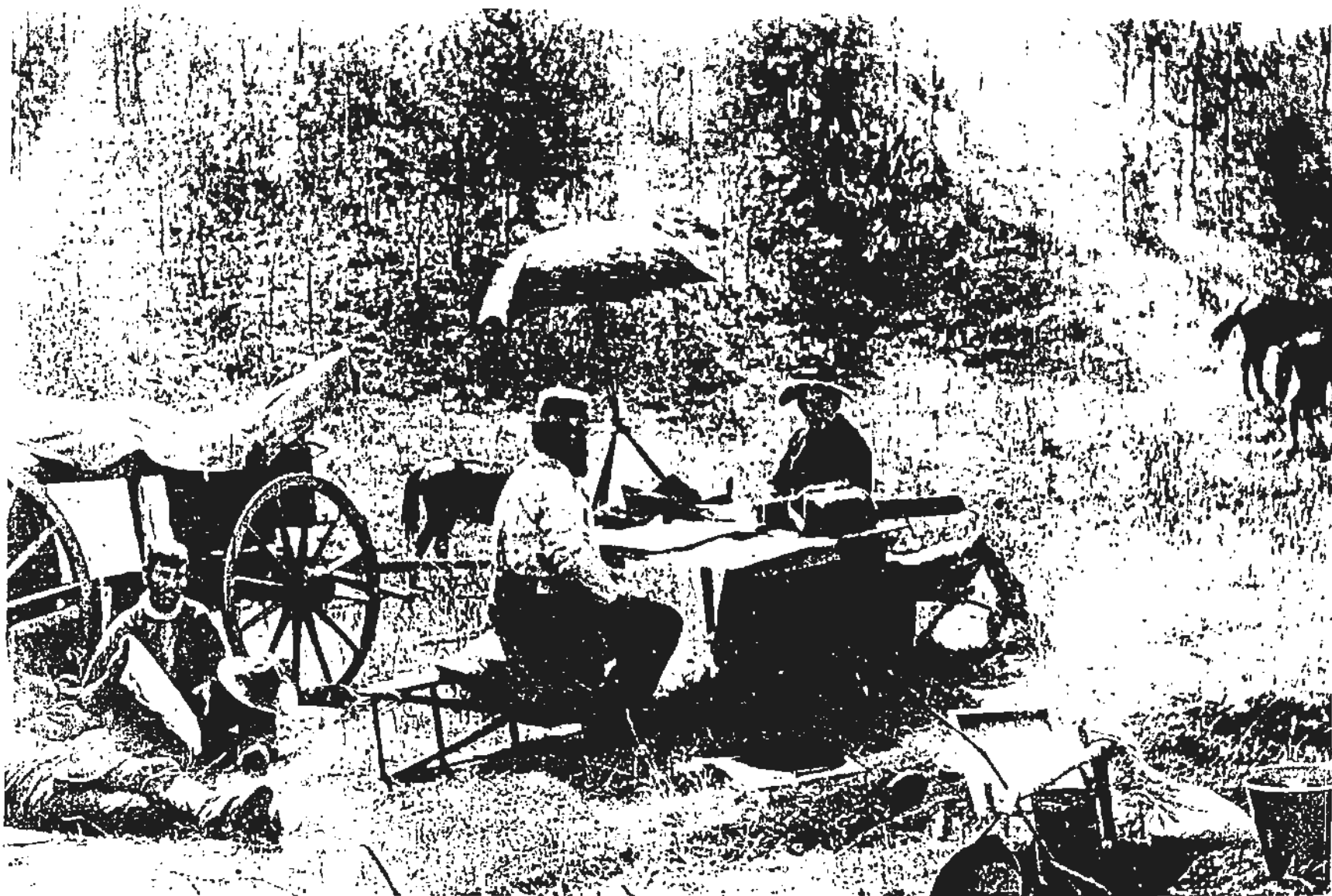


Fig. 2. Alice Fletcher in the field at "Camp Sunday." Seated at her desk are Fletcher and surveyor Edson Briggs. The man fully in view in front of the wagon is James Stuart, interpreter and driver; the other man is presumably one of the chainmen frequently hired by Fletcher. Photograph by E. Jane Gay (ISHS 63.221.11).

uncooperative Indian Agents and hostile white settlers, and had difficulty finding the widely scattered Nez Perce. The rugged countryside and extreme weather conditions hindered the progress of allotment for the entire four years and the allotment of the Nez Perce Reservation would prove to be one of the most difficult tasks of Fletcher's career.

While employed as a Special Agent to the Nez Perce, Alice Fletcher also sought to pursue her profession as an anthropologist (Fig. 3). Although she often laments to her mentor, Frederic Putnam, of the difficulties of allotment and the lack of time for her anthropological work, she also writes of her attempts to "get material" and find informants. She sought to acquire material culture for the Peabody Museum and worked toward obtaining a model of a Nez Perce house, complete with roots and a supply of meat, for the 1893 World's Columbian Exposition. For fellow anthropologist Franz Boas she sought to collect Nez Perce myths and take anthropomorphic measurements. Interested in Indian music, she requested that colleague John Fillmore travel to the Reservation to record Nez Perce music. Fletcher looked to missionary Kate McBeth for help on the Nez Perce language, struggling to record names correctly and understand their meaning.

For four years, Fletcher diligently maintained a diary (Fletcher 1889-92a) and wrote numerous letters to her employer Commissioner Morgan (Fletcher 1889-92b) and to her mentor Frederic Putnam (Fletcher 1889-92c) about her work among the Nez Perce, as she registered and allotted nearly 2000 individuals (Fletcher 1889-92d). She also filled a pocket-size 6-1/2 X 3-1/2 in. field notebook with her very small handwriting, recording informant interviews and her own anthropological observations (n.d.a). This intermittently dated notebook, along with a set of miscellaneous field notes (n.d.b), became the basis for "Ethnologic Gleanings Among the Nez Perces" (n.d.c) one of two manuscripts Fletcher prepared on the Nez Perce.⁴

Fletcher collected data for this manuscript primarily in 1891 (Fletcher n.d.a). Her informants included Celia Rubens,⁵ Abraham and Elizabeth Brooks⁶ (Fig. 4), Charles White⁷ (Fig. 5), Nancy Corbett⁸ (Fig. 6), and Billy Williams⁹ (Fig. 7). Her typed manuscript, partially edited by Frederick W. Hodge,¹⁰ was never published. To this day, it remains unclear as to why Fletcher did not publish this ethnographic document which represents the first anthropological work concerning the Nez Perce.

In order to retain the integrity of a work composed a century ago for publication today, editing has been minimal. Certain inconsistencies have been addressed and clarifications and comments have been provided. Alice Fletcher's comments are in parentheses () while the editors' are in brackets []. Occasionally a crossed-out word has been shown as the strike-through word in brackets where it adds significance to the manuscript. Punctuation has been corrected to contemporary standards.



Fig 3. Alice Fletcher stands and James Stuart reclines in housepit depressions at *Ah-kaht-tse'ween* (10-IH-1395, opposite present-day Kooskia, Idaho) situated at the beginning of the main Clearwater River. The Nicodemus homesite is on the opposite bank of the Middle Fork while the South Fork enters just above Fletcher. Photograph by Jane Gay (ISHS 63 221 57b)



Fig. 4. Informants Abraham and Elizabeth Brooks. Photograph by Jane Gay (ISHS 63.221 100)



Fig. 5. "Returned Students." Left to right are: Caleb Charles, Silas Whitman, David McFarland, James Stuart, and Charles White. Charles, Whitman, and Stuart all attended Chemawa Indian School in Salem, Oregon; McFarland and White both went to the Indian Industrial School in Carlisle, Pennsylvania; photograph by Jane Gay (ISHS 63.221.82).



Fig. 6. Informant Nancy Corbett. Photograph by Jane Gay (ISHS 63.221.15).



Fig. 7. Informant Billy Williams. Photograph by Jane Gay (ISHS 63.221.101).

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[I. ETHNOGRAPHIC DATA]

Origin of the Nez Perces

The following story was told Miss S. L. McBeth, long a teacher and missionary among the Nez Perces¹¹ by a full-blood member of the tribe, in July, 1876, while the man was employed to cut some firewood.

"It is said that long ago there were no people in this country because man was not yet created. A monster, *Ills-wase-tsit*, the Earth Beast, occupied the Kamiah valley. It constantly reclined, or was unable to move or work, I do not know which. Its head was so high it could eat the tops of the highest trees. Its heart rested on the hill near "Kentuck's" house,¹² its mouth was six miles up the Clearwater River, near "Isaac's" place; its hinder parts were many miles down the river; its body filled Kamiah valley. Its eyes were like two suns, its breath like a stormy wind. It drew its food into its mouth by strong inhalations, and swallowed it whole. It devoured in this manner all beasts and birds that came near. Every living thing feared this Earth Beast except Coyote -- for Coyote was the wisest of all created things, and it was without fear.

"Coyote approached *Ills-wase-tsit*, and was unseen until he was immediately in front of the Earth Beast. Then he stood up, and the monster by its breath drew Coyote down its throat. In the belly of the monster Coyote found many animals, starving. He traveled along the interior of the monster until he came to its heart; then he took a sharp stone which he had concealed about him when he approached the monster, and cut its heart in two, and so killed the Earth Beast. After it was dead Coyote caused many people to spring from the flesh of the Earth Beast. The Sioux, the Snake Indians, the white people, all of the enemies of the Nez Perces, and all of those who are outside of the Nez Perce country, came from the flesh. Afterward, Fox asked Coyote why he left the beautiful Kamiah valley uninhabited. Then Coyote took the heart of the monster, in which a few drops of blood still remained, and, squeezing out the blood, sprinkled it in the valley, and from these drops sprang the Nemepoo (Nez Perce) people. That is the reason why there are so few of them, and why they are better than the people made from the monster's flesh.

"Some of the people still believe this story. I believed it myself," said the narrator, "until Mr. Spalding¹³ came and taught us the truth. Some of the people fear and reverence the coyote to this day. One old man I know who lives up the river says that although he knows the story is not true, yet whenever he hears or sees a coyote he is afraid in his heart. Other people hear the foretelling of events in the howl of the coyote. The heart is never spoken of except as a living organism; the Nez Perces can not speak of the heart of a tree, rose, the earth. The word for heart is *tinne-na*.

"There is an old tradition that the Kamiah region was once overwhelmed by fire and but three people escaped alive.

"Stories vary as to how the Nez Perces came to this country. Some say they came from below, following the stream farther and farther toward the mountains, fleeing from the warlike tribes to the west; others tell of their coming from the east, and descending the river. The old settlement (Village 63 on the accompanying map)¹⁴ was abandoned long since. The name *Nak-ke-ma*, the other side people, seems to indicate a mountain from W. E. E. [sic].

"Dogs came from east of the mountains."

The myths of the Nez Perces show a kind of sequence in the thought of the people relating to the cosmos, which was somewhat as the following:

In the earliest time the great forces of life were manifest in the elements -- cold, heat, wind, and water, the earth, and the firmament. All these were anthropomorphically endowed. Each had its family and relatives, its enemies and its allies. The titanic experiences of that time have left their traces on the heavens and in the clouds, they linger in the northern lights, the withering heats and fearful storms. The mountains are monuments of fierce battles that tore the cañons and hurled the rocks where they lie today, and sent the streams rushing to the sea. After

these mighty forces had adjusted themselves, the bare earth was clothed with forests and herbage, for the forces of life are ever seeking new forms with which to clothe themselves for action. Vegetation was endowed with human passions, and finally became fixed in their present varied forms. Then came animals -- gigantic creatures, prototypes of the beasts of today. They suffered, loved, betrayed, and fought each one another, filling the earth with their exploits. In due course of time these ceased to be capable of further change. They dwindled and fell into dumbness -- but not until they had exterminated the most venomous among them and had removed obstructions, made it possible for the fish to go far up the streams, and had in many ways prepared the earth for the advent of man.

These animals are spoken of in the myths as the *tit-wa-til-yi-yah* (*tit-wa-til*, a story or tradition; *yi-yah*, of the air or the spirit). There is in the word *yi-yah*, as used here, a double idea: that of a spirit form, and that also of the air which surrounds the form and preserves its story. When the time came that the *til-wa-til-yi-yah* were fixed in their form, there seems to have arisen in them a desire for a change, and permission to exchange their forms was granted provided they are able to effect the change. Many tried it, but all failed.

"Frog had a longing to become a Beaver, and so expressed himself. The Beaver was willing to welcome him as one of themselves; so they directed him to prove his fitness by swimming under the water of a river and cutting down a tree on the opposite bank. The Frog stood up, full of belief in his power to accept the task, and without hesitation plunged into the water, dropping far out of sight. He swam boldly across, and emerged on the opposite bank. Elated with his success, he hopped to the foot of the tree and bit at it, but the rough bark tore his soft mouth, while he was not able to make any impression on the tree. Long, long, the Frog persisted in his impossible task, until the Beavers became weary. At last he succumbed and accepted his fate to be a Frog to the end of time."

Similar stories are told of other animals.

There seems to have been present to the *Til-wa-til-yi-yah* the anticipation of a later race that was to come and depose them; so, when any calamity befell one of them, he would cry out, "They are coming! They are coming!"

The *Til-wa-til-yi-yah* were followed by a race called *Na-te'-tal-lu-wit*. The name of this race indicated that they possessed attributes of wisdom and goodness. The word embodies *tols-wit*, "goodness," and a part of *websekin ena-nih*, "wisdom." These people were those who preserved the history of the *Til-wa-til-yi-yah*, and drew lessons from their life, and transmitted these stories to the *Te-to-ka*, the Indians of today. In these stories we find the elements using blankets and skins, and heroes wielding trees, regardless of the statement that animals and trees were not yet created. Although these stories in their details overlap epochs, yet they present a remarkable sequence of movement. A collection of these myths was being made by a native Nez Perce, but death cut short his work.

Ma-na?

Old Billy¹⁵ said: "Long ago we used to watch the water flowing" (he lived beside the Clearwater, a broad, rippling stream) "day after day, night after night. The water was ever flowing, and the water was ever the same, and we cried, "*Ma-na?*" ("What causes it to be?").

"We looked at the great rocks, enduring always, while men and all living things come and go, are born and die, and we cried, "*Ma-na?*"

"We watched the clouds gather, the storms sweep over the mountains and through the village. We heard the wind, we could not see it, although we saw its effects -- and again we cried "*Ma-na?*"

"We watched, we waited, we looked at every strange thing; we were always waiting, watching. A great white bird sailing in the air would come across our sight. We would wait, and watch, and ask, 'Paish yot?' ("Perhaps that is it?")"

All speculations were impersonal in character, and spoken of as "it." This feeling of impersonality lay below all speculations concerning any manifestation.

Wy-a-kin, the familiar spirit or guardian of a person; from *wy-ick*, "to move."

Wy-ya-tin-wash, the place where the spirit, the *wy-a-kin*, came to the youth.

Han-ya-wat, the power that made all things. The word is from the root *han-it*, "to make or create."

Al-la-lim-yah, the Spirit of the Wind, sometimes spoken of as the Spirit of the Mountains. This spirit was said to be a person who was naked, walking to and fro unceasingly, never resting, never eating, continually wailing and weeping, tears of blood falling from his eyes and from the great staff which he carried. He was very tall. In ancient times many persons sought to ascertain whether *Al-la-lim-yah* was a man or a woman, but no one has ever been able to touch this being. When a person thought he saw *Al-la-lim-yah* and put out a hand to touch him, there was no substance, only the air. By his breath *Al-la-lim-yah* started all the breezes, all the winds. He walked on the tops of the trees, and felled them with his breath. As he moved about, there were two turning places: one was the mountains near Moscow, Idaho, the place to which the people fled when the floods came over the land, and so were saved; the other was in the Asotin country. *Al-la-lim-yah* is that spirit that sends the *wy-a-kin*, a beast or a bird, to the youth who goes alone to fast and pray on the mountains.

Te-la-pu-sa, the word used for "worship," is the name of an ancient dance. It was impossible to get any accurate account of this dance. The following are two songs used in it:

Yo-ko a wi at sam.

Mamai yats han it.

Te-lap at sa hit keik ta tash a

A kam kin e kom.

He-ya he yi yi.

(Translation:)

We look for him who children made.

We are lonely and homesick.

He will descend, we will meet him,

The great Chief above.

He-ya he yi yi.

Ki-jah-he yuk keit a tas am a

Mi ohot om u.

He-ha hi yi yi.

(Translation:)

He will destroy those who are bad.

The great Chief above, when he comes.

He-ya hi yi yi.

The *Wy-a-kin*

When a boy or a girl was approaching puberty, that period was regarded as the proper time for retiring to some lonely place, there to fast in the hope that in a dream or vision something would appear and breathe upon them. Whatever was seen by them under these circumstances was called a *wy-a-kin*, and it was believed to be able to put them in communication with the supernatural powers, and bestow upon them health, strength, and good fortune. In order to obtain this assistance it was necessary for the dreamer to make an image of what he had seen, and keep it near his person. This image could be made from hide, wood, or stone. When a lad had seen his *wy-a-kin* and was about to make its image, he fasted, and went alone to some secluded place and in silence made the image. Sometimes he went to the place where the vision occurred, but this was not obligatory. During the process of manufacture the youth could not touch or drink water, nor eat. He must strive to be holy. The work of making the image is generally done at one sitting, though there are no rules about this -- a person could return home and then go back and finish the work. When the image was completed, frequently an arrow was tied to it with sinew, colored red, yellow, or green. A man might have more than one vision, and so more than one *wy-a-kin*. There were *wy-a-kins* for war, for hunting, and for fishing, but there was none for digging kouse or camas [*Lomatium cous* and *Camassia quamash*; the preparation of these staple plant foods is discussed below]. This work tended to make the body strong, and so was in itself a helper, and there was no need of a *wy-a-kin*.

If the same object appeared again and again many times to a lad, this indicated that the lad was to become a *te-wat* -- "mystery man," a kind of shaman.

The following experience was given by an old man of excellent repute, and occurred when he was about twelve to fourteen years of age:

"My father's brother took me to an old man who had mysterious power. This old man said to me: 'Now you are to seek. Whatever comes to you, whatever you see, whatever speaks to you, from that thing you will have help.' He gave me his own cap to wear. It was made of a coyote skin. He put the cap on my head and told me to go to a certain place where there was a stone. When I reached there I must put the cap on the stone. The old man said he would whip me if in the following morning he did not find the cap on the stone. It was late in the afternoon when I was taken to the old man, and it was dark when he sent me off to the lonely place where the stone was. I was very much afraid of the dark, and I went away crying. I kept looking back, I was so afraid, but at last I lost sight of his tent and I was all alone and in great fear. At last I got to the place, and I felt about and found the stone, and put the cap on it. As I did this all fear left me, and I started to return. As I went I saw a nice looking woman with yellow garments, and a child was with her. She advanced toward me, and I suddenly fell over. I lay in a swoon by the side of the trail. When I came to my senses I saw a man and his colt -- the woman and child had turned into these. Then I knew that the horse was to be my *wy-a-kin*. I got up and started on. When I was nearly home I fell again. While I was lying in this second swoon some friends found me, and carried me to the old man's dwelling. He blew upon me and I became conscious. I was not allowed to eat until the old man gave me permission, and then he first blew on my food. This was how I saw my *wy-a-kin*."

"I made the image of a horse, rolled a little of a horse's mane about it, and added the feather of a bird that I saw in another dream that I had, and I wore it about my person. We were taught that the *wy-a-kin* could help us in hunting, for while a man slept his *wy-a-kin* would be busy searching for game, and then would lead the man to the place where the game was. If one was tired in the legs, the *wy-a-kin* would give him strength. If a man was wounded, he was rubbed with his *wy-a-kin* and the wound healed. If a man's *wy-a-kin* happened to be a beaver and

the man was wounded, he would be taken to where there was water, and movements would be made like those of a beaver, and the man would first bleed and then he would recover. I have seen men who fell when they were drunk, rubbed with their *wy-a-kins* when they were cut, and the wound healed. Some *wy-a-kins* help a man to stay long under water. I always wore my *wy-a-kin* in my belt until I became a Christian; then I took it out and threw it away."

Usually the parents send the boy off to fast and seek his *wy-a-kin*; but sometimes, when a boy is in trouble, he will determine to go off alone to the mountains, even if he should die for it. The boy who was going to the mountains to see his *wy-a-kin* was taught never to speak as he went along, not to wonder, not to exclaim, not to question to himself -- but always to listen. When the *wy-a-kin* spoke to a youth, sometimes it was in a song. Then the song was sacred to the boy. "The character of a boy," said the old man who was talking, "determines the kind of *wy-a-kin* that is sent to him. If he is a brave boy he will see a fierce animal or an owl. The owl kills its prey, even mice. This *wy-a-kin* would give the boy power, when he grew to be a man, to kill even grizzly bears."

The *wy-a-kins* give signs by the clouds that they are using power. Always they give signs.

When a man was wounded in battle he would look at his *wy-a-kin*, sing his song, and watch for the sign that he was heard -- a cloud, rain, ever so small a thing, would indicate that he was heard and help was coming.

Sometimes a wounded man would become insensible, in which case a *te-wai* was sent for. He would approach the man, and sing. The song would recall the wounded man to his senses, when he would sing; then a sign would come, showing that the *wy-a-kin* had heard.

The Northern Lights are regarded as a sign of trouble -- sickness, scarcity of food, or war. Sometimes they are seen in the early morning, when they look red, almost like a rainbow. This is a sign of war.

The following was told the writer by an old full-blood Nez Perce of excellent character:

"When a person goes to seek the *wy-a-kin*, he must be very watchful. If he sees something but does not know what it is, he must say nothing. In his heart he will ask: 'What is it?' but he will keep silent. If no answer comes, the man will be sorrowful; but if the something speaks, it breathes its spirit into the man, and he becomes like a spirit, and is holy."

"I went to the mountain near Moscow. A friend was with me, and he became lost. I had very little clothing, only one small skin to cover me, and I had nothing to eat. It came one night, and I sat there alone, shivering. As I sat there a spirit touched me, and said: 'Look up!' I rose and saw the wonderful lights flashing as if it were midday. The spirit said: 'Rise, show your body, so shall you be strong of body; look at it, so shall your body be strong!' I rose and looked, and did as the *wy-a-kin* said. My *wy-a-kin* has kept me safe. I have been in battles where the arrows of the Snakes were all about me, but I was untouched. The Northern Lights are connected with the youngest son -- perhaps they are his *wy-a-kin*."

The "youngest son" was in the north. (See the following myth.)

The following myth is connected with certain rites and ceremonies, and tells who is the "youngest son." It was related in 1891 by an old man who died a year or so later.

On the Columbia River some distance from Wallula is a mountain called *Le-leek-pa*. This name was given by Coyote. There are three or four smaller mountains, and then the Yakima River. There used to be a great lake, called *E-way-tah*, there, which was always icy, and it was never warm. This lake was a person called *You-ne-yi-yah*, because [he was] always cold. This was before the present people were hereabouts. Not far from the lake there was a place called *Yoke-ye-yah*, which was always warm. *Yoke-ye-yah* is the name of the green-necked duck. When this duck goes about in the water it shows that spring is at hand. *Yoke-ye-yah*, the warm place, was also a man. Both these men, *You-ne-yi-yah* and *Yoke-ye-yah*, had wives, and each had five

children. These children grew up, and were always fighting. Each had a large wooden vessel. The cold ones had their vessel filled with icy water; the warm ones had theirs filled with oil from a large fish called *kei-lakh*. The ice was like glass. The warm ones poured oil on the ice, the cold ones threw on icy water, and the place became impassable. The children of the warm man, *Yoke-ye-yah*, could not work there. In the effort of these children to get to their home and parents they were all killed -- not one was left of the warm family but the old man and his wife. Their eldest son had married, and his wife was with child. She said to her father- and mother-in-law: "My husband is killed, I have no one left, and I am going away." She took her basket-hat off of her head and hung it up in one place, and hung a deerskin, white and soft, beside it. Then she said to the old people: "If the basket-hat falls, you will know that my child is born and is a girl; if the white skin falls, then the child is a boy. Should the child be a boy, when he is grown if you see a red cloud, then you may know that he is coming to see you." Having told the old folks these things, she started off alone, and went toward the south.

In course of time, the white skin fell. The old woman turned to her husband, and said: "Did you make that skin fall?" "No," he answered; but the wife was not satisfied. She picked up the skin and hung it up in its former place, but it at once fell down again. Then both exclaimed: "Ah! It is true."

The boy grew, well-proportioned in body and wise in mind. His mother told him the story of how the cold man, *You-ne-yi-yah*, had killed all his relatives except his old grandfather and grandmother. When the time came she sent him alone to the mountains to get his *wy-a-kin*. He was gone two or three nights. When he came back he said to his mother: "What shall I do further?" "Plunge into the cold water to make yourself strong," she said, "and you must work, work, and never be idle." Again she said: "You must make a sweat-house. You must put slender sticks down your throat and the bad blood will flow out. Afterward go again into the sweat-house, and then plunge into the cold water." He did as his mother told him, and grew stronger and stronger, so strong that he could break a great log and pull up a tree by its roots. He kept on with his training until at last he said: "I have done all, I am strong, and I shall start for my grandfather." As he set forth on his journey the red clouds spread themselves over the heavens. The old grandmother caught sight of them, and remembered the saying of her daughter-in-law. She cried to her husband: "Look! Look! See the red clouds!" The sight was strange, for it had been cold, cold winter ever since their children had been killed.

The young man traveled on until he came in sight of the great mountain, *Le-leek-pa*. He sat down on one of the smaller mountains and looked about him. All was ice except one little place where his grandparents sat. Just then the old folks looked up and saw, toward the east, a yellow cloud, and soon a warm wind began to blow. (The Nez Perces say, when it is yellow in the east up to the zenith it will be warm for a long period.) As the young man, who was named *Look-ye-you-me-tats*, sat there on the small mountain looking at where his grandfather and grandmother were confined, tears filled his eyes and fell in such profusion that they formed the cascades [Cascade Range]. The young man cried out to his grandfather: "Go to where a canoe is hid for you," and he led them down the Yakima River to the Columbia. The cold man, *You-ne-yi-yah*, said to his wife and five children, as he saw the old couple start out: "Look! They are going after fish!" The whole family became very angry and they ran and caught hold of the canoe. But the grandson held the canoe while the old people hauled in a great load of fish. Suddenly the young man rose and stepped on the ice. *Ku-ku-tu-ku-tu* went the ice, cracking in every direction under the gigantic proportions of the young man. "Ah! That is the grandson," shouted *You-ne-yi-yah*, the cold man, and he and all his family fled in terror, for the ice was fast breaking. The grandfather, grandmother, and grandson went home and made much oil out of the fish, and filled the five vessels belonging to the dead sons. Then they rested. After a while the grandson said: "We will go again." So they started for the Columbia River, where they met their old enemy, the cold man, his wife, and their five children. There the grandson wrestled with them, swaying back and forth. The grandfather threw on oil and the ice broke into cracks, *ku-ku-tu-ku-tu*, and all of it was going. The grandson killed the cold man and his wife, and all but his youngest son, who fled.

Then the warm wind blew and blew, and the grandson said: "Henceforth there shall be no more perpetual winter; for a short time only shall cold prevail, then warmth will come again. So when *ta-la-leekh* (yellow broken clouds) are seen after the cold, then shall the people know warm weather is coming. If very early before the sun rises red clouds are seen, the cold will come quickly, like the winking of an eye." The "youngest son" of the cold man escaped to the north, and when the cold wind blows, they say it comes from *You-me-yi-yah-min-me-ots* -- the place where *You-me-yi-yah's* [sic] son went. The grandson went back to the forest, and the warm wind is called *yoke-yi-yah-min-me-ots* -- the place where the grandson went. The teaching of the son by his mother is considered as the authority for the practices observed among the people to gain strength -- plunging into the river, going to the sweat-house, and thrusting sticks down the throat. So too the signs of the ancient struggle are still seen: little red clouds in the east are the sign of cold, as are also the northern lights, and these are connected with the youngest son of the cold man. Little red clouds in the west are the sign of warm weather and are connected with the grandson.

Men who could not see anything when they went alone on the mountains to fast and pray have been known to make an image and use it as a true *wy-a-kin*. Such men always fell in battle--they had nothing to protect them.

*Te-wats*¹⁶

The grandson was the first *te-wat*. He was the first one to go to the mountains to seek his *wy-a-kin*, the first to make the sweat-house, the first to use the sticks and to do all the things necessary to become strong.

While he was young he did much good. All the good *te-wats* (mystery men) follow the grandson as he was when he was young; the bad *te-wats* (wizards or shamans) follow the grandson as he was when he became old. For when the grandson, by his power, waxed mighty and rich and obtained many *wy-a-kins*, he took all the pretty women. They did not want to be his wives; he killed them, and became a terror in his old age, using his power for evil and harm, and not for good as when he was young.

If a *te-wat* kept to his *wy-a-kin*, he stayed good all his life; but if he gets many *wy-a-kins*, he wanted to kill people and do other bad things. When two or more *te-wats* contended against each other, they did not touch each other -- it was their *wy-a-kins* that fought. The weaker gave way, and the man died. If the two who were contending were of equal strength, then the two men died about the same time. It thus happened that through jealousy *te-wats* tried to kill each other. Most *te-wats* became bad as they grew old; power made them bad.

Te-wats were sometimes called to draw out of the sick man the evil spirit that caused the disease. If the *te-wat's* *wy-a-kin* can recognize the spirit, the *te-wat* can take it out of the man; but if the *wy-a-kin* does not recognize it, then the *te-wat* can do nothing to help the sick man.

The *Pe'-tow-gah-kin* Society

The name of this society means "to make one happy." The society was composed of *te-wahs* [*te-wats*] solely, and held its meeting in a long-house during the winter, at which time new members were admitted. A candidate had to present himself voluntarily, and must be a young man to whom the same object appeared repeatedly when he went alone to fast and dream in the mountains. When he offered himself to the *Pe'-tow-gah-kin* for initiation, he then for the first time sang the song that his *wy-a-kin* had given him in his vision and at the same time he acted out his vision. When he arose and stepped out to do this, he "could not move freely or rapidly because his *wy-a-kin* was still feeble within him." After one of the *te-wats* approached him and moved around him once or twice, then the young man would be able to proceed and dance alone. As he danced and acted, the *te-wat* who had helped him watched every movement closely in order

to detect what the young man's *wy-a-kin* might be. The *te-wats* knew and understood the cries of the animals, and what they mean. So, after a time, the *te-wat* who was watching would think that his *wy-a-kin* recognized the *wy-a-kin* of the initiate. If the *te-wat* correctly guessed the name of the *wy-a-kin*, then the young man fell rigid. The reason for this was because of the "struggle between his *wy-a-kin* and the *wy-a-kin* of the *te-wat*." Sometimes the *wy-a-kin* of a young man was so powerful that it made the *te-wat* want to kill the young man so that it might not oppose the *wy-a-kin* of the *te-wat*. If he did try to kill the young man, he must not touch him with his hand, for it was the *wy-a-kin* that held the life of the man. "The *te-wats* have power with the spirits of birds and animals, and can wage war, *wy-a-kin* against *wy-a-kin*," said my informant.

The following was told concerning a dance that was held by the *te-wats* during the winter. The incident may have occurred at the dance called *Wy-a-kin-ye-tset*, "Dance of the *Wy-a-kins*," which took place in winter. Concerning this dance, detailed information was not obtained as to its frequency, as it has passed out of use by the middle of the last century.

"At the dance the *te-wats* determined to see who was best, whose *wy-a-kin* was the strongest. They moved about the fire and stretched their hands over each other. The stronger would make the weaker fall stiff, as if dead. There were women present, and sometimes they would rise and dance in the way of honoring the *te-wats*. In recognition of the honor shown by the women, the wife of a *te-wat* would take a gift to one of the dancing women. If she touched the gift with her left hand, she would fall as in a fit¹⁷, but if she took it with her right hand, all went well. On one occasion a woman was dancing and not seeing the gift bearer approaching, accidentally touched her with her left hand, and fell rigid at once."

Power of the *Te-wats*

"The *te-wats* have power to call rain," said an old man. "They can do this by singing certain songs. They talk to themselves, and after a time they foretell when the rain will come."

In the same manner the *te-wats* could tell what one's luck would be in hunting, for they had the power to forecast events. They likewise had the power to cure rattlesnake bites. An old man whom I knew was said to have this ability -- and a case was cited where the man bitten was "black and swollen" before the *te-wat* arrived, but after the singing of the songs and the passing of hands over the man, the *te-wat* "pulled out the poison."

Te-wats could kill a man by magic. The man thus doomed was "unconscious of what had been done, but he was soon seized with a sickness, and sent for a *te-wat*, as a *te-wat* can see who has done the mischief." The patient was laid on the ground, and his friends gathered about him. Sticks were placed along the sides of the man, and on these the friends beat, keeping time to the songs of the *te-wat*, who was to try to expel the evil from the man. The *te-wat* knelt beside the man and extended his hands over the prostrate form, but did not touch it. At the proper time a rawhide was put about the body of the *te-wat* and held by two stout men, while the *te-wat* pulled and tugged as if drawing something out of the patient. After a while, when he was in a reeking sweat, the *te-wat* declared he had drawn out the evil. He might show it. Sometimes it looked like a bit of sinew three or four inches long. The *te-wat* would draw it out to five or six feet, but it would spring back to its former length. The *te-wat* asked what he should do with the man who had put his spell there -- kill him, or save his life? The relatives had to decide. If they decided on death, then the *te-wat* cut the sinew in two, and at that moment the man who had worked the spell died. "White people will not believe this," added my informant, "but it is true. These charms will work only on Indians; they do not affect white men."¹⁸

Love Charms

Certain *te-wats* possessed medicines that would cause a love spell; these could be bought by young men. Before the youth could use the medicine he must fast for two days and bathe frequently. Then he took the medicine and sought the girl. If he could touch her clothing with it -- if only the edge of her blanket -- that was enough. Then he must be invisible for two more days. After that "he gets the girl sure!"

Columbine seeds [*Aquilegia* sp.] are used by Nez Perce young men for perfume, as is common also among the northern prairie tribes.

History

Lawyer

La-la-chol-sote, Bat that Flies in the Daytime, died in 1876, aged eighty years. He was known as Lawyer,¹⁹ and his sons were among the leading men of the tribe.

Lawyer's father²⁰ lived on the South Fork of the [Clearwater] river, and kept the horses of Lewis and Clark when they were there in 1805. Lawyer could remember these first white men. He spent much time with the Flatheads,²¹ and became acquainted with, and later worked for, the American Fur Company.²² It was on account of his shrewdness that he received the name of Lawyer. He remained east of the Bitterroot Mountains until Mr. Spalding came, in 1836. Lawyer became one of Mr. Spalding's first pupils, and learned to read and write the Nez Perce language. Up to 1840 the Nez Percés were divided into many small bands and villages on the Clearwater and Snake rivers, and had no head-chief. When excursions were made into the buffalo country, the bands came together and chose a leader who would fill the office until the people returned. Lawyer was frequently so chosen by parties going to hunt or to war with neighboring tribes.

In 1840 Dr. [Elijah] White²³ was sent as agent to all the tribes living in Oregon Territory. He visited the Nez Percés, and finding no head-chief he made Ellis²⁴ such. Ellis, with [another Nez Perce boy named Pitt] a Cayuse and two Spokane Indians, had been taken by the Hudson's Bay Company traders to Selkirk settlement [the Red River settlement in Manitoba], and placed at school for five years. Ellis could read and write, and it was for this reason that he was made head-chief by Dr. White. He filled this position only a short time, for he went with a party to the buffalo country and died there in 1847. This was the year of the murder²⁵ of Dr. [Marcus] and Mrs. [Narcissa] Whitman, and all missionary work among the Nez Percés was closed at that time. Old Joseph²⁶ went to Mr. Spalding's school, and had his son (later Chief Joseph) and his daughter baptized. The daughter lived with Mr. Spalding. Later she was married and was living in Kamiah when these notes were recorded. Chief Joseph visited this sister at Kamiah in 1891.²⁷

There was no head-chief after the death of Ellis until 1855,²⁸ when Governor I. [Isaac] I. Stevens [of Washington Territory] and Joel Palmer²⁹ came [to Walla Walla] to make the treaty [of 1855]. Finding no head-chief, they gave that office to Lawyer, with a commission.

When the treaty of 1863 was made, Jacob of Lapwai was head-chief [actually Lawyer was head chief]. He was defeated for that office in 1874 by Lawyer. In 1875 Lawyer was defeated, and Reuben,³⁰ the father of James Reuben,³¹ was elected. The office lapsed after a few years.

It was about August [1805] when Lewis and Clark arrived in the Blue Earth country, Cho-pun-ish.³² Lawyer was nearly ten years of age. His father kept Lewis and Clark's horses while the Columbia River was explored to its mouth [the horses were kept at Ahsahka, at the mouth of the North Fork of the Clearwater River, where the Lewis and Clark expedition made canoes for the final portion of their westward trek]. The way Lewis and Clark came to call the Clearwater *Koos-koos-kie*, was this: the Nez Percés were asked, when the explorers reached the Clearwater, if this was the great river of the west; they replied "*Koos-koos-kie*," that is, "This is a smaller river."³³

Hand-shaking was first made known to the Nez Perces by Lewis and Clark. When these white men came among the Nez Perces, who were at their yearly gathering in the prairie [Weippe Prairie in north-central Idaho], the strange men shook the hands of the Indians. Some of the old men said: "*Hin-olt-sih*," they dandle us as if we were children. They could not understand this form of greeting.

The Treaty of 1863 was negotiated because of the discovery of mineral deposits on the Nez Perce land. The Indians had objected to miners coming among the tribe. Lawyer, however, induced the Indians to sign; but old Joseph (father of Chief Joseph), Eagle From the Light, Big Thunder, and Looking Glass³⁴ refused to sign and accept the treaty which established the reservation as it stood before the allotment in 1889. This caused the breaking of the tribe into the "treaty" and "non-treaty" parties.

The Wallowa valley had been held as a common hunting and fishing ground, and until 1863 no one chief claimed it. The first dispute arose about 1871, when white settlers came. Then young (Chief) Joseph claimed it. In 1873 the valley was reserved; in 1875 the order was rescinded. Young Joseph became angry with Lawyer. Joseph's father was a half-brother of Five Crows, a Cayuse Chief, and his mother was half Cayuse. When Joseph became the leader of the non-treaty Indians, the Nez Perces who accepted the treaty and were influenced by Lawyer bade Joseph [to] cease to make trouble for the tribe, and go to the country that was equally his -- that of the Cayuse, the Umatilla reservation. In these troublous [sic] times Looking Glass said he had mysterious powers and could cause a man's death by wishing it and the people of Asotin, where he lived, made him a chief. He found Joseph. Lawyer had become a Christian, and was made an elder in the Presbyterian Church in 1871. In 1872 he was defeated in the election for head-chief by Jacob of Lapwai. In 1874 Lawyer defeated Jacob's re-election. In 1875 Reuben, the father of James Reuben, was elected head-chief. Lawyer then retired to Kamiah, where he remained until his death in 1876.

Nancy³⁵

The following reminiscences of Nez Perce life in the first half of the last century were taken down from an old full-blood Nez Perce woman in 1890. Her name was Nancy [Corbett], and she was a respected and trustworthy person. She had had a varied life. Even in her old age (she was well on toward eighty years when the conversation here recorded took place) she was a woman of remarkable vigor of mind. Her children were all past middle life, her grandchildren grown men and women, and their children approaching maturity. All of her descendants were of good character and standing among the people with whom they lived, both Indians and white folk. The pictures she gave us of the vicissitudes and limitations of Indian life have an historical as well as ethnological value.

Concerning Nancy's grandmother: In the latter part of the eighteenth century a party of Nez Perces went across the mountain to the eastward to hunt. While the men were away, the camp, where were the women and children and some old men, was surprised by enemies. The old men fought, but were overpowered, and all who were not wounded were carried away captive. Each person's arms were pinioned behind him at night, and they were tied with ropes. The night following the capture, Nancy's grandmother, who was of the party, dreamed that a little black squirrel came to her and told her she would be killed the next day, but that she could save herself if she would do what the squirrel had told her when she was a little girl. The squirrel had told her how little squirrels cut ropes with their teeth. When the grandmother awoke, she bit the ropes that tied her, and so freed herself. She had with her a little girl who was clothed in a skin dress decorated with elk's teeth. These rattled so that the dress could not be taken off the child without waking the party, so it was impossible to save the child. When the grandmother found that she must leave the little girl, she crept away and went up on a hill where there was a tree with many branches. She climbed up and hid there. When day dawned, search was made for her until noon, then the party went on and left her, and she made her way back to the Nez Perce.

Later this woman was cooking kouse with her sister where they were camped on the south fork. The kouse was in a cedar-root basket, in which the water was made to boil with hot stones. Suddenly one of the sisters caught sight of a Snake Indian peeping through the mats of the lodge. The sisters questioned how to save themselves and agreed to quarrel. So they talked loud, pulled sticks from the fire, and made as if to strike each other. The man became so interested in watching the fighting women that he pushed his head through the mats in order to see better, when the younger sister seized the basket of boiling kouse as if to throw it at her sister, but instead she dashed it in the face of the Snake Indian. He gave a gasp, fell back a few steps, and died, blinded and scalded.

Then were efforts made to get [on the] track of those taken captive. Nancy's grandfather went to the Pacific coast and procured dentalium [*Dentalium pretiosum*] shells from the Indians there, and then started across the country to trade. He went on until he came to a people who lived in earth houses something like the Nez Perce sweat-houses, only very large (evidently "earth lodges"). He made friends with these people, and obtained horses from them. Horses were then esteemed as great wealth, as there were not many in the tribe. When the people first had these animals they did not know them, and when a horse put its ears back, the Indians would say: "He is glad to see me." When they forded they would tie the horse by the head and tail and the man went on foot, keeping on the upper side to prevent the current from carrying off the horse. They did queer things in those days!

Nancy's father was not very tall, but he was well developed and very strong. He could carry three deer, one on his back and one on each arm. He used to bathe much in the icy river. He would thrust sticks down his throat, and run with them quite a distance. He ate no meat, only roots and fish. Once, on the Middle fork [of the Clearwater River], he was attacked by a bear; he caught the animal by the ears, tore its mouth apart, and thrust his knife down the bear's throat, killing it. There was a deep pool where large salmon came. He would take a hair rope with a spike fastened to one end, and dive with it into this pool. Then he would spear the fish, string them on the rope, and the men on shore would draw them up. He would catch twenty at a time in this way. (Diving and walking under the water were frequently performed by the Nez Perce. A man whom I knew in Kamiah [Nicodemus] took a heavy stone under each arm to hold him down, and walked across the bottom of the Clearwater where it was more than two hundred feet wide and quite deep.* Swimming and diving were a part of the early training of boys -- in old times).

It is said that Nancy's grandfather, *Se-lu-pa-low-tin*, and his younger brother, *Ha-lul-ho-tso* (who was grandfather of the old chief Lawyer), were the first Nez Percés to cross the mountains. They went up the Middle fork to a divide where there is a big rock that has a head on it. (The drawing Nancy made of this rock was like a huge mushroom.) This rock is known to the Nez Percés by the name *Tsar-pah-tsa'-tit*, "having a head." Here they looked down and saw an open country. They saw moccasin tracks and followed them, and were the first Nez Percés to meet the Flatheads, who were out hunting in that region.

Nancy's maternal grandfather had white hair and was spotted, and in every generation there were some of the children who were spotted, and they were generally partly deaf. He lived in the village where Lewiston now stands and was a leading man. Much wild rye [*Elymus cinereus*] grew thereabouts.

When Nancy was a little girl she used to gather flat stones and keep them in a little wildcat skin bag. She would take her bag of stones, go to a sandy place where she would dig circles, and set up the stones for people, and put thorn berries [*Crataegus* sp.] about to make a grove. Mussel shells [probably *Margaritifera falcata*] were the horses. She would bind the little stones with deer skin to the shells, the short stones being women and the long ones men. She made bows out of grass, and laid them beside the little men as they slept, so that their weapons would be near at hand if an attack were made.

Nancy used to watch her father make flint arrowheads. He held a piece of deerskin in his hand to protect it from the flint; the point was toward his wrist. He had an elk-horn tip, one end of which was sharpened to a point while the other was blunt. He used the blunt end when making a large arrowhead, the sharpened for a small one. In southern Idaho, in the Snake [or Shoshone Indian] country, were two buttes, and parties went there for flint at the risk of their lives. They would quarry the stone and put the rough pieces of flint in a deerskin bag, and start home. In safe places they would stop and rest, and while resting would work out arrowheads. (I have found many work-shops at resting places on the trail leading from the Nez Perce land to the southern country).

The stick used in digging camas was of mock orange [*syringa* or *Philadelphus lewisii*], the end having been hardened by fire.

Hoes were made by fastening a stone to a stick with sinew. An elk-horn, sharpened, was employed in pecking a tree in order to fell it. A stone hammer, shaped in the middle to fit the hand, was used to pound the elk-horn on the spongy end. In this manner trees were cut down. It was slow and hard work.

Nancy said: "We made pottery, shaping it by hand. We dried it in the sun, and then rubbed it with salmon scales until it was hard and glossy. We used to cook the skin of the salmon to make glue. The men wove the cooking baskets out of split cedar roots; we put hot stones in them and boiled the water, and so cooked our food. The women made baskets out of wild rye and rushes. The wild rye was made into mats for beds. The people were poor in skins, and the babies were put on these mats."

"Robes were made out of the skin of the white-tail deer [*Odocoileus virginianus*]. The awl used for sewing was from a bone in the leg of a bear, next to the paw. The bone was sharpened by rubbing on the rocks."

The woman's deerskin dress was similar in cut to the calico sacques [wing dress] worn when these notes were taken. The tunic was fringed on the sleeves, the seams, and at the bottom, and embroidered with porcupine quills on the breast and shoulders. These tunics were sometimes made double, to insure greater warmth. The leggings were embroidered and fringed. Moccasins also were embroidered; the soles were double because so much climbing had to be done over rocks.

Nancy was first named by her father.³⁷ When she reached puberty her mother gave her a name from her family. It is said that long ago old men had visions, and in these visions names were given which they were to bestow on their children. The names thus received through dreams became the family names, and no one outside could take them, and they must be given the child formally by the family. When a child was born, word was sent to the father's family, and a name was then given; this name belonged only to childhood. Every family had a set of these names. When the boy or girl reached puberty, a feast was held, and he or she was publicly given one of the hereditary names to show to what family the person belonged. If the name given had once belonged to a man whose life was good, the lad was talked to and urged to strive to be like his ancestor whose name he now bore. (This general statement was corroborated by two old and trusty men, but it was not possible to ascertain clearly whether it was always the practice that the name given a child must be one of the child-names of the father's family, as was the case with Nancy).

Among the young people the spring was the meeting place. The young man would be there when the girl came for water, and he would fill her vessel and be very polite.

If a girl liked a young man she might tell her parents, or she might tell the young man that she liked him and would marry him. If he objected, he would say: "We are related." If a girl refused a man, she would say the same thing to him. If a girl and a young man liked each other

and were in earnest, one would go to the parents of the other, and say: "We are not related," and add: "You will find gifts in a certain place." Then if the parents were willing, the girl's parents would add gifts. Sometimes parents arranged marriages, and said nothing to the children.

"I had been out playing shinny,"³⁸ said Nancy, "and when I came home my parents told me I was to marry a certain man. I did not want to marry anybody, and I cried a great deal. I had to go to him. I lived with him, but he beat me. Then he went off, and I took my son and went back to my parents and lived with them for more than two years. Then there came a white man who gave my father much money, and I had to go with him. I lived with him many years, until his death.

"There used to be wars, for my white husband was a hunter. Once I was in a battle with the Cheyenne, and a warrior rushed at me with his spear. I dodged it, and it went into the ground. The man pulled it out, but I jumped at it, seized it by the handle, and broke it. Another time a young man rushed at me. He had an elk-horn whip hanging to his wrist by a strip of wildcat skin. He cried to me 'Look at the sun for the last time!' 'Look at the sun yourself, for if I die, you die, too,' I shouted. He raised the whip to beat out my brains. I seized the whip and broke the skin strap. I kept the whip. Afterward a Cheyenne came and offered me many presents for that whip. 'Why should I give you the whip,' I asked. 'Because,' he answered, 'when that young man goes back the people will ask him for his whip, and when they find out that a woman took it from him, he will be as a woman.'"

"One time my white husband was wounded in battle. He had an arrow in his hand, and another in his arm, and one in his spine. I pulled the arrows out of his hand and arm, but I could not get the one out of his back. I tried to pull it out with my teeth. I put a blanket about it, to get a better hold, but it would not come. Later, when the wound was very sore, I pulled it out and he got well."

"I used to make leggings, moccasins, and sheets for the white hunters, and to mend their clothes. I made a cover for the wagon, of wildcat skin, and sewed little bells on the seams, so that they jingled when the wagon moved."

"In the old times, when a young person died, the parents would beg to be buried with the child. Sometimes the relatives would have to tie the old people up. _____'s father [Fletcher apparently intended to fill in the name later] had to be tied when his younger brother died. I remember seeing an old man enter the grave prepared for his son. He sat down in the excavated place, took his son's body in his arms, and was buried with him. They built a sort of roof of sticks over him, and then piled the earth over the grave, and he died there with his dead son. At a burial everyone present threw some gifts into the grave."

The Months

A myth relates that once Prairie Chicken and Coyote consulted as to the divisions of time. Coyote wanted as many months as there were hairs on his tail. Prairie Chicken said, "No, that would be too many and too long, the people would starve. There had better be as many as feathers in my tail." Coyote would not agree to this. Then Prairie Chicken said, "I will hide. If you find me, it can be your way. If you can not find me, then it shall be my way."

When Coyote was looking off somewhere, Prairie Chicken slipped away and hid. Coyote searched and searched. He stepped on the Prairie Chicken many times; that is why it has no flesh on its back -- Coyote scratched it off. At last Prairie Chicken put up her head and said, "Can't you find me? You'll never be anything but a Coyote, going around looking and halting!"

Prairie Chicken rose. It has twelve feathers on its tail.

Months were measured by the growth of plants and the growth and movements of animals and fish. The moon was not considered a true measure. Following are the names of the months:

January, *We-loo'-poop*, "the cold winds and the long month."

February, *Al-la-iom-mal*, "all little things." At this time everything begins to spring out of the earth.

March, *Ah-ah-me*, "the crows begin to call"; also *Ka-ka-te-tat*, the name of a root which is eaten in the spring. This time the flowers begin to come.

April, *Ah-pah'-al*, a word expressing the work of preparing kouse, the gathering and pounding of the root. In this month the kouse is growing.

May, *Hee'-lul*, a term expressing the act of catching fish by nets.

June, *Kqui-ok'-sal*, from *kqui-kse*, a small fish that is caught in a net at this time.

July, *Hee-lem*, the middle of the fire or the heat. *Ty-yam* is the word for summer, and *hee'-lem*, is the middle of *ty-yam*.

August, *Kul'-li-me*. *Kul'-li* is the name of a small greenish fish that goes up the streams to the mountains in this month.

September, *I'kka-al*, the time when the salmon appeared in the mountains. The first salmon are bad to eat.

October, *Ho-pi-lul*, the time the leaves fall.

November, *Suc'kh-le-walla*, an expression meaning that summer is ended, winter is near.

December, *Ha-ha-ak-quw*, the name of the fetus of the deer. The deer breed in this month.

The Seasons

The seasons are: *Ty-yam*, summer; *Suck-mim*, fall; *Al-mim*, winter; *We-wahk*, spring; *Al-we-ta*, spring.

A person's age is measured by springs.

Personal Names³⁹

Many of the personal names refer to *Ah-la-lim-yah*, the Spirit of the Wind; to *Ah-leu-toe*, the Spirit of Fire; and to *Ah-lu-yah*, the Spirit of Intense Cold.

The names that begin with *Ah-*, or long *A*, generally refer to these spirits of wind, fire, or cold. Of fifty-six names beginning with this sound, forty-eight belonged to women. The following are female names: *Ah-la-lim-te-yuht* (*Ah-la-lim-yah*, sings or echoes on the mountains). *Ah-la-lim-yah-we-nun* (*Ah-la-lim-yah*, weeps among dry forest trees). *Ah-la-lim-wa-tsan-my* (*Ah-la-lim-yah* says, "I pass close to you"). *Ah-leu-toe-tar-i-eye* (little fire travels in the dark mountains). *Ah-lu-yah-tol-te pot* (the cold walks high on the mountains).

In male names these spirits are more active, as in *Ah-la-lim-yah-tah-kar-win*, 'filled with the spirit': *Ah-la-lim-yah*, 'as a whirlwind.'

Ah-lu-you-ho-e: *Ah-lu-yah*, 'cold races.'

Ah-lu-you-tsal: *Ah-lu-yah*, 'cold enters everywhere'.

The names of birds of strong flight occur in the masculine names. The names given to chiefs referred to large birds, large beasts, or to the sun. Female names referred to the land or earth and to smaller animals. Sometimes masculine names also referred to the earth as Red Earth, Clean Earth, Sloping Earth, The Earth Weeps, The Earth is Afraid.

The following are the names of the "chief" birds:

Yi-yah, White Duck; *Wap-tas-in*, Black Eagle; *Ya-tin*, Gray Crane (many used to be seen long ago); *Y-ku-kune*, Woodpecker (this was the chief or leader of all the small birds).

Of the "chief" animals, the following could be used or referred to in the names given to chiefs:

Yack-a, Black Bear; *Wa-gon-ki-a*, Elk; *Tim-run-in*, Mountain Sheep; *Ha-hats*, White Bear; *He-men*, Wolf; *All-he-tup-nin*, Mink. The mink was the chief of the small furred animals on the mountains. *Ki-o-ta*, (), claimed to be head of all; he might be killed or drowned many times, yet he would rise again.

There were no names, male or female, referring to the moon. A black stone (*ops*) from which arrow points were chipped is referred to in some masculine names.

Personal names were hereditary in families. A pet name was given to a little child. It often had several names. Sometimes a child would express a preference for a particular name, and would say: "From today, or from tomorrow, this shall be my name." But a name so chosen, or one given by the parents, was not considered to be the permanent, or "strong," name until it was publicly proclaimed in an assembly and assented to by those present. This proclaiming of the name generally took place at one of the feasts for the dead. At that time the father and mother of the child brought a present of blankets, or a horse, and after all the possessions of the dead had been divided among the relatives and friends, the father or the mother held up the gift brought to establish the child's name, saying, "I want my child's name to be _____." A brief silence followed; then an old woman or an old man would answer, *Ah*, "yes," and this would be followed by consenting *Ahs* from all the assembly. From that time on the child would be known far and near by the name then proclaimed. The child had generally reached the age of the second dentition when this event took place.

The boys were generally given one of the hereditary names belonging to the father's family, and the girls one from the mother's family. The old names generally referred to the leading spirits -- wind, heat, cold, fire, earth, water, etc. If there was any contention in the family as to the names to be given, whichever parent brought the gift and obtained the assent of the assembly carried the day. The name then assumed became the permanent name, and all disputing ceased.

In the olden time, when a boy or a girl sought his vision and secured his *wy-a-kin* in the vigil of the mountains, a name might be given by the attendant spirit. If such happened, the name was kept a secret until some day in battle, or in the presence of great danger, when safety or relief came through the power of the *wy-a-kin*. Then the new name would be proclaimed for the first time by its owner, although it might have been bestowed many years before by the *wy-a-kin*. That name took precedence of all [sic] other names, and became the honor name of the individual.

Chief Joseph took his name from his father to whom it was probably given by Mr. Spalding when he was baptized. His Indian name was *Hin-ma-ton yah-laht-kit*. It is composed of two words: *hin-ma-ton*, 'thunder' and *yah-laht-kit*, 'coming from the water up over the land'; hence "the sound of the thunder coming rolling over the water to the land."

Mortuary Customs

When a death occurred, particularly if the deceased were a prominent person, a friend would be sent to proclaim the death through the village and also through all the villages of the group. This custom was still observed in 1890. The writer has heard the stillness of the night broken by the ringing voice of the messenger proclaiming the death of a member of the community. This was followed, here and there, by sounds of persons startled from their sleep and running out to catch more distinctly the name that was called.

When a man died, his closest friend would take the clothes of the deceased to the dwelling of the nearest relative, and lay them before him, saying: "These are the garments of your relative." Then the relative would send far and near to all the friends and kindred, to bid them to a solemn feast.

At the time of the feast, when all were present, the friend who had taken the clothes of the dead man would put them on; and, standing there in the garments of the dead, he would make a speech in which the death was formally announced and the life and character of the deceased extolled. At the conclusion of the address the speaker removed the garments. This was a signal for expressions of sorrow, and all the company responded by wailing.

(Notes from Billy)

According to Billy, it was said that, in ancient times, when the fish first came up the river no one was allowed to eat of them until the people were assembled by the priests, when there was a ceremony of thanks, the priests singing ritual songs. A similar ceremony took place when the berries ripened. Men were appointed to go out and hunt for game, that meat could be served at this thanksgiving feast. The women would gather the fruit. After the people accepted Christianity they observed this feast of first-fruits. They came together and had a collation, the meeting opening with prayer and the singing of hymns. "I attended one of these feasts when the fish began to run," said Billy. "The fish were split lengthwise and threaded on sticks three or four feet long; these were thrust in the ground around the fire, the heads of the fish uppermost, and thus were roasted. Meat was cooked in the same manner."

Billy thought that this ceremony was modified by the whites -- that formerly the first salmon were taken to the chief of the village; the chief called all the other chiefs, who ate of it; then the people caught and ate.

Young men and women of marriageable age could marry from October to December, but at no other time of the year. No one married until he or she was about twenty years of age. The couple were engaged, but not bound; they agreed that if all went well they would take each other. During this period each watched the character and behavior of the other. If all was pleasant, they married for life. Polygamy did not exist in the Kamiah valley until after the white people came into the country.⁴⁰ It was a sort of etiquette for the husband or wife to say, when dying: "Do not grieve too long for me; take a husband" (or a wife).

No young man or woman could stay overnight in the long-house unless permission was granted by the parents. Only married people and young children remained in the long-house.⁴¹

Immorality was punished as follows: One of the baskets having a hole in the bottom for the mortar on which the kouse was pounded, was put on the head of the offender and pressed down until it rested just above the eyes. The man or woman was then forced to stand before a hot, smoking fire until nearly exhausted. Meantime a person heralded the crime of which the culprit was guilty and the people were bidden to have nothing to do with the offender till he or she did better.

When on the buffalo hunt, the herd was sought by runners. A leader was chosen -- a man noted for his justice. He had control, and to him the runners reported. The people all moved together until the place of the herd was at hand. The leader told the people how to go, and at word from him they rushed on the herd and slaughtered all that was needed for food.

Large bones of extinct animals are found in the Nez Perce country. A mastodon tooth weighing twelve pounds was discovered there; such are said to belong to an earth spirit who is not good and kind. This spirit has been interpreted in modern times to be the Devil. In reply to the Christian teaching of the power of the Devil, the pagan Indian said: "How can that be? He is dead -- here are his bones!"

Old Isaac said: At first the people used sticks for arrows and feathered them with a flat weed. Then the people had flint points, and used feathers. Then they had skin garments.

Burden dogs came from the buffalo country. Some were so strong they could carry forty pounds on each side. This is the way the Nez Percés brought home their meat from the buffalo country. A rich man might have five or eight dogs, a poor man two. "When it was known there was a litter of dogs, a man would go and ask the woman for one. She would put her hand to her mouth and think long; perhaps she would let him have one, perhaps not."

"Cats came from King George," Billy said. There were no cats in this country when Billy was young.

No sorrow was expressed when a child died. Only when a relative was killed was there desire for revenge.

Wy-a-kin ya-tset, "Dance of *Wy-a-kin*," was held in the winter.

Child Life

The Whipper

Within the long-houses the household goods were kept in the back part under the slant of the side walls, the beds being spread in front. There was a passageway between the beds and the fire. The lodge was about fifteen to twenty feet wide. Between the fires down the center the cooking utensils were kept and the little boys lodged. There was a fire to each family.⁴²

The discipline of the children was delegated to certain men whose duty it was to punish disobedient and quarrelsome children. If two boys called each other bad names or disobeyed their elders, their case was reported to the disciplinarian for the day, for there was always one of these appointed whippers in the camp. When night came every boy in the lodge was whipped. The offenders were the last to receive punishment, so that they might have the pain of anticipation, as my informant explained, who had himself passed through the experience he described. "Every boy," he said, "had to lie down on his face and take the blows coming to him. The lodge would be in a hubbub, for not only would the children be smarting under the rod, but those who were anticipating their turn would be howling in terror. Sometimes parents got their children off from this whipping if they were innocent, by sending them out to look after the horses up on the hillside. The little fellows would plunge through the snow, often climbing about for miles. When the horses were found, and it was safe for them to do so, they would return to camp. If a boy were absent at whipping time and not on duty, he received his whipping when he returned."

"These disciplinarians naturally were hated by the boys, who gave them nicknames by which they always called them behind their backs. I used often to wish they were dead! Other boys used to say: 'When I grow up, I'll whip these men's grandchildren!'"

"It was the rule that every boy from twelve years upward who was in good health must go into the river and stay there with the water up to his neck for a given length of time. The water was icy cold, and sometimes was filled with ice. To prevent the body from being cut by the ice a mat was tied about the neck so as to fall over the back. The boy kept part of the body protected by the mat against the running water. Each boy was bidden to move his arms rapidly in the water to keep him from freezing, and he must shout at the top of his lungs. Their shouts were frequently cries of distress."

"If a boy should rise out of the water so as to expose his chest or body, the switch of the disciplinarian would fall, causing exquisite pain. The same fate befell the boy who tried to escape from the water before the time appointed. Men also took these morning baths. They were thought to make them hardy, capable of enduring heat and cold, and of running a long distance without fatigue.

"If a boy tried to avoid his morning plunge, he had to take a whipping. In this case only the offender was whipped."

There was a white pole in each lodge, and every boy had to make a black mark on that pole for each of his plunges. "I made forty marks," said my informant, "and then I quit."

"There were whippings nearly every evening. I always knew when it was coming, for if I heard anyone entering the lodge I could tell if it was the whipper. He always carried his switches in front of him, and I could hear them scratching along the entrance way; and when he lifted the mat I saw them poking in front, and then I knew what was coming."

"We used to get angry at the boys who got us in trouble, and would not speak to them for days. If they came near us we went off and left them; but we made it up after a while. Girls were seldom whipped, but sometimes they caught it; and sometimes they went into the river."

Tribal Pipes

There were two tribal pipes, one pertaining to peace and the other to death. Both had ⁴³bowls. The stem of the peace pipe was ornamented with eagle feathers. (As nearly as I could ascertain, the feathers were put on as a fan-shaped pendant similar to those used in the ceremony of peace known as the Hako among the Pawnee,⁴⁴ and as the Wa-wan among the Omaha⁴⁵). The death pipe had a black stem. When a proposal was received for an alliance or to make peace, the chiefs met in council, and a consultation took place as to the course of action to be pursued. If the decision were favorable, all smoked the peace pipe; if for war, the death pipe was passed about. The fate of a captive was decided in the same manner. If death was decided on, all the chiefs smoked the black pipe, and it was offered the captive for his last smoke on earth; when that was over, he was taken out and either shot or [clubbed] chopped to death. These two pipes were in the keeping of the head-chief; but as this office was created as late as 1840,⁴⁶ and before that time there does not seem to have been any close organization of the tribe⁴⁶ or centralization of the governing power, it seems doubtful whether prior to that time there were any pipes that were strictly speaking, tribal pipes -- that is, that were recognized as representative of the whole people, and the reception or rejection of which would involve the entire tribe in any line of conduct. That there were pipes is beyond doubt, and there may have been pipes that represented villages or groups; but the tribal organization was so loose that it is highly improbable that there was any pipe which represented all the groups and villages, in a tribe that had not achieved the office of head-chief.⁴⁷

War Customs

If a man wished to go on the war-path or to capture horses, he and his companions took a skin and beat upon it at night. The sound of the beating and the song that accompanied it called the people together. This procedure was called *Ke-low-wa-yah* (*ke-le-lu*, hide; *wa-yah*, to beat). It was a serious call for volunteers. There must be no crying of friends at this time; only brave words could be spoken. When the party was fully made up, a leader was selected whom all must obey. He must fast in order to prepare himself. When the party was ready the warriors sat in a circle. Each man unwrapped his *wy-a-kin*, and holding it in his hand, sang his song and asked his *wy-a-kin* for a sign -- a cloud, rain, hail, lightning, or something to show that the time was propitious for the party to go. If no sign was given, many would drop off; those who persisted in going were likely to be killed. If an enemy were near, they might start while the sign was being given, but this would be done only in the presence of danger. Otherwise, if no sign was given, the men would sit still and wait.

The *Ke-low-wa-yah* was the initiatory ceremony of going to war to capture horses. It was sometimes used when the purpose was to kill an enemy or to avenge the death of a relative or a friend. When the people were gathered together on Camas or Weippe prairie before they separated to go off to the buffalo country, the *Tal-lik-leek-it* was performed (*tal-lik*, the loping of

the horse; *lik-leek-it*, circle). A procession was formed. The leader, an old and experienced warrior, rode in the rear. Some of the men would be on horses, some on foot; some were nude, some in regalia. They wore girdles of skins, on which were their *wy-a-kins*. Then a circle was formed. Only those warriors who had been in battle could have a place in this circle. For this occasion the warrior would paint the places on his body where he had received wounds. He would sing his songs and act out his war experiences. Meanwhile the women stood outside the circle and made bird calls, which were heard by the warriors' *wy-a-kins*, and were an appeal to them to help the men.

This ceremony was held also when a battle was decided upon. After the ceremony the people started. Men and women went together to battle, and sang as they moved on. Sometimes the women fought beside the men.

The shield used in battle was of rawhide, about 2-1/2 to 3 feet in diameter, and was called *e-na-ta-kan-pass*, meaning to protect, to take hold. It was carried over the left side. Bows and arrows were used, and a sort of war-club called *kap-lots* -- round stone bound in rawhide and fastened to the handle stick with a thong.

There were four war honors: to kill, to scalp, to strike, to touch.

The *Pah'-hum* was a society of warriors. At the meeting of this society a man would recount his deeds and sing his songs. On such occasions he would dress himself just as when he performed the deed which he was now to act. Both men and women attended, and were called together by the beating of the hide.

At the scalp-dance held during the middle of the last century, the women painted the right side of the face red and the left side black, and danced about the pole to which the scalp was tied, from left to right. At this dance, if a man fancied a woman and wished to take her for his wife, he would take a stick and lay it on his hand on her shoulder. If she pushed it off, she rejected him; if she allowed it to remain, it was regarded as a betrothal.

When entering battle, the warrior wound up his *wy-a-kin* and tied it on his hair or shoulder, or on some vital spot, that it might be a shield against danger.

Leaders of war-parties who were on the road to chieftainship were apt to have visions and to foretell events. There was a man named Raven, who was gifted with second sight; he would fall off his horse and tell his vision. At first people disregarded his sayings, but soon his words governed their actions and he became a sort of chief. He was a noted war-leader.

Battle-fields were haunted. An old man told me that he and his wife and mother-in-law were off hunting in the mountains. They camped in a place, and as night came they heard war-cries, the charging of men, the stampeding of horses and cattle. "My wife and mother hid themselves," he said, "I took my gun and got down behind a rock, ready to die fighting. When dawn came all was quiet; our horses were feeding, and there was no sign of anyone having been around. We had camped on an old battle-field." I have heard many such stories among the prairie tribes.

The Warriors' Feast and the Honor Poles

In early summer, "when the grass is tall and everything is in full vigor," the yearly gathering of the warriors of the tribe took place. All the people -- men, women, and children -- came in their gala dress. At this time the two honor poles were made -- the *tol-kee-wos*, a straight pole, and the *wath-kee-lotz*, a pole with a crook, like a shepherd's staff. These poles were made by warriors exceeding fifty years of age, that is, men beyond middle life who had been successful warriors. While they were engaged in this work, the younger men held their dance and had a sham battle. When the poles were finished they were ceremonially presented, and the great gathering broke up after partaking of a feast.

For the preparation of the honor poles a large tent was set up, and to this repaired the men who were entitled to take part in fashioning them. The *tol-kee-wos* and the *wath-kee-lotz* were ten and twelve feet long, and were wrapped with strips of otter-skin. Sometimes it took two and a half skins to cover the poles. While the old men were decorating the poles they sang the death songs, recited their deeds of valor, and told of their appeals for help and of the answers they had received from the supernatural powers.

These poles were made and distributed once a year, at this time, and they could be held by the men who received them for only a year.

The man to whom was given the custody of the *tol-kee-wos*, or straight pole, must keep it constantly with him while in the camp, when on the hunt; and, if an alarm was given and enemies appeared, he must at once proceed to the battle, carrying the pole with him. If the battle chanced to go against his party, he must dismount, if on horseback, thrust the pole into the ground, and take his stand beside it; and there he must stay and fight until he conquers or dies -- unless a brave companion warrior should see his danger and rush toward him, seize the pole, and carry it off; in that case the owner would be free to retreat and save himself. If the man who had the pole did not thrust it into the ground, let his horse run off, and stay himself to fight beside the pole, he would suffer an unpardonable disgrace. Only once in a lifetime could a man become the possessor of the honor pole; and, as already stated, he could hold it for one year only, that is, from the yearly gathering in the summer time when the pole was presented to him, to the same gathering the following year.

If during the year when a man had possession of the honor pole no opportunity occurred for him to go into battle with it, that honor that accrues from a valorous action in connection with the pole is accounted to the man, as he has held himself in readiness during the period, and the fact that no opportunity offered for him to show his valor is his misfortune and not his fault. The possession of the pole was one of the steps toward the recognition of a man as a leader among this people.

The *wath-kee-lotz*, in addition to being bound with strips of otter skin, was decorated with eagle feathers. It was considered a higher honor to receive this pole than the straight one. The man who carried the *wath-kee-lotz* was not allowed to carry any weapon with which to defend himself -- he must rush into battle and strike the enemy, living or dead, with the pole. This act raised a man to a position of the highest rank.

When the poles were finished by the old men the fact became known, and all the young warriors gathered in a tent and there awaited the procession of old men, who advanced toward the tent where the young warriors sat. Two leaders (chiefs) carried the two poles; they were preceded by a chief who carried the tribal pipe of peace. The pipe was filled and ready to smoke; and as they passed around the circle of warriors in the tent, it was offered to each one. Whoever first accepted the pipe and smoked it, accepted the pole, and to him the pole with the crook was handed. He thus became its possessor and charged all with the obligations connected with it until the same feast occurred in the following year. The next man who accepted the pipe was given the *tol-kee-wos*, the straight pole. It was open to every man to accept or to reject the pipe and the poles, for it was a choice of death or honor. But if, having accepted the pipe and the pole, a man failed to use the latter in the prescribed manner, he could never retrieve his lost reputation.⁴⁸

War and Hunting Experiences

Long ago, before there were many white people in this country, a man with his wife and child went off to hunt in the Blue Mountains toward the Umatillas.⁴⁹ They stayed there about two months, gathering food for the winter. The Snake Indians were out hunting, too, and the man and the woman, although camped in a secluded place, were always on the lookout for enemies. The man hunted every day, and when he came back at night he always entered the tent by the right side. By this sign the woman knew it was her husband. She always kept a fire burning. One

night, late, as she sat watching for her husband, a man dressed in her husband's clothes entered the tent by the left, and the woman knew by that it was not her husband, and suspected it was a Snake Indian who had killed her husband and come to their tent. The man carried something in his hand -- a lump of fat such as is about the kidneys of an animal. It was wrapped up in leaves. The man handed the woman the bundle. She saw it was not deer fat, and suspected that it was a part of her husband's body; but she said nothing. The man sat down and thrust out his feet to show his moccasins. She recognized that they were her husband's. She went to the man and drew off his moccasins and hung them up to dry. The man leaned back, but hid his face. She bustled about the fire, making preparations to cook some food. She took up her vessel -- it was empty. She passed by her child and pinched it to make it cry. She made no sign as if she thought the man was not her husband. He lay watching her between his fingers. Then she took up the child to quiet it, and, picking up her water vessel, went out to get water. She had on her warm moccasins, for her husband's long absence made her afraid, and she was ready for a journey. When she was well outside, she ran for her life. She traveled all night and the next day. She saw people on the mountain, but she did not know them, so she was afraid to go near them. At last she encountered some Nez Perces, and they helped her to hunt for her husband's body. At last they found it, mutilated.

The Snake Indian whom she left in her tent took all the store of meat, and escaped. The Nez Perces called the Snake Indians *Tu-el-kin*, "the enemy."

"Cut-throat" is a nickname for the Sioux, and the following story is told to account for its origin.

A Nez Perce woman was with her people in the buffalo country. One evening she went out to get some water for her husband. At the spring a Sioux was lurking. He seized the woman, and started with her for his country.

When the woman did not return, the husband and his brother went out to search for her. At the spring they saw signs of a scuffle and followed the trail, which led them far away. Finally they came to a camp, which they secretly circled and at last found where the Nez Perce woman was hidden. In the camp was a half-white man. The brother and husband told their trouble to this man, who was friendly, and he pointed out to them the tipi where the Nez Perce woman was hidden. He told them that she was one of the four wives of a chief. "Tonight," the man said, "there is to be a great gathering of the chiefs. He will be there, and the Nez Perce woman will be alone in her tipi. She wears a dress with bells around the bottom, so she cannot run away."

The two men agreed what to do: the brother was to watch, while the husband was to go to the tipi where his wife was. The brother went toward the big tipi, which was lit up, and heard the men talk. The husband crept near the dark tipi where his wife was, and entered.

"Who are the people in this tipi?" he asked.

"That is my man's voice!" cried the woman, as she stretched out her hands and caught one of his.

"Come with me," he said.

"I dare not move!" she cried, "I have on this terrible dress with bells. Here I must sit, a prisoner. I am so afraid of these men, and I have nothing to wear but this garment. You wait until the council is over, then the man will come and lead me out, for I am never allowed out alone for any purpose. He will lead me back. While I am gone, you creep in and hide behind the pillow in the tipi, and wait."

In time the chief came back, the woman was taken out, and the husband crept in. When the couple returned, the chief lay down to sleep. The woman appeared full of fun; she played with him, and tickled him, while he became more and more overcome with sleep. She continued her play until he was so sound asleep that he could not be wakened, and he lay snoring. Then the woman turned her husband, and said: "He is asleep!" The husband drew his knife and cut the

chief's throat from ear to ear, and he died without moving. Then they bound up the skirt, rolling it over and over so the bells could not make a noise; and, taking all the valuables in the tipi, they signaled to the brother, who had secured five horses belonging to the chief, and started. No one yet knew of the murder.

In the morning the two wives whose business it was to prepare the food came with breakfast to the chief's tipi, but he still lay asleep! After a while they attempted to waken him. Then they discovered blood, and ran and aroused the camp. The Nez Perces had escaped and were not found. The woman who had been rescued was worn and thin, for she had been badly treated and beaten by the other wives of her captor.

(? Dance -- Ceremony) [Beneath this is written "Where should this go?"]

A dance was held in the summer time around a pole. What the pole stood for I was unable to learn. It was accounted unsafe for a person to touch this pole, as to do so irreverently would cause death. This dance took place in the prairie land near Walla Walla. It may have been a Cayuse ceremony in which the Nez Perces shared. The gathering at this dance was later made use of by the traders, and it was said that it became an occasion of great ceremony.

Preparation of Camas

A large hole was dug in the ground. In it was laid wood, on which large stones were placed. The wood was set on fire and the stones made very hot. All the coals were taken out, leaving only the heated stones. Over this earth was thrown and water added, to make a hard floor. Grass was laid on this floor, and over it was spread a layer of camas roots; then grass was again spread, covering the sides of the pit. These alternate layers of grass and camas roots were added until the pit was nearly full, the grass being the final layer. Over this earth was placed and a fire built on it, which was kept burning for two days and a night. When the time came to take the camas out, wood had to be placed on the ground, as it was too hot to stand upon. The grass in the pit did not burn, but it became very hot. When the camas was taken out, the outer covering was taken off, and the soft, inner part, when cooled, was pounded into a mush and formed into cakes, which were then dried in the sun.

Preparation of Kouse

Kouse roots were dried in the sun. The larger ones were eaten dry. The smaller roots were pounded and the meal mixed with water, formed into cakes, and baked over a fire, or else dried in the hot sun.⁵⁰

For pounding both kouse and camas a stone pestle was used. There were two kinds. The short one was called *ta-leep-lich*; the long one, *pe-lee-lie*. It is said that the small type was the older. The large, saucer-shaped basket had a round opening at the bottom, which was fitted over a round flat stone mortar. On this stone the roots were crushed with the stone pestle, the basket catching and holding the meal as it was made.⁵¹

Colors

The colors (*timee* or *taimi*) recognized by the Nez Perces are as follows:

Black, *simuh-simuh*.

Blackish, *tsi-mi-muh-nin*.

Bay, *ilp-ilp*.

Blood-red, *Tu-tal-ikt*.

Blue, *yos-yos*.
 Deep blue, *yohoi-wakos*.
 Sky blue, *palot, hai-kittin-wakos*.
 Pale blue, *palot-nin*.
 Brindle, *kik-oi-nin*.
 Brown, *shiph-shiph*.
 Reddish brown, *shukin-shukin, lam-lampt*.
 Copper color, *silan-ilp-ilp*.
 Gray, *ra-hus-wakos*.
 Leather color, *toh-toh*.
 Pied (cow), *shirh-alhnin*.
 Pied (horse), *lilip-lilip-nin*.
 Purple, *ilp-ilp-lam-laut-yohoi-wakos*.
 Red, *ilp-ilp-mimaks-mimaks-kash-kash*.
 Light red, *lamant-nin*.
 Reddish brown, *ilp-ilpin*.
 Scarlet, *himthimt*.
 Sorrel, *maks-maks*.
 Speckled, *kash-kash*.
 Sunburnt, *helasukurkt-ila-lamkin*.
 White, *hai hai* (like ice) *kanyash kanyash*.
 Yellow, *maks-maks*.
 Yellowish, *Kawauh-nin*.
 Reddish-black, *Alptoh-wakos*.
 Whitish black, *ista-lamkt-wakos*.
 Bluish, *palot-wakos-kas-kas-nin-yoho-hos-nin*.
 Light brown, *maka-kas-nin*.
 Buff, *silan-kauh-kauh*.
 Grizzled (bear), *is-hap-lik-at-sin*.
 Grizzled (cattle), *lamsilpin-kas-kas-lilu-k(a ?)-nin*.
 Lilac, *yohoho(a?)-nin*.
 Red, *ilpilp-nin*.
 Whitish, *hayaih-nin*.

The diminutive -- ish = *nin*.

Bay, copper, purple, and red, all have *ilp-ilp*. Blue, green, lilac, gray (whitish black) have *yos, wakos, yohoi, palot*. Yellow?

II. MYTHS⁵²The Adventures of Coyote⁵³

The following was told by a full-blood Nez Perce, a well known man, in 1891:

Coyote traveled up all the streams, and he it was who gave the names to the villages.

The son of the Coyote was the great chief *Me-oh-hat*, Chief of the Orient. He gathered all the people to go and hunt the deer on the mountains to the east (Bitter-root Mountains) and to the west (Blue Mountains). In the morning he gave his commands. He would hit the log with his foot, and fire would rise up. When the people saw this fire they knew they were to go on a hunt. Then he would command one group to go this way, and another group to go in a different way, but after the hunt they were all to return to their villages.

[The Chief] *Me-oh-hat* had two wives. One was white like a duck; the other was dark like a cricket. She had a son. The old Coyote put on his son's clothes and returned to the wives and took the white one. Coyote wished to appear as *Me-oh-hat*, so he went and kicked the log to bring fire, but it would not come. So he had to twirl sticks to get fire. Coyote was the discoverer of making fire by friction, by rubbing sticks one of which was fastened on the ground and the other rubbed on it by rotating between the hands.

When the people saw the fire signal they gathered and started on the hunt; but it was in vain, for they gathered little game. When the people came back Coyote bade them to build long-houses. When the people complained of their poor hunt, Coyote told them his father had gone off and taken the *Wy-a-kin* which coyote always wore on his tail -- that is why they had no luck. Most of the people knew he was lying.

The little dark wife was very poor and thin, but she kept her child with her and carried it on her back. The son had gone, no one knew where, but it was far away. He was followed by an old couple. When he asked, "Who are you?" they answered, "Your grandfather, the grandfather of the one who was lost." These old folk were Black Spiders, those that spin the largest webs. They spun round and round the body of the sun. They opened the door of their net and told him to go back to the earth. They let him down. When he touched the ground, he tied the end of the net to something and went off to hunt. He killed a deer, and sent it up to the old couple by the web. Then he started to hunt for his camp. He struck the trail and saw his dark wife with the child on her back. She had taken his shield and bound it on the outside of the *te-kas* (child's cradle) and held its ends, and its band was about her forehead. As she walked, bent, she sang:

In-mun-lo-yah

Tsul-tsa lov-yah

An-no, an-no! (A wail)

(My husband is lost! *An-no An-no!*)

The little Cricket was always behind when all the people were in camp. The little boy had a small bow and arrows. The little boy, peeping over the shield, knew his father, and cried: "*To-ta-tum* Arrow -- an old term, "Father here [are] my bow and arrows." The mother nudged the shield, and shouted, "Keep silent! Your father is dead!" But the child continued to cry "*To-ta-tum!*" the mother wailed "*An-no, an-no!*" and begged the child to be still. A string from the shield dragged on the ground, and the father stepped forward and put his foot on it. The mother felt the pull, but she struggled to go forward. Finally she turned and beheld her husband, and cried: "*In-nim ewe'pua!*" Then she told him how Coyote had taken the white wife, that he sang sorcerer's songs, and that the people were hungry. And she was ever behind, wailing and singing her song, "My husband is lost!"

She did not return to the camp, but built a light little house of reeds and hid her husband there.

A man went to the mountains and killed a deer. As he was returning, Cricket ran out and caught hold of the deer, and said: "Why don't you remember the widow and child who are hungry?" This conduct was strange, for Cricket had always been quiet before in his house on the outskirts. All the people were in their long-houses when Coyote had had them come together for ceremonies and singing. When the hunter returned to the village he told the people how Cricket had acted about the meat, and said: "She does not sing as she did!" She lit no fire until night; although she was sometimes singing, still she would not stop. As the people thought of this change in her conduct, they determined to send [someone] to find out about it. Yellow Snake was sent. He crept up to the house and looked in; then he hastened back, crying to the people: "There are two!" The people ran to where Cricket's house was and tore it open, and there they found the son. And the people sang "*Si-yah yah me yots hatwah-yah we sa*" (He has risen from the place of silence; he has come!)

When Coyote heard them, he cried: "No, it is a dog. It is not true. It was a dog took the man!" But the people shouted their song: "He has risen from the place of silence; he has come!" Again Coyote denied the truth of the saying, but the people forced him to go to the house on the outskirts, and there they saw his son with the little boy on his knee. The old Coyote exclaimed: "My son, my son, I give you back your robe!" "Stay where you are," said the son. Then the white wife reproached old Coyote, and said, "Why do you deceive me?" She was so ashamed that she flew into the water, and has stayed there ever since.

The son went on the hunt. The old Coyote lingered, and then he started. Coyote had a buffalo robe, and carried a deer on his back. The buffalo robe began to have holes. He mended it and mended it, still it was in holes. As he traveled he came to a stream in a cañon. It was the son who made the cañon by striking a wand on the ground. He did this to prevent his father from following. Coyote finally found a river, and he went swimming down, down, until he reached the falls. People lived there near the rocks. Five maidens had dwelt there from very ancient times. This was a place where the great rocks prevented the fish from passing up the stream.

Coyote, while among the deer, made a raft of reeds on which to float down the river. He turned himself into a little child in *te-kas* (cradle), and so floated down to the five maidens. They saw something a long way off on the water, and wondered what was in the cradle on the raft. The eldest maiden who dwelt on the rocks swam out and caught hold of the raft and the *te-kas*, and brought them to shore. Then she unlaced the *te-kas*, and cried, as she saw the baby, "It is a boy!" But the youngest said: "It is Coyote!" The other sisters took it, cared for it, fed it, and the boy grew -- grew very fast.

By and by they went on a journey, and all became hungry. The boy was so hungry that the sisters told him to go back and get something to eat. They all started, and, although they traveled fast, the boy got there first. They all ate, but when the maidens went, as usual, to fish, their poles broke. "Why is this?" they cried. "It is Coyote," said the youngest.

He broke the bridge of rocks at The Dalles, and there stands the rock that looks like a *te-kas*. And the people were called *Te-kas-poo* (pro [sic] people) from the rock *te-kas*.

This was before Coyote destroyed the winter in Kamiah valley.

Fox and Coyote

Fox and Coyote were friends, and dwelt together.⁵⁴ Fox was great, and never failed, whereas Coyote was impulsive, and failed in his plans.

They made a large but sunny and warm dwelling and each had his place opposite the other. They always hunted together. Coyote was fond of mice, and Fox always shared his mice with Coyote. There was a *Tit-na-tit-yi-yah* (story people) who had a dwelling near by, where he lived with his wife and child. He was a rich man, and had much meat dried and [packed] stored away in the back part of his house. One day Fox came alone to the house, where stood a vessel

full of fat from the deer, and a little boy was rolling the vessel. The father came home from the hunt, and there sat Fox watching the child. The father knew that the old Fox wanted the fat, for he caught hold of the vessel, whereat the child began to cry. The father called out: "What is the matter?" the child said: "There is a creature here that wants my plaything!" Then the father called to Fox: "Come out! It is not good to act so!" Fox came out. He saw many sacks of deerskin, all of them filled with meat, hung about the house. The man asked his wife to prepare some food for Fox. The woman cooked a great deal of meat, and Fox ate heartily. When he was leaving, the wife tied bundles of meat on Fox for him to take home.

Fox got home in the evening with his bundles of meat, but Coyote had not yet returned. So Fox hid his store, reserving a small piece which he intended to present to Coyote with great ceremony. Fox sat by the fire as if asleep, but in reality he was watching his store of meat, when in came Coyote with mice. Seeing Fox sitting there, Coyote threw him many mice, some alive and some dead, saying: "Waken, waken my son! Take these mice. Are you not happy? Do you not like what I give?" But Fox sat sleepily, and let the mice travel here and there. "Why do you act so?" said Coyote. "I have been scratching in the bushes, and now you do not care for what I have brought you!" Thus Coyote scolded. Then Fox roused himself, and took the piece of meat and handed it to Coyote. "Oh, my friend," cried Coyote, "where did you get this?" Fox evaded a response and then told a lie. But Coyote teased and teased, so at last Fox said: "I got the meat from up there," pointing and repeating in detail the story of how he found the boy and all that followed. When the story was finished, Coyote said: "You are bad! You are not a good boy! I am old and poor. I shall go there tomorrow. The man will have mercy on me!" This was what Fox feared.

The next day at dawn Coyote set forth. By and by he came to the man's house, and there was the boy playing with the vessel of fat, while his father was in the sweat-house. Coyote went to the sweat-house and sat down there. The man called out: "Go back to the house, and the woman will give you food to eat!" So Coyote went to the house and sat down like a chief, his feet stretched out and his hand over his face. The woman took food to him, but Coyote refused, saying, "Wait for the man to come in, and we will eat together." The man came and the woman prepared food for him. The man thought Coyote had eaten and was full, so the man ate alone. Coyote had thought that perhaps the woman would prepare better food for the man, and if he waited he would get the best. Coyote still sat with his hand over his face. The man, having eaten heartily, went to sleep and snored, for he had long been out hunting, and had been hungry, and was tired. Coyote became angry, and cried: "Now I shall kill him!" and went out to get something with which to kill the man. The woman had left the house to gather wood by the creek, so no one was there when Coyote returned and cut the man's throat. It was in Coyote's mind to kill all the family and then come with Fox and live in the house.

As soon as the man's throat was cut, all the spirits of the deer came to life, and off went all the meat and left the house, and Coyote saw even the woman and the boy turn into deer. There was nothing left but the house and Coyote!

The meat which Fox had received, and which was under his head for a pillow, suddenly stirred, threw off Fox, rose up, and walked off as deer. Fox was greatly astonished and troubled. He thought and he questioned what all this could mean. Then Fox said to himself, "Coyote has killed the man!" and he was sad at heart. At night Coyote went home. He had but a few mice he had been able to pick up. He laughed loudly and derisively as he entered the house and threw some of the mice at dejected Fox, who tossed the mice to one side. Then Coyote chided Fox. Fox began to chant a prayer. "Who, who will give us something to eat?" Just then he heard five thumps outside the door. Fox went to the door, and there were five deerskin bags filled with meat. He took them in, gave Coyote two of them, and kept three for himself. They opened the bags, and oh, the meat was good, with plenty of fat! Coyote ate his two bags full, and Fox ate two bags. Coyote then crossed over to Fox's side, and said: "We will be sharers," and they began on the last bag. After this they were a long time without food. Fox prayed again, and

again there were five thumps outside the door. Fox went out, and there were five bags of meat. He brought them in and gave Coyote three and kept two for himself. Fox and Coyote each went to his own side of the fire.

After many days Coyote had eaten all the meat in his three bags, and Fox still had some left in his second bag. Coyote went hungry for two days; then Fox had compassion on him and gave him some of his meat that was left. After a time all the meat was gone and hunger came again. Once more Fox prayed, and once again five thumps were heard. Coyote spoke, saying to Fox: "You have always gone to the door. Sit still; I will go in your place." Coyote went to the door and saw a man running away from the bags of meat. Coyote ran after the man, and used bad words, making fun of the man's braided scalp lock. Then he returned to take up the bags, but they had all turned to spirits, and were gone.

Fox had a very sorrowful heart, and said: "That is not good, not good," and mournfully they returned to their house. They hunted for food -- anything they could find.

Fox went to a distance and gathered pitchpine and cut it into four lengths. As he cut, he threw the sticks back of him. He said: "That is enough, I shall make a fire." Then he turned around, and there were the sticks changed into salmon. Then Fox began to cut wood and throw sticks behind him, and all the sticks became salmon. After eating, Fox turned home with the salmon, and hid them. Coyote came home with mice; but Fox, being full of salmon, rejected the mice. For two days Fox secretly ate of the salmon, and Coyote heard the noise of eating, and, peeping over the screen between them, spied Fox eating salmon. Coyote jumped over and caught Fox eating. Coyote cried: "My friend, when did you get this food? Why did you not tell me?" Fox was silent. Coyote teased and teased, until at last Fox told how he obtained the fish. "I am strong," said Coyote. "I will make much salmon." They fell asleep. Early in the morning Coyote started out. He cut up the log and threw the sticks back of him, and they became salmon. Coyote began to eat. He gave no thanks. He ate and ate until all the fish were gone. Then he began to cut more wood and toss the sticks over his back, but as they fell one on the other, they sounded like falling wood. They were not salmon any more. "I'll stop," he said; "this will be a large load of wood." He was ashamed, but he strapped the wood on his back and went home. There lay Fox stretched out, with his hand over his face. Fox had a presentiment that Coyote had gone wrong. Coyote dropped his wood at the door, and, taking a stick, went in. He said to Fox: "You never showed me how to make a fire of the pitch." Coyote said this to pretend he was not thinking of the fish.

Fox had salmon left, but when he turned down the wrapping, the fish had turned to pitch. Fox was sad because of Coyote's foolishness. Still, they remained together.

Winter came, and ice was everywhere. Fox came to the stream, and said: "Although I find nothing to eat, I shall sit on the ice and let my tail drop in the water." He did so, and wild potatoes and other roots gathered on the hair of his tail. "Thank you! Thank you!" said Fox. He picked up the roots and put them on his back, and dropped his tail in the ice hole again. Again the roots came, and again he gave thanks. He had now a large supply, and he went home. Coyote was full of wonder. He questioned Fox as they put the roots in hot water and cooked them. Fox divided with Coyote.

Fox upbraided Coyote: "You have not been doing right; you ate the first salmon and gave no thanks. I get food because I give thanks."

"I'll do as you do," said Coyote, and he started off early in the morning to a place where the ice was thin, and put his tail in the water. Sure enough, the roots came and fastened on to it. When Coyote saw them, he began at once pulling them off and eating, not even stopping to pile them on the bank. He put in his tail to get many more. The ice clung to his tail and pulled his hairs by their weight. He scratched and scratched, but he could not save himself, for he was drawn under the ice, and floated off.

Magpie saw him, and cried: "What has killed Coyote?" and began pecking about his eyes.

Coyote came to life, and said: "I was not dead, I was only sleeping."

"No, you were not, for you could not sleep there," said Magpie. "You are not good. Fox gets his food by thankfulness, but you pick it off your tail and do not care. You were not asleep. If you remembered to be thankful, you would get much."

Coyote went back, and continued to live with Fox.

One day Fox sat watching, and he saw some Kingfishers hunting fish through an air-hole in the ice, and one bird, the *sah-sah*, one of the five, went down in the hole, and was gone some time. The bird had a little stick of which he pulled the fish out. All five birds had many fish. They saw Fox, and they said: "Let us give our fish to Fox; we can get more." So they gave Fox their fish and he thanked them and went home carrying the fish on sticks. He gave two sticks full to Coyote. They dressed the fish and hung them up to dry. Coyote began once more to question Fox. Finally Fox told him how he watched the birds. Coyote said: "I'll go tomorrow." Then they slept. In the morning Coyote started off, and came to a place where he saw a long stick with fish strung on it. This had been done by the Kingfishers. They were going to give this stick of fish to Fox. Coyote saw the birds dive and bring up fish. They felt kindly toward Fox, and, thinking this was he, gave him some of their catch. He took the fish without a word, and began to eat. When he had eaten, he said, "I'll dive." He snatched the whistle of the bird and tried to dive in the ice hole; but he missed his aim, struck his head on the ice, and was killed. Then the birds discovered that it was not Fox but Coyote, and they flew away and left him with his broken head.

Magpie came along, saw Coyote, and began to peck about his eyes. When Coyote awoke, he said: "Why do you awaken me? I want to take a long sleep."

"You!" retorted Magpie. "You are old, you can not do as the fish-hawks do. They have been diving this way since they were little. No Coyote can dive and live in the water. You think you can whistle like the birds, but you can't!"

Coyote went back and hunted mice, but food was scarce and he and Fox were hungry.

Fox traveled on and came to where five Beaver brothers dwelt. The Beavers were drawing out *may'-yeh* (a fish like red salmon). Many lay on the bank. The Beavers gave Fox some of the fish and he thanked them and returned home. When Coyote saw the fish, his first words were: "*Kite-see ow yah*" ("I am thankful"). "Where did you get the fish?"

Fox answered: "I have always helped you but your conduct has not been good. Do not do as you have been doing. If you are thankful, there are many fish."

Coyote rejoined: "You did not go to work and get the fish; the birds got them for you. It is not to your credit!" I can go myself and get them.

"It is not our way to go under the water," said Fox. "We travel on the hills and in the valleys."

So they disputed. Coyote was full of pride and said, "I'll go and get many fish!" So off he went and came to the place where the Beavers were.

The Beavers said: "We can catch many fish."

"So can I," said Coyote.

Then they dived, and Coyote got nothing, but the Beavers caught many. Coyote took the fish and went home and said to Fox: "See what I have -- I did this!"

Spring came, and they said: "We separate."

Fox said: "I shall go somewhere on the mountains, and not go far."

Coyote replied: "I shall go everywhere," and he wandered far off.

Fox's heart was right; but Coyote's heart was not always right, sometimes it was off, sometimes wrong.

The *Te-lu-pin* Fox had soft yellow hair.

Fox and Coyote had each five daughters, and each set had an *ahwet* (a lodge) [the menstrual lodge] where they lived and made things. Coyote's heart was bad. He went to the *ahwet* and let his urine fall until all the daughters were dead; then he went to the *ahwet* of the five daughters of Fox and did the same thing, and they were all killed.

Fox was very sad. He cried, but Coyote did not care. Fox prayed as he cried, and fire came down, and balls of fire fell all around. Fox found shelter and was not destroyed. Coyote fled, but the fire followed him, came up all over him, and he fell dead.

Then the fire stopped, and Fox saw that Coyote was killed. He was lonely for his friend.

The grass began to grow, and the earth was beautiful again, but the bones of Coyote lay disjointed on the field. As Fox walked alone he saw the bones. On coming near he recognized them as Coyote's bones, the skeleton having all fallen apart and the grass growing between the bones. He wept, and said: "Where shall I find the jaw-bone of my friend?" As he cried, there came a groaning tone from the skeleton. Again Fox cried: "Where shall I find the jaw-bone of my friend?" and again came the groaning reply. Fox walked in and out among the bones, and after the third time he espied the jaw and cheeks, from which came a groaning sound. He took them in his hand, and hunted and hunted until he found all the bones, little and big, and put them together. When the skeleton lay there, Fox stepped over it five times. After that Coyote began to stir, and the flesh came as Fox took him by the hand to help him up. Soon the friends stood face to face. "Oh, but I have had a lonely heart!" said Fox.

They dwelt together a while, but soon separated. Coyote ran here and there, and Fox wandered on the mountains. They met often, and were friends.

This story, I was informed by more than one old person, was formerly told by parents to their children, who were bidden not to be like Coyote. It was sometimes repeated to young men and women for the same purpose. One old woman said to me: "My mother told me this story, and gave me its secret (revealed its moral). She said it was to teach me not to tell lies, not to cheat, but always to be thankful."

The Moon's Face

A girl said one day to her companions in the *ahwet*: "I am going to get the Sun for my husband. She took a sheaf of wild wheat and a round vessel with her and started for the Sun's house.

She put mats down at the door of the Sun's house, and sat there. The Sun heard her, and said, "Whence came you?"

She replied, "Something is in your eye."

"Come and look at it," he responded as he pulled down his eyelid.

She went toward him; he clutched her, and covered nearly all her face. She struggled to free herself, but there she stands still, and one can see the shadow of the sun's hand on her face.

Coyote and the Birds

Long before there were any people here, Coyote was here, and killed everything that came in sight. He was always going up the river, never down. The *Ne-te-ta-hu-ate* would attack Coyote, kill him and throw him in the river. He would float down two eddies and a half, then he would meet Magpie. Magpie would peck at Coyote's eyes, and wake him.

Once Coyote was going along. He heard *Ta-mom-no* (humming-birds). They called to him from the hill: "Do you want to fight?"

"That is just what I want," said Coyote.

Then the birds came down the hill, bringing the *kap-lotz* (a round stone bound in rawhide and attached to a stick). They attacked Coyote so suddenly that they killed him. As he lay dead, they said contemptuously: "Oh, that Coyote! Throw him in the river!" They did so, and he floated down, *pa-pet-tsu-lim-mah-kena* (two and a half eddies).

The friendly Magpie came along, and said: "Somebody's killed!" Then Magpie pecked Coyote around the eyes.

Coyote said: "What did you wake me for? I was taking some exercise toward the head of the river."

"But," said Magpie, "someone had killed you!"

"That is what I thought," responded Coyote. Coyote always said this.

Now, there were Bugs that went about with Coyote, and the youngest Bug would talk and advise with Coyote.

The Humming-birds kept their hearts tied up and hidden in a secret place on the hill; therefore these heartless birds could not be killed.

By the advice of the youngest Bug, Coyote played he was an old man, and, taking a staff, he swallowed the Bug and went on. He came to the hill where the Humming-birds lived. When they saw him they called out: "Do you want to fight?"

Coyote said: "I can't. I am an old man. Come and kill me!"

Then the humming-birds ran toward him; but in order to reach him they had to pass behind a hill. As soon as they were out of sight, Coyote ran swiftly to the place where their hearts were tied, and cut them down. The Humming-birds discovered him and very nearly caught him, but they were not quick enough -- he cut down the hearts and the Humming-birds fell dead. Coyote said: "The *Ne-te-ta-hu-ate* are coming, and such as you can not live. I am killing such, to make ready for the people who are coming."

Once Fox thought to advise Coyote, so he told him a great wind was coming; he must prepare for it and hold on to a chokecherry tree [*Prunus virginiana*]. But Coyote said: "Never you mind, I can manage!"

Coyote and Daughter

The daughter of Coyote died, and she was buried. Coyote was very lonesome, and wandered about sore at heart, for he missed his child. Suddenly he heard laughter in the air. He stopped, and said: "That sounds like my child." Again in his lonely wandering he heard the laughing, and a voice speaking. He cried out: "My child, my child! It is your voice! Tell me where you are staying."

She answered, "I stay over there where the sun goes down."

"Stop! I am going with you, I am so lonely!"

"You can't," she said, "'You are in life."

"I'll fall in this fire and die; I must go to you!"

He made a great fire and threw himself into it, but he did not die.

He was so intent on going to his daughter that he determined to follow her voice. He could hear it only at night; in the daytime all was silent. So at night he would follow the sounds in the air. He followed on and on, until finally he came to a great sea. He was told by *How-la-how-la* that his daughter was on the other side, but a boat would come for him. He thought he saw one and tried to step into it, but found himself in the water, and no boat was there.

He stayed by the shore, but could find no boat. Then he bound his eyes and felt about for a boat. He found it, got into it, and was taken to a beautiful place where there was a large company of pleasant looking people who were happy, laughing with each other, and contented. When daylight came all was silent, nothing was to be seen. For ten days he watched, and then the people said: "Why does Coyote stay here, keeping his eyes on us? He ought to go away."

Coyote spoke to his daughter, and said: "I must go away, the people here are displeased with me."

The daughter made a bundle and tied it on her father's back, and said to him: "You must travel over five mountains. When you get to the five small mountains, do not sit down there, and do not look back. Go on, and go down from there."

So, blinding his eyes once more, he started. For five days he was passing these mountains. When he came to the fourth mountain he heard talking and whispering in the bundle on his back, which had become heavier. The next day he toiled up the fifth mountain. The bundle had now become so heavy that he could hardly support it. He was near the top, but he faltered. He was so near and the burden was so heavy that he thought it would do no harm to rest a moment, so he sat down, and turned to look at the heavy load he was carrying -- when it fell from him, shrank and disappeared, while he heard his daughter's voice saying: "I warned you to pass this little mountain and not stop; then you would have been a spirit, and we could be together. Now, I shall never see you more!" And she was gone.

White Coyote

Long ago, after the conflict between the South and the North, there was a great chief who was also a great *te-wat*. His name was White Coyote. There was a great *te-wat* whose name was White Skunk. White Skunk went to the West. White Coyote went to the East, where there lived a very fierce people who killed many persons. These people at the east were called *Lit-wa-til e yi-yi yah* -- "story, or tradition, people."

At the time White Coyote went East to the fierce people, there used to be great cold and great heat, and there was a great Sun, called *He-sam-tuks-yi-yah*. It was this great Sun that did the killing. This Sun had a child called *Huse-sah-nah-kas-na*. This child of the Sun sat on a hill below which ran the trail along which all the people must pass, and there they were killed by this child of the Sun. Coyote knew this, and he determined to travel there. He came to a hill that was opposite the one where the Sun's child sat killing people. Coyote kept out of sight; but he dug a hole, and put therein flint, and fire, and wood for punk, beside five stones and five stone hammers. Near by were some springs. When all was finished White Coyote appeared, and going up to the Sun's child, said: "Why do you sit here? This is not a good place. Yonder is a place prepared for you by the elder. This fire there has been burning no one knows how long, there is water also." By many arts White Coyote persuaded the Sun's child to go across and take a drink. White Coyote went with him to show him the springs, and while the Sun's child stooped to drink, White Coyote took the stone weapons hidden there, and with many blows killed the Sun's child. Then White Coyote stripped the Sun's child of his clothing, put on his garments, and started for the home of the Sun. When the disguised White Coyote entered the Sun's house, he went to the father Sun with an offering of meat. That is not my son's meat," said his father, "it is bitter!" After a while the father Sun fell asleep. Then White Coyote looked about him. There were many things in the house -- indeed it was full of things. White Coyote helped himself and started out.

He traveled all night, but when dawn came he found himself only just outside the house. The father Sun rose up, discharged excrement, and, seeing White Coyote, confronted him, saying: "It was you who killed my son," and slew White Coyote on the spot.

There Coyote lay where he was killed. Magpie came along and pecked about the eyes of White Coyote. Then White Coyote said to Magpie: "What do you do to me? I am not dead!" And Coyote got up and was well.

White Coyote taught his youngest child, *Wits-kow-kow*, that the Sun was a murderer, and said to him: "You must go and kill the Sun while he sleeps, that he may cease killing people." And the child went. He found the place where the five knives were, and with them cut the throat of the Sun. "Now, you are no longer to kill, for the people are coming. You are only to give light and heat, and not death," said Coyote's child.

The old people say the earth is round. White Coyote kept on to the East after the Sun had been deprived of its power to kill; and when in the middle of the earth, he met White Skunk, who had started to travel West, both were astonished at seeing each other. Then they took new names. *E-sy-yah-yah* is an old name for East; it also meant Coyote. The Skunk was called *Tis-kow*. In the West he devised gambling and charms, and the people obtained these from the Skunk, who went West.

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Endnotes

¹E. Jane Gay's glass plate photographs of the Nez Perce, now a collection of the Idaho State Historical Society (Dawson and Marshall 1980) depict the process of allotment, material culture, traditional dress, and a variety of individuals from children and students to elders and informants. Gay collaborated with Fletcher on a Nez Perce exhibit for the Columbian Exposition (Fletcher 1889-92c:22 May 1891), wrote numerous letters for the publication *Red Man*, and later compiled a manuscript entitled *Choup-nit-ki*, published recently as *With the Nez Perces: Alice Fletcher in the Field, 1889-1892* (Gay 1981). Fletcher wrote to Putnam, "The facts are that I have had more to do than I could accomplish and my strength is not what it once was. I have had to cry halt once in a while. Miss Gay is getting to be imperative and says 'I must stop'" (Fletcher 1889-92c:31 July 1892).

²James Stuart was employed by Fletcher in June 1889 for a salary of sixty dollars per month. Needing a "competent and trusty man who understands both languages" as her driver, she considered James Stuart to be "well educated, having attended the Chimawe School at Salem, Oregon. . . He reads and writes and bears a good reputation as to his character" (Fletcher 1889-92b:5 June 1889). She reports his excellent and loyal service, in spite of having his life threatened for working with her on allotment (Fletcher 1889-92b:26 December 1889). During the second year of allotment, Fletcher requests that Stuart's salary be raised to seventy dollars per month for

"the expense of living in the wilderness" and because "he is the only man I know on the reservation with sufficient education, general intelligence and honesty of act and speech to serve in the capacity of interpreter in allotting lands . . ." (Fletcher 1889-92b:4 January 1890). James Stuart was the grandson of Fletcher's informant Nancy Corbett (Fletcher 1889-92d:9). Throughout her 1889 correspondence Stuart is spelled "Stewart." From 1890 through the completion of allotment and in the Allotment Book (Fletcher 1889-92d), it is spelled "Stuart."

³Edson Briggs, of Pataha City, Washington, was secured for surveying services by Fletcher at a per diem of eight dollars. Fletcher considered Mr. Briggs a competent man who had done surveying for the government in the past and was well acquainted with the country. The task assigned him would "involve camping for the season, from one hundred to one hundred and fifty miles from any base of supplies, and necessitate a considerable camp outfit" (Fletcher 1889-92b:5 June 1889). Briggs previously graded all the North Pacific Railroad lands in the region and located and graded the land of the Oregon Improvement Company (Fletcher 1889-92b:16 September 1889). Fletcher found Briggs to be patient and tactful during difficult disputes over boundary lines (Fletcher 1889-92b:26 December 1889) and remarkably skillful ". . . in his surveying and adjustments of the complicated lines" (Fletcher 1889-92b:12 July 1890).

⁴The other manuscript, "The Nez Perce Country," was compiled by Fletcher (1891) based on interviews with Nez Perce informant Billy Williams and is in preparation for an upcoming volume of *Northwest Anthropological Research Notes*.

⁵Celia Rubens was 55 years of age and the widow of Chief Rubens when she took her allotment (Fletcher 1889-92d:57; Fletcher n.d.a). Her son, James Rubens, was a messenger to Washington questioning allotment; upon returning home he requested that he be allotted (Gay 1981:27-28, 58). Fletcher's spelling of "Rubens" is consistent in her notes and the allotment book. The name is spelled Reuben in the text and elsewhere (Gay 1981).

⁶Abraham Brooks and his wife Elizabeth, 48 and 45 years of age, respectively, at the time of allotment (Fletcher 1889-92d:216) were Fletcher's informants in the summer and fall of 1891 (Fletcher n.d.a). They were settled on part of the Langford claim (Fletcher 1889-92b:17 March 1890) and were most likely interviewed while Fletcher was at Ft. Lapwai (Fletcher 1889-92a). Abraham Brooks, also known as "Blind Abraham" appears in two Jane Gay photographs (ISHS 63.221.24 and ISHS 63.221.100). He was wounded as one of General Howard's scouts during the Nez Perce war and walked with the use of a cane (Dawson and Marshall 1980:7).

⁷Charles White was the son of Eliza White and in his early twenties during allotment (Fletcher 1889-92d:184). He had attended Carlisle Indian School in Pennsylvania (Dawson and Marshall 1980:25).

⁸Nancy Corbett was the grandmother of Fletcher's driver and interpreter, James Stuart (Fletcher 1889-92d:9). In 1890 Fletcher proposed to ". . . go to Kamiah Valley tomorrow and in a few days to digging. I shall get an old woman who is very bright to camp with me and tell me stories of the past" (Fletcher 1889-92c:20 August 1890). A diary entry refers to "Grandma Corbett" who "gives me a coyote skin," and the next day, "talked with Grandma all day" (Fletcher 1889-92a:18, 19 September 1890). Her field notes for "Nancy Corbett, over 80 years tells:" are dated 19 September 1890 (Fletcher n.d.c). The notes were collected as she camped between Kamiah and Ft. Lapwai (Fletcher 1889-92a) possibly at Camp Corbett, Paul Corbett's place on the South Fork of the Clearwater River (Gay 1981:67). Paul Corbett, Nancy's sixth and youngest child, was 42 years of age when he filed for allotment and was the brother of Susan Corbett Holmes, James Stuart's mother (Fletcher 1889-92d:8). According to allotment records, Nancy Corbett had 28 grandchildren when Alice Fletcher talked with her (Fletcher 1889-92d:8-13).

⁹Billy Williams (*Kew-kew'-lu-yah* or Jonathan Williams) was born ca. 1815 and also known as "Business Billy" or "Old Billy." Fletcher worked with Billy Williams in June 1891 on a map and description of Nez Perce villages that eventually became the manuscript "The Nez Perce Country" (Fletcher 1891). Believing him to be "one of the oldest and most remarkable men of the Nez Perce tribe" (Fletcher 1889-92c:22 June 1891), she gathered additional information from Billy on 4 June 1892, probably while at Ft. Lapwai (Fletcher 1889-92a; n.d.b). Billy was one of Kamiah's most successful farmers, an early convert to Christianity, and one of the first elders at the Kamiah Presbyterian church, built in 1873 (Gay 1981:181). Gay writes in 1889 that "Old Billy . . . came often to talk with us about Lewis and Clark and the exploits of his own grandfather" (Gay 1981:62). Billy was photographed by Jane Gay in August 1891 (Gay 1981:143).

¹⁰The written editorial comments throughout the manuscript may not be Fletcher's but those of Frederick Webb Hodge, Smithsonian ethnologist and editor of the two-volume *Handbook of American Indians North of Mexico*, to which Fletcher was a contributor (Hodge 1907-1910). The initials "F. W. H." follow an editorial comment to "Miss Fletcher" and several corrections in the manuscript have been made by someone unfamiliar with the history and geography of the area. There are questions regarding the date of the arrival of Lewis and Clark in Nez Perce country, the spelling of Chief Joseph's name, the river to which the South Fork belongs [the Clearwater], and an accent mark over the second "e" of [Nez] Perces, an accent mark that Fletcher never included in any of her notes or correspondence concerning this group. Finally, a curt note appears stating "This is hardly part of 'History,' as it relates largely to everyday customs and to material culture. The title is rather misleading" (Fletcher n.d.c).

¹¹Sisters Sue [S. L.] and Kate McBeth were Presbyterian missionaries who worked among the Nez Perce from 1873 to 1915. They provided considerable support for Alice Fletcher and facilitated her allotment and research. "I am lingering here a day longer to get a little more out of Miss McBeth's *ms.* so that I can do more intelligent work among the Indians" (Fletcher 1889-92c:20 August 1890). Kate McBeth also published a history of the Nez Perce (McBeth 1908).

¹²Kentuck was a well-known Nez Perce man. He was photographed by Jane Gay (ISHS 63.221.2a, b).

¹³Henry Harmon Spalding, a Protestant missionary, arrived among the Nez Perce in the Clearwater Valley in 1836. His mission was on Lapwai Creek at present day Spalding, Idaho.

¹⁴This map is part of the manuscript, "The Nez Perce Country" (Fletcher 1891).

¹⁵One of Fletcher's primary informants. See Endnote 9.

¹⁶See Walker (1989) for a study of Nez Perce sorcery.

¹⁷A woman's "fit" was described by William Clark at Nez Perce village on the lower Clearwater River, 9 October 1805 (Moulton 1989:253; Sappington 1989:26-27).

¹⁸Fletcher herself was the intended victim of a *tewat*. Her diary entry of November 30, 1889 states: "Brought a medicine man to kill me by looking at me" (Fletcher 1889-1892a). Gay (1981:80-81) also describes this event:

Her Majesty [Fletcher] held a council with the Lapwai Indians who were still opposed to allotment. The council was a stormy one and there were many angry denunciations and threats of violence. James said there were 'knives under the blankets', and after the Council had broken up in a good deal of excitement, an old medicine man undertook the task of killing Her Majesty 'with his eye'. He, with several other Indians who were in the secret of his intentions, followed the Special

Agent to her office where the 'tewat' wrestled with his occult powers until Her Majesty, wishing to be alone, cleared the room and the old fellow, muttering in his important rage, strutted out to explain to his friends as best he could why he had failed. What ever his explanation may have been, the Indians came to the conclusion that 'the Measuring Woman' was stronger than the sorcerer and a respect for her power began to appear among them.

¹⁹An important figure involved with the Americans from the days of the fur trade in the 1830s until his death. He was the subject of a book-length biography (Drury 1979).

²⁰*Walammottinin* was known in English as Twisted Hair (Josephy 1965:5). He provided hospitality to the Lewis and Clark party from 21 September to 24 October 1805, accompanying the party as guide and interpreter as far west as The Dalles (Moulton 1989:328); he rejoined the party upon their return in 1806 (Moulton 1989:226).

²¹Salish, whose territory was in western Montana; Lawyer was sometimes reported as part Flathead (Josephy 1965:78).

²²Lawyer fought alongside the Flatheads and American trappers against the Gros Ventres, and was seriously wounded at the battle of Pierre's Hole in 1832.

²³Actually in 1842 and as a subagent sent by the U. S. government (Josephy 1965:221).

²⁴Ellis or Ellice received his English name in 1830 (Josephy 1965:88).

²⁵Justified execution (Sprague 1987).

²⁶*Tuekakas*, an influential leader from the Wallowa Valley in northeastern Oregon, was one of the first Nez Perce baptized by Spalding.

²⁷The previous year, Fletcher recorded in her diary, "Chief Joseph here" (Fletcher 1889-92a:26 June 1890).

²⁸Richard was selected in 1848 but had little influence (Josephy 1965:277).

²⁹Superintendent of Indian Affairs for Oregon Territory.

³⁰*Tipyahlanah Oikelazikin* was a headman who became wealthy operating a ferry and providing supplies to Euroamerican miners in 1861 (Josephy 1965:397).

³¹James Reuben was well-known during Alice Fletcher's time as an interpreter, minister, and intermediary for General Howard in the war of 1877; after the war he arranged for the transfer of some of the prisoners from Oklahoma back to Idaho.

³²See Aoki (1967) for an explanation of the term "Chopunnish."

³³Billy William's 1891 story of Lewis and Clark is recounted in Gay (1981:148-151). On 11 December 1889 Celia Rubens brings Fletcher a basket and stone owned by a 96-year-old who remembers the 1805 arrival of Lewis and Clark. "She was greatly frightened at the sight of these strange looking men and hid in the bushes watching these men dry their provisions etc. . . ." (Fletcher n.d.a).

³⁴Looking Glass was one of the most influential leaders among the non-treaty Nez Perce.

³⁵Nancy Corbett. See Endnote 8.

³⁶This feat by Nicodemus was also described by E. Jane Gay (1981:128), who photographed him as well (ISHS 63.221.117).

³⁷"She was born near [her son] Paul's field [on the South Fork of the Clearwater] on a threshing ground in a tent of mats and skins. Conical in shape. Her father's place was here from his father's -- her mother was from Lewiston" (Fletcher n.d.b).

³⁸See Culin (1907:632) for a discussion of the game of shinny.

³⁹After leaving Idaho Fletcher wrote to Kate McBeth for linguistic assistance. Sending a list of 220 names taken from her registry of the tribe and arranged alphabetically, Fletcher asks McBeth for their translation. Fletcher relies on McBeth's expertise of the language and requests answers to a number of questions (Fletcher n.d.b: Fletcher to McBeth, 9 and 30 January 1895):

. . . I want to get a few facts for each name if possible. I want to get a translation of the name and I would like to know how it is composed . . . I shall be glad to have you correct the spelling if you will, making it agree with your form of spelling the language . . . I notice that a very large number of female names end in "my". Can you explain that! . . . I notice that the syllable "ioe" occurs often in female names. Can you explain this. You can write the translations of the name in the vacant line.

Filled lines and two different styles of handwriting suggest that McBeth translated the names and returned the list to Fletcher.

⁴⁰A case of polygamy was alluded to by both Lewis and Clark (Sappington 1989:23).

⁴¹Informant Elizabeth Brooks told Fletcher on 2 December 1891:

When a girl arrived at maturity her mother took care of her. 3 days she was kept warm, could not bathe. The old people initiated the young. A girl was told that now she was different she must be modest. After puberty 4 years must elapse before marriage but in her 5th year could marry. About 14 years of age. Wore a buffalo pad and burned it, cleansed their garments with a clay and stone. The men could not see or smell menstrual [sic] flow or hemmorage [sic] would follow and a loss of strength (Fletcher n.d.d).

⁴²Fletcher described a long house in greater detail in her field notebook (n.d.a):

The winter houses of the Nez Perces were long, sometimes 100 ft. They were constructed by tying three tall straight _____ poles at the top & setting these poles to one side [?] on the other forming a triangle -- the poles would be arranged so as to [?] touch at the bottom. When all the triangles [?] [?] to form the entire length of the lodge then other poles were laid on [?] in at the top upon the tied poles. Over this frame work mats were spread. The mats were made of rushes. The fires were along the center about 12 feet apart. One family took one side of the fire, a relative the opposite side. Between every two fires was an opening left for the door. This door had a mat [?] on it. Beyond it was built a sort of hallway or entrance also with a mat to add protection from cold and [?]. Facing these doorways and running the length of the lodge were sheds containing the supply of wood. Each family's stores being opposite to the living part of the long tent.

The household goods were kept in the back part of the tent. The beds being spread in front having a passage way between the beds & fires. The lodge was therefore fully 20 ft. wide. [blank] Between the fires the cooking utensils were sometimes left and here the little boys were lodged. 20 to 30 families lived in one of these long lodges and sometimes several of these lodges were grouped together on the river bottom or in some sheltered cañon.

Fletcher found the Nez Perce house different from any other she had seen and began the making of a model of the "long tent house such as the people used to live in during winter" (Fletcher 1889-92c:22 May 1891). Later she suggests to Putnam that the anthropology exhibit for the 1893 World's Columbian Exposition might include "an instructive series of long houses in models. The Nez Perce, the Iroquois, those of the Southern Indians and the Algonquin group" (Fletcher 1889-92c:6 August 1891). Evidently, Putnam requested a Nez Perce house, since Fletcher writes "I am a little uncertain whether you want a model of the long mat house of the Nez Perce or a life-size specimen. It is going to be difficult to obtain either for the people have not used such dwellings for 15 or 20 years and only the older folk can make the mats and set up the long tent. I can, I think, do it, after I have seen it set up here" (Fletcher 1889-92c:13 July 1891). Apparently the model was nearly completed before Fletcher left Idaho in 1892. "The Exhibit, of a model of the old-time house, the foods of the people, roots and the (?) made from them, dried fish, dried meats, weapons, (?) and costumes is in the hands of James Stuart. Many of the articles are ready, made by the Indians and he will work hard to have everything ready in the early winter. As soon as it is ready he will ship it to Chicago [for the Columbian Exposition]. I should be glad if he could go on and set it up for I want him to make a model of an *alwetax*, the place where the young unmarried women stayed during the winter camps" (Fletcher 1889-92c:11 September 1892).

⁴³A blank line appears in the original; apparently Fletcher intended to add something here, perhaps the Nez Perce word for catlinite, since the word for this raw material was recorded in her field notes. Stone pipes have been recovered archaeologically in the Clearwater River region dating from ca. 5000-500 BP (Sappington 1994:183).

⁴⁴Fletcher and Murie 1904.

⁴⁵Fletcher and LaFlesche 1911.

⁴⁶Writing to Putnam, Fletcher laments: "I am a good deal bothered to get at the organization of these people. As yet I can't find any union nor distinct clans but there must be something of the latter buried up somewhere" (Fletcher 1889-92c:20 August 1890).

⁴⁷An undated newspaper clipping reports the presentation of a "significant relic" to Miss Fletcher by the Nez Perce. "The pipe of war and council which has been used in all the tribal deliberations for over thirty years, the one which was gravely passed around when the tribe made their last outbreak, has now been given to Miss Fletcher with due ceremonial and the impressive statement that she had destroyed its significance because they were no longer a tribe but citizens of the United States. Miss Fletcher will present the pipe to the Peabody Museum" (n.d.d).

⁴⁸In her original notes, Fletcher refers to the honor poles as Death poles (Fletcher n.d.a). Jane Gay photograph (ISHS 63.221.18), entitled "War Poles" may illustrate these honor poles.

⁴⁹This story was told to Fletcher by Elizabeth Brooks, 17 November 1891 (Fletcher n.d.a).

⁵⁰While collecting material for Putnam and the Columbian Exposition, Fletcher writes: "I shall secure the roots eaten by the Nez Perce, the flour cakes, etc. so that you can have that complete [for the Columbian Exposition]" (Fletcher 1889-92c:22 May 1891). "I have the promise of a set

of the roots used by the people in the order of their growth and use. This is to show forth the native foods as well as to have a supply of the meats, deer, Elk, fish, etc. I suppose the latter will have to be some sort of cure on acc't of flies, smell, etc" (Fletcher 1889-92c:4 December 1891).

⁵¹Fletcher's notebook contains additional details on root preparation as recounted by Celia Rubens on 11 December 1889: "The stone pestle . . . has been used by the old Indians to pound camas, kouse roots out of which they make bread. A round flat stone is beded [sic] in the ground so as to steady it. The basket is then put over the stone which forms the hollow. Forked sticks are thrust in the ground to steady the basket, from 4 to six are used. This basket was made by the old woman herself . . . The stone was given to the old woman when she was young by an old man long since dead . . . Basket made of willow" (Fletcher n.d.a). On 18 June 1891 informant Elizabeth Brooks "sells for \$2 the pestle belonging to her great grandmother and knows not how far back it came . . ." (Fletcher n.d.a).

⁵²Early in her Nez Perce field work Fletcher found it "strange to find so many myths here that I knew East of the Mts. but I think they have become known to these peoples from the Dakotas. War captives on both sides have diffused the stories" (Fletcher 1889-92c:2 August 1889). In the summer of 1891 she received a letter from Franz Boas "about contributing to the Hand Book of N. A. Mythology . . . I think I can promise the Nez Perce, but I want to know what is intended by the Hand Book" (Fletcher 1889-92c:13 July 1891). Evidently she agreed to contribute as she later writes "I hope to get more myths to complete my Nez Perce chapter" (Fletcher 1889-92c:31 July 1892). In addition to collecting myths and folk tales, Fletcher was "trying to work into the old religion but everything is very elementary compared with the Omahas and other Eastern tribes" (Fletcher 1889-92c:6 August 1891). While Boas published numerous articles on Native American mythology, the proposed *Handbook of North American Mythology* did not appear in print.

⁵³For a complete study of coyote in Nez Perce mythology and a fairly complete bibliography of Nez Perce mythology see Walker (1996).

⁵⁴Told by Elizabeth Brooks 2 December 1891 (Fletcher n.d.a).

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Alice Cunningham Fletcher's "THE NEZ PERCE COUNTRY"

ROBERT LEE SAPPINGTON
CAROLINE D. CARLEY
University of Idaho

KENNETH C. REID
JAMES D. GALLISON
Rainshadow Research

Abstract

Alice Cunningham Fletcher was the first anthropologist to study the Nez Perce Indians. She spent four field seasons, from 1889 to 1892, working among the Nez Perce as a Special Agent of the United States government allotting land. At her request, a Nez Perce elder prepared a map of Nez Perce territory that included the locations and descriptions of 78 traditional villages as they existed in the early nineteenth century. This 1891 map and her accompanying manuscript are published here for the first time.

Editors' Introduction

Alice Cunningham Fletcher (1838-1923) was a well known anthropologist in the late nineteenth and early twentieth centuries (Mark 1988). She was sent to the Nez Perce Reservation as a Special Agent of the United States government in order to implement the allotment program mandated by the Dawes or Severalty Act of 1887.¹ She spent each summer and fall from 1889 to 1892 working among the Nez Perce in north central Idaho. In addition to her allotment work, she attempted to acquire ethnographic data whenever possible. As the first anthropologist to work among the Nez Perce, she was in a unique position to record data that would be unavailable to later anthropologists and historians. Fletcher prepared two manuscripts concerning Nez Perce culture but neither of these was published during her lifetime. The first was recently published in *Northwest Anthropological Research Notes* (Sappington and Carley 1995). This article represents the publication of the second manuscript, which Fletcher entitled "The Nez Perce Country."

Fletcher worked with a number of Nez Perce people but one of her principal informants was *Kew-kew'-lu-yah* (whose English name was Jonathan Williams although he was usually called Billy Williams), a Nez Perce elder who was born ca. 1815. At her request, *Kew-kew'-lu-yah* prepared a map of Nez Perce territory that included the locations and descriptions of 78 traditional villages as they existed in the early nineteenth century. The basic data for "The Nez Perce Country" was collected on 10 and 11 June 1891. Fletcher provided a biographical sketch of Billy and discussed her methods as indicated below. Because she could not speak the Nez Perce language and Billy could not speak English, it is likely that translation was provided by

James Stuart, a man of Nez Perce and Euroamerican ancestry who served as Fletcher's interpreter² during her allotment work (Sappington and Carley 1995).

Fletcher was obviously excited about this project. Shortly after collecting the data, on 22 June 1891, she wrote to her mentor Frederic W. Putnam,³ a leading anthropologist and curator of the Peabody Museum:

I've secured from one of the oldest and most remarkable men of the Nez Perce tribe a map on which he has drawn all the Nez Perce Country and created all the villages of the tribe, 77 or 78 of them... I've the names of these villages and many curious items.... I want the map to go to the Museum eventually. I shall send a photograph of the old Indian who drew the map. I have tested its accuracy with several old Indians. This is the first time the villages etc. of this tribe have been gained and I've also the inside history of the four men who went to St Louis for teachers in 1832, those whom Catlin painted. I can make a very interesting article when I can get at Catlin's work and contract or supplement [sic] his story.

I thought I would like to send something to the Ass.[American Association for the Advancement of Science] and this map is both interesting and valuable. Later I will place beside it one of our maps and show the same rivers etc. ...I've all the Nez Perce names of the rivers on the map... I don't want any one but the Museum to get it to keep [Fletcher 1889-92a].

Another letter to Putnam on 6 August concerns her presentation of the map and a biographical sketch of Billy Williams at the August 1891 meeting of the American Association for the Advancement of Science in Washington, D.C. From Ft. Lapwai, Idaho, Fletcher reiterated how important she considered this project to be:

I mail with this a paper for the Ass[ociation]. It is in two parts. The first is the paper, the second the legend of the map... I've made a tracing of the important portion of it for my future work here. I hope the paper will please you. It is all new, no one I think has ever gained this information. I have here a field to myself. You will see I have learned some thing of this tribe and I have much more I could add, but I do not wish to be too lengthy. I send my only copy. I have no time to make another, I am sorry to send a ms that is not clean and clear, but I am so closely occupied that I can't do any writing except at catch moments and it would take me days to copy and delay too long. I should like the paper published so as to hold my material...[Fletcher 1889-92a].

The abstract was published in the Proceedings of the American Association for the Advancement of Science in 1891 (Fletcher 1891). Fletcher continued to work on the "The Nez Perce Country," for some time after she left Idaho. In a letter to missionary Kate McBeth⁴ on 30 January 1895 Fletcher wrote from Washington, D.C. and asked a question about Billy's map. One of her introductory comments in the manuscript indicates that she was still working on it in the twentieth century. However, she never completed this project. Shortly after her death, Francis La Flesche,⁵ her adopted son and collaborator on numerous projects, submitted this manuscript to the Bureau of American Ethnology for publication. The manuscript was rejected by J. Walter Fewkes, Chief, Bureau of American Ethnology. In a brief letter to La Flesche dated 4 October 1926, Fewkes responded that "we find, however, that it is not feasible to bring the paper before the committee for publication either by the Bureau or the Smithsonian, and I therefore return it with many thanks" (Fewkes 1926).

Fletcher's research on the Nez Perce was overlooked during her lifetime. Neither of the two principal early ethnographies (Spinden 1908; Curtis 1911) mention her work although they do refer to some of the sites that had already been reported by Fletcher. Subsequently, this manuscript was forgotten until the 1960s when it was located by Deward E. Walker, Jr. One of his students employed it to compose a composite study of Nez Perce settlement patterns (Schwede 1966). Schwede's thesis included nearly 300 sites and incorporated information ranging from Lewis and Clark in 1805-1806 to data acquired from Nez Perce informants. Schwede combined Fletcher's manuscript with other reports and located 75 of those sites based in part on Fletcher's research. Despite this, later researchers did not examine Fletcher's original work and most scholars have relied on Schwede, although some of the information is inaccurate, as indicated by others and discussed below. The published version of Schwede's thesis (1970) intentionally did not include specific site location data.

At some point, probably in the 1970s or early 1980s, a Forest Service employee retyped "The Nez Perce Country" and redrew the map. This appeared to have been done quickly and some obvious errors are evident. Copies of this version were circulated among some scholars, including the first two authors, who obtained a photocopy in 1982. Stephen Shawley may have examined this version of "The Nez Perce Country" because in one of his 251 listings he added in parentheses "Refer to Fletcher notes" (Shawley 1984:101) but he did not cite this manuscript specifically nor did he include it among his references cited. Elmer Paul, a Nez Perce elder, also consulted this version of "The Nez Perce Country" for his own compilation of over 300 Nez Perce place names (Paul 1987). However, most of *Kew-kew'-lu-yah's* locations are omitted and only a few site specific citations are provided, making it difficult to correlate the two studies. In contrast to *Kew-kew'-lu-yah* who drew his map freehand from memory, Paul's locations were placed on modern maps which makes his work easier to use.

As an incomplete work involving mutually unintelligible speakers of two distinct languages that was initiated over a century ago, there are obviously occasional problems with this manuscript. It was typed on a manual typewriter but many comments and additions were added by hand. Inconsistencies have been standardized but, as much as possible, the original spelling and organization have been left intact. All Nez Perce words appear as spelled by Fletcher but we have italicized them; in the original some are in regular characters while others were underlined. In most cases, place names, spellings, and punctuation have been brought up to contemporary standards. Examples include "Clearwater river" to Clearwater River, "Bitter-root mountains" to Bitterroot Mountains, and "Mr" to "Mr." Fletcher made numerous comments and these are indicated by parentheses () while ours are enclosed in brackets [].

The original typed and hand corrected manuscript, Fletcher's copy of the map, and the rejection letter from Fewkes are on file at the National Anthropological Archives at the Smithsonian Institution (Box 18, Ms. 4558 [No. 59]). The map measures approximately 45 x 47 in. and at some point it was cut in half in order to laminate it. It has a compass orientation but no scale. The markings were done originally in pencil; subsequently, some pencil lines were erased and redrawn while others were inked over. The villages were indicated as open circles in red pencil. Due to the original limitations of paper size, rivers, landmarks, and trails often bend away near the edges of the map. Because of its size, condition, various modifications, and its unfinished status the original map would be indecipherable if reproduced as it appears. Therefore, photocopies of the original were traced and re-lettered in order to make it more visible

to readers and future scholars. Spelling and labeling mirror the original but some modern place names have been added for clarification and these have been indicated in brackets.

The map exhibits several conventions typical of native cartography (Gallison and Reid 1996). For example, asymmetrical or irregular linear features such as streams and trails have been rendered symmetrical or smoothed and straightened, with changes in line tending to occur at nodes such as stream confluences. Rivers may appear anastomosed, a condition that rarely occurs in nature. This reflects the use of a continuous line to show streams, trails, and crossings as parts of a single route. Exaggeration and compression are apparent in the size and shape of river basins, and the scale varies internally. In some places, variability of scale probably reflects travel time rather than actual distance.

During the past decade the authors have used Fletcher's manuscript and map to augment various archaeological investigations at sites along the Clearwater and Snake rivers. When appropriate, sites which have been examined archaeologically are noted below. The purpose of this paper is to bring Fletcher and Williams' work the recognition it deserves and to make the data available to other researchers interested in Nez Perce ethnography and settlement, and in Native American cartography in general.

The Nez Perce Country

The accompanying map of that portion of the State of Idaho formerly occupied by the Nez Perce Tribe of Indians was drawn in June, 1891 by *Kew-kew'-lu-yah*, whose English name was Jonathan Williams. He was familiarly called "Billy," and because of his promptitude in attending to all matters committed to his care he received the nickname of "Business Billy." He was one of the most trusted and respected members of the tribe, and retained until his death, a few years after the date mentioned, unimpaired faculties. His memory was remarkable, and his character for truthfulness made his reminiscent statements of peculiar value. The photograph here reproduced [Fig. 1] was taken at the time he made the map [Figs. 2, 3].

Billy's father, *Me-yau'h*, was born during the last decade of the eighteenth century, in the village called *Te-sy'-yak* (No. 51 on the map). His mother, *Is-to'-kop* was a native of *Hoo-koo* (No. 77 on the map). Billy was born at *Te-sy'-yak* about 1815, when recollections of the advent of Lewis and Clark [in 1805-1806]⁶ were still a frequent theme about winter camp fires. Although many white men had come across the mountains, and trappers from the Northwest Fur Company⁷ had found their way to the tribe, still the memory was fresh of the first white men who came and went, and then came again, telling of an ocean to the west, and then disappeared over the eastern mountains. Their conduct was in marked contrast to that of many of the followers, and this difference made them stand out distinctively in the memory of the people.

In 1813, a few years before Billy's birth, the Northwest Fur Company established a trading post on the Upper Columbia River where Fort Colville⁸ now stands and the Nez Perce Indians soon learned the trail that led to this place and took their pelts to exchange for wares from the "King George" people, as the Canadians are still called. The dealings of the Fur Company open an unpleasant but important chapter on the contact between the white and native races. As a means to increase business, the Company devised a plan which should act as an incentive to the hunters to acquire tribal position. The plan was to urge the men to take more wives, and so become a chief—the more wives, the more workers there would be to prepare the



Fig. 1. *Kew-kew'-lu-yah* or Billy Williams. Photograph by E. Jane Gay in 1891. Courtesy of the Idaho State Historical Society (ISHS 63.221.101).



Fig. 2. The Nez Perce Country as drawn by *Kew-kew'-lu-yah* or Billy Williams and recorded by Alice Fletcher in 1891.

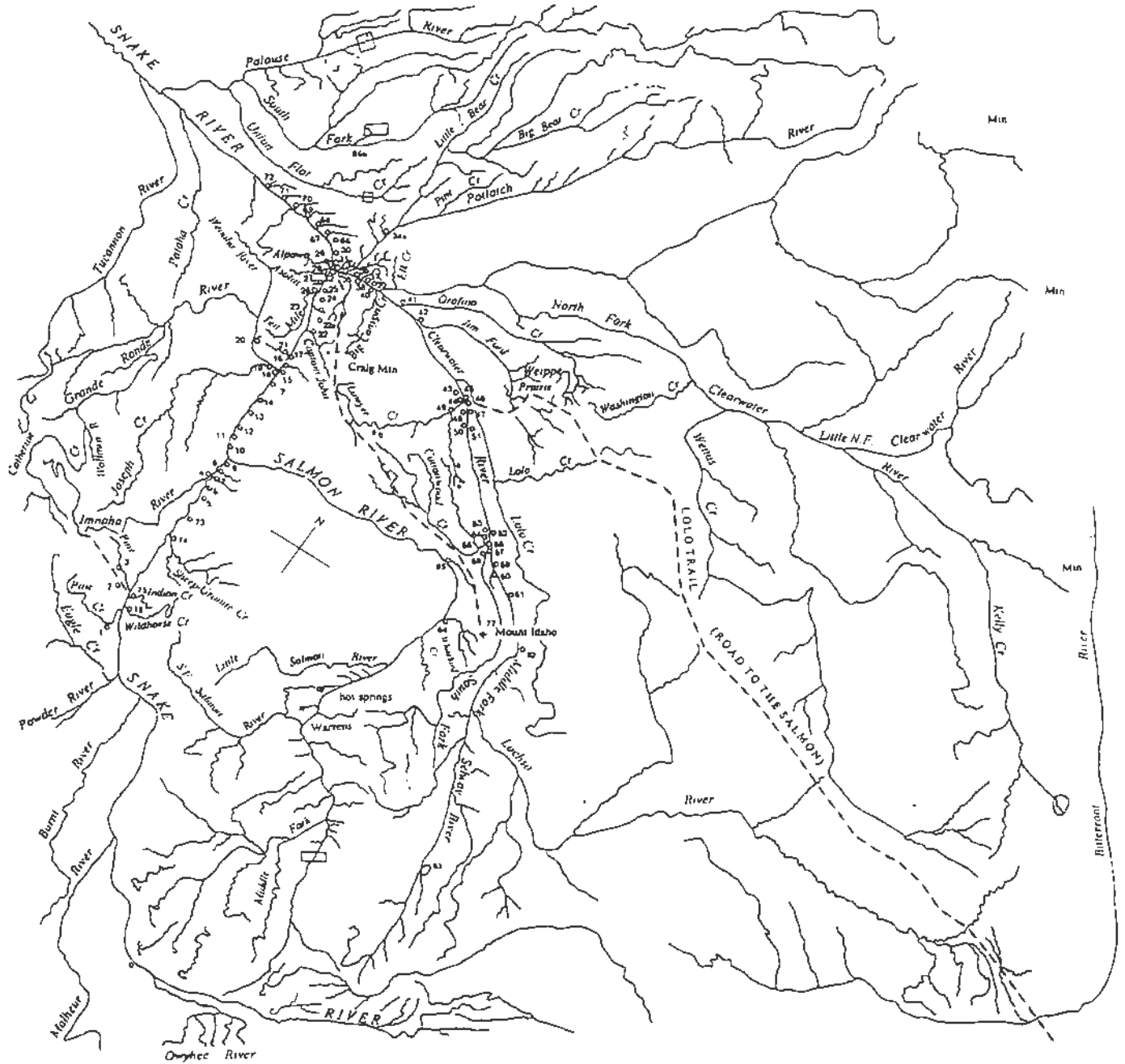


Fig 3. The Nez Perce Country as drawn by *Kew-kew'-lu-yah* or Billy Williams and recorded by Alice Fletcher in 1891. Modern landmarks have been added.

pelts, and the more business of buying and selling. It was on the occasion of a journey to Fort Colville [sic] that an event took place which had a lasting effect on Billy's life. After his father had disposed of his pelts at the trading post, the family party turned homeward, the three children securely tied to their ponies. As they journeyed Billy heard his father say to his mother that "King George had told him to take another wife, that he might become a chief." The mother rode on, and said nothing. Even when they camped she still kept silence. After a time they reached the village *Yak-toe-e-no* (No. 34 on the map). To quote Billy: "To this village came many words from King George down the trail. Here lived one of the chiefs he had created. This was how it happened: 'How many wives have you?,' asked King George. 'One.' 'I give you one and a half foot [sic] of tobacco; get another wife, and next year I will give you more,' said King George. The man obeyed, and the next year when he appeared at the trading post he received a larger gift of tobacco and King George put a wide tin band about his hat—a sign that he was a chief." This was the chief who, when the family came to the village *Yak-toe-e-no* said to Billy's father that it was his office, under King George, to furnish new wives. So Billy's father "put a red feather in his hat and went to the chief with gifts, and indicated the woman he would take as a new wife." Two men were sent to get the woman. If any woman thus approached dared to resist, she was flogged into obedience. While the men were gone, Billy's mother started with the three children across the country, taking the direct trail to *Te-sy'-yak*. Here she helped herself to her husband's horses and supplies, and departed, with Billy and his two sisters, for the buffalo country east of the Bitterroot Mountains. Billy was quite a man before he saw his father again. When the father with his new wife looked for his former wife and children, he found them gone. He returned to his village, lived there quietly, and did not try again to take more wives or become a chief. In his old age he was ministered to by the children of his first wife.

Billy's mother devoted herself to the care of her children. The burden of her counsel to them was, "Never listen to King George's teachings!" To her son she was always saying: "I pity the women! I pity the women! My son, never be like your father; never have more than one wife!" Billy heeded her advice, and all his long life lived with his first and only wife.

Billy witnessed the departure of the four men who went to St. Louis in 1832, and there met George Catlin,⁹ and became the means of drawing to the Pacific coast the American missionaries who were instrumental in saving Oregon to the United States. The names of the four Indians, whose journey has left a permanent trail in the history of our country were:

(1) *Tip-ye-lak-na-jek-nim* ('Speaking Eagle'). He was from the group of villages known as the *We-am'-mo*, and probably from either *Ho-li-e-po* (No. 43) or *Ny-ouse-so* (No. 44). He was a man well beyond middle life, a chief, and one who entertained Lewis and Clark on their return trip. This man was grandfather to *Kipka-palikan*, a former chief, and now a leading man in Kamiah. Old Speaking Eagle seems to have been of a philosophical turn of mind, and the question as to whether the sun was father and the earth mother of the human race was one that occupied his mind and he discussed it with his companions. The King George men told him that this was the case, but he doubted, and asked: How could the sun make a boy? Moreover, this teaching contradicted some things that Lewis and Clark had said. It was the discussion of such questions as these that led the four men, of whom Speaking Eagle was the leader, to determine to find the trail of Lewis and Clark, and ask them as to the fact concerning the sun and the earth. (Strange as these speculations may seem to us, they were not uncommon in Indian tribes. The story told by Billy, and repeated here was later confirmed by several old and trustworthy men and

women. It reveals the incentive of this memorable journey, and is probably as true as it seems strange.)¹⁰

(2) *Ka-ou-pu* ('man of the morning, or daylight'). This man was a Flathead [Indian] and lived in the village *Took-pa-mah* (No. 58). *Ka-ou-pu* was nearly as old as Speaking Eagle, yet he, too, determined to join in this quest for knowledge.¹¹

(3) *He-yonts-to-han* ('rabbit-skin leggings'). This young man was a nephew of Speaking Eagle. His mother was a Palouse [Palus Indian, a group located downstream on the Snake River and closely related to the Nez Perce], and he lived in *Lum-ta'-ma-pa* (No. 64).¹²

(4) *Ta-wis-sis-sim-nin* ('old or worn-down horns of the buffalo'). This young man was the son of Billy's father's eldest sister. He was therefore Billy's cousin. He came from *Te-sy-yak-poo* (No. 51).¹³

Billy's mother went with her children to bid these men good-bye as they were starting on their long journey. Billy remembered this circumstance well, and the interest that was aroused by the journey of the four men. Billy was about sixteen years old.

"The four men took the Lo-lo trail.¹⁴ It was early summer and the trail was only just open when they started. They reached the Salish (Flathead) country, where they were joined by two of that tribe. One of them remained with the party two days, and then decided he was too old for the journey, and returned to his tribe. The other, *Kam-kam-pose-ma*, kept on for three or four days; but he, too, was old, and by the advice of the others he turned back. The four then went on as fast as they could - they hardly stopped to hunt for sufficient food. They talked much of the teaching about the sun and the earth, and decided it must be a lie. They traveled for months. The leaves were falling when they reached St. Louis. Their faces looked strange to one another, for they had suffered from hunger and cold. They had no weapons—they had thrown them away. So as to avoid trouble with the strange tribes they met."

"Of course," said Billy, "none of us knew about the journey and what happened until afterward, but I remember what was told very clearly. My mother used to say, after the men were gone: 'You will never see them again.' At St. Louis the white people looked hard at them, as if to say, 'Who are these people?' The sign language was not known to them and they could not speak, nor could they understand. They knew the name St. Louis, and so they knew they were in that place. If they walked anywhere they became lost, so they stayed in one place, sitting down. They could not find Lewis and Clark. They were frightened, and afraid to search. They made a sign by putting their hands over their eyes as if blind, and pointed to the west, making slowly the movement of the sun to the west; then they tried to show, by drawing the hand, that they had come from the west."

"The white people circled about them, looking them over, and felt their heads. They found out that there were two languages, that three of the men spoke one language."

"The leader, Speaking Eagle, cried all the time, and sickened, and died. He said: 'I am not crying about my body, but about my people who must still sit in the darkness'." He died with his hands over his eyes. The Flathead never spoke after the death of Speaking Eagle, and died soon after.

"The two younger men began to pick up signs, and in a month or so they could talk a kind of sign language."

"After this the white people gathered to learn the cause of this visit, and someone wrote down the story told by the young men. They wanted it known that four had come and two had died, and that they did not know if they would ever get back to their own country. A man came

and took their pictures and said they would be known by these pictures. (This was George Catlin and was probably in 1838. For his account of these Indians see *Letters and Notes, etc., on the American Indians* by Geo. Catlin. Vol. II. p. 108-9 London. 1841). A promise was made that a man would be sent to them. The young men stayed in one place, and many came to see them. Those who came were not bad men. The white people called them Nez Perces. This was the first time they had heard that name."

"On the way back they ate berries. When over the mountains and near the headwaters of the Clearwater [River], *Ta-wis-sis-sim-nin* died, and was buried in the mountains in a hole gullied out by the snow. The survivor brought the riderless horse back, and was met by his kindred in the buffalo country; but he was unwilling to return to his people. He was afterwards known to be living with white trappers, to have cut his hair, and to have put on white men's clothes." His father and mother went to live in village No. 54, and were always on the lookout for white men. It was this group that met Mr. [Henry Harmon] Spalding,¹⁵ the missionary, when he and Dr. [Marcus] Whitman¹⁶ made their memorable journey across the Rocky Mountains [in 1835].

It will be remembered that this journey was the result of a missionary enterprise awakened by an impassioned address delivered by someone who had heard the story of the four men from an unknown country to the west who had come to get light, and who sat with shaded eyes. The speaker used this story to arouse missionary zeal. The address found its way to New England, and resulted in the departure of Dr. Whitman and Mr. Spalding. Their journey proved that the Rocky Mountains were not an impassable barrier, and that the region to the west could become a part of the United States. All this is well known history, and is also the setting up by Mr. Spalding, at the Nez Perce mission at Lapwai,¹⁷ of the first printing press west of the Rockies, the press having been shipped from the Hawaiian Islands by American missionaries, across the Pacific Ocean and up the Columbia and Snake rivers. On it was printed in the Nez Perce language texts and hymns, and rules for government among the people.

Billy's youthful days were spent in hunting and in sharing in warfare against intruding tribes. Mr. Spalding arrived about 1836, and opened a mission and school at Lapwai. Billy heard of this, and wished to respond to Mr. Spalding's call for scholars, but his mother objected. He said she wanted him to grow to be a strong man. He acceded to her request and lived a year or two longer engaged in hunting and fighting; but he continued to receive reports of Mr. Spalding's school, and at last started to Lapwai to look into the matter for himself. He found a large school, the boys studying and working with the men, the girls weaving. Here he tasted his first potatoes and wheat bread. He at once determined to have some seeds and start a garden at his home on the Clearwater River.

At Lapwai Billy saw a girl toward whom he was attracted. He was poor, he had nothing to offer her, and she refused to listen to him. He went home, started his garden, profiting by the instructions of the missionary, and soon had a fine garden. The fame of his industry traveled to Lapwai and reached the ears of the maiden he had spoken to. She, meanwhile, had refused other young men, not liking their conduct. She was told that he had no father, that his mother was a good woman, that he had horses, buffalo skins, and garden. "I do not know what I shall do," she cried to her mother. "I do not like these men who think they have a right to whip their wives. Billy has a good face," she admitted. At last she consented to go with Billy. As she was leaving, her mother asked her: "Are you going to Kamiah for a little time?" "No," she replied, "I go to be always with him until I die." And off they started on the long journey over Craig Mountain to

their home in the beautiful valley of Kamiah where they lived and brought up their ten children. Billy's garden furnished the best vegetables to the mining camps that came nearer and nearer to the Nez Perce Country as the years went on.

"After the murder [or justified killing (Sprague 1987)] of Dr. Whitman [by the Cayuse Indians in November 1847], a letter came from The Dalles to one of the chiefs, asking for fifty or a hundred men to act as scouts. A council was held at which a white soldier was present, who told them that the scouts would be paid \$30 per month; none need go unless they were willing, but if they did not go they must be friendly and not kill the United States soldiers. The man then called for volunteers." Billy was the first to rise. He asked: "How many months do you want me to be a soldier?" "Nine." "Do you want me to be a soldier in winter?" "Yes." "What shall I do with my wife and three children?" Before the white soldier could answer the chief told Billy to stop talking, but Billy went on: "Can I stop being a soldier whenever I like?" "No," said the white soldier. "Good!," said Billy. Then, turning to the assembled Indians, he said: "I am a soldier now—how many of you will follow me?" First one and then another volunteered, until forty-one declared they were ready to start. Nine of the men, including Billy, went to Boise City,¹⁸ whither the Cayuse had fled after killing Dr. Whitman. There they met four regiments of soldiers and one of cavalry. There was snow on the ground. The Cayuse and Snake Indians had fled. The volunteer Indians were told to go to The Dalles, but eight of the nine took their money and returned home. Billy said: "I will stay." He went to Walla Walla, [and] there he met "Colonel Steptoe"¹⁹ who told him of Christmas and the Fourth of July, and was a friend." He was also under General Isaac Stevens,²⁰ for whom Billy expressed much affection. During the wars with the Yakama, Palouse [Palus], and Spokane [Spokan] Indians, the Nez Perce remained quiet and friendly. Billy served as express carrier during hostilities. As he traveled under orders he "heard the guns of battle" and "saw grain fields on fire." He was present when the first treaty was made in 1854-55.²¹ A second treaty, in 1863,²² brought about many contentions, as the reservation it established did not cover all the Nez Perce Country, and involved the abandonment of villages and regions to which the people tenaciously clung, and finally led to the Joseph War of 1877.

After his service in the army Billy returned to his garden and farm in Kamiah valley. His eldest son became an ordained minister of the Presbyterian denomination, and was pastor over the church at Kamiah until his death at the close of the last century. Billy had been an elder in the church for more than twenty years. His children all became leading men and women in the tribe, and set an example of industry, frugality, and good morals. When, under the Severalty Act [of 1887], the tribal lands of the Nez Perce were divided into individual holdings, Billy was the first man in the tribe to take his allotment, and the prompt and efficient manner in which he marked his boundary lines showed him true to his character as "Business Billy."

More than two days [10 and 11 June 1891] were occupied in drawing the map. At times Billy would sit as if lost in thought, then he would suddenly resume his pencil and proceed rapidly to trace rivers and streams and to mark village sites. He grew very weary, but persevered in his work even when urged to stop, as I feared he would fall ill. The morning after the completion of his task he met me with his usual bright smile, and exclaimed: "I feel good—I sleep last night, not all time talk with old people!" Evidently his nights and days had been haunted by scenes and stories belonging to another age.

Although the map is not drawn to scale and was Billy's first attempt, yet the relative position of the rivers is fairly correct.

Billy had never been to school. He could neither read nor write, nor could he speak English. It is possible he may have been shown by the missionaries maps relating to Bible history; but, so far as I could learn, he had not studied a map of Idaho or of the adjacent states. This fact makes his map of unusual interest. It covers a territory roughly estimated at about 250 miles north and south, and 180 east and west. His knowledge of the country represented was gained by traveling over it, mostly by foot. On the map the rivers, trails, and canyons are all drawn alike, these to Billy were practically passage-ways in getting about the country.

Some errors would have been avoided if the paper when first handed him had been of its present size. The sheet was added to after the map was well started, as it was evident that Billy needed more space. The Nez Perce Indians had no difficulty in recognizing the streams and localities on the map.

During the four years that I was among the Nez Perce I found comparatively few who could orient themselves—a marked difference from the prairie tribes. The people traveled by topography, and this map proves they had the power of making a general picture from detached details, as there was no vantage point from which a bird's-eye view of the country could be obtained.

The Nez Perce call themselves *Nim-me-poo* (*nim-me* = our own; *poo* = people).²³ The Flatheads [in western Montana] call the Nez Perces *Sa-hap'-tin*, and the Nez Perce speak of the Flatheads as *Sa'-lish*. The custom of piercing the nose, so common among the Columbia River Indians, seems not to have obtained [occurred] during the past century, as the old people said they could not remember seeing any of the *Nim-me-poo* with pierced noses.

The country occupied by the *Nim-me-poo* at the beginning of the last century and for a considerable time prior, may be roughly described as a basin between a hundred and a hundred and fifty miles in diameter; hedged on the east by the Bitterroot Mountains, on the west by the Blue Mountains; on the north by the divide between the streams flowing to the Columbia and those finding their way to the Snake and Clearwater rivers, and on the south by the divide between the waters of the upper Snake River and the branches of the Salmon. The basin is broken by rivers and deep canyons, and traversed from the northeast to the southwest by a ridge some 3000 feet above sea level known as Craig Mountain. The rivers and streams were formerly well stocked with fish. The salmon ran far up into the mountains. Elk, deer, and bear were numerous. Upon the level uplands or prairies coues [*Lomatium couis*] and camas [*Camassia quamash*] grew plentifully. These roots after being differently treated were powdered into flour to make a species of bread. Maize, pumpkins, and melons were unknown, though these and also potatoes were later introduced by the missionaries.

The Shoshone, or Snake, Indians to the south lived in a less favored region, and were continually pressing upon the Nez Perce. Their inroads kept the people in constant dread. These southern Indians seem to have been their only incursive enemies.²⁴ Occasional feuds broke out between the Nez Perces and other tribes to the north and west, but in the main the relations were peaceable and friendly. On the east the buffalo herds beyond the mountains greatly attracted the people. The Blackfeet claimed the country where the buffalo ranged, and as the Nez Perce made frequent excursions after meat and pelts, there was constant warfare between them and the Blackfeet. Beyond the latter lived the Crow, who were friendly; and if the Nez Perce could escape the Blackfeet and pass on to the Crow country, they were able to hunt the buffalo in safety.

The Blue Mountains were called *Wall-wall-mah-sam*, and probably took their name from the Walla Walla [Wallawalla] Indians who came there from the west to hunt. The name *Wall-wall-mah-sam* was applied to the entire range.

The Bitterroot Mountains had no general name, but each peak had its special appellation. One of the highest was called *Tom-loo-yats mah-sam*.

See-sak-kae mah-sam was the general name of the Salmon River mountains, "because of the circling around the river"—a curious reversal of our idea of rivers and mountains! The buttes that rose here and there all had names. One shapely cone to the west of Camas Prairie was regarded as a weather gauge—a cloud cap was sure to foretell a storm. Its name was *Kits-yu-weep-pa*, the butte where the morning is seen.

The Snake River was called *Pe-ku-nin*. It had another name, *Na-ka-la-ka-kinneki*, meaning, coming from the muddy side—evidently in contrast to the Clearwater River, *Ky-ky'h kinneki*, coming from the clear or white side.

Each fork of the Clearwater had its name. The North Fork, *Ah-sok'-ka*, runs far up into the mountains. One of its upper branches was called *Yuke-sam*. A small lake from which one of the tributaries of the *Ah-sok'-ka* takes its rise was called *E-wa-tan*. The Middle Fork was called *Sol-wah*.²⁵ The South Fork was known as *Took-coop-a*, meaning straight, as the river here runs nearly due south. The creek running into the Salmon [River] called *La-wa-ta*, on which village No. 64 stood, is the Whitebird, where, in the Joseph war of 1877, the U.S. Army met with disaster.²⁶

The *Lok-ka-mah-sam* (*Lok-ka*, pine tree, *mah-sam*, mountain), or Craig Mountain, seems to have divided the people into two grand divisions. Those living west of the mountain were called *Pu-nim'-moo*, meaning people of the Snake River, from *Pe-ku-nin*, the name of that river. Those living east of the mountain were known as *Na-ki-ma*, from *nak-ki*, the other side. These divisions were subdivided into groups, each group composed of a number of villages, and each village being the home of a band or clan.

The map gives the names and locations of seventy-eight villages. All of these were either in existence or their sites known at the beginning of the last century.

The advent of Lewis and Clark marked a period in Nez Perce history, and whether a village or a custom existed before that event or afterward could generally be ascertained.

These seventy-eight villages were divided into twelve groups. Each group had its distinctive name, seven of which are known. Six of the groups belonged to the *Pu-nim-moo* division. Three groups, each with its own name, belonged to the *Nak-ki'-ma* division. Between these two divisions were three groups the distinctive names of which have been lost. These three groups were intermediate in many ways, being dependent upon the groups to the east and the west of them, and yet in a measure independent of both.

At the opening of the last century one group of seven villages had been totally destroyed through wars with the Shoshone Indians. Four other villages had also been depopulated from the same cause.

One or two new settlements have been made since the Treaty of 1855; but as they were due to white influence they are not mentioned, having had no place in the old order as shown on the map.

As a rule the villages were situated on the banks of a stream, and the inhabitants considered themselves as kindred. Marriage between the people of a village did not take place. Each village is said to have been governed by hereditary chiefs, and in every group of villages

one village was the acknowledged "leader," regulating the time for quest of food (hunting, fishing, and digging of roots). All the villages of a group hunted together, generally in a specific locality. They also fought together. If one village was attacked, the others of the group hastened to its defense. In aggressive warfare, also, they acted together. War leadership does not seem to have been an hereditary right, although chiefs sometimes led.

The villages were occupied only during the winter months. In April and May the kaus was ready to dig. The roots were brought to the villages for preparation. June was occupied in fishing. Camas was gathered in July, and hunting began in August and continued "until the snow flies." The storms drove the people to the shelter of their longhouses. In building these the earth was excavated two feet or more, and long lines of poles formed the framework, on which mats made of reeds and rushes were bound. The principal poles were in groups of three, and each group marked a family section, or apartment. The fires were in the center, and between every two fires an entrance-way projected from the lodge. A mat hung at each end of this hallway as protection from the cold. Outside each section was a sort of shed for the storage of wood and other belongings. From fifteen to twenty families lived in one of these houses, some of which were as much as two hundred feet in length. All the marriageable women dwelt together in a half-subterranean structure roofed over with heavy timbers. Through a narrow entrance in the dome-like roof one descended to the floor below by means of a sort of ladder made from a small tree, the lopped off branches forming steps. This ladder was never in position except when in use by the inmates. This house was called *Al-we'-tas*, meaning the abode of those without husbands. The young women and widows living in the *Al-we'-tas* went every morning to the long house and assisted their respective families in the preparation of the food; they helped to bring the wood and water, and when these tasks were done they took their own supplies and returned to the *Al-we'-tas*, where they wove mats, made garments, and were otherwise busily employed. Every village had its *Al-we'-tas*, which was always respected by all the men, old and young. The last of these structures disappeared a little after the middle of the last century.²⁷

The discipline of the children of a village was delegated to certain men appointed for the purpose by the chiefs. They were called "whippers." There was one or more to each long house.²⁸

Group 1

The name of this group has been lost. All of its villages were in the vicinity of the Snake River and became extinct prior to the beginning of the 19th century. Their names and locations, however, are given on the map. They are numbered 1, 2, 3, 73, 74, 75, [and] 76.

Their hunting grounds were to the westward toward the Blue Mountains, and overlapped those of the *Walla-walla-poo* or Cayuse Indians. The people were considered as mixed with other tribes and not of pure Nez Perce blood. They were the most southern group in the tribe [The Group 1 villages mark the southern frontier of Nez Perce winter settlement. Accurate location of these villages is important for understanding aboriginal land tenure, the timing and extent of Numic expansion in the lower Snake River basin, and other questions. However, quite variable accounts of the position of Group 1 have appeared in the literature during the past thirty years. For example, Schwede (1966:No. 280) places Village No. 1, *Kaus-pa-ah-loo*, in the lower reach of Hells Canyon near Somers Creek at river mile 210 on the west side of the Snake River. This location implies that the remainder of Group 1 and all of Group 2 occur downstream of Somers Creek. Thompson (1992) accepted Schwede's interpretation of *Kaus-pa-ah-loo* and

concluded the archaeological site on Tryon Creek (35-WA-288) marked the location of Village No. 2, *Tak-in-pa-loo*. Another interpretation proposed by Rice and others (1981) places villages 2, 3, and 76 of Group 1 about 25 miles upriver, between Rush Creek (river mile 231) and Bernard Creek (river mile 235)].

[However, all three accounts fail to accommodate Billy's statement that village No. 5 of Group 2 was located 50 miles above the mouth of the Salmon River. This would place the southernmost settlement in Group 2 somewhere in the reach between Saddle Creek and Granite Creek, at about river mile 238. All of the villages in Group 1 must therefore be located above this reach].

[Our interpretation of Group 1 places village Nos. 1, 2, and 3 in the basin of Pine Creek on the west side of the Snake River. Village No. 75 is at the mouth of Indian Creek and Village No. 76 is at the mouth of Wildhorse Creek so that both are on the east or Idaho side of the Snake. This places Group 1 about 44 river miles above the location favored by Rice and others, and about 70 miles upstream of Schwede's location].

[This interpretation has several advantages. Most importantly, it accommodates the location of Village No. 5 in Group 2 by placing all of Group 1 upstream of Granite Creek. Second, it accounts for apparent errors in cartography in the vicinity of the Imnaha River and Pine Creek, by placing a trail leading from the Imnaha south between North Pine and Pine creeks, and by recognizing that the internal drainage of lower Pine Creek was drawn incorrectly by Billy Williams. The branches of Pine Creek converge to form a single channel about six miles west of the Snake River. Third, Pine Creek was a significant salmon spawning stream as late as 1924, when cyanide spills from the Cornucopia Mine finally destroyed the fishery (Reid and Gallison 1993). However, none of the short, steep, first and second order streams mentioned by Schwede (1966) and Rice and others (1981) as locations for *Tak-in-pa-loo* and *How-pa-loo* had significant salmon runs. Finally, local historical accounts refer to Nez Perce and Umatilla villages and cemeteries on East Pine Creek near Langrell between the late 1870s and early 1900s (Pine Valley Community Museum 1978:32, 1979:31, 1984:27, 1991:24). The impression given by these accounts is one of resumption of a temporarily interrupted land use pattern.²⁹ In summary, our interpretation places the extinct villages of Group 1 along both sides of the Snake River between Pine Creek and Granite Creek].

1. *Kaus-pa-ah-loo*. This village was on the creek *Kaus-pa-al* [Pine Creek], which emptied into the Snake River from the west. It led up to a bench, or prairie, where cous grew plentifully (*Kaus*, an edible root). The village was said to have been large, but from continual battling with the Shoshone, who coveted the cous grounds, all the people had been killed and the place deserted before the beginning of the last century [Schwede said that the name of this village referred to any kind of dry root and she placed it in the area of Somers Creek (Schwede 1966:No. 280)].

2. *Tak-in-pal-loo*. Situated on the creek *Tak-in-pa-al* [also in the Pine Creek basin]. Where the village stood there was a deep, quiet place in the stream where the salmon came in abundance. *Tak-in* is the name of such a deep place—"almost like a harbor." Deer abounded on this creek, and because of the plentifulness of game and fish the village suffered from constant inroads from the Shoshone, and became extinct. It is said that at the opening of the last century there was living one old man who belonged to this village [Schwede stated that the name of this village referred to a meadow and placed it "somewhere on a line from Wolf Creek to (the) confluence of Horse Creek and Imnaha River" based on her understanding of Fletcher's work

(Schwede 1966:No. 276). Thompson (1992) correlated *Tak-in-pal-loo* with a site on Tryon Creek while Rice and others situated this village on Sluice Creek (1981:19-20)].

3. *How-pa-loo*. The name comes from the stream [Pine Creek] on which the village stood, *How-pa'-al*: *how*, from *hown*, a hole; *pa-al*, leading to. The stream was full of rapids and holes where fish hid. This was the "leader" village of this group. It is said to have been the largest and most important. It directed the time of hunting. It was entirely destroyed prior to the last century [Schwede stated that the name of this village referred to a swift stream and she placed it in the same general location as village No. 2 (Schwede 1966:No. 277) while Rice and others (1981:19-20) placed it on Rush Creek].

73. *Ky-yah-pos-poo*. From *ky-yah-pos*, a bush, the wood of which was used for making baskets. This village had been so long extinct that only its site was known at the time of the advent of Lewis and Clark [Schwede (1966:No. 274) thought this village may have been located between Birch and Wolf creeks; however, we place it below Pine Creek and probably above Granite Creek].

74. *Ko-sik'h'-poo*. Near this village [on Sheep Creek or Granite Creek?] a soft, workable, stone was available. The village has long been destroyed [Schwede also placed this village between Birch and Wolf creeks (1966:No. 275). We place it below Pine Creek and above Granite Creek].

75. *Ko-sik'h'-poo*. This village [on Indian Creek] bore the same name as the preceding, but both ceased to exist so long ago that it is not known whether or not they were inhabited by the same band or clan. Tradition says they were a very brave people [Schwede thought this village may have been in the vicinity of Wolf or Jones creeks (Schwede 1966:No. 278). We place it below Pine Creek but above Granite Creek].

76. *Ko-lat'-pa-loo*. Nothing is known of this village [on Wildhorse Creek] save the tradition of its site and that it belonged to the same group as the foregoing [Rice and others placed this village on Bernard Creek (1981:19-20)].

Group 2

The name of this group was *Pe-ku'-nin-moo*—literally, people of the Snake River. The people of this group were hunters rather than fishers. Their hunting grounds were to the southeast on the *See-sak'-kae-mah-sam*, the mountains about the Salmon River.³⁰ After the destruction of Group 1 the *Pe-ku'-nin-moo* became the southern outpost of the tribe. They were warlike in character, and after the destruction of one of their villages (No. 5), they looked upon all strange men as enemies. They fought in large war parties, seldom less than a hundred warriors and often three or four hundred. When war was decided upon at the leading village (No. 9), two messengers were sent to the other villages to call for volunteers. These people were very excitable, and when Lewis and Clark arrived they were with great difficulty restrained from attacking them by the authority of the *Nak-ki-ma* division (dwelling east of Craig Mountain). All of the villages of this group except No. 4 lay on the east side of the Snake River. The Treaty of 1863, which established the [present boundaries of the] Nez Perce reservation, did not include any of the villages of this group. This group comprised Nos. 4, 5, 6, 7, 8, [and] 9 [Villages in Group 2 were located on the Snake River downstream of Granite Creek and above the mouth of the Salmon River. According to Tucker (1993:93), the Nez Perce of *Tu-hool-hool-sute*'s band wintered in this reach as late as the 1870s. The main village was located at Pittsburg Landing;

others extended from Dug Bar up to Kirkwood Bar. Some groups wintered still further upstream at Salt, Temperance, Sluice, and Saddle creeks. Hearths excavated at Pittsburg Landing have radiocarbon ages dating to the eighteenth century in association with tubular copper beads and Desert series arrow points of southern sources (William 1991)].

4. *Im-na'-ma*. The creek, *Im-na-ha* [Imnaha River], upon which the village stood, ran in sharp bends like knees; *im* signifies knee. This was a large village even at the time of the Treaty of 1855, but it was abandoned after the Treaty of 1863 [Schwede placed this village at the mouth of the Imnaha River and confirmed its location with several ethnographic sources (Schwede 1966:No. 267)].

5. *Ky-ya-pus'k-poo*. From *ky-ya-pus'k*, a berry-bearing bush. This populous village was about fifty miles south of the mouth of the Salmon River, on the Snake. All the people were killed in wars, and the place was uninhabited at the beginning of the 19th century [Schwede stated that the name of this village referred to an early service berry. She placed two villages with the same name in the area between White Horse Rapids and Wolf Creek and attributed both locations to Fletcher (Schwede 1966:Nos. 273, 274)].

6. *Toe-e-ko'-poo*. From *toe-e-ko*, a reed. This village lay near a swampy place where the reeds used in making mats grew abundantly. Although it had suffered from wars, there remained a sufficient number of inhabitants to take part in the Treaty of 1855. The village was abandoned after the Treaty of 1863 [Schwede confirmed that the name of this village was associated with reeds or tules. She thought that it was located between Divide Creek and White Horse Rapids although her basis for this information is unknown (Schwede 1966:No. 272)].

7. *Till-tee-ta'-ma*. From *till-tee'-ta*, a bad-smelling bush, unfit for food, that grew along the banks of the small creek [Wolf or Getta creeks ?] which here entered the Snake River. This was a large village, but was abandoned after the Treaty of 1863 [Schwede provided confirmation of the name of this village by stating that it was based on a red leafed plant but was unable to confirm its location through ethnographic sources (Schwede 1966:No. 266)].

8. *Tu-na-ham'-mo*. A large village on a small creek [Divide Creek ?]; abandoned after the Treaty of 1863 [The name of this village may have referred to mountain sheep and it was reported to be located in the area of Mountain Sheep Rapids and Mountain Sheep Creek (Schwede 1966:No. 265)].

9. *Te-ka'k-pa-sam'-ma*. This village took its name from the deep, barren gullies that seam the high bluffs of the Snake River—a marked feature in the landscape of this region. These gullies were called by the Nez Perces *ta'k-pa-sam*. This was the "leader" village of its group [Schwede stated that the name of this village refers to a fishing net although she did not attribute this to any Nez Perce informants (Schwede 1966:No. 250)].

Group 3

The name of this group was *Sah-kon'-ma*, from *sah-kon'*, a canyon, or shady place. The Snake River here runs through deep canyons, and the bottom lands on which the village stood were limited in area. The fishing was good. The people were not given to the hunting owing to the difficulty of getting out of the canyons. This inaccessibility of the country left them in comparative peace. After the introduction of horses the people occasionally hunted, but they remained fishers until the abandonment of all the villages of this group after the Treaty of 1863 when they moved onto the reservation then established, and gradually took to farming. This

group comprised Nos. 10, 11, 12, 13, [and] 14. No. 10 was the "leader" village [all villages in Group 3 were located below the mouth of the Salmon River in Idaho and above the mouth of the Grande Ronde in Oregon].

10. *E-pa-lute'-poo*. *E-pa-lute* signifies throwing nets over great rocks which lie in the river, into holes where the water whirls, and scooping out the fish which hide there. There was excellent fishing at this place, and the village was a large one. It was the "leader" village [Schwede stated that the name referred to something sticking into the water although she did not state the basis for this translation (Schwede 1966:46). This is the same name as for the Palus village at the confluence of the Palouse and Snake rivers, meaning something sticking into or out of the water (Sprague 1968). This village may have been located at the mouth of Cherry Creek on the opposite site of the Snake from *Kew-kew'-lu-yah's* map (Schwede 1966:No. 249)].

11. *See-wy'-yah*. The name indicates a sudden turn or bend in the river around a promontory. This village had many inhabitants. The people were spoken of as *E-pa-lute'-poo*. Villages 10 and 11 were closely bound together, but the people were counted as distinct clans between whom marriage was permitted [Schwede provided a similar translation although she did not confirm it with any Nez Perce informants. She placed this village in the vicinity of Garden Creek (Schwede 1966:No. 248)].

12. *Sy-yo'h-po*. The word expresses the peculiar sound of the river at this point, where two currents meet and flow over the stones. Here stood a large village of over thirty long houses, the people subsisting almost wholly by fishing [The name of this village may refer to granite and it was reported to be located in the vicinity of Garden and Cache creeks on both sides of the Snake (Schwede 1966:No. 247). Test excavations at Cache Creek (on the Oregon side) found numerous fish remains and net weights associated with glass trade beads (Reid and Gallison 1994). The name Cache Creek is derived from storage pits where fish and meat were cached by Indians in 1876 (Horner 1940s:52-53)].

13. *E-wisp'-po*. This name is the only one in all the Nez Perce list which has a mythical origin. The story goes that the Coyote, a hero in Nez Perce folk-tales, who was always going up the river and never passing down-stream, came to this place where springs issued from some great rocks, and being thirsty he drank of the water, found it cold and good, and called the place *e-wisp'-po*, meaning a whirlpool. This was a small village, but many Nez Perce traced their descent from it [Schwede said that the name referred to urine and thought this village was located in the area of China Garden Creek on the east side of the Snake (Schwede 1966:No. 246). Paul confirmed the presence of the springs and the association with Coyote; he also thought the name meant "Coyote urinated" (Paul 1987:No. 208)].

14. *O-le'k-o-lee-poo*. The word *ole'k-olik* means twisting like a snake. At this point the river is very tortuous, the water whirling as it runs. The fishing here was good [A site with a different name but with a similar translation was thought to be located in the general vicinity of Birch and Shovel creeks on the west side of the Snake River (Schwede 1966:No. 245). The village may have been the fishing site visited by Sergeant Ordway's party in May 1806 (Moulton 1995:316-317). Stratton and Lindeman (1979:11) place the site of Ordway's visit at Wild Goose Rapids, but on the east side of the river, immediately downstream of Birch Creek].

Group 4

The name of this group was *Will-lu-wo*. Its villages were on the Snake [River] and [its] western tributaries. The people were hunters, and went west to the Blue Mountains for game. As warriors they were rivals of the *Pe-ku-nin-moo*. Several large streams traversed their country, and the prairies were rich grazing grounds after the acquisition of horses. The *Will-lu'-wo* group refused to enter into the treaties of 1855 and 1863. This region has become historically famous because of the brilliant fight Chief Joseph made in 1877 for the Willowa [Wallowa] country, the ancient home of his people. Group 4 comprised Nos. 15, 16, 17, 18, 19, 20, [and] 21. No. 18 was the "leader" village. [All villages in Group 4 were located along a narrow section of the Snake River from just above the mouth of Joseph Creek to just below the mouth of Couse Creek].

15. *Nuse-no'-pe-poo*. From *nuse-nu*, a nose. The promontory around which the river lay was like a nose. This was a good-sized village [A similar translation is that the name referred to snorting. This village was located opposite the mouth of the Grande Ronde River (Schwede 1966:No. 243)].

16. *E-mah-hy'poo*. From *e-mah-hy*, a root much liked by the old Indians. The young folks have forgotten its taste. It was plentiful along the [Captain John?] creek on which the village stood, and was gathered in the early spring [This name may have referred to wide bladed bunch grass growing in creeks (Schwede 1966:No. 189)].

17. *Sis-nim-'poo*. From *sis-nim*, the thorn bush. This was quite a large village [Schwede provided the same translation and confirmed it with several Nez Perce informants. This village was on Thorn Creek (Schwede 1966:No. 268)].

18. *Well-'eyou-wah we*. *Well* is an abbreviation of *Wa-lu-la*, the name of that part of the stream now known as the Grand Ronde between its branches and its debouchment into the Snake; *eyou-wah-we* means mouth. A branch of this stream, the Wallowa, gave its name to the country for the possession of which Chief Joseph fought in 1877. No. 18 was a large village and the "leader" of this group [This may be the same village placed on the north side of the mouth of the Grande Ronde by Schwede (1966:No. 195)].

19. *In-nan-toe-e-in*. The final *in* signifies that the location was surrounded by the river *In-nan-mah* [Grand Ronde River]. To this point a fish closely allied to the salmon came in great numbers [probably the sockeye or bluebacked salmon (*Onchorhynchus nerka*)]. This populous village was the home of Chief Joseph [This village was located at the mouth of Joseph Creek. Schwede states that the name referred to the north side and confirmed its existence with a number of Nez Perce informants (Schwede 1966:No. 199). Paul differed on the spelling and its meaning but he also placed a village in the vicinity of the mouth of Joseph Creek (Paul 1987:No. 134)].

20. *Well-wo'wah-ah-ly-ma*. *Well-wo*, derived from *Wal-lo-wa*, the name of a stream; *wah*, up the river; *ah-ly*, on the river bank; *ma*, people. The name thus signified that the people lived up the *Wal-lo-wa*, on its banks [Nez Perce informants confirmed that a village was located up the Grande Ronde but Schwede was unable to locate it (Schwede 1966:No. 209; Paul 1987:No. 112?)].

The term *Ah-ly-ma* is applied to any people living on the borders of a river. The fragments of tribes from the Columbia River are spoken of as *Ah-ly-ma*. The name has acquired another meaning, however. The French came down the rivers, and those who lived with Indian

women settled on the streams. These Canadian French were Roman Catholics, and their half-breed descendants who still adhere to that faith are spoken of by the Nez Perce as *Ah-ly-ma*, though the name is not applied to Roman Catholics who are full-bloods.

21. *Is-kin-'ne-wa-'wee*. From *is-kit*, a trail, [and] *ne-wa'wee*, following the creek [Couse Creek]. The village stood where the trail leading to the Blue Mountains followed the creek. This was formerly a large village, but its inhabitants were destroyed through the action of one of its prominent men. The story of the event is current through the tribe, and is used to point a moral. *Is-kin'ne-wy'ma* was an ambitious man, who desired to make himself great. He boasted of his strength and valor, and sought to lead war parties. He rallied his village by crying: "The *Pe-ku'-nin-mo* are not fierce, but I am fierce!" He sent messengers to the villages of his own group, and even to other villages and tribes, bidding the warriors join him in a great expedition against the southern Indians. At last he set forth with more than six hundred warriors, among whom were men from the friendly Walla-walla [Walla-walla], Palouse [Palus], and other tribes. They took the trail to the west and then turned south, where they met the Bannocks in battle. In the face of danger *Is-kin-ne-wy'-ma* showed neither valor nor leadership and suffered a terrible defeat. Not one of the great company which went forth with him was ever heard of again. The name of this would-be warrior became a tribal synonym for boasting and deception. Parents would check a braggart youth with the admonition: "Don't be like *Is-kin-ne-wy'-ma*!" [Several sources have documented the existence of this village. Schwede confirmed the name but stated that it referred to many trails; she was unable to locate it (1966:No. 194) and placed a different village in the vicinity of Couse Creek (1966:No. 181). Shawley placed a trail along Couse Creek and an unnamed camp at its mouth (1984:Map 10). Paul also placed a site at the mouth of Couse Creek (1987:No. 192)].

Group 5

The name of this group has been lost. So also [has] its independent organization, as it had no "leader" village. The people subsisted almost wholly on fish; but if they desired to go and hunt to secure meat, they were obliged to ask permission of No. 18, the "leader" village of Group 4. The people of Group 5 were not numerous, nor were their villages important. They were situated in rather a barren region. The group comprised Nos. 22, 22a, 23, [and] 24 -- all located on the Snake River. The reservation established by the Treaty of 1863 did not cover these villages, and consequently they had to be abandoned. The people removed to the reservation, and there changed their mode of life.

22, 22a. *Il-lar-kart-'part-poo*. Both villages bore the one name, and were in fact one village. No. 22 was occupied in winter, as there were woods near by; No. 22a was occupied in summer. High cliffs rose on both sides of the villages, and the heat caused by the reflection of the sun on the rocks gave rise to the name of the place; *il-lar-kai'-wit* meaning the bright light that accompanies summer heat. The region hereabouts was barren. The Indians said: "The white people do not like this place, as nothing will grow here." Consequently the natives were not intruded upon. To this village those who were not in sympathy with the Christian element in the tribe resorted in the winter to hold their old-time practices, as they were here out of reach of the progressive Indians, the missionaries, and the teachers [Schwede confirmed that this village was located on both sides of the river and stated that its name referred to the sunny side (Schwede 1966:No. 182). Paul placed this village more generally at Buffalo Eddy (Paul 1987:No. 47).

Buffalo Eddy is well known for its rock art and is administered by the National Park Service as part of the Spalding unit of Nez Perce National Historical Park].

23. *Te-lee'-wah-we*. *Te-lee*, from *te-lil*, a large immovable rock; *wah-we*, from *e-you-wah-we*, mouth. Such a rock stood where the creek on which this village was situated emptied into the Snake River. The settlement was large on account of the fine salmon fishing at this place [Schwede stated that the name referred to a galloping place for horses but she was unable to locate it (Schwede 1966:No. 193)].

24. *Hah-wah-nah'-heesph-po*. From *Ha-wah-nah*, mosquito. The swarms of this pest infesting the bottomland where this village stood on the Snake River, gave name to the place [Paul confirmed that the name was associated with an abundance of mosquitoes and placed this village above the mouth of Ten Mile Creek on the Washington side above Asotin (Paul 1987:No. 187)].

Group 6

The name of this group has been lost. The people were warlike and numerous, and claimed to form a distinct group; yet in the quest for food they were under the direction of No. 18, of Group 4. They hunted in the Blue Mountains which lay to the west, when they had obtained permission to do so from No. 18. In all other matters they were under the leadership of No. 28, in their own group. All of Group 6, and five men from No. 29, took part in the Treaty of 1855; and when the Treaty of 1863 was made, the reservation then established did not cover the territory occupied by this group. The villages had, therefore, to be abandoned. This was accomplished peaceably with all except No. 28, which took part in the Joseph War of 1877. This group comprised Nos. 25, 26, 27, 28, [and] 29. No. 28 was the "leader" village in everything except the hunt [The villages in Group 6 extended from the lower part of Hells Canyon past the confluence with the Clearwater River and into the lower Snake River region. This area includes the modern communities of Asotin and Clarkston].

25. *Sahk'som-mo*. This village was situated on a fine lot of bottom-land. [No description of the meaning of the Nez Perce name for this village was provided by Fletcher but it may refer to an osprey or fish hawk (Schwede 1966:No. 177). It was located in the vicinity of Tenmile Rapids on the Snake River on either the west side in Washington (Schwede 1966:No. 177; Shawley 1984:No. 143) or the east side in Idaho (Paul 1987:No. 189)].

26. *Wah-yie'-wa-we*. *Wah-ha*, the name of a creek; *yie-wa-we*, a euphonious adjustment of *eym-wa-we*, mouth. This village lay at the mouth of the creek *Wa-ha* [Ten Mile Creek], in the west bank of the Snake [(Schwede 1966:No. 180)].

27. *Ah'-na-toe-eno*. Situated at the mouth of the *Ah-nah* [Ten Mile Creek], a creek noted for its delightful water. Early in the 19th century this village was composed mainly of women, who were remarkable for their gentleness. Nearly all the men had been killed in battle [Fletcher did not provide a translation for the name of this village. According to other sources, its name may refer to down river (Schwede 1966:No. 178) or to a canyon mouth suddenly encountered (Paul 1987:No. 190)].

28. *Ah-so'-toe-e-no*. In this village lived a noted chief whose family for three generations had been prominent as leaders in the religious mysteries, and also in war and hunting. These chiefs had borne the name *Ah-pos-wah-hyte*. The last of their number was the famous Looking Glass, one of Chief Joseph's most important officers in the war of 1877 [this

village was located in the vicinity of Asotin Creek and extended on both sides of the Snake River (Schwede 1966:No. 173; Paul 1987:No. 141). Archaeologists have documented sites (45-AS-9 and 45-AS-86) in Washington (Sprague 1959) and Idaho (10-NP-151, Sappington 1985). For a summary of the meaning of the village name see Sprague (1959). This village has been severely affected by developments in Asotin, Washington, and Hells Gate State Park in Idaho and has been partly inundated by Lower Granite Reservoir (Gurcke with others 1979)].

29. *Al-pow-nah*. This village, on the west side of the Snake at the mouth of the *Al-pah-hah* [Alpowa Creek], is the last Nez Perce village on that side of the Snake. Here the people were mixed with the Palouse [Palus] Indians, and more than one language was spoken in this village [The name for this well known village refers to a hot or sunny place (Schwede 1966:No. 142). Archaeological excavations were conducted here (45-AS-82) in the early 1970s and these investigations were among the most extensive ever undertaken in the southern Columbia Plateau (Brauner 1976). Block excavations uncovered late prehistoric and protohistoric houses. This site is now almost completely inundated by Lower Granite Reservoir (Gurcke with others 1979:36)].

Group 7

The name of this group has been lost. The villages lay down the Snake River, and joined those of the friendly Palouse [Palus Indians]. The people lived mainly by fishing, although they hunted to some extent. They were not considered as warlike as the *Pe-ku'-nin-moo* or the *Will-lu-wo*. No. 69 was the "leader" village. When the time arrived for digging camas on the grounds claimed by this group (69a on the map), near the present town of Moscow, Idaho [this village has been well documented (Schwede 1966:No. 110; Shawley 1984:No. 211; Paul 1987:No. 133), messengers were sent by the chief from the "leader" village to all the villages of this group. In three days all the people came and camped together near village No. 69, and then all moved out to the camas ground. When the ground was reached each village camped by itself; there was no camp in common. All the group seems at this time to have been directly under the control of the chief who was of the "leader" village, who kept order, so that there was no confusion or disorderly behavior. *Ky-ky-mas* was the name of their last chief. This group comprised Nos. 66, 67, 68, 69, 70, 71, [and] 72. When the Nez Perce reservation was established, in 1863, the region occupied by these villages was not included, and all were sooner or later abandoned [These were the westernmost Nez Perce villages. These sites were located on the lower Snake River so that all have been affected by Lower Granite and Little Goose reservoirs].

66. *Wit-kee'-sp*. This village took its name from the stream on which it stood, and which here emptied into the Snake River [The name for this village refers to the alder tree (*Alnus* sp.) (Schwede 1966:No. 147; Paul 1987:No. 163). It was located about three miles down river from Alpowa, probably in the vicinity of Steptoe Canyon (Paul 1987:No. 163) although Schwede places it farther downstream (Schwede 1966:No. 147). All recorded sites in this vicinity were inundated by Lower Granite Reservoir (Gurcke with other 1979)].

67. *Toe-ko'h-pe*. From *toe-ko'h*, a sort of cave, or hole, formed by many stones. A number of such places were in the vicinity of this village site. The village had disappeared before the beginning of the last century [Reid and Gallison (1995:262) suggest the caves or holes

may refer to three shallow rockshelters reported by Nelson (1965:6) opposite Wild Goose Island, or to talus pit clusters near Ridpath or opposite Swift Bar].

68. *Yak-e-you-wa-we*. A large village stood, as its name implies, at the mouth of the creek named *Yak*, which here empties into the Snake River [at the mouth of Yakawawa Canyon; the name refers to something wide, possibly the stream (Schwede 1966:No. 150). An archaeological site at this location (45-WT-52) was inundated by Lower Granite Reservoir (Gurcke with others 1979:61)].

69. *Pa-lote-pe*. *Pa-lote*, muddy; *pa-lote-pe*, muddy and slow river. This was the "leader" village of the group. From here orders were issued in reference to the quest for food [This village was located just below Truax, Washington, between Yakawawa and Wawawai canyons; the name has also been interpreted as referring to a light green color (Schwede 1966:No. 152). All sites in this area were inundated by Lower Granite Reservoir (Gurcke with others 1979)].

70. *Wah-nah-we*. The multitudes of mosquitoes that were in this region gave name to this village. These people became possessed of large herds of horses, and about the middle of the last century they moved in a body to the Yakama tribe in Washington on account of the horse-stealing habits of the white men in their vicinity [the name may possibly be associated with the harvesting of sunflower seeds (Schwede 1966:No. 154). This area is now known as Wawawai; a late prehistoric to protohistoric archaeological site was recorded at this location (45-WT-39). It was examined by archaeologists from 1968 to 1971 (Adams 1972; Yent 1976) and then inundated by Lower Granite Reservoir (Gurcke with others 1979:61). A Whitman County park is located here today].

71. *Ah-tok-sos*. From *tok-ses*, a fording place. *Ah-tok-sos* literally means, where the people came out of the stream. The native name has been corrupted to Texas. Texas ferry is now a white settlement [This village was first reported by Lewis and Clark in 1805 (Moulton 1988:265) and a historic settlement was later located at Texas Rapids known as Riparia. The location on Billy Williams' map should be much farther west and nearly opposite the mouth of the Tucannon River. Schwede discussed a village with a similar name and attributed it to Fletcher but this is nowhere near Riparia which she properly located (Schwede 1966:No. 155). Apparently she looked at the place name without looking into the history of the site. Another interpretation of the Nez Perce name is that it referred to an exclamation (Schwede 1966:No. 155). This site (45-WT-1) has been investigated archaeologically and dates from ca. 8000 BP to the historic period (Miss and Cochran 1982; Carley and Sappington 1984; Reid 1991). Most of this site has been inundated by Lower Monumental Reservoir].

72. *Ah-la-mo'-tan*. The Nez Perce name of this village was *Ah-mo-toe-in*, but the people were much mixed with the Palouse and the name became changed. In this village two languages were spoken—Nez Perce and Palouse. Beyond this village there was no Nez Perce settlement [This site is associated with Almota, Washington (Schwede 1966:No. 156; Paul 1987:No. 247) and the area is still known by this variant of its Nez Perce name. The name may refer to heaped up fire (Schwede 1966:No. 156) but its meaning is uncertain (Paul 1987:No. 247). Almota is actually considerably east of Riparia so again there is some confusion in the location of this village. This site was partially inundated by Lower Monumental Reservoir].

Group 8

The name of this group has been lost. The "leader" village was No. 31. The villages lay along the Snake River near its junction with the Clearwater, and extended up the latter river some twenty-five miles. Beside its descriptive name, the "leader" village was known as *Tah-mal-win-wes*, from *tah-mal-wit*, law or command, and *wes*, from *wetes*, land. From this village were issued the commands respecting the hunt. Under orders from this village the people could hunt toward the Blue Mountains, and toward the north, and on the west side of Craig Mountain. Its control in reference to hunting could reach to Groups 5, 6, and 7, though its power was not as well recognized by 5 and 6 as [it was] by 7. It had no power to permit hunting in the territory of the *Nak-ki'-ma* division, or for crossing the mountains into the buffalo country. When the hunting seasons approached, messages were sent from the "leader" village No. 31 to the "leader" villages Nos. 53 and 54, to ask if the people of Group 8 would be allowed to hunt to the east, in the buffalo country. If the request was refused, the messengers were instructed to ask when the hunting would be allowed. If the reply fixed a time, the message was graciously received and obeyed by the group. The group comprised Nos. 30, 31, 32, 33, 34, 35, 36, 37, [and] 38. The sites of the last five villages of this group were included in the reservation set apart for the tribe by the Treaty of 1863. The remaining villages were abandoned not long after the treaty, the people removing to the land reserved for the tribe [All the villages in this group were located along the lower Snake and lower Clearwater rivers. This is the most densely populated area within traditional Nez Perce territory and many of these sites have been impacted by Lower Granite Reservoir and by the construction of railroads, highways, and other developments].

30. *Tu-ka-yute'-po*. From *tu-ka*, a reed. This was a small village. The inhabitants were much mixed with the Spokane Indians [Another interpretation of the name of this village is that it referred to a cliff or rock going into the water; it was located on the south side of the Snake River about three miles above the mouth of Alpowa Creek (Schwede 1966:No. 141). All sites in this area have been inundated by Lower Granite Reservoir (Gurcke with others 1979)].

31. *Suck-ka'-ly-e-kin-ma*. From *suck-ko*, heaps of sand, and *ly-e-kin*, shore or bank. The name is descriptive of the site where the village stood. This was the "leader" village, and was spoken of as *Tah-mal-win-nes*, the place of command over the land. While this village controlled the movements of the people in the quest for food, it does not seem to have had any special authority over warlike undertakings [Schwede provided a similar interpretation of this village name (1966:No. 139). North Lewiston is located here today].

32. *Pah-ah'nup*, or *Pa-mah-po*. The name indicates a point or island where two rivers come together. Here the Snake and Clearwater join. On the site of this ancient village Lewiston, Idaho, now stands [Schwede agreed with this interpretation but applied the name to other side of the Snake River where Clarkston, Washington, is now located (1966:No. 138). Although partially inundated by Lower Granite Reservoir, archaeological reconnaissance has confirmed the location of this site (45-AS-99; Gurcke with others 1979:37, 65) and test excavations indicate that it dates back to ca. 5000 BP (Sappington 1991)].

33. *Hat-way-ma*. From *Hat*, part of *Hat-ta*, the name of a stream [Hatwai Creek] coming down from the uplands to the Clearwater; and *way*, from *e-you-wah-we*, mouth. This village was at the mouth of the *Hat-ta*. Villages 32 and 33 were near kindred; individuals lived sometimes in one village and sometimes in the other. The people could not intermarry—"it would have been the same as if a man had married in his own village." [This village was first reported by Lewis

and Clark in October 1805 (Moulton 1988:253). Another interpretation of the site name is that it referred to an old woman (Schwede 1966:No. 131); this may be a reference to the name of a particular woman, *Ott-way*, who once lived here (Shawley 1984:Nos. 10, 37) but the meaning remains uncertain (Paul 1987:No. 42). This village has been the subject of extensive archaeological investigations and is the oldest radiocarbon dated site (10-NP-143) in the Clearwater River region with one age of over 10,000 BP; at least ten housepits dating from ca. 6000 to 3000 BP have also been investigated (Ames and others 1981; Sappington 1994). Much of the site is now covered by U.S. Highway 12, Corps of Engineers facilities, and Nez Perce tribally owned businesses].

34. *Yah-toe-e-no*. This village stood at the mouth of the *Yah-ka*, or Bear Creek, now called the Potlatch [River]. Through this valley, which leads up from the Clearwater River to the uplands, passed the trail to the trading post on the Upper Columbia at what is now Fort Colville [Fort Colvile]. This village, although not large or important in the days before the advent of the white men, became so after the establishment of the trading posts, as here dwelt one of the chiefs empowered by "King George" to give wives to aspiring hunters. This was the village where Billy's father "took a new wife." [This village has been well documented ethnographically (Shawley 1984:No. 245; Paul 1987:No. 38). A variation on the interpretation of this site name is that it referred to where the river joined another stream (Schwede 1966:No. 102; Paul 1987:No. 38). This village was important in the history of the Lewis and Clark expedition as the party stayed here on both trips across the Plateau. Among other details, they reported a large Nez Perce mat lodge, the presence of Coeur d'Alene visitors, Lewis became involved in an altercation with a Nez Perce man over the party's eating of dogs, and a Lewis and Clark medal was found in a burial at this site in 1899 (Moulton 1991:209-219). The site (10-NP-102) was tested by archaeologists from 1967 to 1971 and the occupation dated from ca. 3000 BP into the historic period; it has been heavily disturbed by railroad and highway construction (Toups 1969; Sappington 1994:26)].

34a. *Yak-kam'-ma*. This village was situated upon a tributary flowing from the west [either Little Potlatch Creek or the Middle Fork of Potlatch River] to the *Yak-ka* [Potlatch River]. Here [in the vicinity of Juliaetta, Idaho] occurred a fierce battle with the Spokanes [Spokan] at the end of a long warfare. During these hostilities the inhabitants of *Yak-kam'-ma* built a breastwork of stone filled in with earth across the valley, or gulch, as a wall of defence [defense]. The origin of the feud between the Spokanes and the Nez Perce is one of the folk-tales of the people, which runs as follows:

In the latter part of the 18th century a feud arose between the Nez Perce and the Spokane [Spokan] Indians, growing out of the following incident: There was a man who lived at *Hat'-way-wa* (No. 33). He was fond of birds, and particularly of two eagles that had their nest near by. He used to listen to their calling to each other, and they gave him much pleasure. One day two brothers who were hunting came along, and the cries of these birds annoyed them. One said: "O, bother the birds!" He strung his bow and shot one bird, which fell by the stream pierced by the arrow. The next day the man said: "Why is it so still? Why do I not hear the cry of the eagles?" And he started to ascertain the cause. As he went he came across the eagle, with the arrow through its body. He pulled out the arrow, noted its mark, and started to find its owner. He discovered the young man and killed him, because he had killed the eagle that the man loved. This young man was married to a woman who was part Spokane. A son was born to her soon after. The mother went to her Spokane relatives, and brought up her son to believe it was his

duty to avenge his father's death. When he was grown he gathered a band of Spokanes, and they went to the *Hat'-way-ma* village and killed nearly all the people. The young man sought and found the man who was his father's slayer. When he found him he cried: "What did you do to my father? Why did you make widows?" And, waxing angry, he thrust his knife into the old man, shouting: "Go to sleep!" For years after there was war between the Nez Perce and the Spokanes, but before Billy was born the two tribes had smoked the pipe of peace and become friends again [This village has been well documented ethnographically (Shawley 1984:No. 246; Paul 1987:No. 172). Another interpretation of the name of this village is that it refers to something being scattered out on a hillside (Schwede 1966:No. 104). In support of Fletcher's translation, the upper tributaries of the Potlatch River are known today as Big Bear Creek and Little Bear Creek].

35. *Lap'-way-ma*. The name *Lap-way* comes from *lapit*, meaning two. Two streams, one from the south and one from the east, unite from where the *Lap-way* [Lapwai Creek] enters the Clearwater. It was on this village site that the mission of Mr. Spalding was started. Here the first mill was built and printing press set up, and the school and church was founded in 1836. After the Treaty of 1863 the government placed the agency for the tribe at this place. [This well documented village was first reported by members of the Lewis and Clark Expedition in October 1805 (Moulton 1988:255). Another interpretation of the name include a reference to butterfly or place of butterflies (Schwede 1966:35; Shawley 1984:93) but this meaning remains uncertain (Paul 1987:123). The area is now known as Spalding and is administered by the National Park Service as part of Nez Perce National Historical Park. Archaeological investigations have documented a long span of human occupation at this site (10-NP-108) dating from ca. 10,000 BP to the present (Chance and others 1985)].

36. *Yah'toe-en-moo*. *Yah-ta* is the name of a creek. The village name signifies to come over the *Yah-ta* [This village was located at the mouth of Pine Creek and its name may be derived from over-ripe *ye't yet* or *cous* (Schwede 1966:No. 100) although Paul (1987:No. 44) stated it had an unknown meaning].

37. *Tah'-sa-hah'po*. *Sa-hah-pi*, between. At this place on the Clearwater there is a great eddy [Big Eddy] a which seems to divide the stream, hence the name. There was a large settlement at this point [This village has been documented ethnographically although several authors have provided conflicting interpretations. Schwede discussed a village at Big Eddy but she provided a different name and then applied this name to a site at the mouth of Bedrock Creek (Schwede 1966:Nos. 98, 99); Shawley discussed a place name at Big Eddy but he also located the village slightly downstream (Shawley 1984:No. 214); and Paul (1987) has an unlabeled dot at this location on his map but there is no mention of the site in the text. A prehistoric site (10-NP-105) was investigated here archaeologically from 1967 to 1971 prior to the development of a rest-stop by the Idaho Transportation Department. Numerous late prehistoric housepits were investigated and the occupation at this site dated from ca. 8000 BP to the historic period (Toups 1969; Sappington 1994)].

38. *Mah'toe-en-no*. *Mah-kah*, snow, is the name of a canyon which here opens into the Clearwater River. Patches of bottomland are found along the banks of the small creek which finds its way through the deep canyon to the river. Indian homes with gardens and little fields flourish on these patches today, but formerly the only inhabitants were in the village at the mouth of the canyon. This village was the last to the east that acknowledged the leadership of No. 31 [This well documented village (Schwede 1966:No. 101; Shawley 1984:No. 88; Paul 1987:No.

39) was located between the mouth of Cottonwood Creek and the community of Myrtle, Idaho. An alternate interpretation of its name is that it refers to something sweet smelling (Schwede 1966:34); Paul stated that the meaning of this name was unknown (Paul 1987:123)].

Group 9

The name of this group has been lost. The villages were upon the [lower and main stem of the] Clearwater River, and commanded that stream from the "Big Canyon" [near Peck, Idaho] to a creek [Jim Ford Creek] some six or eight miles beyond the North Fork of the Clearwater. The "leader" village was No. 40. From this village permission to hunt on Craig Mountain was given, as also to fish in the Clearwater. Group 8 sometimes applied for permission to hunt, while, on the other hand, Group 9 sometimes asked the same permission from No. 31, of Group 8. Groups 7, 8, and 9 early came under the influence of the traders and fur companies, and on the whole have shown less sturdiness in resisting the evils arising from contact with the white men than have other portions of the tribe, although there are many individual exceptions to this general statement. The group comprises Nos. 39, 40, 41, [and] 42. All of these were included in the reservation of 1863.

39. *My-'ik-sone-no. My-'ik*, sand. This village was noted for its feasts [Schwede could add nothing to this entry (1966:No. 91); there are no other known references to this village].

40. *Lock-ka-yah-'ma. Lock-ka*, pine trees. This was the "leader" village of the group. From it issued permission to fish and to build dams [walls or weirs to obtain fish] in the Clearwater, and also to hunt on Craig Mountain. This village, also, was noted for its feasts [This village was located on the west side of the mouth of Big Canyon Creek and its name was reported by a recent Nez Perce informant as referring to an open space (Schwede 1966:No. 92)].

41. *Ta-wah-'poo*. This village stood at the mouth of the *Ta-wah* (now called the Orafina creek) [Orofino Creek]. *Ta-wah* is derived from *ta-wis*, meaning antlers, this creek being a noted hunting ground for deer. Many people lived here [The location has been confirmed by more recent Nez Perce informants (Paul 1987:No. 81) but this name actually refers to the group of people who lived on Orofino Creek (Shawley 1984:No. 169). A much different interpretation of the name of this village associated it with the negative effects of a place cursed by a shaman (Schwede 1966:No. 82)].

42. *Mis-sah'e-you-wa-we*. From *mis-sah*, what for?, and *e-you-wa-we*, mouth. This was a small settlement [at the mouth of Jim Ford Creek (Schwede 1966:No. 37; Shawley 1984:Nos. 89, 182). The name was also interpreted as referring to lying or to a liar (Schwede 1966:32)].

Group 10

This group belongs to the *Nak-ki-ma* division of the tribe, and was called *We-am-mo*. The villages of this group covered the region now known as Kamiah valley, a stretch of bottomland from three and a half to four miles long, spreading in the middle to nearly a mile and a half in width, through which the Clearwater flows. Judging from the depressions of the long communal houses, the villages must have been quite close together. The people of this group were not so warlike as those of Group 11. They were protected by the latter, as, owing to the character of the valley, no enemies could reach it except through the territory claimed by Group 11. No. 49 was the "leader" village, but authority for hunting came from Nos. 53 and 54 of

Group 11. Group 10 comprised Nos. 43, 44, 45, 46, 47, 48, 49, 50, [and] 51. All these villages were included in the treaties of 1855 and 1863, so there was no removal of the people when the reservation was established. They were among the most progressive of the tribe. [By progressive, Alice Fletcher meant receptive to missionary influences. By all accounts there were numerous sites in the Kamiah valley but there is no means of delineating them all. It appears that there were multiple names for the same sites and that different studies have reported various numbers and locations of sites].

43. *Ho-li-'e-poo*. *Ho-li*, elbow. The village lay in the bend of the river—a small village, and very old, on the west bank of the Clearwater [This village is not well documented. The origin of its name could possibly be a Salish word (Schwede 1966:No. 68)].

44. *Ny-ouse-so'*. The name characterized the ground, which was damp. A mist was sometimes seen rising from the spot. Here was quite a good-sized settlement. Today the site is covered with fields and Indian homes [This village location was confirmed by one recent Nez Perce informant. Another possible interpretation of the name is that it referred to a slope (Schwede 1966:No. 67)].

45. *Ko-lo'*. From *ko-lah*, a slight elevation. A small village was here. The people of *Ko-lo'* and also of Nos. 43 and 44 were, at the beginning of the 19th century, very much afraid of horses, and hunted the deer a-foot [No one has been able to provide additional information concerning this site (Schwede 1966:No. 69)].

46. *Ty-yi'nap-po*. From *ty-yime*, summer. A warm spring bubbled up at this place and many people lived here [Another interpretation of this name is that it referred to middle or mid (Schwede 1966:No. 70). This site may also correspond to the location of the Heart of the Monster at East Kamiah (Schwede 1966:No. 49; Paul 1987:No. 195) which is now owned by the National Park Service and administered as site No. 15 within Nez Perce National Historical Park. The Heart of the Monster is significant in Nez Perce mythology and the story was first recorded by Fletcher (Sappington and Carley 1995)].

47. *Will-lu-'e-mal*. The word signifies "great hospitality." The people of this village were noted for their honesty and kindness and the absence of *tewats*, or men of the sorcerer class [see Fletcher's discussion of *tewats* (Sappington and Carley 1995) and Walker (1989) for additional information]. They gave feasts of deer, fish, cous, and camas. The village was quite a populous one [Without stating a source, Schwede said that this name referred to running (Schwede 1966:No. 71)].

48. *Kamiah-wa-ta-ly-'e-poo*. The name means, the people living on the lower part of the Kamiah creek [Lawyer Creek]. This was a large village [The root word for Kamiah is spelled variously but refers to Indian hemp (*Apocynum cannabinum*) (Harbinger 1964:57; Shawley 1984:No. 52; Paul 1987:No. 70). This village was placed on upper Lawyer Creek by a recent Nez Perce informant (Schwede 1966:No. 51)].

49. *We-am-'ma*. From *we-am*, many springs. At the beginning of the 19th century this was a large village of 500 people or more, but before the middle of the century it had been almost depopulated by the black measles, introduced by the Walla Walla or Cayuse Indians. As many as thirty or forty persons died in a day. Many hundreds of the Nez Perce tribe perished. About the same time smallpox was brought by Spanish blankets from the southwest. For a time the region was almost deserted, as the people fled to the buffalo country, by way of Spokane. It was this scourge of measles that led to the Whitman massacre by the Walla Walla [Wallawalla and Cayuse] Indians [in November 1847] [Without stating why, Schwede said that the name refers to

traveling and coming into an area (Schwede 1966:No. 72). Another version of this name equates it with the Kamiah area and the people who lived there (Shawley 1984:Nos. 102, 239).

50. *Kip-la-loo*. This name is derived from the word *kip-kip*, which indicates the movements of a person hitching himself along by his hands. During the 18th century (some Indians say longer ago) a man lived here who was a cripple. He was a skillful maker of nets, and the village took its name from him. It was a very small village on a small bottom, on the west side of the Clearwater [According to a recent Nez Perce informant, the name refers to being bunched up together like snakes in a ball (Schwede 1966:No. 61)].

51. *Te-sy'yak-poo*. The name designated the white rocks that rise at this point. This was a large village on the east side of the Clearwater. It was the village of "Billy", the maker of the map [A similar translation is that the name refers to "rocks sticking out" (Paul 1987:No. 72). This site may possibly have an association with the Nez Perce word for skunk; if this is the same place, it was also an important fishing site (Schwede 1966:No. 52; Shawley 1984:No. 185)].

Group 11

This group was known by the name *Tsy-was-'poo*. All of its villages were on the South Fork of the Clearwater River except No. 52, which lay on the main stream a little east of where the river forks. This appears to have been the leading group not only of the *Nak-ki'-ma* division, but of the entire tribe. The positions of the villages had certain strategic advantages. They commanded the approaches from the east and the south—the two points from which incursive enemies came. Moreover, they also commanded direct access to Camas Prairie, an important upland stretch well known to surrounding tribes, and which was a meeting ground for trade. It was the custom for all the villages on the Clearwater to camp on this prairie in the month of May and there dig camas roots, near where the town of Grangeville, Idaho, now stands. A kind of market was also held at this place. The Spokanes brought bear, beaver, mink, and martin [marten] skins from the Columbia River mountains; the Umatillas, woven bags and, later, horses; the Walla Walla, embroidered bags, called *ka-kah-pah*; the Palouse, salmon and, later, horses; the Flatheads, buffalo robes; while the Nez Perce traded camas and deer and elk skins. A later market was held in early summer (June) on an upland lying east of Group 10, now called Weippe Prairie. Here belated exchanges were finally made. The people of Group 11 were in frequent conflict with the Snakes on the south and the Blackfeet on the east, and stood as a barrier or guard to the groups lower down the Clearwater, and even to those west of Craig Mountain. It is said that they always met danger with this cry: "Although I die, although I die, it is good! It is not a common death!" The "leader" was No. 53 and 54. They were spoken of as "brothers." The two were really one village; they could not intermarry, as they were one band. Only this "leader" could give permission to enter the buffalo country or hunt in the mountains to the east or south. They also controlled war excursions. Not only were they "leader" in this group, but their voice was potent in the councils of Group 10 and of all the *Nak-ki'-ma* people. As the Indians said: "Their words were heard and respected by the *Pu-nin'-moo* and all the intermediate groups." In fact, this seems to have been the controlling group of the entire tribe. When Lewis and Clark entered the Nez Perce Country they first met the people of Group 10, but their presence was at once made known to Group 11, and their peaceful passage down the Clearwater to the Snake [River] was made possible by the willingness of this group to allow them to go unmolested. It was because of the influence of this powerful group that these explorers were not

directly attacked by the warriors of the *Pu-nin'-moo*. Speaking Eagle, the leader of the party that went to St Louis in 1832 [1831], came from a village of Group 10, but all of his companions were from villages in this group. When, in 1834, Dr. Whitman and Mr. Spalding crossed the Rocky Mountains, they were met far to the southward by a delegation sent by the leading villages of this group, and were safely escorted by it through the Nez Perce Country. All the villages of this group except Nos. 64, 65, and 77 were included in the reservation established by the Treaty of 1863. This group comprised villages 52, 53, 54, 55, 56, 57, 58, 64, 65, and 77. The "leadership" was with the twin villages 53 and 54.

52. *Ah-kakh-tse'ween*. From *Ah-kakh*, (magpie) and *tse'-ween*, promontory. This was a populous village on the east side of the Clearwater River, not far from the mouth of the South Fork. Many depressions marking the sites of the long houses were perceptible at the time this map was drawn. [Alice Fletcher was photographed standing in house pits at this site (Sappington and Carley 1995:Fig. 3). The name and general location of this site has been well documented by more recent ethnographic information but there are conflicting interpretations about the meaning of the name. Schwede provided the most comparable match stating that it referred to magpie point (Schwede 1966:No. 44). However, Shawley associated the name with a rock formation on the hill resembling a "Buffalo hat" and placed the village nearby (Shawley 1984:No. 2) while Paul assigned the location to the ridge and translated the name to an association with "buffalo hump" based on a narrows in the river (Paul 1987:No. 210). Extensive archaeological testing here in the 1980s confirmed the presence of prehistoric and protohistoric housepits at this site (10-IH-1395) and dating indicates that it was occupied from ca. 2500 BP into the historic period (Sappington and Carley 1987)].

53. *Took-poo'-e-ma*. This village took its name from the South Fork of the Clearwater, *Took-coo-pa*, from *took-coop*, straight, as the river here runs directly south for quite a distance. The village was near the point where the South Fork empties into the Clearwater River itself. This was one of the twin "leader" villages of Group 11 [The location of this band and village has been confirmed by other accounts (Schwede 1966:No. 14; Shawley 1984:No. 193; Paul 1987:Nos. 62, 63). Another interpretation for the name of the South Fork is that it refers to "where something has been burned" (Shawley 1984:No. 193). Limited archaeological testing suggests that the site (10-IH-1310) has been disturbed and possibly destroyed by the operation of a log mill (Sappington and Carley 1983:8-14). The town of Kooskia is located here today].

54. *Pe'toe-e-no*. This was the "brother" village to No. 53, and shared with it in leadership, the twin villages being one band. Their commands were obeyed throughout the entire tribe. *Pe'toe-e-no* was on the bottomland on the west side of the South Fork not far from the mouth of *Pe'tat* canyon (now called Cottonwood canyon). On the map, Nos. 53 and 54 should have been placed a little nearer together, and closer to the South Fork branch of the Clearwater [The meaning of this name remains uncertain (Paul 1987:No. 308). Schwede placed several villages in this vicinity but she did not attribute any of them to Fletcher (1966:26). The town of Stites is located in this vicinity today].

55. *Pe-tat-e-you-wah-we*. *Pe-tat*, the name of Cottonwood canyon; *e-you-wah-we*, mouth. This was a small village at the mouth of this canyon where it opens into the South Fork. It was not far from No. 54 [The location of this village was confirmed by information from Curtis, Chalfant, and Nez Perce informants (Schwede 1966:No. 8; Shawley 1984:No. 115; Paul 1987:No. 58). The name appears to be a reference to cottonwood (Shawley 1984:No. 115)].

56. *La-we-kas'-po. We-kas*, a cache. Near the site of this village was a cave [near a place in the river] where fish could be easily caught, and where they could be stored for a time without spoiling. The soil was favorable for the building of caches, and there were many at this place. There was quite a large village here on the east side of the South Fork. The people subsisted mainly on fish [The location of this village was confirmed by Nez Perce informants (Schwede 1966:No. 15; Paul 1987:No. 218). Another interpretation of this name is that it refers to a basalt shelf in the river which was a major fording place in low water (Shawley 1984:No. 71). The site is now covered by the community of East Kooskia].

57. *Kee-kits-see-'weesph-poo. Kits-see-we*, crooked. At this place grew many trees which were queerly twisted and very crooked. It is said that these trees grew from the twigs which were used by mystery men [*tewats*] when, after the sweat-bath, they thrust the twigs down their throats. After using them in this manner they planted them, and they grew into gnarled and crooked trees. The village here was a large one. After the agents of the fur companies had penetrated into this region, "King George" made one of the hunters of this village a "chief", and authorized him to "give new wives" [This village was probably located at the mouth of Rabbit Creek on the east side of the South Fork of the Clearwater (Schwede 1966:No. 6; Paul 1987:No. 309 in text, but omitted from his map)].

58. *Took-pa'-ma*. This was a large village. Where it lay, the [South Fork of the Clearwater] river ran straight, without bends. It took its name from *took-coopa*, straight [Other sources place additional sites along the South Fork but none correspond with this name and Fletcher's description is too vague to correlate with contemporary geography].

64. *Lum-ta'ma-po. Lum-ti*, the end. This was the furthest village up the Salmon River, and was at the mouth of Whitebird Creek, *Sa-ma-ta*. The people of this village refused to enter into the treaties of 1855 and 1863. They joined with Chief Joseph in the war of 1877 [A Nez Perce band was associated with Whitebird Creek (Shawley 1984:No. 69; Paul 1987:No. 5) and their village is well known based on its role in the war of 1877 (McDermott 1978; Wilfong 1990). Another interpretation of the name of this site is that it referred to being permanently dissatisfied (Schwede 1966:No. 254). This site is now owned by the National Park Service and administered as Site 13 of Nez Perce National Historical Park].

65. *Nee-pa'-ha-ma*. From *nee-pa*, a cave. This village stood on the stream *Te-pah-he* [Rock Creek] where it entered the Salmon River. The stream is said to take its rise in a cave where there is ice nearly all the year round, and the village took its name from the cave [Several ice caves have been reported at the head of Rock Creek in the breaks just below Tolo Lake. Confirmation of this village has been provided by several Nez Perce informants. Another interpretation of the name is that it refers to the term of address used by an older sister for her younger brother (Schwede 1966:No. 252; Paul 1987:No. 14). Archaeological investigations were conducted at several sites along lower Rock Creek in the 1960s, including Weis Rockshelter (10-IH-66) and the Cooper's Ferry site (10-IH-73) at the mouth of the creek which may correspond to *Nee-pa'-ha-ma*; prehistoric occupation in this areas dates from ca. 10,000 BP into the late prehistoric period (Butler 1962)].

77. *Hoo-koo*. The word means, at the foot of the mountain. After this village was deserted the site became a favorite stopping place for hunters and travelers, and received the name *Pa-yak-'sa-wit*, tent, because of a close grove of trees that grew there. Their branches were so closely interwoven that they afforded a shelter from the storm as effective as a tent. A portion of this grove remained in 1891, and formed the picturesque entrance to the town of Mt. Idaho,

which occupied the place where the ancient village, *Hoo-koo*, stood [Other interpretations of *Pa-yak-'sa-wit* stated that this name referred to a raw hide house or a buffalo hide tipi (Schwede 1966:No. 2; Shawley 1984:No. 117; Paul 1987:No. 16)].

Group 12

The name of this group was *Sal-wah'-poo*, meaning the people of the *Sal-wah*, as the Middle Fork of the Clearwater was called [According to contemporary geography, the segment designated the Middle Fork begins at the confluence of the Lochsa and Selway rivers at Lowell, Idaho and extends to the mouth of the South Fork at Kooskia where the two forks form the main Clearwater. Most early accounts did not distinguish between the Middle Fork and the Selway]. Whatever may have been the power and position of this group, it had lost its prestige before the beginning of the 19th century. Only one village survived at that time. The sites of the villages of this group are spoken of as the oldest villages of the tribe. It comprised Nos. 59, 60, 61, 62, [and] 63. It is not known which was the "leader" village. The one village that survived until the beginning of the last century took its commands from the "leader" of Group 11 (Nos. 53 and 54). The lines of the reservation established by the Treaty of 1863 did not include the sites of villages 61, 62, and 63; the others were deserted by the middle of the last century.

59. *Tuk-ae-tack'poo*. In the vicinity of the small village at this point were found many stones suitable for use as the pounding stones of the bottom of the baskets in which the Indians pulverized the camas into flour. This site was said to be a good place to throw nets [Fletcher did not provide a translation for the name of this village and Paul said the meaning was unknown (Paul 1987:No. 310). However, two interpretations have been provided: this name referred to something going uphill which probably indicated that there was a trail here (Schwede 1966:No. 16) or it referred to "anyplace where you come out of a fording place" (Shawley 1984:No. 209). This site (10-IH-1009) was tested in the early 1990s as part of the development of a picnic area by the Clearwater National Forest; the occupation was radiocarbon dated from ca. 4000 BP to the historic period. In support of the description by *Kew-kew'-lu-yah*, net weights were among the artifacts recovered (Sappington 1994)].

60. *Kam'-nak-ka*. The name is derived from *kam-ma*, which furnished the fiber out of which fish nets were made [this is the same plant, Indian hemp, for which Kamiah was named]. A large village was once at this place. [Other sources provide similar data (Schwede 1966:No. 17; Shawley 1984:No. 59; Paul 1987:No. 153). Looking Glass' village was located here in 1877 (Wilfong 1990:121). The site (10-IH-820) is now part of Kooskia National Fish Hatchery. Recent archaeological investigations indicate that it dates from ca. 4500 years BP into the historic period (Sappington and others 1997)].

61. *Sits-ah'-lu-poo*. The word denotes a stony place. Here was the only surviving village of this group at the beginning of the 19th century [Despite providing different names, the meaning of this name was tentatively confirmed by Nez Perce informants. However, their understanding of the location of this site makes it seem questionable. Schwede correlated this village to a camp with a different name (Schwede 1966:No. 25) while Paul placed it on the Selway River in his text but omitted it from his map (Paul 1987:No. 312)].

62. *Sotes'poo*. The word means, a bend in the river. This village disappeared before the beginning of the last century, and the sites of the long houses are now covered with forest trees [This name was reported to be based on *so'c*, which is Salish (Schwede 1966:No. 20)].

63. *Ne'hu-lat-poe*. This is said to be the oldest village site known to the Nez Perce. It lies near a pass through the Bitterroot Mountains, more than sixty miles up the Middle Fork of the Clearwater River [actually the Selway River], and about seventy miles from the "buffalo country." There is a tradition that from this village all the villages of the tribe came. At the present time the site is covered by forest trees, and here grow some of the largest of the trees known in this region. There is no tradition by which to fix the time of its occupation or desertion [Kew-kew'-lu-yah's map clearly places this site on the Selway River. Traditional Nez Perce trails followed a braided system and there were alternate routes for the main route over the Bitterroots (Shawley 1984; Broncheau-McFarland 1992). Based on Chalfant, Schwede erroneously placed this site about a mile above the mouth of Brushy Fork on the Lochsa near Lolo Pass (Schwede 1966:No. 37) but this location is well north of the site indicated by Kew-kew'-lu-yah. Examination of his map indicated that this village was located at Bear Creek. Recent investigations by Nez Perce National Forest archaeologists have resulted in the discovery of a site here with a radiocarbon assay of ca. 3000 BP].

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Endnotes

¹ The General Allotment (also known as the Dawes Act and the Severalty Act) of 1887 was intended by Congress to assimilate American Indians into mainstream American society. It was designed to break up the tradition of tribally held land on reservations and to transform individual Native Americans into land-owning farmers and ranchers. Each head of a family was to receive one-quarter section (160 acres), each single person over eighteen as well as each orphan was to receive one-eighth section (80 acres), and all other single persons under eighteen born prior to an allotment order were to be assigned one-sixteenth section (40 acres). Individuals were allowed to select their holdings and the process took four long seasons for Fletcher to complete. The act benefited Euroamerican settlers by allowing them to purchase all unallotted lands with the proceeds intended to be used for the education and advancement of each tribe as determined by the government. Prior to the Allotment Act, the Nez Perce Reservation included over 750,000

acres; after approximately 2000 allotments were made to members of 250 families, the remaining 542,000 acres was declared surplus and opened for settlement in 1895.

² James Stuart was employed by Fletcher in June 1889 for a salary of sixty dollars per month. Needing a "competent and trusty man who understands both languages" as her driver, she considered James Stuart to be "well educated, having attended the Chimawe School at Salem, Oregon. . . He reads and writes and bears a good reputation as to his character" (Fletcher 1889-92b:5 June 1889). She reports his excellent and loyal service, in spite of having his life threatened for working with her on allotment (Fletcher 1889-92b:26 December 1889). During the second year of allotment, Fletcher requests that Stuart's salary be raised to seventy dollars per month for "the expense of living in the wilderness" and because "he is the only man I know on the reservation with sufficient education, general intelligence and honesty of act and speech to serve in the capacity of interpreter in allotting lands . . ." (Fletcher 1889-92b:4 January 1890). James Stuart was the grandson of Fletcher's informant Nancy Corbett (Fletcher 1889-92c:9). Throughout her 1889 correspondence Stuart is spelled "Stewart." From 1890 through the completion of allotment and in the Allotment Book (Fletcher 1889-92c), it is spelled "Stuart."

³ Frederic Ward Putnam was a major anthropological figure in the late nineteenth century. He was curator of the Peabody Museum at Harvard University from 1875 to 1909 and Peabody Professor of American Archaeology and Ethnology from 1887 to 1909. He was responsible for the education of many early anthropologists and for establishing a number of academic and museum programs in the United States (Willey and Sabloff 1993:48-52).

⁴ Sisters Sue and Kate McBeth were Presbyterian missionaries who worked among the Nez Perce from 1873 to 1915. They provided considerable support for Alice Fletcher and facilitated her allotment and research. "I am lingering here a day longer to get a little more out of Miss McBeth's *ms.* so that I can do more intelligent work among the Indians" (Fletcher 1889-92a:20 August 1890). Kate McBeth also published a history of the Nez Perce (McBeth 1908). After leaving Idaho Fletcher wrote to Kate McBeth for linguistic assistance. Sending a list of 220 names taken from her registry of the tribe and arranged alphabetically, Fletcher asks McBeth for their translation. Fletcher relied on McBeth's expertise of the language and requested answers to a number of questions (Fletcher n.d: Fletcher to McBeth, 9 and 30 January 1895):

. . . I want to get a few facts for each name if possible. I want to get a translation of the name and I would like to know how it is composed . . . I shall be glad to have you correct the spelling if you will, making it agree with your form of spelling the language . . . I notice that a very large number of female names end in "my." Can you explain that! . . . I notice that the syllable "toe" occurs often in female names. Can you explain this. You can write the translations of the name in the vacant line.

Filled lines and two different styles of handwriting suggest that McBeth translated the names and returned the list to Fletcher.

⁵ Francis La Flesche was an Omaha Indian who became a noted anthropologist. He co-authored several articles and books with Alice Fletcher including *The Omaha Tribe* (1911).

⁶ Lewis and Clark arrived in Nez Perce Country in September 1805 and remained among the Nez Perce for two weeks before departing in canoes for the Pacific Ocean. On their return the expedition stayed among the Nez Perce from May to July 1806. The expedition spent more time among the Nez Perce than with any other Plateau tribe and they clearly thought highly of their hosts. The journals of the expedition provided detailed information on many aspects of Nez Perce life as it existed at this time (Sappington 1989).

⁷ The North West Company was established in the Pacific Northwest in 1807 and it controlled the fur trade in this area from 1814 to 1821. In 1818 the North West Company built Ft. Nez Percés near Walla Walla in southeastern Washington to serve as a trading center for the Nez Perce and other Plateau Indians. The North West Company merged with the Hudson's Bay Company in 1821.

⁸ Ft. Colville (correctly spelled Colville in reference to the Hudson's Bay Company) was built at the confluence of the Kettle and Columbia rivers in northeastern Washington by the Hudson's Bay Company in 1825 to serve as its Colville District headquarters. From that date until 1860 Fort Colville was the main supplier of trade goods between the Cascade and Rocky mountains (Chance 1973).

⁹ They actually departed in late summer and arrived in early fall 1831. George Catlin was a noted painter of American Indians in the 1830s and he is discussed by Fletcher below. His book has been reprinted (Catlin 1973).

¹⁰ Speaking Eagle was also known as *Tipyahlanah* and *Kipkip Pahlekin*. He was a warrior about 44 years old who came from the village of the Kamiah leader called *Tunnachemootoolt* by Lewis and Clark in 1806 (Josephy 1965:96).

¹¹ More correctly, *Ka-ou-pu* was the son of a Nez Perce man from the Kooskia/Stites area and of a Flathead woman (Josephy 1965:96).

¹² *He-yonts-to-han* was also known as *Hi-yuts-to-henin*, he was about 20 years old and was related to *Tipyahlahah* (Josephy 1965:96). His portrait was painted by Catlin (Catlin 1973:Plate 207).

¹³ His name has also been spelled *Tawis Geejumnin* and translated as "No Horns on his Head," or "Horns Worn Down Like Those on an Old Buffalo"; he was also about 20 years old (Josephy 1965:96). His portrait was painted by Catlin (Catlin 1973:Plate 208).

¹⁴ The Lolo Trail was the main route from Nez Perce Country to the buffalo country in western Montana (Broncheau-McFarland 1992).

¹⁵ Henry Harmon Spalding, a Protestant missionary, arrived among the Nez Perce in 1836. His mission was on Lapwai Creek in the Clearwater River valley at present day Spalding, Idaho.

¹⁶ Marcus Whitman was a medical doctor and missionary among the Cayuse Indians from 1836 to 1847. His mission was near Walla Walla, Washington.

¹⁷ Nez Perce mission at Lapwai.

¹⁸ There is an error here since Boise was not founded until the early 1860s and it is located in southwestern Idaho well away from Cayuse territory.

¹⁹ Lieutenant Colonel Edward Steptoe was the leader of a U. S. Army expedition from Fort Walla Walla against a confederation of Plateau Indians including members of the Spokane, Yakama, Coeur d'Alene, and Palus tribes. The force was defeated near Rosalia, Washington, in 1856.

²⁰ Isaac I Stevens was the first governor and Indian agent for Washington Territory from 1853 to 1857. In 1857 he became Washington's delegate to Congress and later became a major general for the Union during the Civil War. He was killed at the Battle of Chantilly in northern Virginia in 1862.

²¹ The first treaty with the Plateau Indians was made by Isaac Stevens near Walla Walla, Washington, in 1855.

²² After the discovery of gold on the Nez Perce Reservation in 1860, a second treaty was conducted at Lapwai, Idaho, in 1863. This treaty reduced the 1855 reservation of ca. 7.7 million acres to its present size of ca. 750,000 acres.

²³ There are various spellings of this name. Haruo Aoki (1975) derives the Nez Perce *nimipu* from Numic *nimi* meaning "person, Indian."

²⁴ Numerous references occur in the accounts of early travelers, and in the oral histories of both Nez Perce and Euroamerican settlers in northeastern Oregon, to chronic and longstanding hostilities between the resident Nez Perce and intrusive Numic-speaking peoples from the south. The invaders are variously referred to as "Snakes," Shoshokoes," "Diggers," Shoshones," "Bannocks," and "Pokatellas."

Nez Perce warrior Yellow Wolf, born in the Wallowa Valley in 1855, told his biographer of a maternal great grandfather "killed in battle with the Pokatellas, fighting for possession of Wallowa Valley" (McWhorter 1983:24). In the winter of 1834, Captain Benjamin Bonneville encountered an assembly of at least 100 families of "Diggers" living in "crescent shaped brush windbreaks" near the mouth of Powder River (Irving 1986:224-225). Not long afterward, a burial mound marking the grave of a Nez Perce killed by "Shoshokoes" was pointed out to Bonneville in the Grand Ronde valley (Irving 1986:245-246). The missionary Henry Spalding referred to a "large number of Snakes lurking around to steal" in the mountains above Wallowa Lake in July 1839 (Drury 1958:271). In one entry Spalding attributes two set fires to the Shoshone while in another he records "several horse tracks seen, four snake arrow points found." The Horner manuscript includes several explicit but undated references to conflict between the Nez Percés and "Snakes," "Shoshones," or "Sheepeaters." As secondhand as these accounts may be, they paint a picture compatible with those given by natives and eyewitnesses. Thus, Battle Creek, a first order tributary of the Snake River in Hells Canyon (river mile 242.3), functioned as a base camp for Shoshone raiders until the Nez Perce drove them out (Horner 1940s:23-24). Cemetery Ridge, at the head of Tully Creek where Bonneville exited the Innaha in February 1834, was named after a fight between the Nez Perce and "renegade Snake Indians." The Snakes

were defeated and their bodies were buried beneath cairns on the ridge (Horner 1940s:63). At Corral Creek and at Fence Creek, both tributary to the Imnaha just east of the Chesnimnus country, fights are reported between Nez Perces and Snakes (Horner 1940s:73-74). At Hurricane Creek on the north slope of the Wallowas, "roaming Snakes" wiped out a Nez Perce family fish camp (Horner 1940s:144). The most northerly fight mentioned occurred on the north side of the Grande Ronde River near the mouth of Rattlesnake Creek where a "hard battle" between Nez Perce and Shoshone groups left 17 dead (Horner 1940s:155).

²⁵ By contemporary geography, the Selway River is distinct from the Middle Fork of the Clearwater. The Lochsa and Selway rivers merge at Powell, Idaho, where they form the Middle Fork. The Middle Fork then flows west until it meets the South Fork at Kooskia, Idaho and these streams form the main stem of the Clearwater.

²⁶ The attack on the Nez Perce village at White Bird Creek on 17 June 1877 was a major defeat for the U. S. Army. For more information see McDermott (1978) or Wilfong (1990).

²⁷ More detailed descriptions by Fletcher describing these structures have been published elsewhere (Sappington and Carley 1995).

²⁸ More detailed descriptions by Fletcher describing the whippers has been published elsewhere (Sappington and Carley 1995).

²⁹ The southern boundary of Nez Perce Country defined by the Treaty of 1855 also accords with this interpretation. In Article 1, the 58 Nez Perce signatories claimed land to "the crossing of Snake River, at the mouth of Powder River." In Article 2, they were ceded land "to the crossing of the Snake River fifteen miles below the mouth of the Powder River" (Kappler 1904:702-703). By comparison, Schwede's placement of village Group 1 is much closer to the southern border defined by the "steal" Treaty of 1863.

³⁰ Horner's toponomy for Wallowa County place names says of Imnaha: "In the very early days the Im-na-ma-ha Indians were very nearly wiped out of existence by the Snake Indians as it was territory claimed by both sides—by the Snakes and by Joseph and his father's father. The latter was chief of Bekoonan, a country south of the Salmon River" (Horner 1940s:146). "Bekoonan" corresponds in name, position, and contested situation with Billy's village Group 2 *Pe-ku'nin-moo*.

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AN ECOLOGICAL STUDY OF NEZ PERCE
SETTLEMENT PATTERNS

By
MADGE L. SCHWEDE

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INTRODUCTION

This study is an ecological study of the regional distribution and frequency of Nez Perce settlements, and deals with the period immediately prior to contact with the white man, 1750 to 1805. Nez Perce territory during this period includes most of north central Idaho, northeastern Oregon and southeastern Washington. (Nez Perce territory and the included settlements are shown in Fig. 1.) The primary concern is to determine what, if any, interrelationships existed between the distribution and to a lesser extent the frequency of Nez Perce settlements and the biophysical environment on which the Nez Perce were dependent before European contact. As used in this thesis, distribution of settlements is taken to mean the location of Nez Perce settlements in given regions. Frequency, on the other hand, is taken to mean the number of settlements found in a given region. Only minor emphasis in this study is placed on the cultural environment, and it will be considered only where it acts as a limiting factor on the influence of the biophysical environment.

Settlements to be studied in this report are villages and camps. Following Walker (n.d.a) a village, téw?yeni.kes, is defined as the smallest group of people that live on a seasonal basis in a given named geographical area they are thought to own. Ownership in this instance consisted of a vested interest in the territory, regardless of temporary absence by the village members. A camp, wí.se.s, is defined as the smallest group of people found on a seasonal basis in a given named geographical area, which they are thought to own by use rights only. Ownership in this sense is effective only so long as

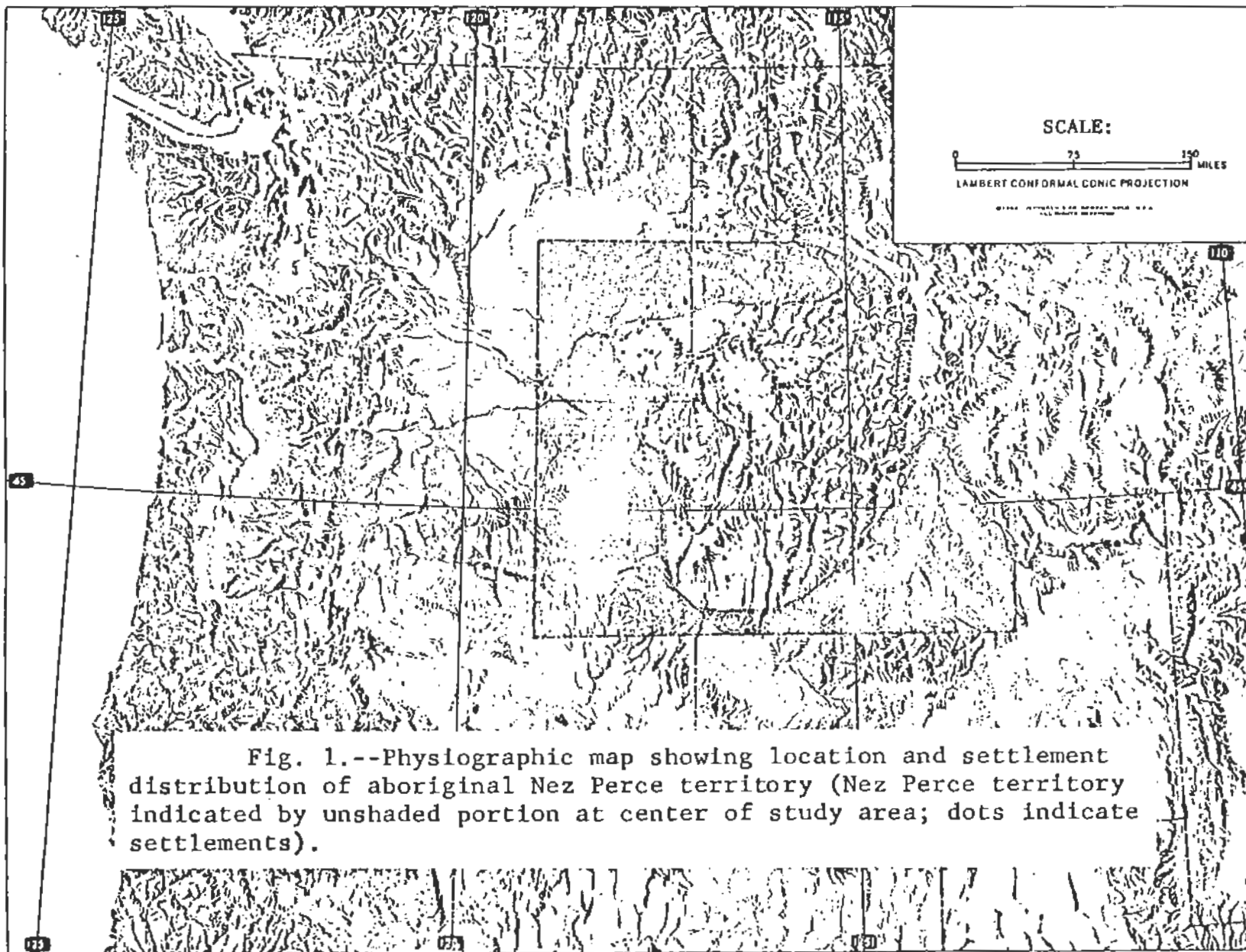


Fig. 1.--Physiographic map showing location and settlement distribution of aboriginal Nez Perce territory (Nez Perce territory indicated by unshaded portion at center of study area; dots indicate settlements).

the camp group remains in a particular area. Thus, the major social distinction between village and camp settlements is one of ownership.

The distribution and frequency of villages and camps seem to have depended on a number of variables in the biophysical environment. Among these variables are the availability of fish, roots, game, and spring water. A principal assumption of this study is that most, and perhaps all, of these factors influence the distribution and frequency of Nez Perce village and camp settlements. The influence of these factors, however, must be examined in a semi-independent manner for mechanical reasons and limitations inherent in the data available at this time. The working hypotheses in this study, therefore, are stated separately for each of the biophysical environmental features considered. It should be emphasized that this grouping does not imply that all factors equally influence the distribution and frequency of both types of settlements.

The study of ecology has been of concern to scientists in the fields of both the biological and social sciences since the latter half of the nineteenth century. Anthropological interest in ecology, however, did not emerge until the first half of the twentieth century. Anthropologists were interested primarily in the relationship between culture and environment, and their studies were directed toward making general statements about the interrelationships between particular environments and their respective cultures, e.g., Forde (1934), Kroeber (1939), and Steward (1938). The concepts developed in such studies are Culture Area, Environmental Determinism, and Cultural Ecology relative to evolutionary theories.

In the last ten years, students of cultural ecology have broadened their interests and approaches. For example, R. W. Dunning (1959), David Aberle (1961), and M. D. Sahlins (1958) have studied changes in social

organization relative to variations in technological and environmental conditions. Another approach has been to describe an environment as the indigenous people themselves see it, e.g., Brookfield (1964), Frake (1962), and Conklin (1961). Archaeologists also have been interested in ecology as a basis for interpreting their data, e.g., Meighan et al. (1958) and Butzer (1964), as have physical anthropologists attempting to interpret ecologically the relationship of protohominid environment to protohominid evolution. Physical anthropologists also have used ecological approaches in their studies of human genetics, nutrition and disease, e.g., Bartholomeu and Birdsell (1956), Howell and Bourlière (1963), and Baker et al. (1962). Despite the value of the broad approach characterizing most of the foregoing studies, this thesis will concentrate on a deliberately limited set of cultural and biophysical interrelationships, i.e., the way Nez Perce settlements were patterned aboriginally according to various biophysical features. This relatively intensive focus avoids some problems that have plagued more generalized studies in the past, some of which have been so general that their conclusions often amount to little more than truisms. Further, the hypotheses and conclusions in this thesis can be tested independently, whereas many past ecological hypotheses and conclusions cannot.

THE DATA

Data used to test hypotheses suggested in this study come from three major sources: (1) published and unpublished ethnographic documents; (2) archaeological survey evidence; and (3) ethnographic field research.

Published Ethnographies

Six studies dealing with locations, settlement patterns, and food resource areas of the Nez Perces have been used in this study. The Lewis and Clark Journals (Thwaites 1959) provide the first recorded knowledge of the Nez Perces, and the daily diaries kept by members of the Lewis and Clark party contain invaluable information on Nez Perce culture. Villages and camps passed by the group or visited on travels down and back up the Clearwater and Snake Rivers in 1805 and 1806 are described, and crude maps accompany the report. In the late nineteenth century Alice C. Fletcher (n.d.), an assistant in ethnography at the Peabody Museum, conducted one of the first ethnographic studies of the Nez Perces as part of which she prepared a map with an accompanying summary of village and camp names and locations. This was followed by two ethnographical studies in the early twentieth century by Herbert J. Spinden (1908) and Edward S. Curtis (1911). Both studies include a listing of village names and locations. In addition to these earlier studies, three studies completed in the last decade provide useful information. Two of these, by Stuart A. Chalfant (n.d.) and Verne F. Ray (1962), are reports of the Indian Claims Commission on Nez Perce aboriginal territory; both contain maps of village and camp settlements with major hunting and gathering territories delineated. Data comprising the third study consist of field notes by

Deward E. Walker, Jr. Walker's notes contain data on village and camp locations, names, and areas of subsistence (n.d.b).

Separate village and camp lists were made for each of the six studies; these lists contain such information as location, name, and other relevant information. All six lists then were analyzed comparatively and integrated into a master list which contains 295 village and camp settlements.

Archaeological Survey Evidence

Four archaeological surveys have been used as checks on the master list of villages and camps compiled from ethnographic sources. In some instances, especially for those settlement locations whose descriptions were incomplete or unknown, the archaeological reports have been used to infer probable locations for villages known to have existed from ethnographic descriptions. These archaeological reports include the following: (1) a survey of the Lower Monumental and Little Goose Dam Reservoirs on the lower Snake River, an area extending from Crampton, Washington to three miles above Riparia, Washington (Nelson 1965); (2) a survey of the Asotin Reservoir on the Snake River, an area extending from Asotin, Washington to China Gardens on the Snake (Rice and Nelson n.d.); (3) a survey of the Mountain Sheep and Pleasant Valley Reservoirs on the upper Snake River, an area on the Snake River extending from about 1 mile below the mouth of the Imnaha River up to the mouth of Sheep Creek (Coale 1956); and (4) a survey report on Bruces Eddy Reservoir located on the North Fork of the Clearwater River (Osmundson and Hulse 1962).

The most useful survey of this group has been the Asotin Reservoir survey which allowed not only a check against the master list for those village and camp settlements between Asotin, Washington and the mouth of the Grande Ronde River, but assisted in locating village settlements between the mouths of the Grande Ronde and Salmon Rivers for which Fletcher's location description

proved ambiguous. After the master list was completed and the data obtained from the published ethnographies and archaeological surveys were integrated, a map and list of the settlements were then taken to the field for a final check by Nez Perce informants.

Ethnographic Field Research

Ethnographic field research was conducted over a three week period extending from November 29 to December 14, 1965. Research, under the direction of Deward E. Walker, Jr., was done through the aid of four Nez Perce informants; Mrs. Elizabeth Wilson, Mr. Sam Waters, Mr. Sam Slickpoo, and Mr. James Miles. The informants were seventy years or older, and each had intensive knowledge of a specific part of aboriginal Nez Perce territory. One to two days were spent with each informant, travelling by car through areas that the informant knew best. Concurrent checks were made with the information already compiled on the master list and map. Notes were taken, referring locations to mileage and to distinctive geological features, as a further means of checking the informant-map correspondence. The specific areas covered with each informant are as follows: Mrs. Wilson--the areas of Kamiah, Idaho, and the South and Middle Forks of the Clearwater River down to Jim Ford Creek on the Clearwater; Mr. Sam Waters--the areas drained by Orofino Creek, Lapwai Creek, Potlatch Creek, and the lower Clearwater River; Mr. Sam Slickpoo--the area of Clarkston, Washington and Lewiston, Idaho; and Mr. James Miles--the area drained by the Snake River from Lewiston up to the mouth of the Grande Ronde River, the Wallowa River Valley, and especially the area between Enterprise, Oregon and Minam, Oregon. Some cross checking between informants was possible and additional reliability was obtained in this manner.

Not all of Nez Perce aboriginal territory was covered in the field investigation. This primarily is due to the inaccessibility of a few regions

along the lower and upper Snake River, upper Grande Ronde River, Salmon River, and Imnaha River. These can be traveled only by boat. Knowledge obtained from the investigation, however, cleared up many inconsistencies in the earlier ethnographic documents concerning such matters as settlement locations, types and names. The investigation also added many new settlements to the collection, and it is estimated that approximately 90% of the aboriginal villages and 75% of the aboriginal camps are included in this listing.

ANALYSIS OF DATA

There are 295 settlements used in the following analysis, 132 of them villages and 137 camps. The remaining 26 settlements most probably are camps but their classification remains undetermined at the present time. A card file was established for ease of organization and placement of these settlements on the base map (Fig. 3, Appendix B). The numbering system employed is as follows: (1) settlements are numbered successively from the first settlement on the South Fork of the Clearwater River (including all settlements on the Clearwater, its outlying tributaries and area included within the tributaries) down to the mouth of the Clearwater; (2) from the confluence of the Snake with the Clearwater (including its tributaries and area encompassed by it) to the mouth of the Snake; and (3) up the Snake River, from the confluence of the Snake and Clearwater to Payette, Idaho. A listing of these settlements by name and number is included in Appendix B with each settlement located in terms of section, township, range, and quadrangle; U.S. Geological Survey and Corps of Engineer maps were used for this purpose (Table 7, Appendix C).

The hypotheses to be tested are as follows:

1. Village settlements tend to be established at lower elevations, whereas camp settlements tend to be established at higher elevations.
2. Village and camp settlements tend to be established near springs.
3. Village and camp settlements tend to be established at or near the mouths of streams.
4. Villages tend to be established at the confluences of large and middle-sized streams, whereas camps tend to be established at the confluences of large and small-sized streams.

5. The frequency of village and camp settlements in a given region is positively correlated with the number and type of food resources in that region.

In testing the first hypothesis, that a relationship exists between elevation and the location of villages and camps, the elevation given for each settlement is an average of the elevations of the two contour intervals between which the settlement is located. Elevations have been obtained for 114 villages and 134 camps or 84% of all known settlements. The remaining 16% could not be located or could not be classified as to type of settlement. The elevation encompassed by Nez Perce territory ranges from 300 feet, the lowest point, to about 10,000 feet, the highest point. In Table 1 it may be seen that of the 114 villages, over half (64%) are below 1,001 feet, 98% are below 2,501 feet, and all are located below 4,001 feet. Of the camps for which elevation has been determined less than one-third (30%) are below 1,001 feet, less than one-half (46%) are below 2,501 feet, and the majority (54%) are located between 2,501 and 6,500 feet. Thus, village settlements are found at relatively lower elevations, while most camps occur at relatively higher elevations.

The second hypothesis, which deals with the relationship between settlements and springs, cannot be tested because of insufficient data. The data available to evaluate this hypothesis are based primarily on information obtained from the informants and secondarily from ethnographies. Although all informants stated that aboriginally settlements were regularly in association with springs, only 25 out of the 295 settlements actually have been pointed out as being near such water sources. This number is too small to be used in testing the hypothesis. On the other hand, adequate information is available to test the third hypothesis, which deals with the relationship between settlements and stream mouths. A settlement is regarded as associated with a stream mouth if it is within 1 mile of the point where the particular tributary in

TABLE 1

RELATIONSHIP BETWEEN VILLAGE AND
CAMP SETTLEMENTS AND ELEVATION^a

Elevation	Villages		Camps	
	No.	%	No.	%
0-500	4	3	1	1
501-1000	70	61	10	7
1001-1500	33	29	30	22
1501-2000	4	3	14	10
2001-2500	2	2	8	6
2501-3000	0	0	20	15
3001-3500	0	0	22	16
3501-4000	1	1	6	4
4001-4500	0	0	8	6
4501-5000	0	0	5	4
5001-5500	0	0	5	4
5501-6000	0	0	2	1
6001-6500	0	0	3	2

^aTotal settlements used in this hypothesis were 114 villages and 134 camps.

question flows into its larger master stream. There are 127 villages and camps considered comprising 43% of all Nez Perce settlements. Only 38% of Nez Perce territory is used in testing this hypothesis, an area consisting of that drained by the Clearwater River and its tributaries (Fig. 2., Appendix C). Within the Clearwater drainage, 67% of the villages and 59% of the camps are located within a mile radius of a stream mouth (Table 2). It can be concluded, therefore, that the majority of Nez Perce settlements are within 1 mile of a stream mouth.

TABLE 2

RELATIONSHIP BETWEEN VILLAGE AND CAMP
LOCATIONS AND STREAM MOUTHS^a

Settlements	Mouth		No Mouth	
	No.	%	No.	%
Villages	42	67	21	33
Camps	38	59	26	41

^aTotal settlements used in this hypothesis were 63 villages and 64 camps.

Because of time limitations, the same geographical area is used in testing the fourth hypothesis, i.e., that there is a positive relationship between village and camp locations on the one hand, and the size of the master stream at confluent rivers, on the other. Similarly, only 34% of all Nez Perce settlements have been used in this test. Testing has been accomplished by ordering the streams 1 through 8, giving the smallest a value of 1 and the largest a value of 8. The method of ordering streams according to size is adapted from Horton (1945). Table 3 shows that the majority of villages, 61%, are found within a mile radius of 7th order streams, 30% near 3rd to 5th order streams, and 8% near 8th order streams. The majority of camps, 62% also are found near 7th order streams, while 38% are near 2nd to 6th order streams.

The final hypothesis deals with the frequency of settlements in a given region relative to its total number of available resources, in this instance fish, game, and roots. For this hypothesis 72% of Nez Perce territory has been used. This area includes all that portion that lies in Idaho, and the eastern edge of Washington and Oregon (Fig. 2). For the purposes of analysis, this area has been divided into 840 squares measuring 6 miles on a side (and thus equivalent in area to a township). The area then was lettered

TABLE 3

RELATIONSHIP BETWEEN VILLAGE AND CAMP
LOCATIONS AND SIZE OF MASTER STREAM
OF RIVER CONFLUENCES^a

River Size ^b	Villages		Camps	
	No.	%	No.	%
1	0	0	0	0
2	0	0	1	3
3	3	6	3	7
4	4	8	2	5
5	8	16	8	20
6	0	0	1	3
7	30	61	25	62
8	4	8	0	0

^aTotal settlements used in this hypothesis were 49 villages and 40 camps.

^bThe method of ordering streams according to size was adapted from Horton (1945).

from the north corner, going west from A through X, and numbered southward from 1 through 35. The results are as follows: 668 of these squares contain neither ethnographically reported examples of exploitation of roots, game or fish nor known settlements; 90 contain food resources, but no known settlements; and 20 contain settlements but no known food resources in the immediate vicinity. The hypothesis has been tested for the 62 squares remaining, which contain both resources and settlements (Table 8, Appendix C).

First, the squares containing settlements are separated into two groups, one of villages and one of camps. The two then are subdivided further into three groups depending on the number and type of resources contained in each square. Thus it is possible to determine the average number of settle-

ments per square according to the number as well as kinds of resources included in each square. Data resulting from this compilation indicate that the greatest number of villages (98%) are in those squares that contain one or two food resources (Table 4). These are primarily fish or roots, or both (Tables 5 and 6). Likewise Table 4 shows that the majority of camps (56%) are in those squares containing one food resource, and to a lesser extent in those squares with two or three resources. Table 6 indicates that fish and roots are more often associated with villages, whereas game and fish are more often associated with camps. Tables 5 and 6 indicate that settlements are most frequently associated with fish, then roots, and then game in order of declining importance. The foregoing findings regarding multiple food resources indicate that the number of food resources exerts only limited influence on the establishment of villages and camps. The final column in Table 4 shows that only 13% of those squares considered contained all three resources. Likewise only 17 of the 146 settlements considered in this comparison are found in squares with three resources. Finally, it is apparent that factors other than the availability of food resources influenced the establishment of settlements, since 20 squares, containing 14 camps and 7 villages, contained no known food resources. There is little doubt, however, that the availability of food resources influenced the establishment of villages since 146 of the 167 settlements considered are found in squares having food resources immediately available.

All hypotheses tested except the one considering the availability of springs tend to show a positive relationship between the biophysical features of the environment and the distribution and frequency of Nez Perce settlements.

It has been established that the majority of villages are located at lower elevations than are camps. This probably is due to the fact that the

TABLE 4

RELATIONSHIP OF TOTAL NUMBER OF RESOURCES PER ARBITRARY UNIT
OF AREA TO FREQUENCY OF VILLAGE AND CAMP SETTLEMENTS^a

Number of Food Resources Available	Villages		Camps		Squares Containing Settlements	
	No.	%	No.	%	No.	%
1	36	47	39	56	40	64
2	39	51	15	21	14	23
3	1	1	16	23	8	13

^aTotal settlements used in this hypothesis were 76 villages and 70 camps.

TABLE 5

PERCENTAGE OF ONE FOOD RESOURCE FOUND IN SQUARES
CONTAINING VILLAGE AND CAMP SETTLEMENTS

Settlements	Roots		Game		Fish	
	No.	%	No.	%	No.	%
Squares with Villages	3	21.4	0	0	11	78.6
Squares with Camps	11	35	4	13	16	52

TABLE 6

PERCENTAGE OF TWO FOOD RESOURCES FOUND IN SQUARES
CONTAINING VILLAGE AND CAMP SETTLEMENTS

Settlements	Roots/Game		Game/Fish		Fish/Roots	
	No.	%	No.	%	No.	%
Squares with Villages	1	10	2	20	7	70
Squares with Camps	0	0	5	55.6	4	44.4

canyon valleys offered the aboriginal Nez Perces more protection against the cold winters characteristic of the higher plateaus and mountainous regions where they foraged for food during the summers. Most villages are established at the mouths of streams, and particularly where streams of intermediate size join their master streams. Camps usually are established near small streams located in mountainous regions at the heads of the larger tributaries. Verification of the last hypothesis indicates the importance of food resources to the frequency and distribution of village and camp settlements.

CONCLUSIONS

The foregoing ecological study of Nez Perce settlement patterns differs from past ecological studies conducted by anthropologists, in that it examines the relationship between specified variables in the biophysical environment and the frequency and distribution of Nez Perce settlements. It has indicated partial answers to the question of why the Nez Perces settled where they did.

It is hoped that this study will provide: (1) an approach and method for more lengthy ecological studies considering more variables or the same ones in a comparative manner, and (2) a base for further, more complete studies of Nez Perce culture. Such studies might include investigations of the relationships between additional aspects of the biophysical environment such as precipitation, wind, and temperature and Nez Perce settlements. This thesis also will serve as a base for further study into aboriginal Nez Perce social organization. Finally, Appendix B, which presents a description and location of most Nez Perce settlements, will be helpful not only in giving archaeologists a chance to test the accuracy of locations reported for these sites, but also in assisting attempts to predict the location of unknown or unrecorded sites in Nez Perce and adjacent plateau areas.

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APPENDIX A

MAPS USED IN THESIS

TABLE 7
MAPS USED IN THESIS^a

Series	Name and Index	Date	Scale	Contour Interval in Feet
1. *U.S. Geological Survey	Walla Walla, NL 11-4	1953, rev. 1963	1:250,000	200
2. *	Pullman, NL 11-5	1955, rev. 1963		
3. *	Hamilton, NL 11-6	1964, N.S.		
4. *	Pendleton, NL 11-7	1953, rev. 1964		
5. *	Grangeville, NL 11-8	1955, rev. 1963		
6. *	Elk City, NL 11-9	1956, rev. 1963		
7. *	Baker, NL 11-11	1955, rev. 1963		
8. *	Challis, NL 11-12	1957, rev. 1963		
9. *	Washington-Idaho, Clarkston Quadrangle	1948	1:62,500	50
10. *	Washington-Idaho, Pullman Quadrangle	1910		
11. *	Plan and Profile of Clearwater River and Tributaries, Idaho, Sheets A-G	1926	1:31,680	20
12. *	Plan and Profile of Snake River and Tributaries, Lewiston, Idaho, to Huntington, Oregon, Sheets A-H	1923		
13.	Oregon Base Map	1955	1:500,000	-
14.	Idaho Base Map	1928		-
15.	Washington Base Map	1962		-
16. Jepson Work Map Relief Series	Oregon Country	n.d.	-	-
17. *U.S. Corp of Engineers	Grande Ronde River, Sheets 1-4	1956	1:24,000	20
18. *	Salmon River, Sheets 1-4	n.d.		50
19. *	Little Goose Reservoir Area	Sept.-Oct. 1957	1:6,000	-

^aTable 7 presents those maps used in this thesis. The first column denotes the manufacturer of the map; the second, the name and index of the map; the third, the date of map completion; the fourth, the map scale; and the fifth, the contour interval of each map. Reference to these maps will be made in terms of the number on the left in Appendix B. The asterisk denotes those maps used for plotting the location of each settlement.

APPENDIX B

DESCRIPTIONS AND LOCATIONS OF VILLAGE
AND CAMP SETTLEMENTS

Introduction

This appendix contains a list of the 295 Nez Perce settlements for which information was obtained. The numbers assigned to the settlements correspond to those assigned to the settlements as they appear on the base map, Fig. 3 (inside back cover). The settlement information as summarized here includes: name, translation and significance, location, type of settlement; and sources used. Where information is not complete for a particular settlement it will be indicated by the following notations: a question mark for no name; "unlocatable" for unknown location; and "undetermined" where the type of settlement, camp or village, is unknown. The translations given are figurative rather than literal and are based on data collected by Deward Walker. The maps used for locating the settlements are indicated by numbers corresponding to those given in Table 7. Finally, abbreviations have been used for the principal sources discussed in the Chapter, Gathering of Data. They are as follows: LC--Lewis and Clark; F--Fletcher; S--Spinden; C--Curtis; Ch--Chalfant; R--Ray; DW--Deward Walker; RN--Rice and Nelson; OH--Osmundson and Hulse; GC--George Coale; EW--Elizabeth Wilson; SW--Sam Waters; SS--Sam Slickpoo; and M--James Miles.

The phonemic solution employed in this appendix is that of Aoki (1962). The suffixes -pe, -pa or -p affixed to many settlement names refer to "place" or "place of," whereas the suffixes -pu, -po, -nu, -ma, -mu, or -me refer to "people" or "people of." The suffixes -toyn and -yi.wewi refer to "confluence" and "mouth" respectively. It would have been possible to regularize all settlement names with respect to the "place" and "people" suffixes, but this was deemed unwise. Most informants seemed to prefer only one of these two suffixes, the preferred formed given in this list. It should be noted also that informants failed to use either suffix in some cases. Finally, informants

have stated that some settlement names are of probable Flathead origin, and this is indicated where relevant.

Copies of this appendix and its accompanying base map are being withheld from general circulation and may be found on file in the Washington State University Department of Anthropology.

APPENDIX C

SQUARES CONTAINING FOOD RESOURCES AND SETTLEMENTS

Introduction

Table 8 contains the list of those squares containing both food resources and settlements. The outline map, Figure 2, denotes that area that has been divided into squares for purposes of analysis. The area used for analysis of the hypotheses dealing with the location of settlements near stream mouths and the confluence of streams is also delineated here. A more complete explanation is given in the section of this thesis entitled, Analysis of Data.

The Square Number in the first column refers to those on the outline map, Figure 2. The x in each column under Food Resources denotes the availability of that resource in a particular square. The last two columns present the number of settlements in the squares that contain food resources. The material from this table is used for testing the hypothesis that deals with the frequency of settlements in a given region and the availability of food resources therein.

TABLE 8

SQUARES CONTAINING FOOD RESOURCES
AND SETTLEMENTS

Square Number	Food Resources			Number of Villages Per Square	Number of Camps Per Square
	Roots	Game	Fish		
G-12			x		1
H-10			x		1
I-11		x			1
K-2		x			1
K-12		x	x		1
L-5			x		1
L-10			x		1
L-25		x	x		1
M-10		x			1
M-11		x	x		1
M-28			x		1
N-8	x				1
N-10			x		1
N-11			x		3
O-8	x				1
O-11	x	x	x		6
O-30			x		1
P-8	x				1
P-10			x	5	4
P-11	x		x	6	5
P-12	x	x	x		3
Q-9			x	5	4
Q-10	x			4	1
Q-11	x			1	1
Q-13	x			1	
Q-24		x			1
R-7			x	2	
R-13	x				1
R-24	x	x	x		1
R-25			x		1
S-3	x				1
S-6			x	2	
S-7			x	1	
S-16			x	1	
T-4	x	x	x		1
T-11	x				1
T-13	x	x	x	1	
U-16	x	x		1	
U-31		x	x		1
V-4	x	x	x		3
V-5			x	1	
V-6			x	3	1
V-8	x		x	1	
V-9	x	x	x		1

TABLE 8--Continued

Square Number	Food Resources			Number of Villages Per Square	Number of Camps Per Square
	Roots	Game	Fish		
V-14			x	3	
V-29			x		1
W-4	x				1
W-7	x		x	6	1
W-8	x		x	5	
W-10	x	x	x		1
W-12			x	2	
W-14			x	5	
W-15	x				1
W-22			x		1
X-4	x				1
X-7	x		x	5	
X-9	x		x	3	1
X-10	x		x	2	1
X-11		x	x	7	3
X-12		x	x	3	
X-25			x		1
X-35			x		1

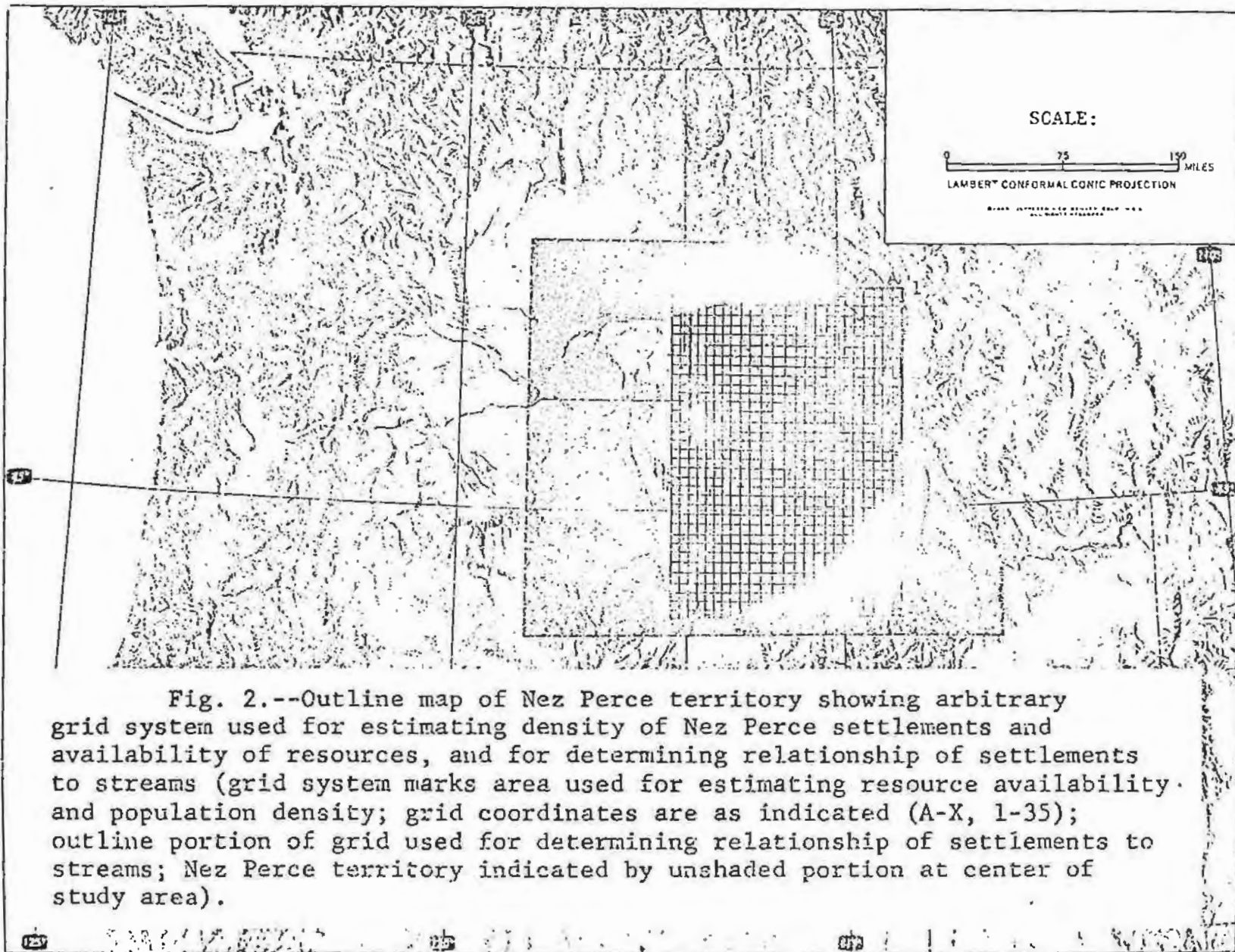


Fig. 2.--Outline map of Nez Perce territory showing arbitrary grid system used for estimating density of Nez Perce settlements and availability of resources, and for determining relationship of settlements to streams (grid system marks area used for estimating resource availability and population density; grid coordinates are as indicated (A-X, 1-35); outline portion of grid used for determining relationship of settlements to streams; Nez Perce territory indicated by unshaded portion at center of study area).

AN ECOLOGICAL STUDY OF NEZ PERCE
SETTLEMENT PATTERNS

ABSTRACT

by Madge L. Schwede, M.A.
Washington State University, 1966

Chairman: Deward E. Walker, Jr.

The ecology of aboriginal Nez Perce settlements is investigated by studying the interrelationships between the biophysical environment and the distribution and frequency of village and camp settlements. Five hypotheses have been tested and it has been found that there is a positive relationship between the biophysical features of the environment and Nez Perce settlement patterns. An appendix and base map are included which denote the exact locations and descriptions of each of the 295 settlements considered in testing these hypotheses.

Nez Perce Tribe

Attorney Name & Address:

K. Heidi Gudgell
Dave Cummings
Nez Perce Tribal Executive Committee
Office of Legal Counsel
P.O. Box 305
Lapwai, ID 83540-0305
(208) 843-7355

Steven C. Moore
Don B. Miller
Native American Rights Fund
1506 Broadway
Boulder, CO 80302-6926
(303) 440-9801

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re SRBA	)	Subcase Nos. 03-10022 (Consolidated)
	)	(Nez Perce Tribe Instream Flow Claims)
Case No. 39576)	
_____)	

AFFIDAVIT OF ALAN G. MARSHALL

STATE OF IDAHO)
	) ss.
County of Nez Perce)

ALAN G. MARSHALL, being first duly sworn upon oath hereby states as follows:

- I am Professor of Anthropology and Social Sciences at Lewis-Clark State College, 500 8th Ave., Lewiston, Idaho 83501. I hold a Bachelor of Arts degree (University of Minnesota, 1967), Master of Arts degree (Washington State University, 1972), and

Doctor of Philosophy degree (Washington State University, 1977); all my degrees are in anthropology.

2. I was asked by the Native American Rights Fund to prepare this affidavit regarding: 1) the social and cultural significance of fish and water resources to the Nez Perce Tribe today; 2) fish and water's significance to the Tribe's historical precursors as known from the ethnographic record; and 3) the cultural factors which affected the understanding of various Treaties and agreements with the United States. This affidavit and my opinions herein are in support of the Nez Perce Tribe's claims to water in the Snake River Basin Adjudication.
3. My experience in anthropology focuses on the ways in which people relate to their natural environment. Early in my student career, through archaeology and Quaternary Studies, I studied the physical and biological factors affecting past societies in historic Palus Indian territory of south-central Washington. Later in my student career, I studied human symbolic responses to the environment and the ways in which human populations affect ecosystems. My research focused on traditional Nez Perce practices and resulted in my Ph.D. dissertation, "Nez Perce Social Groups: An Ecological Interpretation" (1977), which reconstructed Nez Perce society and culture in the 1850's. A copy of my 1977 dissertation is attached hereto as Exhibit 1.
4. I have continued my research with Nez Perce people focusing now on contemporary Nez Perce people and emphasizing basic cultural values as expressed in philosophical, religious, and spiritual issues. Since these issues all involve "the environment" or "nature" as defined by the European tradition, I continue to study Nez Perce ecology.

Participant observation supplemented by review of documents, written and oral historical sources, and research conducted by others are my primary methods of investigation. My research has resulted in a number of invited and volunteered professional papers delivered at meetings and some publications. A complete listing of my professional work is contained in my curriculum vitae, a copy of which is attached hereto as Exhibit 2.

Fish, Water, and Nez Perce Life

5. The story of the Nez Perce is the story of fish, game, and roots, of water and earth. These were the material and symbolic foundations sustaining Nez Perce life when the Americans came into the Northwest. As the material foundation of Nez Perce life, they provided food, clothing, and industrial items such as cordage and glue. Consequently no part of Nez Perce life, no moment of the day, was without a reminder of the necessity of these things for life as a Nez Perce person. In turn, no fish, game, or roots, Nez Perces insisted, existed without water or earth. Without all these material things, Nez Perce people would not have come into existence. And as one Christian, but very traditional, Nez Perce man told me, "Make every step on the earth a prayer."
6. Today, the dearth of "traditional" natural resources and access to them is keenly felt; Nez Perce life depends absolutely upon them not simply for material reasons, but social and symbolic ones as well. As one informant, crying, told me: "I know what I should do [referring to supporting his family in a traditional way], but I can't."

7. For Nez Perces, fish, game, and roots, water and earth are other forms of the life with which 'the Creator'¹ endowed the world and humanity. They show the concern that 'the Creator' has for them. The Nez Perce's own history (McWhorter 1983b) expresses these ideas. History begins with 'the Earth' being pulled out of the water by 'the Creator,' or 'the old man' -- /qíwn/ in the Nez Perce language. There was no humanity at first, and all beings existed on equal footing. One of those original beings, Coyote, had the power to change the world. He broke a fish dam at Celilo Falls on the Columbia River, and salmon appeared upstream for the first time providing the basis for living a good life for all the beings upstream (Walker 1994: 43-52). Afterwards, Coyote saved all those beings from a terrible monster living in the Clearwater River valley who had swallowed them all. He killed the monster, and from its body he determined the character of all the tribes except the Nez Perce. The Nez Perce he created by mixing the monster's blood with water and the earth. At the end of this history, Coyote says, in effect, that everyone must prepare themselves because the human race will soon appear (Walker 1994: 9-11).
8. Thus Nez Perces were created from the Earth and the monster's blood in the land where they now reside and survive by sharing their lives, literally, with the fish, game, and roots. Several significant values relevant to understanding Nez Perces' relationship with the natural world in general, and 'fish' and water in particular, appear in these and other myths. First, all things owe their existence to 'the Creator.' Second, "birth order," i.e,

¹ All Nez Perce English words will be distinguished by single quotation marks: all words in Nez Perce language will be found within /slashes/.

order of appearance, is very important; being the first, elders are more influential and knowledgeable than their juniors, who should be humble. Third, elders are responsible for their juniors and should share their substance with them generously, provided the juniors act properly.

9. The deep significance of fish is seen in the affidavits by the Nez Perce fishermen Horace Axtell, Rudy Carter, Elmer Paul Crow, Silas Whitman, and Ronald Oatman (the "Affidavits of Nez Perce fishermen"). Their life-stories and the history of their families and community are told in terms of fish and water. It is clear from these witnesses that fish and water remain materially important in their personal lives and the lives of their families and community. Also clear is that their identification as Nez Perce men, both by themselves and others, is tied to fish, fishing, and life on the water. Moreover, their spiritual lives, like the spiritual lives of most Nez Percés today and all Nez Percés at the beginning of Euroamerican history in the area, are based in fish and water. Their depositions are only an introduction to the significance of fish and water in Nez Perce life.
10. Their depositions display some of the difference between the mainstream culture of the United States and Nez Perce culture. People exhibiting United States culture talk about themselves and their families in terms of nation, state, county, and city or town or in terms of their employment. People displaying Nez Perce culture explain themselves in terms of their family, community, and tribe and their place in relation to earth and water, and fish, game, and roots. Many spiritual leaders aptly liken their way of life as a path or road. Some refer to it as 'the Red Road.'

Oral History as History

11. But how historically accurate are Nez Perce history and these affidavits? Any history must face this question because a number of occurrences mitigate against perfect accuracy. These mitigating features include: 1) missing documents, artifacts, or faulty memory; 2) the biases of the reporters; 3) the intentions of the reporter; and 4) the cultural interests of the reporters. Oral histories are particularly suspect in these regards and often discounted (Fabian 1983). In consequence, oral history, including that of American Indians (Martin 1987), has been the subject of much study.
12. Authorities on the issue agree that, as with any history, knowing what is being explained, checking internal consistency, and consistency with outside sources is necessary to gauge the reliability of oral history. Studies of oral history show that “. . .recent oral tradition--one or two generations beyond the eldest living members in a community--suffers only small damage” (Vansina 1985: 192-193). Given this very conservative estimate, events of the 1850's are within the range of these affidavits. My own work in 1971-1973 on oral history with men and women in their 80's, where it can be cross-referenced with the Nez Perce fishermen, is in agreement with the Nez Perce fishermen. This suggests reliability into the early 1800's, at least.
13. Not all Nez Perce history is oral history. There are the minutes from the 1911 Nez Perce Memorial to Congress, for example, which include testimony from elderly (70 years old or older) individuals attending the various treaty councils. In reading them one is struck by the remarkable consistency between these voices from 1911 and the information presented by the Nez Perce fishermen. This suggests reliability into the late 18th century.

14. Finally, most authorities show that oral sources are crucial to counter-balancing interpretations of history based on direct evidence, i.e., written and other sources, because the latter's reliability is suspect for the same reasons as oral history.

Ethnographic Views of Nez Perce, Fish, and Water

15. For ethnographic observers trying to describe Nez Perce culture, fish, game, and roots provide the evidence of the way Nez Perce people feel, or value, themselves, others, and their environment through their actions and words, both in the present and historically. In other words, culture is the pattern by which a community's members progress through life meaningfully. This ethnographic position is taken in this affidavit. On this basis, I am prepared to testify to the following opinion regarding the significance of fish and water to Nez Perce Indian people: Fish and water are materially and symbolically essential to Nez Perce people and their culture both in the present and the past; declines in fish and water availability, primarily due to human environmental alteration and restrictions on access, have had deleterious effects on the people and their culture.
16. If 'fish' and water are materially essential in contemporary Nez Perce culture, as they are, then ethnographers should see 'fish' and water in use at the important moments of people's lives. For Nez Percés these moments are, in descending order of significance 1) the 'root feast' or /ké'uyit/ 2) funerals; 3) memorial 'giveaways' marking the first anniversary of a person's death; 4) 'name-giving' ceremonies; 5) 'pow-wows', 6) 'first salmon,' 'first kill,' or 'first roots' ceremonies; 7) traditional weddings; 8) a birth; 9) the desire to share the joy of life and thanks for it. Other, 'non-traditional' events at which 'fish' are served include birthdays, graduations, some church (Christian) gatherings, and

fund raising events. Each of these events, which occur in the course of many people's lives, includes a 'dinner.'

17. 'Dinners'² are a distinctive part of Nez Perce life. They are an essential part of 'honoring' someone or some event. These 'dinners' ideally include 'water' -- /kúus/, 'chinook salmon' -- /nácoo'x/, 'meat' (elk, deer, moose, or, as a treat, buffalo) -- /núkt/, 'roots' -- /qáaws/, and '(huckle)berries' -- /cemiitx/. Such 'Indian food' is regarded as necessary to any traditional public activity; the less 'soyapo food' or 'whiteman's food' there is at a public or private activity the more 'traditional' or 'Indian' the activity is. A sponsor cannot have a real 'dinner' without a supply of these items large enough for everyone to eat as much as they desire with leftovers for guests to take home. They are especially valued if they come from the Nez Perce homeland.
18. These items cannot be bought through markets although it is difficult to get enough by one's own efforts even for less significant events. Consequently, sponsors must call on their 'relatives' (i.e., both kin and friends, both Indian and non-Indian) for help. Even beyond that sponsors may have to 'trade' for these items with unrelated Indian people.
19. The amounts of these items required for the 'dinner' depends on the number of people likely to come. 'Dinners' have open invitations; that is, they are announced publicly and individuals who feel some kind of connection with the person being honored will come. Thus, the number of guests depends on the reputation of the individual being 'honored.'

² 'Dinner' is the most general term applied by Nez Percés to these meals. The term includes both non-ritual and ritual meals. Ritual meals are more specifically termed 'feasts.'

20. Clearly these items are symbolically essential to Nez Perce life as well. They stand for the feelings people have for the honored person. If the feelings are strong, then the sponsors will have dedicated a large portion of their lives to intense fishing, hunting, root gathering, and berrying. Of course, they also must call on their relatives and find people to trade with. In doing all these things the social ties that a person has must be used, and social cohesion is enhanced and basic values governing those relations reaffirmed. In the crassest of terms, the sponsors become indebted to those who help them, and "pay off" those who have helped them in the past.
21. In a sense, the 'water,' 'chinook salmon,' 'deer,' 'roots,' and 'berries' are honored, too. Their "capture" is regarded seriously; that is, they are 'the Creator's' creation. As living, cognizant beings they voluntarily give up their lives to Nez Perces in order for Nez Perces to live. Killing them in order to live means that they must be eaten. Letting them spoil or throwing out the leftovers is a kind of sacrilege. To play with them, e.g., 'sport' fishing or catch-and-release fishing, is a kind of sacrilege, too. So the things making up the meal at a 'dinner' symbolize the cycle of life that is the Creation and its consumption a kind of communion.
22. These 'dinners' have a number of vital social functions. They reaffirm family, community, ethnic pride, and identity.
23. 'Fish' and 'water' also identify Nez Perces *vis á vis* non-Indians and Indian people from outside the Pacific Salmon area. For example, preference for salmon flesh, fat, skin, 'cheeks,' eyes, bones, and other parts is regarded as distinctively 'Indian' and 'traditional.' Water is often ritually consumed by individuals when they arise and greet

the morning and 'the Creator.' One's role in the production, distribution, and consumption of salmon and water symbolizes membership in a group. Ritual consumption of water by adherents of the Seven Drums Religion³ in public venues symbolizes one's religious identity.

24. It is for these reasons that 'fish' from other sources is not an acceptable substitute. 'Fish' purchased at the store is barely thinkable; 'chinook salmon' from hatcheries is acceptable, but not preferred; 'fish' other than chinook salmon are poorly regarded in this context. At one memorial 'dinner/feast' the sponsoring family was unable to provide 'chinook salmon.' Instead they served silver salmon that had come from an Oregon hatchery as part of a community distribution. Several groups of people told me quietly that the 'dinner' fell short of what they expected, but realized that the family simply did not have the wealth in numbers of fishermen, friends, or trading partners to get the necessary 'fish.'
25. 'Fish' other than salmon (i.e., chinook, steelhead, sockeye, or silver in descending order of preference) cannot be substituted for salmon in these ceremonies. However, this fact does not mean that native resident fish are insignificant materially or symbolically. Until the last decade or so, Nez Perces used many kinds of fish (see Exhibit 3 attached hereto). All were gathered by men, though occasionally a few women fished for fun.⁴ While

³ The Seven Drums Religion is a contemporary version of a very old form of worship found among the Nez Perce and their closest cultural and linguistic relatives, the Sahaptins. This cultural group includes, e.g., Umatillas and Yakama people.

⁴ By fun I mean that they, like most men, found the activity enjoyable. Nevertheless, it was never done as a pastime.

chinook salmon have always been the preferred kind of fish and the one central to significant ceremonies, other anadromous and resident fish were enjoyed as well. Resident fish (/cúuyem/) such as 'eels' and 'sturgeon' are appropriately served in all venues. 'Trout' of all kinds are appropriate in semi-public and family contexts. Other kinds of native fish (e.g., northern pikeminnow, suckers, and chiselmouths) were appropriate in family contexts. Non-native fish (/lixliksiin/), e.g., small-mouth bass, walleyes and carp, are rarely used.

26. Asserting that fish other than salmon are not important is inaccurate today and historically, however. These other fish are essential foods when chinook salmon is in short supply or unavailable. Furthermore, many of them are very tasty. Many people enjoy trout, for example. Another aspect of their importance is that catching them is good training for catching salmon; when gaffing for salmon it takes a well-developed sense of touch and quick reflexes to distinguish between rocks and logs on the bottom of a stream and the back or side of a salmon. This practical knowledge can be developed by gaffing for suckers during their spring run.
27. Thus, even though chinook and other salmon are preferred, the Nez Perces as a group did not process enough chinook salmon to satisfy their needs each day, or even month, of the year. This has probably always been so, as indicated by the myth of Ant and Yellowjacket, for example, which describes the trouble following from a lack of chinook salmon (Slickpoo 1973:160-162). Besides these practical issues, resident native fish are prominent figures in myth (see Exhibit 4 attached hereto), and most can be guardian spirits.

28. These points are reflected in the way in which Nez Perces think about, or taxonomize, 'fish.' The Nez Perce language taxonomy of fish and other things is fundamentally different from that of English language speakers and scientists, and is the same as that of the closely related Sahaptin language speakers of the middle Columbia (Hunn 1980, 1982; Hunn and French 1984; Marshall 1977). For example, the Nez Perce language word denoting "fish" is /léewliks/ but this term typifies salmonids (fish without visible scales) and, in particular, chinook salmon. Another Nez Perce language word for 'fish' is /cúuyem/, which typifies resident native fish. Finally, there is the term /lixliksín/, which typifies non-native fish. The taxonomy reflects "the utilitarian factor" in Sahaptin (Hunn 1982) and Nez Perce biological classification.
29. The Nez Perce English word 'fish' parallels Nez Perce language taxonomic rules thus exemplifying the process of "fossilization"⁵ of Nez Perce language features in Nez Perce English (Chernoff 1992). Because the classification is "utilitarian," it also reflects the historical continuity of the significance of 'fish' and their use. Thus, in ceremony, 'chinook,' 'fish,' or /nàcoo'x/, stands for all fish, including resident fish, but does not mean that they are more important than these other fish.⁶

⁵ "Fossilization" refers to the phenomenon of a semantic or grammatical feature of a language, e.g., Nez Perce, which is made part of a local dialect of a new language, e.g., English. It is an unfortunate term because it connotes "out of date," "lifeless," or rigidly antiquated.

These adjectives do not characterize Nez Perce English; it is current, lively, and serves Nez Perce people well in their daily lives. It carries forward familiar, useful, and significant ideas and sounds into a new speech environment. This is true of many non-linguistic practices as well; Nez Perces recognize the results of this process calling such practices 'traditional' activities and things.

⁶ Nez Perces traditionally have valued egalitarianism and distrusted hierarchies of any sort (Walker 1968: 29). This is reflected in the taxonomy of 'fish'; /nàc'oo'x/ typifies the spiritual, ritual side of all 'fish', it does not rule them. The 'big chief' of all 'fish,' sturgeon (/qilex/), like all 'chiefs,' could not order anyone to do or not do

30. Some connotations of 'fish' in both Nez Perce language and Nez Perce English are; a) wealth, b) ancestors, c) hearth and home, d) gender and age related identities and roles, e) positive/negative sanctions, f) prestige, g) spirituality, and h) beauty. These emotional elements are clearly present in the context of 'dinners.'
31. 'Water' is symbolic of spiritual concepts as well. The Nez Perce language word denoting "water" is /kúus/ (Aoki 1994). The word /kúus/ has strong spiritual connotations, "Water is medicine for everything" according to Yellow Wolf (McWhorter 1983b). /kúus/ has remarkable healing properties. In the community histories of Kamiah, Ahsahka, and Lapwai, Idaho, are references to wounded men going into streams alone, calling on their guardian spirits, and returning to their friends healed and unscarred.
32. The Nez Perce English word 'water' carries these strong spiritual connotations through the linguistic process of fossilization. It is still regarded as 'medicine' (Walker 1966). It has healing properties. The symbolic significance of 'water' is more clearly displayed in another context. During my investigation of Nez Perce spiritual concepts, I followed up on the concept of 'the old man.' 'The old man' (/qíwn/ in Nez Perce language) is regarded as the Being who created the world; in contemporary Nez Perce life this conception is identified with the Christian "God" (/hanyaw'áat/ or /'aqámkin'ikoo). 'The old man' withdrew from the world after creating and naming everything, leaving the 'sweathouse'⁷ as a token of himself, his body as it were. Essential elements of

anything.

⁷ The 'sweathouse' is another example of so-called "fossilization" in a realm other than language. Because the 'sweathouse' is a token of 'the old man' it is a place of great spirituality. It was a significant adjunct to many Christian Nez Perce churches as well as part of non-Christian life. See Walker 1966.

'sweathouse' ritual include 'old' rocks, fire, and water. All of these, according to my informants, were each a kind of 'old man.'

33. As with 'fish,' though, not all 'water' is the same. The 'strongest' water, i.e., the purest and most efficacious water, is found at the source of water. So, 'water' from "springs and fountains" is most highly regarded. In fact, a spring is the most highly preferred source of 'water' for 'the sweathouse.'⁸ 'Water' from high in the mountains, too, is thought to be very strong. Cold, flowing water is somewhat less preferred than 'water' from its source, but it is better than still water in the lower elevations of the Nez Perce homeland. On the other hand, hot springs are highly charged spiritually and medicinally.
34. 'Traditional' Nez Percés continue to assert that 'water' is the home of powerful spirits as well. The sources of 'water' discussed above, are important points where the spiritual world becomes visible and spirits live. Eddies and deep holes in streams and rivers are home to various kinds of spirits. Waterfalls and the confluences of streams are also significant spiritual places.
35. For example, the Big Eddy in the Clearwater River near Lenore, Idaho, was home to a herd of spirit water elk, among other things. These ghostly creatures, which look like elk without hooves, came up out of the eddy to graze in the grassy ridges of the river canyon. Changes in the eddy caused by the repositioning of Highway 12 through its eastern edge

⁸ I maintained a sweathouse for several years, from which much of my knowledge about Nez Perce spiritual life derives. This sweathouse was located on a spring, which dried up soon after I moved away. Despite the remaining group members' best efforts the spring could not be revived; they were reduced to using Lapwai Creek, 30 feet away.

made the herd disappear. Another example of a spirit or monster living in water was at Ferdinand, Idaho, right next to Highway 95. In fact, this toad-like creature lived in the culvert under the highway. When the highway was updated in the 1950's its home was destroyed, and it disappeared.

36. The idea of 'water' as 'medicine' continues in Nez Perce life. Today, spiritual authorities point out that water is essential to everything. Because it literally "flows through everything," its consumption at the very beginning of a traditional 'dinner,' or 'feast,' symbolizes the connectedness of all the world.
37. As the streams become less productive and 'fish' become scarcer, the intensity of the effort to provide for one's family and community during vital ceremonies at pivotal moments in Nez Perce lives becomes too great for some families to sustain. As this occurs, the Nez Perce lose a crucial social pathway upon which elders lead their families into the practice and understanding of the basic values of Nez Perce society and culture. As this happens children are 'lost,' and 'coming generations' will not be Nez Perce.

Current Fish Harvesting

38. Most members of the Nez Perce Tribe participate in one way or another in the Nez Perce material and symbolic economy, this social pathway. The material elements of this economy must come from Nez Perce country, they must be converted from raw resources into cultural resources by Nez Perce people or their relatives, and they must be consumed before spoiling. In consequence, a significant part of today's Nez Perce economy is devoted to locating, catching, processing, distributing, and consuming 'fish.' In the previous paragraphs, the consumption portion of this process was briefly described. In the

next paragraphs, the steps leading to consumption are described in terms of task groups, i.e., those naturally forming groups of people who: find fish, the natural resource; catch them and thereby convert them into a raw resource; and process them, thereby creating a complete cultural resource.

39. Participation in task groups is vitally important for reasons other than providing food. It is significant in developing and maintaining close community, familial, and personal relationships as well as personal identity. These identities and relationships are forged in work at locations familiar to one's family ancestors and tribal elders. One's connection to 'the land' and 'the Creator' are best developed there, also.
40. The path begins with a small number (less than 125) of tribal members engaging in ceremonial and subsistence 'fishing' in any given year as principal providers of fish. This estimate does not include occasional fishermen, boys learning how to fish, and others. These fishermen travel to, and sometimes camp at, historically known usual and accustomed places (see the Affidavits of Nez Perce fishermen).
41. In Nez Perce English 'usual and accustomed places' for fishing refers to any stream used by Nez Perce people within living memory. More particularly it refers to the Columbia River from Celilo Falls upstream to the Snake River; then up the Snake River to the Palouse River; then the Snake River and all its tributary drainage basins (e.g., the Palouse, Tucannon, Clearwater, Grande Ronde, Salmon, and Weiser Rivers) and other side streams upstream to, and including, at least the Payette River. Because of the significance of headwaters of streams to Nez Percés, the headwaters of the Snake River in the Yellowstone country, for example, are also regarded by some as 'usual and

accustomed places' because of their families were 'eastern country people' (see paragraph 59 below) and traded with the American Fur Company at rendezvous in that region (Joseph 1965).

42. Task groups devoted to fishing are composed primarily of males and are important for developing gender identity and demonstrating a man's ability to contribute to the community. These groups are significant for teaching boys and young men basic Nez Perce values and world-views; socializing them into adult male roles; teaching them many practical arts; and educating them in family, community, and tribal history.
43. Specifically, boys and young men learn the technology and techniques of fishing and the conditions allowing successful fishing. They use fishing rods, lines with hooks (which may be used for gigging) or baits and lures; dip-nets; spears; gaff-hooks and poles; and set-nets. They learn how to improvise these tools and repair them. They learn the streams that their 'family' always fished ('usual and accustomed places'). They learn in a practical sense that the particular location of fishing activity on a family stream depends upon a number of factors, including season of year; water conditions; stream bed conditions; access to the location; knowledge gained through experience and/or oral history; reports from other fishermen; and the number of other fishermen relative to the abundance of 'fish.'
44. More broadly, they learn about the natural world and its spiritual dimensions through guided and independent experiences; the history of their family, community, and tribe through stories of past adventures and reminiscences of older men; what it means to be a

man in a group of men, family, and community; and the myths which are the reference books of Nez Perce life. (See Affidavits of the Nez Perce fishermen).

45. Young boys are too small to catch salmon safely without adult supervision. So during times when salmon are not available they seek out other kinds of 'fish:' trout, suckers, and northern pikeminnows, among others. These experiences culminate in the first salmon a boy takes. With this salmon a boy changes into a young man by sponsoring a small 'dinner' or 'feast' honoring his elders and ultimately, 'the Creator' (the 'first salmon ceremony'). The experiences gained here establish life-long friendships that will provide social support of all kinds, including those necessary to sharing life with the 'fish' in 'dinners' or 'feasts' for their community's 'root feasts,' their elders' funeral and memorial ceremonies, and their younger relatives' name-giving ceremonies.
46. Some active fishermen take up to 200+ salmon per year. Men who are able to do this receive high praise and prestige because they provide the necessary raw resources to women for the further production of 'Indian food' for their families and communities. Families with enough 'fish' to eat as a normal part of their diets are regarded as 'traditional.' Such families are strong spiritually and are authorities on Nez Perce 'Indian' life and history.
47. Several possibilities exist as the next step in the production of 'fish' for 'Indian food.' These steps are in the domain of women and girls and are their decision to make. First the 'fish' must be gutted and rinsed out, if the men have not done so. Then the fish may be cooked immediately by baking or in a more 'traditional' manner by filleting and roasting on a spit next to a fire. Or the 'fish' may be preserved by freezing, canning, smoking, or

drying. In the latter processes the 'fish' are filleted first. To smoke fish one must have access to a tipi or smoke house and, depending upon the flavor desired, the appropriate wood. In order to dry 'fish,' the filets must be cut to the skin in about 1/4 inch strips; otherwise, the meat is so thick it will spoil before drying. Removing the skin and associated fat from a 'fish' is almost never done.

48. Lastly, serving 'fish' is 'the women's' prerogative except in a few instances. Sometimes 'men' provide a 'dinner' or 'feast' for the community or some group. In this case, they are expected to do all the production of 'Indian food.' The second instance is in the context of very 'traditional' or Seven Drums Religion 'dinners.' In the latter instance, young men led by an elder file past the tables where the community will sit and place 'fish' on the table. This is done after a cup of water is placed at each seat by either young men or women and before any 'meat,' 'roots,' or '(huckle)berries' are placed on the table.
49. Finally, a word about the frequency of 'dinners' and 'fish' consumption. My impression is that the frequency of 'dinners' has remained stable or increased. There are, for example, more 'pow-wows' with higher attendance than there were in the 1960's and 1970's. There are more adherents of Seven Drums Religion on the Nez Perce reservation than ever before. More people unaffiliated with the Seven Drums Religion are putting on 'name-giving' and other traditional ceremonies.
50. Changes in 'fish' consumption are more difficult to estimate. It may be that 'fish' consumption in more private venues has decreased because the demand for 'fish' to be served at 'dinners' has increased.

51. The exact consequences of this situation are unclear. What is clear, however, is that the Nez Perce economy is increasingly strained as demand has increased and supply has steadily declined.
52. 'Fish' are a significant to Nez Perce government as well. This is an important ethnographic indicator of the significance of 'fish' to Nez Percés. If 'fish' were of little significance, then 'fish' and issues related to their well-being would not have political effects. The reverse is true, however: 'fish,' issues related to their well-being, and fishing often dominate Nez Perce tribal government.
53. In fact, the acceptance of the 1948 Constitution of the Nez Perce Tribe was a response to the necessity of having strong leadership, something not characteristic of Nez Perce tradition (Walker 1968: 29), in order to press their claims for some past treaty violations with the the Indian Claims Commission. This constitution established the Nez Perce Tribal Executive Committee (NPTEC). The constitution and actions by NPTEC produced a strong reaction and two anti-constitutionalist political parties formed. These parties lost most of their influence with the successful claim for the loss of Celilo fishing rights (Walker 1968:124-127).
54. The stance that NPTEC takes towards 'fish,' fishing, and non-Nez Perce governments (tribal, state, and federal) remains as a "litmus test" of its authority and affects the political fortunes of its members. In the late 1970's and early 1980's, state-ordered closure of a 'traditional' fishing stream, a 'usual and accustomed place,' resulted in an armed confrontation between State of Idaho police forces and tribal fishermen at Rapid River near Riggins, Idaho. NPTEC and many of its conservative supporters deplored this

potentially violent confrontation; the Nez Perces participating in the confrontations were characterized as a bad element in an otherwise peaceful tribe that had always been friendly with non-Indians. However, a political party and associated faction, The Fishermen's Committee, formed and several members of NPTEC unfriendly to the fishermen were unseated in later elections and replaced by members of The Fishermen's Committee. The Fishermen's Committee seemed to melt away, perhaps because many of its members felt their concerns were being addressed.

55. Nevertheless, since that time the strong interest of many tribal members in so-called natural resource issues, in particular fishing and hunting, is reflected in the proceedings of NPTEC's Natural Resources sub-committee. This is true even though the Nez Perce tribal government invests heavily in programs related to stream health and increasing 'fish' returns to the Nez Perce homeland. Concern is high enough that another group is forming to press NPTEC in regard to fishing, hunting, and other resource issues.
56. The 'traditional' character of these concerns sometimes is hard to discern because it overtly resembles concerns for those issues in non-Indian society. For many Nez Perces, the concern is 'spiritual' from a non-Indian perspective. For example, work on stream-health is concern for 'water' as 'medicine' that connects everything. 'Otter' -- /qiláasx/ -- studies are important in relation to 'fish' because they, like Nez Perces, cannot survive without an adequate supply of good water and 'fish.' In other words, the idea of 'the Creation,' 'the old man,' and the living consciousness of all beings continues as a dominant value underlying Nez Perce attitudes and actions.

57. That 'fish' and 'water' are essential material and symbolic elements in contemporary Nez Perce society and culture is very clear. They provide the means by which people can express their individuality and pride; their commitment to their families and community; and their connection with the spiritual world. They are, in other words, the means by which Nez Perce people express basic social values and give them a sense of who they are, i.e., expressions that are necessary to the life of any individual or community. The reduction in availability of 'fish' and water reduces their ability to be Nez Perce people in a community of Nez Perces.

The Historical Foundations of Current Fishing

58. None of the basic social patterns related to 'fish and water' described for contemporary Nez Perce life is new. Their life-giving roots extend, like those of the "fossilized" elements of Nez Perce English, deep into living history. The following brief description is a reconstruction of Nez Perce culture in the 1850's.

59. Nez Perces in 1850 ranged from present day central Montana to northwestern Wyoming westward to the Cascade Mountains of Washington and Oregon. In any given year of the mid-1800's as much as 10% of the Nez Perce population lived east of the Bitterroot Mountains. These 'eastern country people,' or /k'uusey'nuutitooqan/ traded salmon pemmican -- /tán'at/, horses, shells and other products for a variety of goods (Griswold 1954). By the 1830's, they were important participants in the American Fur Trade (Josephy 1965: 40-78). They attended fur trade rendezvous in the Grand Tetons and Yellowstone country. Their influence in the region caused them to be invited to the negotiations 1855 Treaty with the Blackfeet, which the Nez Perce signed.

60. Despite these extended forays east of the continental divide, the Nez Perce homeland was in the Pacific “Salmon Food Area,” so characterized by Wissler (1957: 9-11) because salmon were the dominant aspect of the regional economy.
61. “All the streams between San Francisco Bay, California, and Bering Straits, Alaska, draining into the Pacific, are visited by salmon. These ascend from the sea *en masse* to spawn, constituting a “run,” in local speech. As they reach the very headwaters, they are available to all the tribes of this drainage, even those far inland. The run for each species of salmon occurs but once a year and this developed periodic seasonal practices not unlike those of agricultural peoples. As the time for the run approaches, the tribes gather upon the banks of the streams, equipped with fishing appliances, dip nets, harpoons, and weirs, as the local conditions may require. Then when the salmon pass, they are taken out in great numbers, to be dried and smoked. In the interior of the Columbia Basin, the dried fish are afterwards pounded fine in mortars, thus being reduced to a state not unlike pemmican. This pulverized food is carefully stored in baskets as *the chief reserve food supply of the year*” (Wissler 1957: 9, emphasis added).

Location and Timing of Fishing

62. The region from which they obtained the great bulk of their subsistence was in the Snake River drainage basin, i.e, the Snake River and all its tributary drainage basins (e.g., the Palouse, Tucannon, Clearwater, Grande Ronde, Salmon, and Weiser Rivers) and side streams upstream to at least the Payette River (Fletcher 1892; Ray 1936, 1938; Schwede 1966, 1970; Sappington *et al.* 1995).
63. The natural resources supporting the Nez Perce were various, including fishing for both anadromous and resident fish, hunting, and gathering various vegetable products (Marshall 1977; Schwede 1966, 1970; Spinden 1908; Thwaites 1905; Walker 1968).
Collecting the natural resources required that Nez Perce people move each year from

'usual and accustomed' place to 'usual and accustomed place' in concert with the seasons (Wissler 1957: 9; Marshall 1977: Fig. 16 Resource Zones of *Aepweme/ Nez Perce*). The following brief description of the seasonal round is drawn from my dissertation (Marshall 1977) and subsequent work.

The Subsistence Cycle of the Nez Perce

64. The Nez Perce year alternated between two kinds of groups, each with a different energetic relationship with the natural world. In winter and early spring, people lived in what I have called consumption groups because people were living primarily on stored foods. In late spring through early fall, people lived in production groups, so-called because people used almost all their waking hours to gather, hunt, and fish to obtain enough food for the late fall, winter, and early spring when people again lived in consumption groups.
65. This was a regular cycle with each family retracing from year to year well known, well traveled routes.⁹ These routes were circular, i.e., they were not out to a destination and back on the same trail. The entire geographic cycle was a family's */wisées/*. During the ecologically productive season of the year, people in family groups moved from one improved campsite (*/wispáykaas/*) to the next in regular progression. They did not use

⁹ See Shawley (1977) for a detailed mapping of the dense network of trails in the parts of Nez Perce country that he could sample. In my own experience, it is clear that trails followed every ridge in the Bitterroots. From these trails, task groups of fishermen and hunters went down to streams and bedding areas of their quarry. The reason for this pattern, I was told, was that trying to follow streams or side hills was simply too difficult because of the steepness of the mountains, windfalls and deadfalls, and other difficulties; it was easier and faster to go miles out of one's way on a ridge-top than to travel "as the crow flies" down a heavily forested and thicketed, over-steepened slope, find a stream crossing, and go up another terrible slope.

other families' routes or improved campsites because those facilities were owned by the people who made them.¹⁰ When the first snows of fall began, the families returned to what anthropologists have called winter villages (/t'ew'yenikees/) where they had their winter stores and friends and relatives upon whom they could depend in lean times. As implied by the words themselves, the /t'ew'yenikees/ was the place people would leave gratefully after the root feast in order arrive (as implied in the term /wisp'aykaas/) at places where food was plentiful.

66. Initially people gathered food and other resources in the canyons of the Snake, Clearwater, Grande Ronde, and Salmon Rivers, which are much warmer than the surrounding high plateaus and nearby mountains in February, April, and May. In the canyons the perennial, herbaceous plants gathered by the Nez Perce often bloomed and withered before the snow melted in the mountains' foothills. The suckers and chiselmouths, which run up the sidestreams of all the rivers, had spawned and returned to their regular haunts. These were the foods supporting 'the root feast.' These foods also began to rebuild the people's strength so that they could devote their waking hours to gathering, processing, transporting, and storing the food necessary to surviving the next winter.¹¹

¹⁰ This is illustrative of issues concerning "ownership;" while no one owned the land and so could not forbid its use, persons and groups "owned" the product of their labor or efforts. Without this "capital" already in place, and the intimate knowledge of the natural features of the /wisées/, people had great difficulty in surviving. This was Lewis and Clark's problem in the fall of 1805 as they followed the Nez Perce road to the eastern country that Lewis and Clark called the Lolo Trail.

¹¹ "The Ant and the Grasshopper" is a European "fable" that the Nez Perce found so fitting to their lives that they quickly appropriated it as their own. In this fable the grasshopper spends his summer fiddling around enjoying himself while making fun of the ant, who toiled ceaselessly to build his house and store up food for the

67. The new year began with the 'root feast' (/ké'uyit/). My oldest Nez Perce consultants in 1973 told me that it was to celebrate the people's, especially the elders' and children's, survival through another winter. It occurred after the first fresh plant foods had been gathered as suggested above.
68. Through May, June, July, August, September, and sometimes into October these production groups, composed of all people but the infirm, moved upwards in elevation following trails well-known to each family group, all the while exploiting the spring and summer seasons of differing elevations. Along these trails were improved camp sites strategically located to provide access to natural resources such as game, fish, and plants. At early season, people were still living hand-to-mouth. The first roots that had been stored for 'winter' (/qáaws/) could not be consumed without risking winter starvation, so a wide variety of other scattered plants and berries, such as wild hyacinth, spring beauty, and canyon serviceberries, were eaten. Elk, deer, moose, bears, cougars, and other game were themselves still recovering from the winter; lean at the best of times, game was poor food during spring and early summer and caused digestive problems. 'Fish' such as trout, suckers, northern pikeminnow, chiselmouths, crayfish, and 'mudfish' were also part of this season's diet. As my most knowledgeable consultant stated, "People were always rustling around."

winter. When winter came the grasshopper almost froze and starved to death. Of course, the generous ant takes the grasshopper in without reproof and ungrudgingly supplies the grasshopper with sustenance for the winter.

69. Only two situations delayed or altered this progress. One occurred as people were relieved to stay at the camas bulb gathering grounds for several weeks where women gathered, processed, and preserved huge amounts of bulbs which were then transported many miles to the winter village in which their families lived and consumed their stores over winter. The other situation occurred when the people heard that the annual 'fish' run had begun, at which time all other food gathering activities were dropped in order to rush to the men's fishing locations to catch, process, and store enough 'fish' for the following winter. This was an anxious time because no one knew when, or if, the 'runs' would appear (on rare but well-remembered occasions they failed), how plentiful the 'run' would be, and the runs waxed and waned unpredictably.
70. The early season fishing sites were not haphazardly located on the great rivers, the Snake, main Clearwater, and Salmon. Nez Perce men knew from long personal and family experience where the 'fish' would stop and rest in their upstream migration. Men also knew the underwater trails that they followed. So the men built structures which made their efforts and tools much more efficient. All day and all night, just as at Celilo Falls in living memory, men dip netted or speared 'fish' with leisters or harpoons from wooden platforms built on steep banks over deep holding water. Fish walls, i.e., rock piers, were built out into the salmon's underwater trails to divert and hold 'fish' that would otherwise simply swim by so that those 'fish,' too, could be taken. Canoes were used, often in flotillas, as platforms for dip netting and spearing 'fish.' As this 'wealth' poured in, women gutted, filleted, smoked, dried, pulverized, and packed 'fish' in large open structures erected for this purpose. Most of these sites were at or near winter villages.

There was little resting; everyone knew that this was the main chance for a winter without hunger.

71. As the 'run' moved upriver, other structures and devices were added to the technological mix. Wherever possible weirs, or fish dams, blocked entire rivers, both major and minor, such as the North Fork of the Clearwater at Ahsahka, Idaho, and the Middle Fork of the Clearwater at Maggie Creek near Kooskia, Idaho. As the 'run' ascended even further, the smaller streams were filled with traps. Set lines with hooks and/or set nets were placed in the rivers as the runs tapered off. In some areas, such as Hell's Canyon, men knew which rocks salmon rested behind as they ran up the rapids; there they used throwing nets to ensnare the 'fish.' Still further up the streams, fish were taken with spears, gaff hooks and sometimes by hand or clubbed. Even at the headwaters of streams, spawned-out salmon referred to as /'eyx/ were picked up for immediate consumption, thereby leaving stored fish for the winter season.
72. By late August, September, and October, many people were in the mountains. Women continued to gather, process, and store camas bulbs. As men turned their attention to hunting, fishing for trout and other resident fish, and bringing back salmon for consumption, women also processed and stored the game.
73. As early as late September and certainly by early October, the mountains became snowy, and people returned to their winter villages to await the new year. During that time, people ate their stores and called in their guardian spirit powers, who had given them the 'power' to succeed, to honor them and show them to others at guardian spirit dances. All who wanted to come were welcome. Guests were fed until they could eat no more, and

they were given places to sleep and clothing, if necessary. In this way, individuals, their family, and their village demonstrated through wealth the strength of their spirit and the bounty of the Creator.

74. By late winter, however, all but the richest villages had short supplies. In February, the whitefish began to congregate over submerged sand banks to spawn, and men fished for them. Men also ranged into higher elevations looking for the wintering grounds of elk and deer or bear dens. By early spring people were often hungry and the last ceremony of the year took place, the children's feast, or /toláyact/. In this ceremony “. . .the children demanded food from adults for a feast of their own” (Walker 1968: 29).

Amount of Fish Taken

75. 'Fish' were crucial in the individual and communal survival and well-being of the Nez Perces. This is demonstrated in part by the technical sophistication and wide range of devices used for capturing and processing fish, and the intensity and organization of labor devoted to fishing when 'fish' were available, as well as the population concentration that occurred at the most productive locations. That they were the dominant single factor in the Nez Perce economy is undisputed by any authority on the issue.
76. All agree that a huge amount of salmon were taken on a yearly basis. Authorities differ only on the amount of salmon captured on a regional basis and the relative amount that 'fish' contributed to the overall yearly diet. None offer any estimates of the contribution of fish other than salmon to native economies.
77. Minimum estimates of about 300 pounds/person/year are provided by Hewes (1973) and Hunn (1981), though by very different methods and with somewhat different goals.

Hewes was interested in the history of regional salmon fishery productivity in “aboriginal” times and at the beginning of the commercial fishing period, thus defending his earlier, very conservative estimates (Hewes 1947). He argued that the initial stages of the commercial period had high productivity because the salmon population had an opportunity to “rest” following the collapse of native economies. Hunn was interested in showing that plant products formed a far larger share of the native regional economy than was allowed for by anthropological theories of hunter-gatherer economies. To do this, he had to revise Hewes’ estimates.

78. The higher estimates for regional, and specifically Nez Perce, use were made by Walker (1967), Marshall (1977), and Schalk (1986). Walker’s estimates were developed in the context of claims made by the Nez Perce Tribe for part of the Celilo Dam settlement for fishery destruction. Marshall supported Walker’s higher estimates. Schalk’s (1986) estimate was made in the context of the highly charged regional debate over the causes of declining salmon runs in the Columbia Basin; by establishing a baseline for salmon populations, he felt, the effects of development on the salmon runs could be better estimated.
79. Hewes revised his doctoral dissertation (Hewes 1947) in order to determine fisheries productivity for the entire Pacific Salmon Area, but he did not undertake studies of each group. Instead he used a “dead reckoning” approach to solving this problem. His assumptions were that 1) salmon constituted, on the average, 50% of the diet for the entire area; 2) 2,000 calories/day could sustain the average native consumer; and 3) salmon flesh yields 1,000 calories/pound. Thus he arrives at a figure of one pound of

salmon per person per day, or 365 pounds of salmon per year (Hewes 1973: 134). In another estimate, substituting daily minimum protein requirements for calories, Hewes (1973: 134) alternatively estimated the annual per capita salmon use a 305 pounds per year.

80. Hewes' estimates of the total salmon catch for the region and for the Nez Perce are too low. The Nez Perce case indicates how that is so. Hewes (1973: 136, Table 1) suggested that the Nez Perce used somewhat less (300 lbs./person/year) than the average Plateau group because, first, the Nez Perce used salmon only for human food, and second, the Nez Perce were more dependent on game animals for food than the average regional consumer. Thirdly, he used the best population figures for the time, which placed the Nez Perce population at 4,000. Using his figures the total salmon catch by Nez Perces would be 1,200,000 pounds of salmon per year. However, current, more accurate estimates place the Nez Perce population at 5,000. Therefore, if his assumptions are accepted, the estimates of total salmon catch must be increased by 25% to 1,500,00 pounds per year. Even so, this estimate, if used at all, must be regarded as an absolute minimum and with great skepticism.
81. Skepticism follows, for example, from one of his assumptions which exerted a downward bias on his estimate. Hewes assumed a 2,000 calorie/day diet was sufficient to adequately feed native peoples in ethnographic times. However, this caloric intake is used as a baseline nutritional requirement for contemporary adult Americans leading sedentary lives in climate controlled buildings. It could not have supported an healthy, active Nez Perce adult male, much less a pregnant or lactating woman, someone who was sick, or a

growing child. The assumption also leaves aside the issue of heightened metabolic levels at low and high ambient temperatures. Moreover, the Nez Perce obviously did not have any of today's "labor saving," i.e., human energy saving, devices or infrastructure. His estimate, therefore, must be lower, perhaps far lower, than the average daily caloric intake of Nez Percés in the 1800's. A similar criticism of his baseline for protein requirements can also be made.

82. Finally, Hewes' skepticism about his own estimates must be taken into consideration. All his estimates are "...for the sake of example" only, except for the population estimate, as all figures are arbitrary.
83. Walker (1967: 19) made a much higher estimate than Hewes' (1973). Walker arrived at his estimate in a very different manner than Hewes because it is founded in historical and oral historical data. Based on these, he conservatively estimated that the Nez Perce captured a minimum of 1,500,000 pounds fresh weight of salmon a year based on 300 fish weighing a minimum of 10 pounds each for a minimum of 10 days at each of 50 fishing stations. This calculation provided a minimum annual per capita consumption of 300 pounds for 5,000 Nez Percés.
84. Factors that indicate higher catches and per capita consumption are: 1) eyewitnesses recorded as many as 700 salmon were taken some days, while the minimum recorded was 300; 2) 40-pound salmon were not unusual, 10 pounds is the minimum; 3) the number of peak days doubled to 20 in some years at some stations, while 10 peak days was the minimum for any single station; 4) the calculation does not account for fishing outside of Nez Perce territory; and 5) the calculation does not account for salmon obtained through,

and for, trade and other purposes (Anastasio 1955, 1972; Griswold 1954; Marshall 1977; Walker 1967: 25-26). Walker (1967: 23, Fig. 3) provides another, higher estimate of about 450 pounds per person per year.

85. Walker's estimate was conservative also because he calculated it using only 50 fishing sites. Data found in Walker (1967) and Schwede (1966, 1970) indicate that each of the 94 known village sites was associated with a fishing site. Using Walker's method and the total number of village sites, I roughly estimated that 2,820,000 pounds of chinook, sockeye, silver, and steelhead per year, or about 560 pounds of salmon (fresh weight) per person per year, were taken by Nez Perces (Marshall 1977: 43-44).
86. Hunn (1981) raised the issue of how much Plateau Indians, including the Nez Perce, depended upon salmon to meet their minimal daily requirement (MDR) for nutrition. Hewes estimated slightly less than 50%. Murdock (1967), in a holocultural study, estimated 40% for hunter-gatherers world-wide.¹² Hunn argued that the significance of plant foods to the diet of Plateau peoples was greatly underestimated because of a long-standing ethnographic bias of overestimating the contribution of game and fish in hunter-gatherer societies generally. He did not take issue with the estimated weights (roughly, numbers of fish), but with the percent of the nutritional minimal daily requirement (MDR) that they accounted for. This is an entirely different question than the one asked by Hewes (1973 [1947]), Walker (1967), and Marshall (1977). But it is a serious critique

¹² Aboriginal people of the Plateau are all categorized as having a hunting and gathering subsistence economy.

of Hewes because his estimates are calculated as though salmon accounted for almost 50% of aboriginal peoples' diets. On the other hand, Walker's (1967) and Marshall's (1977) estimates are not based on caloric values and so are unaffected by Hunn's critique.

87. Hunn rejected Hewes' (1973) regional estimates as too high because Hewes: 1) underestimated the nutritional value of the food plants used by Plateau people; 2) assumed that entire fish were eaten, whereas only 80% of the total weight of a salmon was used; 3) made caloric estimates based on the fattest species of salmon (chinook); and 4) failed to account for the fact that caloric estimates were based on fish taken at the beginning of their migration, i.e, before losing up to 75% of their caloric potential due to fat loss while swimming upstream. To recalculate the food value of salmon for each group, he: 1) took an average caloric value for all species of salmon; 2) devised a factor for reduction in caloric value in proportion to distance from the ocean; and 3) multiplied by .8 to account for waste. He discounted the significance of other fish to the diet.
88. In the end, Hunn (1981: 128, Table 3) estimated that salmon accounted for only 13% of the Nez Perces MDR if Hewes' calculations were used, and 26% of MDR if Walker's estimate was used. These estimates of percentage contribution to MDR are 27% and 13% less, respectively, than the 40% contribution to the diet estimated by the Murdock (1967) for all hunter-gatherer societies such as the Nez Perce.
89. Hunn discounted resident fish as significant to Plateau peoples' MDR because, he asserted, "While other fish contributed to the total dependence on fishing (Hunn 1979), waste, loss to scavengers, and the use of salmon as fuel. . .should tend to offset any

[nutritional] increment from non-salmon fishing sources, except among groups. . .with restricted access to salmon (1981: 127).”

90. Schalk (1986) agreed with Hunn’s (1981) concern that previous calculations of salmon use, in particular Hewes’, did not account for wastage, caloric loss during migration, and other uses. But Schalk (1981:17) thought that Hewes’ estimates were therefore *too low* rather than too high. Schalk (1981: 23-24, note 6) argued that Hunn misunderstood Hewes’ calculations. Disagreeing with Hunn in this one crucial point, Schalk *added* fish poundage where Hunn *subtracted* losses of food value in order to make up these food value decrements. Schalk assumed that people intensified salmon fishing in order to make up the nutritional loss instead of turning to other kinds of fish, game, or plants.
91. Schalk thereby recalculated Hewes’ (1973 [1947]) estimates for Plateau people. After adjusting for caloric loss and waste loss, his catch estimate for the Nez Perce is 2,584,000 pounds per year (Schalk 1986: 19), or about 516.8 pounds of salmon per person per year. This figure is remarkably close to Walker’s (1967) high estimate and, especially, Marshall’s (1977) estimate.
92. Clearly these estimates and the issues surrounding them are problem-laden. Whether Hewes’, Walker’s, Marshall’s, Hunn’s, or Schalk’s estimates are used, it is clear that the amount of salmon taken was insufficient as a sole source of animal food and that any substantial drop in ‘fish’ production meant starvation and death for the Nez Perce. Also clear is the fact that Nez Perce could not live without salmon whether ‘fish’ were 13% or 50% of the diet.

93. Furthermore, starvation, illness, and death occur in the short-term. Discounting the importance of /cúuyem/ (native resident fish) because they were not a substantial portion of the yearly diet ignores that fact. They were the primary source, in some years probably the only source, of fresh, relatively fat protein during the very lean late winter and early spring months, which the Nez Perce called the 'starvation season.' Consuming them at other times enabled a few more pounds of 'fish' to be saved for consumption at later, more critical times.
94. For these material reasons /cúuyem/ were sometimes avidly sought after and caught by methods and devices similar to those used for salmon. Thus, an unknown but significant amount of eels and sturgeon were consumed by Nez Perces (Walker 1967; Marshall 1977). Also an unknown but significant amount of suckers, trout, and other fish were consumed by Nez Perces (Marshall 1977). Other aquatic resources, such as freshwater clams and crayfish, were consumed by Nez Perces as well (Walker 1967; Marshall 1977). Indeed, searching for all kinds of aquatic resources was an almost daily occurrence.
95. None of these estimates calculate the individual, social, or cultural values and functions of 'fish.' These symbolic dimensions were obviously crucial to Nez Perce being at all levels, so much so that the Nez Perce could not have existed *qua* Nez Perce without them. In examining these I find a strong consistency with the social and symbolic functions of 'fish' in today's Nez Perce society.
96. Nez Perce society, like most hunting and gathering societies, was organized in a manner that supported getting natural resources where they occurred, processing them into useful

items (cultural resources), distributing those cultural resources to those who needed them, and consuming them. Unlike industrial societies, however, there was little specialization of labor except by age and gender. Everyone engaged in this process almost without regard to ability. Children were expected to contribute even as they were learning about the process; old people were expected to share whatever they could, most vitally their lifetime experience and knowledge. Men were expected to fish, hunt, and so on, while women worked to convert those raw resources into cultural ones. A person knew who had obtained the natural resource, who had processed it, and who had given it. Thus there was no “alienation”¹³ from either the natural or cultural or human resource characteristic in Nez Perce society; everything was invested with multiple meanings.

The Nature of Groups Engaged in Producing, Distributing, and Consuming Fish

97. These activities are accomplished through task groups, groups of people who: 1) locate natural resources, such as salmon, and convert them into raw resources; 2) transport these resources to camps and villages; and 3) convert these raw resources into cultural resources. The functions of these groups are multidimensional; they are not merely economic groups of otherwise unrelated persons creating a product for sale to some stranger.
98. They are kin groups living on the ultimate caring ancestor (“the Earth”) whose other children (fish, animals, birds, plants, and so forth) voluntarily sacrifice themselves to

¹³ “Alienation” refers to the situation in which a product or good has no intrinsic value to the maker or distributor, only to the consumer. In other words, the product has no worth or meaning except in terms of what it will bring “on the open market.” In traditional Nez Perce society, on the other hand, there was little, if any alienation.

their brothers and sisters (the humans) so that their human kin will live. And just as the 'the Earth's' other children give of themselves to their human kin, humans must sacrifice through sharing with their kinsfolk and return the gift of life to those who died for them through rituals. There is no waiting to do these things, they must be done as soon as possible. Otherwise the 'fish' will spoil and one's relatives (human and non-human) will be angry at the waste of life and no longer offer the gift of life to the spoiler.

99. A material perspective shows the major importance of 'fish' and water to Nez Perces. Task groups of males, and sometimes females, regularly checked streams ('usual and accustomed places') near their winter villages and camps for all kinds of 'fish' that were captured when available for other task groups to process. Task groups also transported salmon to 'camps' or 'villages' at 'usual and accustomed' places that were always located near a suitable source of water. In 'camps' and 'villages' at usual and accustomed places, females, and sometimes males, processed 'fish' for later use (Marshall 1977; Spinden 1908). At 'villages,' processed fish were stored for use when natural resources were not available in sufficient amounts to sustain the population (Marshall 1977; Spinden 1908; Walker 1967, 1968). In other words, 'fish' were the manifest *raison d'etre* for many groups.
100. The spatial distribution, density, and size of settlements and the Nez Perces' population reflected the distribution, density, and size of the 'fish' runs. All but one of the winter villages were located at access points to large numbers of salmon (Schwede 1966, 1970) because people necessarily lived in proximity to sources of large numbers of 'fish', especially salmon, and sources of water (Marshall 1977; Schwede 1966, 1970).

101. Fish were not the only water-related material resource. Plants living in water that were used by Nez Perces include the following (Marshall 1977): 1) /qéemu/ -- Indian hemp-- which was the primary source of fiber for making, among other things, bags, cordage, bow-strings, dip nets, set-nets; and 2) /tok'ó/ -- bulrushes and cattails -- were used to make, among other things, mats, housing, and burial shrouds.
102. Virtually all social and cultural relations among 'relatives' and friends, between leaders and followers, and with allies were patterned in relation to 'fish' production because 'fish' were an essential cultural symbol used to sanction behavior (Marshall 1977). In the following paragraphs some social and cultural dimensions of 'fish' production, distribution, and consumption are briefly discussed.
103. Natural resources, i.e., land, water, fish, game, plants, etc., not reduced to possession by a person or persons were sacred and inalienable (Marshall 1977; Slickpoo 1973, 1989; Whalen 1971). However, once natural resources were reduced to possession, i.e., processed into cultural resources, they were subject to all kinds of economic exchanges. These exchanges were as 'gifts' to one's relatives and friends (reciprocal exchange), as 'feasts,' helping out one's followers, or creating allies (redistributive exchange), or in bargaining for another item or cash (market exchange) (Marshall 1977).
104. The common production and/or consumption of 'fish' marked kinship associations and maintained descent groups (Marshall 1977). Marriages were arranged among 'families' to provide for direct access to fisheries and/or indirect access through gifts, redistribution, or trade of the cultural product 'fish' (Marshall 1977).

105. Gender and age identities and roles were marked by different kinds of associations with 'fish' (Marshall 1977). Generally speaking, men, through fishing, converted a natural resource into a raw resource, which women then processed into a cultural resource. Learning these processes and the limited physical capability for high productivity defined childhood. Expertness and high productivity at these tasks marked full adulthood. Subsequent declines in physical capability for high productivity, but great knowledge about the many dimensions of the process, distinguished elders.
106. One of two ways to become a chief at the village level (/miiohatmíiohat/) or band level (/miiyóohat/) was through the redistribution of resources or providing access to resources, including fish, to followers (Marshall 1977; Walker 1968: 16-17).
107. Leaders known as /lewteqenewee/, or fishing leaders, achieved this status as a result of their ability to organize, construct, and appropriately distribute the product of communal fishing activities (Marshall 1977). For example, the /lewteqenewee/ at /timímap/, a village near the mouth of the North Fork of the Clearwater River, was very influential. At the very location of Dworshak Dam was the best place for one of the area's most productive fishing weirs. The /lewteqenewee/ there watched the river fall to a level at which it was possible to build the weir. He organized groups to get the materials and construct it. He determined who fished there for how long and when. He also distributed fish from the weir to needy people. He had to have, according to one of my consultants, a good enough memory to recall when and how much fish every individual and family at the site had received and make sure that was consistent with their contribution to the weir.

Some Spiritual Concepts Related to 'Fish' and Water

108. Religious concepts were also related to 'fish' and water. They were part of the sacred nature of the world and in particular the Nez Perce homeland. Nez Perce religious beliefs included animism, i.e., the belief that natural objects, natural phenomena, and the universe itself (the land) possess souls and/or consciousness (Marshall 1977; Walker 1988; Whalen 1971). Indeed, the land, too, was a kind of relative. General O. O. Howard reported that Chief Joseph stated, "The earth was his mother. He was made of the earth and grew up on its bosom. The earth, as his mother and nurse, was sacred to his affections, too sacred to be valued by or sold for silver and gold. He could not consent to sever his affections from the land that bore him. He asked nothing of the President. He was able to take care of himself." (Quoted in Josephy, 1965: 487-488.) Moreover, the spirits as well as the bodies of one's ancestors become part of the land.
109. 'Fish' frequently figure in the arts of Nez Percés, especially in oral literature (Aoki 1979; Aoki and Walker 1989; Marshall; Landeen in press; Walker 1994; Slickpoo 1972; Phinney 1969. See Exhibit 4).
110. A variety of other water-related resources were also significant to Nez Percés. Animals such as /kuucpúu/ (mink), /qiláasx/ (otter), and /táxcpol/ (beaver) were both spiritual beings and provided skins for decorative and other purposes.
111. Spirits and the places they inhabit were an essential part of the sacred dimensions of ceremonial and daily Nez Perce life (Coale 1958; Marshall 1977; Ray 1939: 68-122; Walker 1967, 1968, 1988). This complex of belief and associated ceremonies distinguishes the Plateau culture area from all others (Ray 1939). All Nez Percés

depended in part on some individuals who had special relations with spiritual beings. Some of these beings controlled the availability of various resources, among these resources were 'fish.' The spiritual beings most commonly associated with this "power" relating to 'fish' lived in the water. Other spirits, with other kinds of power, also lived in the water; for example, eels /héesu/, northern pikeminnow (squawfish) /qiiyex/, and crayfish /ti'ila/.

'Fish' and Water in Relations with the United States

112. Relations between the Nez Perce Tribe and the United States have been dominated by concerns over access to fundamental material resources and key cultural symbols sufficient for the Tribe's economic, social and cultural life, including 'fish' and water. Each treaty and agreement, as well as the minutes of negotiations, reflects these concerns.
113. Each party's understanding of the provisions of various treaties and agreements depended on cultural, linguistic, and social factors. In other words, the Nez Percés most likely did not understand the treaties in the same way as the representatives of the U.S. government's executive branch (including the President), the Senate, or courts. Indeed, hidden cultural and linguistic factors, such as fossilization, continue to cause misunderstanding between speakers of Standard American English and Nez Perce English dialects and speakers of English as a second language, even though they seem to speak the same language (e.g., Joans 1984).
114. The idea of selling, or alienating, fish and water was not directly expressed in the lexicon of Nez Perce language. The current Nez Perce language word for "to sell" is /'itam'ayaa/, but it is the same word used for "to exchange" or "to trade." The latter terms indicate that

for Nez Perces, an on-going interest between the persons involved in /'itam'ayaa/. Such an on-going interest would have been part of Nez Perces understanding of the treaties. Furthermore, as discussed in paragraph 103 above, fish and water were not subject to exchanges of any kind until they were in the possession of a person.

115. The alienation of fundamental “resources” was not part of Nez Perce culture. After all, these “resources” were life, the Creator’s gift to them *via* the original Beings. It is extremely unlikely that tribal members, including the leadership, would have fully grasped the idea of total alienation of resources and access to resources in the 1850's. It is indeed unlikely that the very idea crossed many Nez Perces minds. From their perspective they were the “senior generation.” The passage of rights to share ‘the Earth’ passed from ‘the Creator’ to the original Beings, to Nez Perces. The new comers, in this view, were juniors with whom the Nez Perces were willing to share part of their homeland. And in that shared part the Nez Perces probably thought they had the right to satisfy their needs before their juniors.
116. Thus, the 1855 Treaty Between the United States and the Nez Perce Indians was most likely viewed as a sharing of access to “the land” (which is not partible) and its bounty, not as an alienation of sections of it. The lack of extensive discussion of fish and water does not indicate lack of concern for ‘fish’ or water on the part of Nez Perces. Rather it indicates the fact that at least some Nez Perce did not realize that alienation was on the table. Nez Perce rights to them were not negotiable as far as the Nez Perce were concerned.

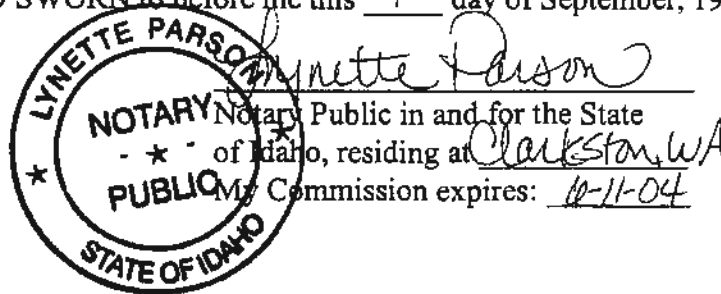
117. The 1863 Treaty between the United States and the Nez Perce Tribe of Indians also reserved fishing at 'usual and accustomed' places. It also indicated increasing realization as to the implications of treaties in terms of alienation and the difficulty of sharing essential resources with them. Free access to springs and fountains was apparently being denied through enclosures by non-Nez Percés.
118. The 1893 Agreement between the Nez Percés and the United States also reserved fishing at 'usual and accustomed' places and free access to springs and fountains. Even the Nez Perce representative most sympathetic to the agreement, James Reuben, pressed to continue Nez Perce ownership of 'usual and accustomed places' and access to springs and fountains.
119. In a 1911 memorial to Congress, several (12/13 out of 97 affidavits) of those mentioning hunting, fishing, or springs and fountains attested to their understanding that the rights of Nez Percés to them had never been ceded.
120. Attached hereto as Exhibit 5 is a true and correct copy of a 1967 report by Deward E. Walker, Jr., Ph.D., titled "Mutual Cross-Utilization of Economic Resources in the Plateau: An Example from Aboriginal Nez Perce Fishing Practices," one of the references I have listed in Exhibit 9 attached hereto.
121. Attached hereto as Exhibit 6 is a true and correct copy of a 1970 article by Madge L. Schwede, titled "The Relationship of Aboriginal Nez Perce Settlement Patterns to Physical Environment and to Generalized Distribution of Food Resources," one of the references I have listed in Exhibit 9 attached hereto.

122. Attached hereto as Exhibit 7 is a true and correct copy of a 1995 article by Robert Lee Sappington, *et al.*, titled "Alice Cunningham Fletcher's 'The Nez Perce Country'," one of the references I have listed in Exhibit 9 attached hereto.
123. Attached hereto as Exhibit 8 is a true and correct copy of a 1908 article by Herbert J. Spinden, titled "The Nez Perce Indians," one of the references I have listed in Exhibit 9 attached hereto.
124. Attached hereto as Exhibit 9 is a list of references upon which I have relied in the preparation of this affidavit.
125. Further your affiant sayeth naught.

Dated this 9 day of September, 1998

Alan G. Marshall
Alan G. Marshall

SUBSCRIBED AND SWORN to before me this 9th day of September, 1998.



NEZ PERCE SOCIAL GROUPS: AN
ECOLOGICAL INTERPRETATION

By

ALAN GOULD MARSHALL

A dissertation submitted in partial fulfillment of
the requirements for the degree of

DOCTOR OF PHILOSOPHY

WASHINGTON STATE UNIVERSITY
Department of Anthropology

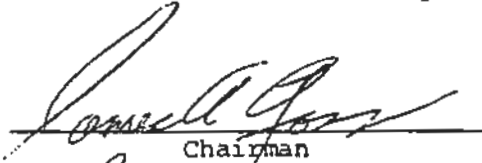
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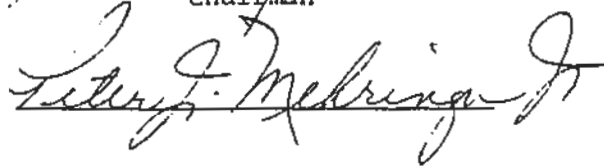
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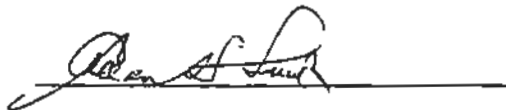
To the Faculty of Washington State University:

The members of the Committee appointed to
examine the dissertation of ALAN GOULD MARSHALL
find it satisfactory and recommend that it be accepted.


Chairman







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NEZ PERCE SOCIAL GROUPS: AN
ECOLOGICAL INTERPRETATION

ABSTRACT

by Alan Gould Marshall, Ph.D.
Washington State University, 1977

Chairman: James A. Goss

This dissertation describes prereservation Nez Perce social organization as a framework to surmount subsistence problems resulting from variations in resource availability. The environment in which the Nez Perce lived was highly varied in physiography, flora, and fauna. There are three physical subdivisions within the area of northeastern Oregon, southeastern Washington, and northern Idaho. Five of Merriam's life zones, ranging from Upper Sonoran through Hudsonian, occur in the area. Because of the rugged relief of the region, these life zones form relatively narrow bands, and were available for use by all groups. As the vegetational zonation suggests, local climates were also varied; resources however, were not strongly localized. The deep canyons of the Snake, Clearwater, Grande Ronde, and Salmon Rivers produced fish and spring plant resources. The Arid Transition (Timberless) zone was unique in the quantities of summer plant resources it produced. At higher elevations, late summer plant resources, primarily berries, and large game mammals were harvested. Because of the time it took for anadromous salmonids to reach their breeding grounds at the headwaters of streams, they too were available in fall. Because of the ruggedness of the country, resources were temporally, as well as spatially, separated.

Two basic kinds of Nez Perce social groups are distinguished: exploitative groups and consumption groups. Exploitative groups controlled access to resources through use and improvement of living sites and/or extraction locales. They were thus exploitively dependent on particular territories. In comparison to exploitative task groups, consumption groups were not localized. It was through sharing within consumption groups that the subsistence deficiencies of an exploitative group were supplied and surplus distributed. There were seven levels of such groupings: domestic groups, village factions, villages, intervillage factions, village combines, and regional groups. Kinship was the mechanism producing this pattern of dispersion. Since leadership of any consumption group was dependent on largesse, and since largesse was dependent on the exploitative success of a leader's exploitative unit, cyclic and secular variation in resource availability affected leadership and the size of any unit.

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CHAPTER 1

INTRODUCTION

The Nez Perce people have been thought of as a tribe since their first recorded contact with Euroamericans less than 200 years ago. But the notion of "tribe" is irrelevant to the Nez Perce social entities of the pre-reservation period. Tribal political organization often results from contact with encroaching cultures (Fried 1966, 1975). The appearance of Lewis and Clark in 1805 marked escalating economic, political, and military pressures from the United States government. The government imputed Nez Perce "chiefs" with the power to dispose of their peoples' land. The United States subverted the aboriginal political process through this political misconception, and through economic interference. Thus it gradually became politically and territorially dominant. The Nez Perce Tribe appeared by governmental fiat in 1877, when the United States forced important dissident Nez Perce groups from their homelands and confined the Nez Perce to their present reservation.

Until 1877 the Nez Percés were people speaking /numiputimt/--'the Nez Perce language (Appendix A).' During winter they occupied villages on the major streams of what is now northern Idaho, northeastern Oregon, and southeastern Washington. They considered about 27,000 square miles of this region their home (Fig. 1). Most moved to temporary camps in the region's uplands after snowmelt and returned to the villages in fall. Some regularly travelled throughout an area conservatively estimated at 230,000 square miles (Walker 1967b:1). The villages and somewhat larger, more amorphous, combines were the most inclusive sociopolitical entities.

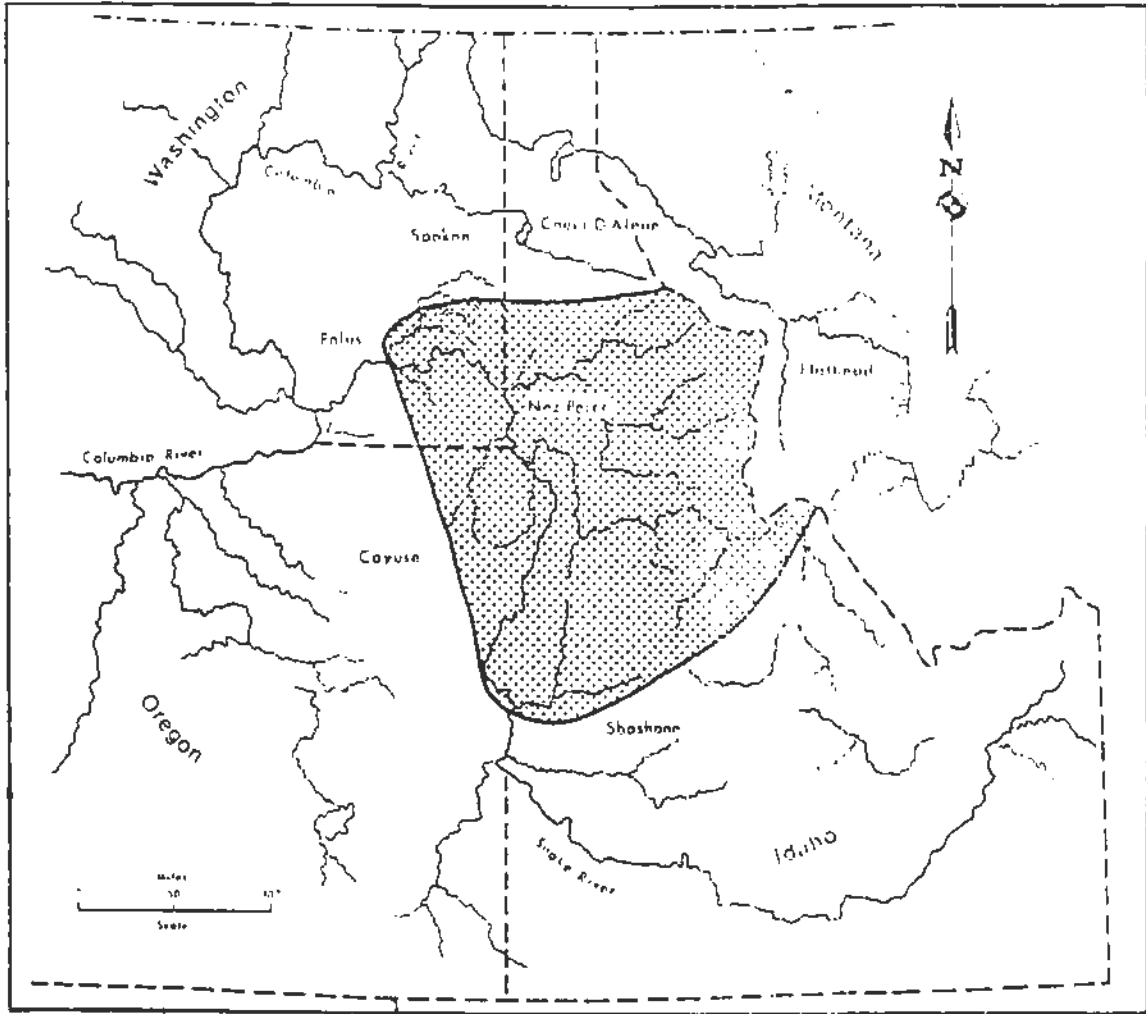


Fig. 1. Prereservation Nez Perce territory.

Plateau ethnographers have generally ignored the Nez Perce. Most work centered on Salishan speaking groups whose winter villages were on the Upper Columbia River and its tributaries or the Chinookan speaking Wasco-Wishram (e.g. Ray 1932; Spier and Sapir 1930; Teit 1928, 1930). On the other hand, people who spoke Sahaptian languages have been poorly studied. This lack of interest initially resulted from the belief that Sahaptian speakers were atypical of the Plateau culture area (Gunther 1950; Ray 1939).

The Nez Percés were sporadically studied despite their peripheral place in the Plateau culture area. Spinden (1908) wrote a brief description which focused on material culture. He concluded that the Nez Percés were a pale reflection of the "vigorous" Plains groups. Other work included Curtis' (1911) excellent, too brief account. Besides these, only short notes dealt with Nez Perce culture. After World War II historians documented Nez Perce-Euroamerican contacts (e.g. Brown 1971; Haines 1955; Josephy 1971). The main interest of these historians was the 1877 Nez Perce War.

Little ethnographic work has been done since the 1930s. Anastasio (1955, 1972), however, used previously published material to deal with the area. His first work asserted that the entire region south of the Canadian-United States border was a single social system. His later work demonstrated that at least some distinctions between individual "societies" on the Plateau were related to environmental difference. Further, he suggested that these differences, in part, accounted for the interdependence of the groups. In this dissertation I support this assertion by showing that the integration of the Nez Perce groups was based on similar ecological relationships. But I shall also show that Anastasio's conception of Plateau social groups was too inflexible: rather than being joined as Nez Perce, Yakima, or whatever,

individuals of various groups were allied as kinsfolk and friends. The description of man-land relationships adds much needed detail to his thesis.

The most recent work with the Nez Perce has been conducted by Walker (1966, 1967a, 1967b, 1967c, 1968, 1969, 1970, n.d.). His work on social change has dealt primarily with postreservation changes in social groups and religious beliefs. However, Walker (1967b) described the prereservation Nez Perce salmon fishery. He was especially interested in Nez Perce rights in fisheries outside Nez Perce territory. But, although he outlined several important concepts and included some "aboriginal" material, his work lacks detail of the socio-political entities.

Unlike previous workers I focus on Nez Perce social organization. There are obvious limitations to such a description, yet adequate and important information remains. One reason for this is the peripheral location of the area. A more important reason is that acculturation is not a one-to-one replacement of old behaviors with new ones (McFee 1968). Many Nez Perces are only one to three generations removed from the prereservation population, and strongly identify themselves as Nez Perce through the ideals and knowledge inculcated in them by their parents, grandparents, and great-grandparents. One of the most poignant aspects of my research is the fact that even though many know how they should act ideally, they cannot, through lack of practical knowledge and circumstance. As one person asked, "Will the old people come back? Will they help us?" They are caught in a bitter conflict. The upshot is transformation: adaptation of old forms to new situations rather than their replacement.

An adequate reconstruction of Nez Perce social organization can be made by comparing these old forms with their prereservation setting. Much of the setting cannot be regained, of course. However, the relationships

people developed to cope with limiting resources can be reconstructed. An ecological description of prereservation groups is possible through comparing the environmental setting with, (1) social behaviors still evident in Nez Perce life, (2) the social knowledge of older tribal members, and (3) historical data.

Ecology is the study of the structure and function of nature (Odum 1975:1-12). Several approaches can be taken. Among them is the study of a population in a discrete area. This is a sound approach to understanding early Nez Perce groups because they exploited a variety of ecosystems, such as streams, steppes, and montane forests. Consequently, I shall describe Nez Perce social organization as an adaptive system.

Some anthropologists (Cook 1973) have objected to using the ecological approach because it is much the same as economic anthropology. The objection is based on a misconception of what ecology is. Economic anthropologists study the distribution of goods and services within a society and the influence of the economic domain upon actions in other societal domains. Ecologists emphasize another aspect of the same phenomenon. They study the circumstantial limits on energy flow between a population and its biophysical environment. Insofar as these differences in emphasis are important the distinction between ecological and economic anthropology should be maintained.

The ecological approach in anthropology has also been criticized because it is a type of functional analysis. Two assumptions sometimes made by functionalists are incorrectly attributed to ecological anthropologists. One is that a society is in stable equilibrium with its environment; an associated idea is that social organizational elements do not conflict. According to Cancian (1960) and Collins (1965) neither assumption is necessary in functional studies. In fact, the first is incompatible with

functionalism. Societies change to "maintain themselves" despite changing conditions (Alland 1973; Cancian 1960). This paradox pinpoints an important distinction; it is not a society which is being kept "alive," it is a population of individuals. A society, then, reflects its environment and is necessarily ephemeral.

Orans (1975) rephrased another persistent criticism. Why should one adaptive behavior or constellation of behaviors occur instead of another? More broadly, why should a society persist if other, more adaptive systems are possible? The question is based partly on logical grounds, but seems somewhat irrelevant. It is equivalent to asking why there were so few placental mammals in Australia. There is also a deeper question, involving the determination of carrying capacity.

Many anthropologists have thought of carrying capacity as the highest possible population given available energy. Ecologists, however, define it as the maximum sustainable density in an area (Odum 1975:124). Energy is not the only limiting factor in ecological relationships, a fact long recognized in ecology (Allee, et al. 1949; Leopold 1933). Other limiting factors, persistently ignored by ecological anthropologists, lie in the competitive situation and social organization (Odum 1975:129). "Poorly" adapted populations or societies may persist simply because there are no competitors which are more fit.

Although Orans (1975) and Vayda and McCay (1975) indicate that showing actual function for a behavior is enough to validate such studies, Alland (1975) believes that the problem is insoluble with concepts developed in animal ecology. Thus he proposes "structural ecology." Structural ecology avoids Orans' criticisms because it assumes that people adapt to what they

perceive. Hence, no group will ever be perfectly adapted to its environment and human populations will never reach the energetic carrying capacity of their environment.

Structural ecology is important to understanding man-environment relationships (see Levi-Strauss 1973). Nez Perce adaptation depended partly on their environmental paradigms (Marshall 1973), and the effective environment discussed in Chapter 2 is perceived environment. "Blindness" to solutions of ecological problems produced by structured environmental perceptions is a partial answer. Still, other animals have the same limitation, so ecological principles developed for them apply to humans. There is more to adaptation than perception.

Behaviors may have unperceived ecological effects. For example, Lewis and Clark (Thwaites 1905 IV) report a Nez Perce firing a tree in the spring of 1806 during their first attempt to recross the Rocky Mountains. Their guide's reason for this action was to let people know the party was there. Leiberg (1900) reports a Nez Perce informant giving the same reason for the origin of extensive burns in the Bitterroot Forest Reserve. My informants agree that the montane areas were regularly burned by Nez Percés, but they say it was done to increase game populations in the area through increasing their winter food supply. Whatever the reason, game populations undoubtedly increased in response to increased winter food supplies. But no one mentioned the fact that some important Nez Perce plant foods, particularly serviceberries and huckleberries, also increased in abundance and productivity as a result of fire. This was an important effect apparently not recognized by Nez Percés.

Society and culture are important because they are "mechanisms" which keep a population at a given level and composition in a given environment.

As these factors change, the character of the others change. Societies are taken as the dependent variable in ecological anthropology because simple systems are more volatile than complex ones. Human populations and organizations are far less complex than the abiotic and biotic environment: there is less energy and material flow, smaller numbers of individuals, less kinds of individuals, and far fewer energy pathways and alternate pathways. Hence human ecologists are concerned primarily with variation in human populations and social organizations. Variations in these constitute adaptations to relatively minor changes in a vastly larger, more complex and stable system. Thus, there are four broad analytic factors in human ecology: (1) population, (2) social organization, (3) biotic environment, and (4) abiotic environment.

Yet another related criticism is that ecological anthropology does not explain anything (Orans 1975). If Orans means that ecological anthropology has not clarified man-land relationships, then he is incorrect. A variety of works (e.g. Evans-Pritchard 1940; Geertz 1971; Netting 1968; Rappaport 1968; Richards 1939; Watanabe 1972) have done so. If, on the other hand, he means that the ecological approach has not proved deterministic sequences, then he is correct. Some authors (Chaney 1973; Service 1968) deny the existence of prime movers in social systems. If social systems are in fact indeterminant, it is impossible to explain them in purely linear causal terms. For this reason ecological anthropologists show how social systems have functioned (Vayda and McCay 1975:295).

Many of these objections relate to a problem recognized 30 years ago by Malinowski (1939) and rephrased by Alland (1975), and Vayda and McCay (1975). Natural selection haphazardly acts on individuals and the social result is indeterminant. Cultures and societies do not adapt, people do. The idea of the superorganic *sui generis* has thus been abandoned by many

"new ecologists" (Alland 1975:63). Society then appears as regularized relationships between individuals which produce increased rates of survival.

The unit being studied is a population which has certain characteristics because of compensating variations in environment and society. The specific problem I consider in this dissertation is how Nez Perce kinship behaviors compensate for recurrent variation in the biotic environment. There are four basic questions about any biological system such as the Nez Perce population: (1) what is its biophysical setting? (2) what are its energy sources within that setting? (3) what are the energy pathways within the system? and (4) what modifies energy flows within the system?

Several kinds of data are necessary to answer the first two questions. First, physical gradients, such as physiography and climate, may be critical. Second, the flora should be known and treated as communities. These two factors are of especial interest since all other life in the area is supported by the energy made available through their interaction. Third, the particular energy sources of the population must be discovered, and their variation in time and space outlined. This shows the maximum and minimum amounts of energy available during a given period of time, and indicates some constraints to which a population must adapt. These data define the independent variable in this dissertation.

The physical setting today is much the same as it was 100-150 years ago. Although vegetation has been altered by agriculture, native plant habitat types are known (Daubenmire and Daubenmire 1968; Daubenmire 1970). Differences in vegetation between the present and 100-150 years ago are probably insignificant in terms of my description. Possible differences in animal populations are discussed in Chapter 2.

Basic information for adequately describing prereservation Nez Perce food resources is available from historical sources and older members of the Nez Perce Tribe. Estimates of native food use in 1900-1910 run as high as 75-80% for at least some families. Thus, older members of the tribe, as well as many middle-aged ones, know at least the more important food plants. Almost all tribal members know the mammals and fish once used. Knowledge about where these resources are now available is also current, as are the major locations in the 1850s. Given this kind of information, the energy sources of the prereservation Nez Perce population can be adequately mapped. Because many of these resources are still in the area, the cycles of their availability are also describable and some rates of energy intake can be estimated.

The second pair of questions concern the dependent variable and are answered in terms of population characteristics. Basic characteristics of any population include (1) dispersion, or the spatial distribution of individuals in groups, and (2) dispersal, that is immigration and emigration between groups. Dispersion is especially important in understanding the relationships of a population to its environment since members of a population tend to aggregate at places where usable resources are most common (Wynne-Edwards 1962). Mechanisms of dispersal are thus critical to any population's adaptation to its environment because they shift individuals from group to group. In the Nez Perce population, dispersion is describable in terms of residence, and dispersal as kinship.

These two points are theoretically interesting. Leach (1961) fueled a long-standing argument in anthropology: the extent of environmental influence on culture. Leach argued that kinship in the Sinhalese village of Pul Eliya was an epiphenomenon of ecological and economic relationships.

Sharp rebuttals, all inconclusive, have been offered by Cohn (1962), Oliver (1962), and Fortes (1969:220-228). A basic question asked by critics of Leach's position is: if kinship systems are adaptive, then why do so few systems occur in so many different environments and societies? The answer seems to lie in the different behavioral complexes "directed" by those systems, rather than in the system itself.

This dissertation is a description of two aspects of Nez Perce ecology: dispersal and dispersion. A description of these facets of Nez Perce life is a partial description of the structure and function of Nez Perce society. As Aberle and others (1950) have pointed out, the same structures may have different functions and effects on the levels of individual biology, psychology, society, and ecosystem. The /numípu/ individually adapted to variation in their energy sources through alternative behaviors and constellations of behaviors learned from their ancestors and invented by themselves in unique situations. These behaviors, in combination with others, constituted a discrete recognizable functional system, Nez Perce society, which maintained a human population. In Chapter 2 I will extensively describe the Nez Perce environment and major resources. Using basic information about Nez Perce kinship in Chapter 3, I will show how dispersal of the Nez Perce population was accomplished. In Chapter 4 I describe how dispersion was keyed to energy sources. The implications of this study for understanding previous work on the Plateau culture area will be discussed in Chapter 5.

CHAPTER 2

THE NEZ PERCE ENVIRONMENT

Aboriginal Nez Perce territory included approximately 27,000 square miles of north-central Idaho, southeastern Washington, and northeastern Oregon (Walker 1967b:1). The area is composed of plateaus and high mountains, both deeply cut by many canyons. The northwestern and central portions of this region are loess-covered plateaus. The Blue Mountains lie southwest of these plateaus, to the east are the Northern Rocky Mountains. The mountains are dissected by many streams which fall precipitously into the deeply entrenched, meandering secondary rivers--the Clearwater, Salmon, Imnaha, and Grande Ronde. These flow into the Snake River, the area's primary stream, which flows due northward into Nez Perce territory through Hell's Canyon. It bends sharply westward at Lewiston, Idaho and leaves Nez Perce country near its confluence with the Palouse river in southeastern Washington (Fig. 2).

The physiographic heterogeneity of the area results from the junction of three geological provinces and a temperate climate. Diverse plant and animal communities reflect this complexity. The area has five life zones: Upper Sonoran; Arid Transition, Timberless; Arid Transition, Timbered; Canadian; and Hudsonian (St. John 1963:viii-xi). Each vegetational zone supports resident animal populations, and transient populations of large browsing animals. The streams have important resident and migrant populations of fish, including enormous numbers of anadromous fish.

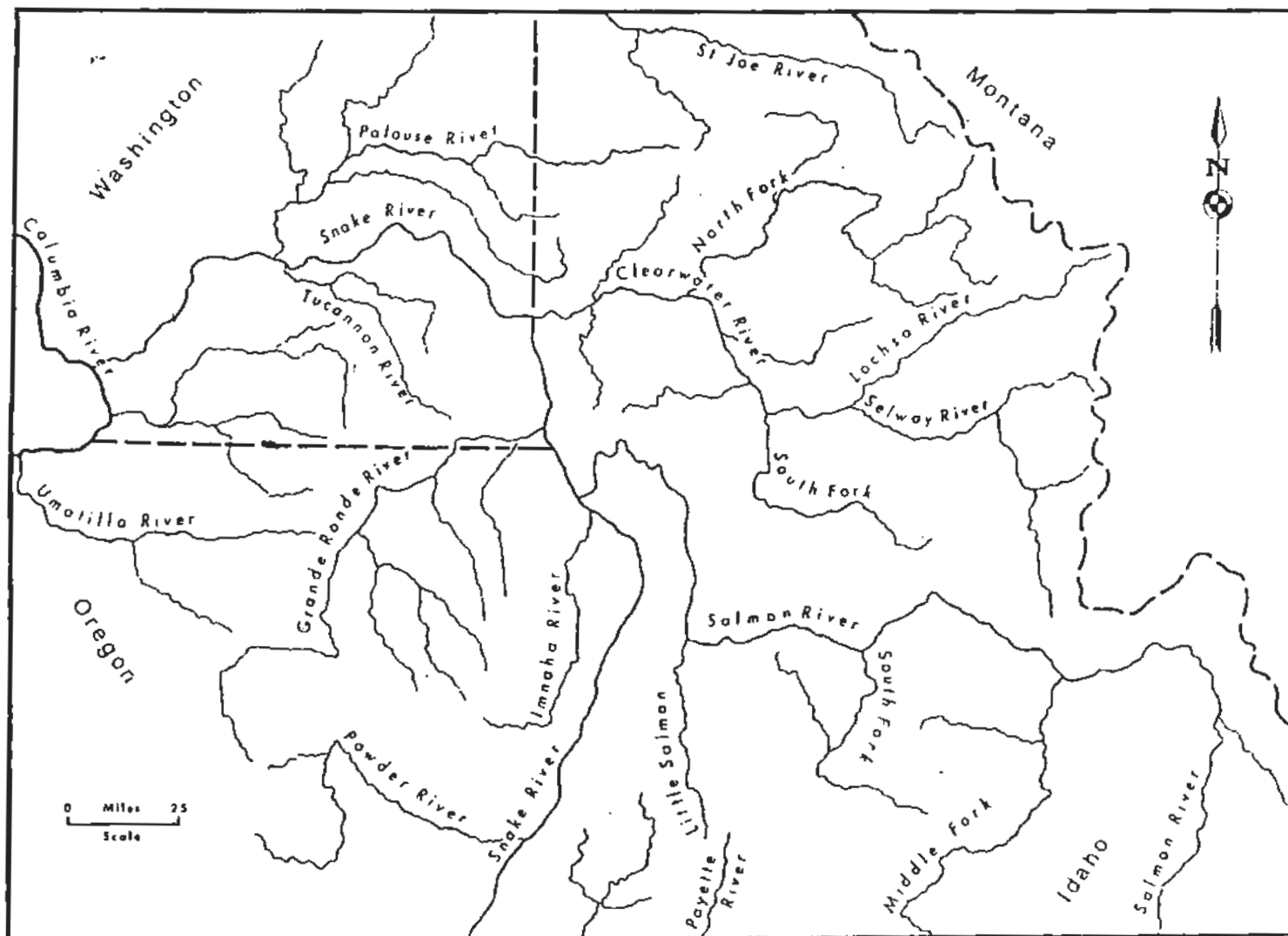


Fig. 2. Major drainages of Nez Perce territory.

The Nez Perce Indians subsisted on various resources found in this region. Resource seasonality greatly influenced their social organization. The people travelled to locations where resources were periodically abundant. As the seasons progressed from spring through fall, this venture took them into the high mountains. In late autumn they returned to the relatively warm canyon bottoms where the Nez Perce subsisted on stored foods during winter.

In this chapter I will describe the environments in Nez Perce territory. First is a description of the general environment. Second is a discussion of the Nez Perce's effective environment: the environmental elements used by Nez Perces for subsistence. In addition, the distribution of resources in time and space will be outlined. Thus, the times and places that a person must visit in order to exploit a resource will be determined. There were obvious conflicts and "unpredictable" variations in the basic schedule which often required adjustment of the yearly round. These problems were partially solved through technology, but solutions were inherent in the social organization as well.

General Environment

The environment was important because it constrained the Nez Percés' effective environment. The most basic limit is physiography. This is the partial product of the geology and climate. Diverse plant communities developed in response to these physical factors. They are significant in that (1) they are sensitive indicators of local physiographic and climatic conditions, and (2) they modify local environments. Each community provided food directly or the conditions, appropriate or inappropriate, for animals and plants useful to the Nez Perce.

Physical Setting

The physical setting is complex, partly as a result of the juncture of three geological provinces: The Columbia Plateau, the Blue Mountains, and the Northern Rocky Mountains (Fig. 3). Within this area elevations range from 500 to over 10,000 feet. Both precipitation and temperature vary with elevation, which has important affects on local climates.

Geological Provinces

The Columbia Plateau Province, unlike the other two, is composed of loess covered basalt strata. Both montane provinces result from the emplacement of two related batholiths which disturbed the bordering Columbia River Basalts. The major streams of the area antedate the latest orogeny and entrenched themselves as the surrounding country rose (McKee 1972).

The Columbia Plateau Province occurs in eastern Washington, northern Oregon, and the immediately adjacent portions of Idaho (Fig. 3). It is distinguished by massive basalt strata. These dip gently towards Pasco, Washington, because of the plateau's subsidence and the uplift of surrounding mountains. Eruptions of highly fluid basalt lava occurred throughout the Miocene and overlapped the lower slopes of the subdued highlands rimming the area. Subsequent orogeny produced the basalt foothills of both mountain provinces. After these flows, loess carpeted this province except for an area in northeastern Oregon.

The Blue Mountains Province lies between the Columbia Plateau and the Basin and Range Province of southern Oregon. These mountains are a large asymmetric fold resulting from two successive uplifts during the Lower and Upper Mesozoic. The anticline strikes east and west along the Washington-Oregon border. Its northern limb rises steeply from the Columbia Plateau, but the southern side slopes gently southward. The eastern end, comprised of

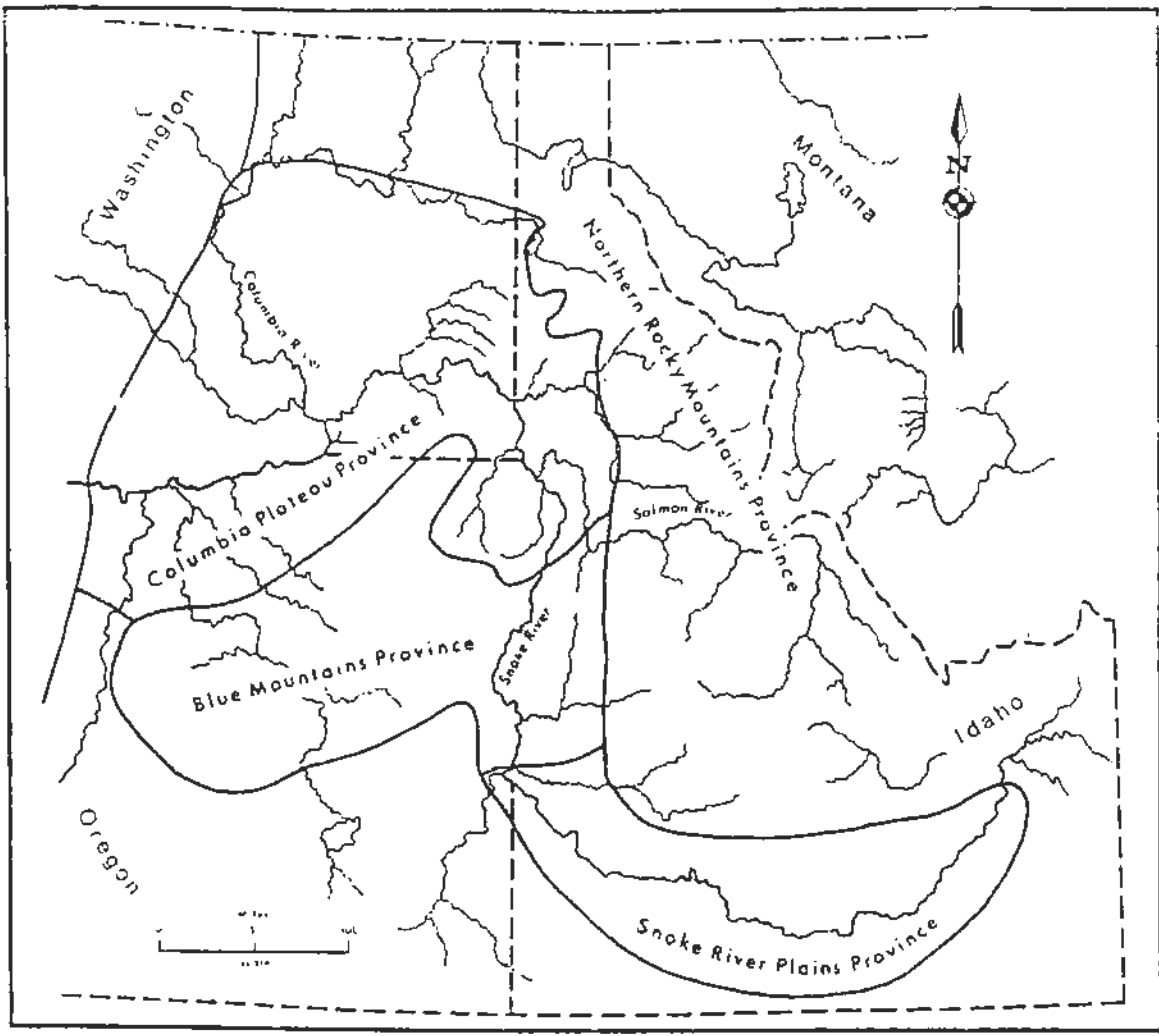


Fig. 3. Geological provinces of the Nez Perce region (adapted from McKee 1973).

the Wallowa and Seven Devils Mountains, lies within Nez Perce territory and butts against the Rockies. Cutting across this large anticline are other folds and faults. Volcanism occurred twice during Eocene and Miocene times, when Columbia River Basalts were extruded. The high peaks of the Blue Mountains were glaciated during the Pleistocene.

In Nez Perce territory, the North Rocky Mountains Province is dominated by the Idaho Batholith, which is about 250 miles long and 200 miles wide. This forms the Bitterroot Range. The emplacement of this enormous mass of granite and granite-like rock altered the Pre-cambrian marine and igneous rocks which formed a gently rolling upland. Because of this intrusion, the upland was folded, broken, and thrust upwards. Subsequently, erosion became the dominant geologic process. Orogeny recurred in the Tertiary, again producing high mountains. Then lava from the Columbia Plateau flooded the mountains' slopes and solidified. As the mountains continued to rise, the layers of basalt were tilted, folded, and broken. Alpine glaciation during the Pleistocene partially exposed the Idaho Batholith.

The physiography of Nez Perce territory bears out the history of these provinces. The Wallowa, Seven Devils, and Bitterroot Mountains stand out of the surrounding basalt plains and foothills as light colored granite peaks. Mountain streams plunge into the entrenched secondary streams which have eroded the cracks caused by warping and faulting of the country rock. These secondary streams meander into the Snake River which, following an immense joint, turns westward at Lewiston, Idaho, and flows out of Nez Perce territory near its confluence with the Palouse River. Three physiographic zones can be distinguished: (1) canyon, (2) plateau, and (3) montane.

Climate

The climate of the area is also highly varied. Maritime air masses, carried into the region by the prevailing westerly winds, produce a regime which is both milder and wetter than the theoretical climate based on latitude and altitude (Church 1942:105-106; USDA 1941:839, 1085, 1130).

Topography is the most important control of temperature and precipitation within the area. Thus, some locales have semi-desert climates, while alpine conditions prevail in others. The covariation of temperature with altitude especially impressed Lewis and Clark. While near Kamiah in the late spring of 1806, Lewis wrote:

about noon the sun shines with intense heat in the bottoms of the river. the air on the top of the river hills or high plain forms a distinct climate, the air is much colder, and the vegetation is not as forward by at least 15 or perhaps 20 days. the rains which fall on the river bottoms are snows on the plain. at the distance of fifteen miles from the river and on the Eastern border of this plain the Rocky Mountains commence and present us with winter at it's utmost extreme. the snow is yet many feet deep even near the base of these mountains; here we have summer, spring and winter within the short space of 15 or 20 miles [Thwaites 1905 V:39].

Semi-desert climates occur in the canyons of the Snake, Clearwater, Grande Ronde, Salmon, and Imnaha Rivers (Fig. 4; Table 1). Conditions become increasingly dry downstream, and annual precipitation differences between closely spaced locales may be great. Thus, Lapwai has 4 inches more precipitation per year than Lewiston (U.S. Weather Bureau 1953), even though the towns are only 11 river miles apart. There is some variation; precipitation at Orofino is greater than at upstream stations such as Kamiah and Kooskia (Fig. 5; Table 1). This reflects the elevation of the surrounding upland; the canyon rim just east of Orofino is 3100 feet above sea level, almost 1000 feet higher than the rim behind Kamiah and Kooskia.

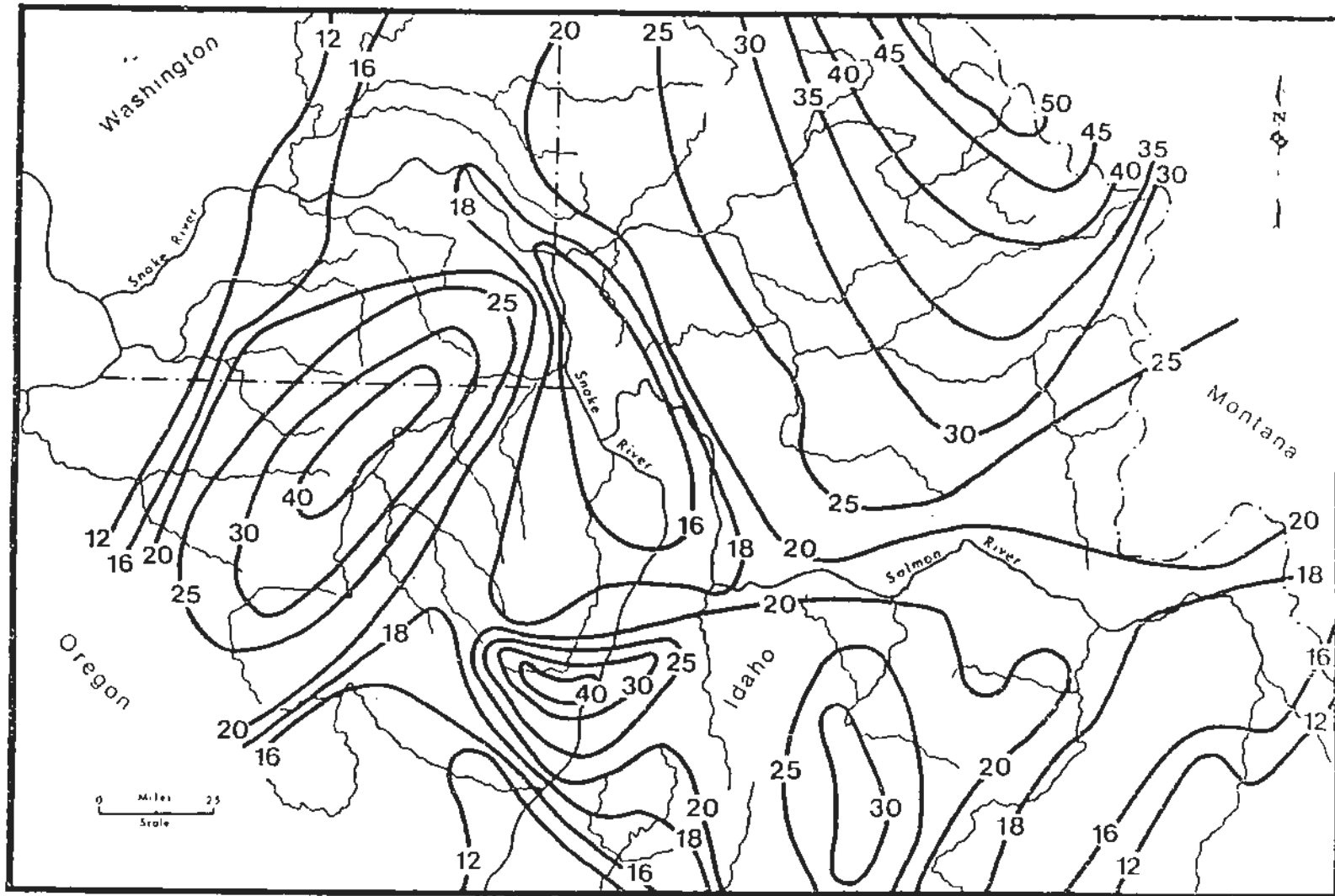


Fig. 4. Precipitation distribution in southeastern Washington, northern Idaho, and northeastern Oregon.

TABLE 1. CLIMATIC DATA FOR SOUTHEASTERN WASHINGTON,
NORTHERN IDAHO, AND NORTHEASTERN OREGON.

Physiographic Zone and State	Station	Jan. Avg. Temp. (°F.)	Jul. Avg. Temp. (°F.)	Avg. Ann. Precip.
Canyon Idaho	Lewiston	29.5	73.1	13.32
	Orofino	29.8	73.1	25.59
	Kamiah	....	....	21.71
	Kooskia	29.3	71.9	24.25
Plateau Washington Idaho Oregon	Lacrosse	29.3	70.2	14.33
	Colfax	28.9	66.7	20.59
	Moscow	28.0	67.2	21.93
	Cottonwood	26.4	65.9	21.53
	Union	29.1	66.4	15.62
	Wallowa	24.1	65.3	17.56
Montane Idaho	Deadwood Dam	16.8	60.4	32.14
	McCall	18.2	62.7	26.30
	Pierce R.S.	23.1	65.0	40.92

SOURCES: U.S. Weather Bureau. 1964. Decennial Census of United States Climate--Climatic Summary of the United States--Supplement for 1951-1961--Idaho. Climatology of the United States No. 86-8.

U.S. Weather Bureau. 1965. Decennial Census of United States Climate --Climatic Summary of the United States--Supplement for 1951-1960--Oregon. Climatology of the United States No. 86-81.

U.S. Weather Bureau. 1965. Decennial Census of United States Climate --Climatic Summary of the United States--Supplement for 1951-1960--Washington. Climatology of the United States No. 86-59.

NOTE: No climatic stations in canyon or montane physiographic zones exist in Nez Perce territory in Washington or Oregon.

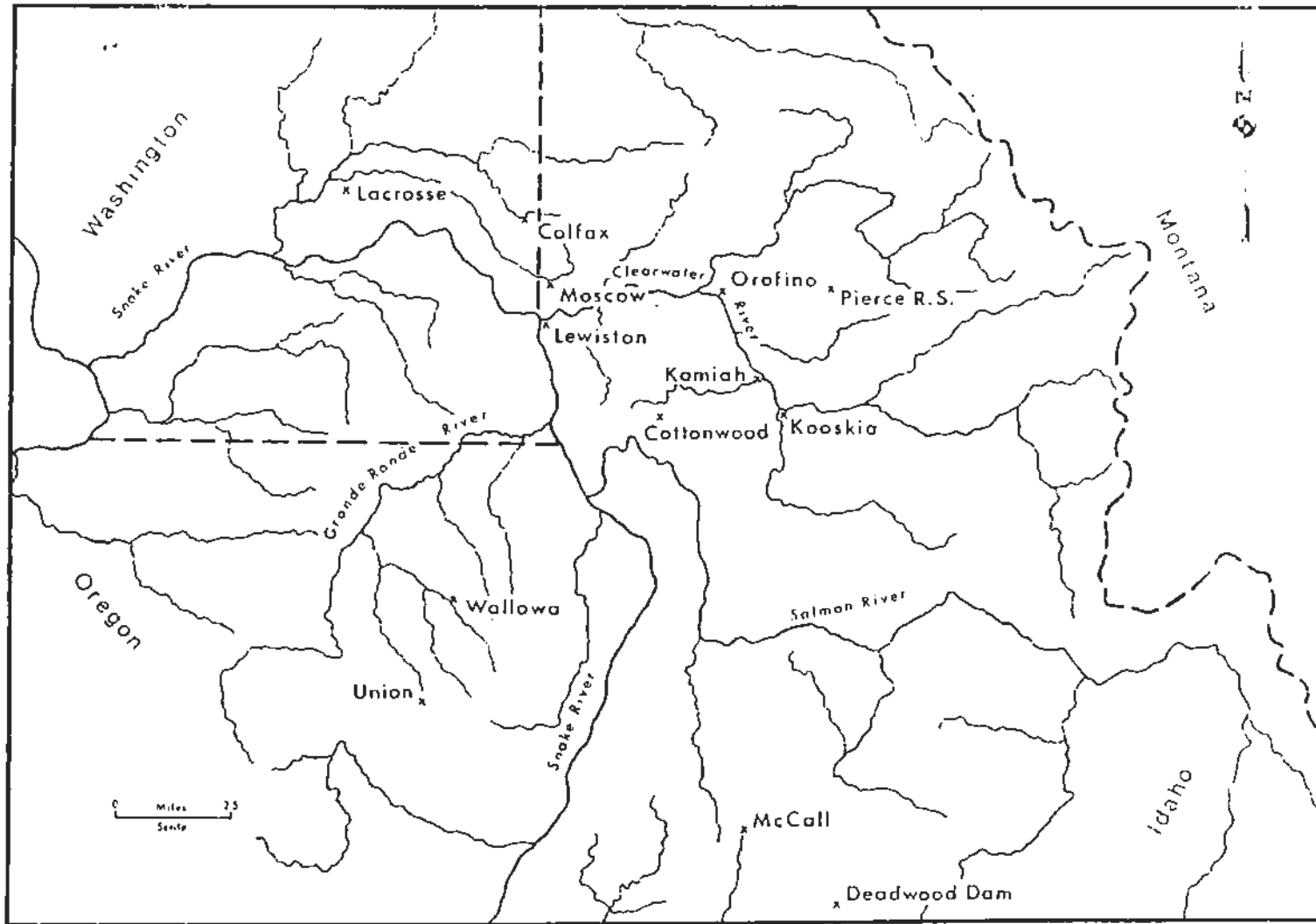


Fig. 5. Weather stations in former Nez Perce territory.

The plateaus get more precipitation than adjacent canyons on the same longitude (Fig. 4; Table 1). Colfax, a plateau station, and Lewiston, a canyon station, are about 25 air miles apart, the difference in average annual precipitation is 7 inches. On the other hand, Cottonwood, another plateau station, actually gets 2.72 inches less rain than Kooskia, which is in the Clearwater River canyon to the east of Cottonwood. Further, Kooskia gets almost 10 inches more precipitation than the driest, westernmost, upland station cited, Lacrosse, Washington. Thus canyons are drier than the plateaus on the same longitude.

On the plateaus precipitation increases from west to east (Fig. 4; Table 1). A difference of less than 1000 feet in elevation, as between Colfax and Moscow, produces a difference of 1.34 inches of precipitation. Pierce, which gets three times as much rain as Lacrosse, is surrounded by ridges 3800 feet higher than Lacrosse. The highest mountains east of Pierce on the Idaho-Montana border get over 50 inches of precipitation per year (Fig. 4). Topographic control of precipitation is evidenced by the isohyets shown in Figure 4, which clearly outline the mountains and the relatively low, flat plateaus. Precipitation, then, varies directly with altitude.

The plateau in northeastern Oregon is an apparent exception, because the Blue Mountains to the west produce a rainshadow. Thus the stations at Union and Wallowa all get less than 18 inches of precipitation per year (Figs. 4, 5; Table 1).

Local temperatures are strongly influenced by a variety of factors, such as aspect, slope, vegetation, surface color, and altitude. Nevertheless, temperature patterns match variation in precipitation. Coolest temperatures occur at the highest altitudes. July daily average temperatures in the 70s occur along the Snake River while records in the low 60s are typical of the

Blue Mountains and the high altitudes of the Rocky Mountains (Rice 1971; Sternes 1967). Canyons are warmer downstream. There are no exceptions to this rule at stations where data are available (Kooskia, Orofino, Lewiston; Table 1). Furthermore, all canyon stations are hotter than any upland station except Lacrosse.

These climatic patterns strongly affect regional vegetation. Because most precipitation falls in the winter months, effective precipitation is high. Thus, vegetation is richer than it would be if most fell in the hottest months. The increasingly cooler, wetter regimes from west to east are reflected by vegetation belts. Plant communities in the east are more mesic than those in the west. Local variations, such as in the plateau zone of northeastern Oregon also influence vegetation.

Vegetation

Plant habitat types in Nez Perce Territory range from xeric steppe to mesic subalpine forest. These form a complex mosaic. The vegetation of the Nez Perce region exhibits two physiognomic types: steppe and forest. The boundary between these two types, though obvious, is not the most important in terms of Nez Perce resources. Instead other temperature-moisture relationships limit the distribution of significant plant communities. In this section the steppe and forest communities are described following Daubenmire (1970) and Daubenmire and Daubenmire (1968). I discuss only the general classification, except for particular communities which are especially relevant to Nez Perce subsistence.

Steppe Vegetation

Although most steppe vegetation has been destroyed by farming and grazing, Daubenmire (1970) has reconstructed the vegetational mosaic from

isolated, undisturbed remnants. Steppe vegetation dominated areas below approximately 2500 feet in elevation. In the highest, moistest sections, a "meadow-steppe" of sod-grasses and showy-flowered forbs occurred. Shrubs were frequent and reached their greatest growth on north-facing slopes and in damp swales. Trees fringed perennial streams and bunchgrasses dominated dry areas as outliers on south-facing slopes and hill-tops. Still further westward the character of the steppe everywhere was that of bunchgrass prairie with almost no shrubbery. Sagebrush (*Artemisia tridentata* var. *tridentata*) grew in the driest locales on the western edge of Nez Perce territory. This "continuum" can be divided into four "zonal" habitat types.

The driest zonal habitat type is the *Agropyron spicatum/Poa secunda* association in the deep canyons (Fig. 6). It is virtually identical with the sagebrush area (*Artemisia tridentata/Agropyron spicatum* association) in the Pasco, Washington, region. Instead of sagebrush, however, gray rabbitbrush (*Chrysothamnus nauseosus*) is the dominant shrub. Low summer precipitation, rather than low winter temperature, limits productivity. About one-half of the herbaceous perennials start growing with the onset of the rainy season in fall and remain green throughout the winter. They flower in spring, when the other herbs and shrubs also become active. Herbs aestivate once again during the summer, but the shrubs remain active and flower in the fall.

The driest zone is interfingered with a slightly wetter habitat type dominated by bluebunch wheatgrass (*Agropyron spicatum*) and Idaho fescue (*Festuca idahoensis*). Gray rabbitbrush is again the major shrub, but it is inconspicuous, as are perennial herbs. South of the Snake River, sagebrush occurs, as does the Plains pricklypear cactus (*Opuntia polyacantha*). This association is also limited by low summer precipitation.



Further eastward, where it is slightly cooler and wetter, a plant association dominated by Idaho fescue and common snowberry (*Symphoricarpos albus*) occurs. Unlike westward habitats, the herbaceous plants, including many forbs with showy flowers, form a mat called "meadow-steppe." Dense thickets of dwarfed, sterile snowberry grow in slight swales, along with Wood's rose (*Rosa woodsii*) and Nootka rose (*Rosa nutkana*). In wetter areas, thickets of common chokecherry (*Prunus virginiana*) are surrounded by successive belts of snowberry and rose. Unlike the steppe habitat types already summarized, the *Festuca/Symphoricarpos* association is limited by low winter temperatures rather than summer drought. Nevertheless, about one-third of the perennial herbs stay green through winter.

The *Festuca idahoensis/Rosa nutkana* habitat type is very similar to the Idaho fescue/common snowberry association (Fig. 7). This, too, is a meadow-steppe rich in flowering forbs. They differ because the Idaho fescue/Nootka rose habitat lies in the Blue Mountain rainshadow. Patches of dwarfed rose occur in swales, and occasionally form thickets.

Several "azonal" habitat types occur where soils are not suited to the associations just summarized. Such soils are saline, shallow, exceptionally wet, or dry. Only a few identified by Daubenmire (1970) are apposite to this discussion.

The most important azonal soils are the shallow (less than 30 cm deep) or poorly drained lithosols, which are subject to frost heaving.

Lithosols

. . . support the maximum of species in *Allium*, *Eriogonum*, *Lomatium*, *Cruciferae*, and suffrutescent plants. . . . The thick farinaceous roots of several species of *Lomatium* which grow abundantly on lithosols (especially *L. macrocarpum*, *L. gormanii*, and *L. canbyi*) were gathered by the aborigines . . . [Daubenmire 1970:39].



Four other azonal habitat types are also important in Nez Perce subsistence. Two include black hawthorn (*Crataegus douglasii*). The *Crataegus douglasii*/*Symphoricarpos albus* habitat occurs on hillside water seeps. Some plants characteristic of dry zonal habitat types form an understory. The *Crataegus douglasii*/*Heracleum lanatum* association occurs along streams. Several mesic plants from the forest zones to the east are found in this habitat. I collected Columbia hawthorn (*Crataegus columbiana*) from streamside thickets in the Lapwai Valley, but its relationship to other hawthorn habitats is unclear. Fruits of both species were collected by Nez Percés.

A third azonal habitat type occurs on wet soils (Fig. 7). Camas (*Camassia* spp.) was so abundant that their blue flowers made the swales look like a spring pond. Camas, especially *Camassia quamash*, was an important food for the Nez Perce. Daubenmire notes that great quantities were gathered by the Nez Perce, and states, "There is no indication of over-exploitation by the Indians. Possibly, the churning of the soil facilitated the establishment of new plants from the seeds of those missed by the diggers" (1970:78). Whites, on the other hand, either fenced and loosed pigs on the marshes or drained them. This history of disturbance makes synecologic study impossible, according to Daubenmire.

The fourth habitat type (Fig. 6) occurs on well-drained alluvial fans bordering the main rivers. Hackberry (*Celtis douglasii*) and, now, the exotic cheatgrass (*Bromus tectorum*) are dominant. These small parks are heavily used by cattle. Thus native floristic features of these limited habitats have been upset.

The steppe in Nez Perce territory includes four major plant associations. The two driest of these are dominated by bunchgrasses and scattered shrubs. Eastward, two meadow-steppe communities result from a cooler-wetter

climate; there, low winter temperatures rather than summer drought is the limiting factor. These form a mosaic with other habitat types, most notably: those on lithosols which support a high frequency of *Lomatium*; moist soils which support hawthorns; wet soils on which *Camassia* marshes occur; and alluvial fans dominated by hackberry. The easternmost habitat types interfinger with the mesic habitats supporting forest vegetation.

Forest Vegetation

The forests are an extraordinarily complex mosaic of communities. Altitude and aspect account for much of this diversity. Both strongly affect plant communities through influences on local climatic regimes. Thus plant associations characteristic of relatively high altitudes sometimes border low altitude communities. Further, if fire devastates a community, plants from neighboring communities will invade. These will eventually disappear, but this succession may take several score, even hundreds, of years. These seral communities form part of the forest mosaic.

Despite these complexities, Daubenmire and Daubenmire (1968) have identified 21 habitat types. These have been grouped into four series. Each series will be described, and the habitat types enumerated as variations.

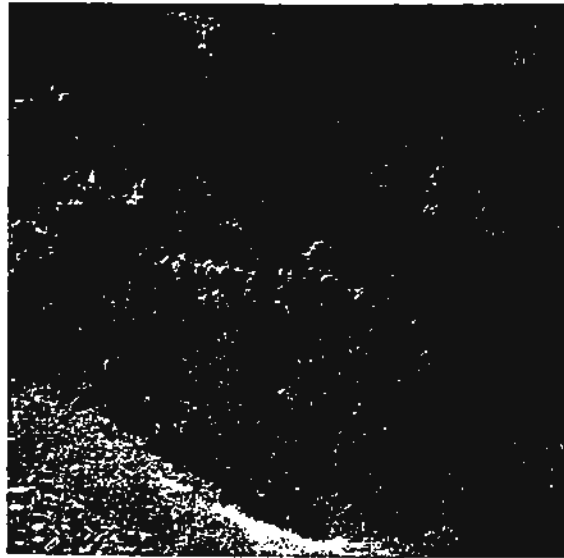
The lowest elevation series is dominated by ponderosa pine (*Pinus ponderosa*; Fig. 8). It is the most drought resistant conifer in the area and these forest communities border the steppe. There are no savannah-like areas; the edge between steppe and forest is abrupt. Three habitat types occur in the Nez Perce area. The two most widespread include either the common snowberry (*S. albus*) or mallow ninebark (*Physocarpus malvaceus*) unions. The ponderosa/snowberry habitat type is apparently meadow steppe with pine as an added floristic element. The ponderosa/ninebark association grows in

slightly moister areas. The third, and driest habitat type is a *Pinus ponderosa*/*Agropyron spicatum* association.

Plant communities dominated by Douglas fir (*Pseudotsuga menziesii*) appear on moister soils. The driest member of this series is the *Pseudotsuga menziesii*/*Symphoricarpos albus* association (Fig. 9); in slightly wetter areas Douglas fir and mallow ninebark dominate. When these areas are disturbed ponderosa pine and larch (*Larix occidentalis*) will invade. Thus in travelling eastward, the driest of the *Pseudotsuga* series is seen first on the north-facing slopes, replacing the ponderosa pine/ninebark association. Further east, the Douglas fir series occupies all slopes. The highest habitat type dominated by Douglas fir is the *Pseudotsuga menziesii*/*Calamagrostis rubescens* association, in which the fir stands over a meadow of pinegrass (*Calamagrostis rubescens*). This series is invaded by larch, ponderosa pine, and lodgepole pine (*Pinus contorta*) when burned. Also, dense thickets of snowbrush ceanothus (*Ceanothus velutinus*) spring up.

A third series is typified by western hemlock (*Tsuga heterophylla*; Fig. 10). Forests at lower altitudes are limited by drought while low winter temperatures limit higher forests. A median occurs at the altitudes occupied by the western hemlock series, and neither factor dominates. Thus, species diversity is relatively high, and three dominant trees occur: grand fir (*Abies grandis*), western redcedar (*Thuja plicata*), and western hemlock.

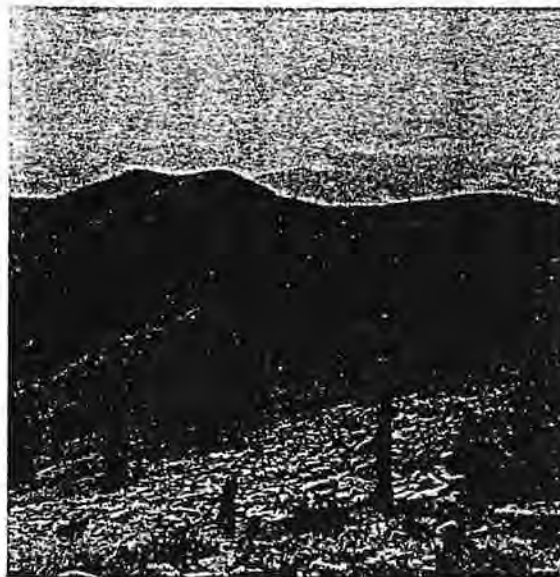
The warmest, driest association is dominated by grand fir with an understory of Oregon boxwood (*Pachistima myrsinites*). A *Thuja plicata*/*Pachistima myrsinites* association is favored by slightly wetter conditions. In even colder, moister places western hemlock and Oregon boxwood prevail. Succession on all habitat types is complex. Seral trees include ponderosa pine, lodgepole pine, white pine (*Pinus monticola*), larch, Douglas fir, and



Engelmann spruce (*Picea engelmannii*). Shrubs favored as winter browse by deer, elk, and moose are especially abundant in early seral stages.

There are six habitat types in the last series. Dominants are either subalpine fir (*Abies lasiocarpa*; Fig. 11) or mountain hemlock (*Tsuga mertensiana*). The reason for the dominance of one or the other species is not apparent. Habitat types on strongly insolated slopes have beargrass (*Xerophyllum tenax*) understories, though fireberry (*Vaccinium scoparium*) and huckleberry (*V. membranaceum*), both collected by Nez Perces, are common. Sometimes globe huckleberry (*V. globulare*) is also present. Open stands of subalpine fir or mountain hemlock distinguish two more habitat types, which are found on weakly insolated slopes. Both have an understory of rustyleaf (*Menziesia ferruginea*), Cascades azalea (*Rhododendron albiflorum*), and, rarely, mountain Labrador tea (*Ledum glandulosum*). The fifth habitat type has an association of subalpine fir and fireberry. The sixth habitat type is found on high peaks, where dwarfed, wind-deformed whitebark pine (*Pinus albicaulis*) and subalpine fir dominate. Seral trees in the habitats are Engelmann spruce, Douglas fir, mountain white pine, lodgepole pine, whitebark pine, and larch.

Two kinds of parks are common. One occurs in small aggraded valleys (Fig. 10), or "holes," surrounded by the *Abies grandis*/*Pachistima myrsinites* habitat type; tufted hairgrass (*Deschampsia cespitosa*) was probably the dominant plant. A fringe of Labrador tea often surrounds these marshy areas. According to my informants, camas (*Camassia* spp.) was common in some of these marshes. The second type, sometimes called "balds," occurs primarily in the *Abies lasiocarpa* series (Fig. 11). These parks are produced by high winter winds which blow off snow cover, leaving the areas moisture deficient in summer. Some steppe plants occur there (e.g. bluebunch wheatgrass)



while some plants, such as green fescue grass (*Festuca viridula*), are specific to these balds.

Twenty-six important forest habitat types have been summarized. These occur in a complex mosaic determined primarily by topography. Topographic factors include slope, soils, drainage, and aspect. Precipitation and temperature are sensitive to topography, but higher locales generally have cooler, wetter habitat types than lower ones.

Discussion

An extraordinary variety of habitat types occupy Nez Perce territory. These range from dry canyon habitats to marshes or subalpine ridges. The most pronounced border is between forest and steppe habitats, but here ponderosa pines simply stand over a basically meadow-steppe community. Although this border marks a critical point in temperature-moisture relationships, two other such borders, even though less obvious, are more important in Nez Perce subsistence. The borders occur where relatively xeric species cannot compete because of low winter temperatures, and relatively mesic species cannot compete as a result of low precipitation.

Two grassland habitat types can be thus distinguished. The first is primarily quiescent in summer (*Agropyron spicatum*/*Poa secunda*, *A. spicatum*/*Festuca idahoensis*, and lithosolic habitat types). The second group is primarily quiescent in winter (*Festuca idahoensis*/*Symphoricarpos albus*, and *Festuca idahoensis*/*Rosa nutkana* communities [Daubenmire 1970:24]). Similar relationships split forest vegetation into three groups. The central belt is the *Tsuga heterophylla* series, and is marked by the subdominance of Oregon boxwood and its associates. Throughout areas occupied by this series neither heat nor drought is a severely limiting factor (Daubenmire and Daubenmire 1968:25; Daubenmire 1968; McMinn 1952).

Thus four major "zones" related to the physiographic and climatic zones may be distinguished. The driest and lowest in Nez Perce territory is marked by scattered sagebrush or gray rabbitbrush shrubs. The second "zone" has abundant mesic shrub species, most prominently snowberry but including *Rosa* spp. and mallow ninebark. It is within this zone that arboreal plants first appear abundantly. Oregon boxwood marks the third zone. The fourth zone is distinguished by widespread growth of fireberry and huckleberries.

This zonation is significant because of seasonal changes in plant productivity. In the first zone there is rapid, relatively early, production of vegetable foods, which ends by May or June. The second zone, because it is dormant during the winter, does not produce until early summer. The third and fourth zones, likewise, are productive still later because of lingering snow and cold weather at high altitudes. Since the Nez Perce territory was composed of these four zones, food harvesting and storage problems were mitigated by moving from zone to zone. A group could thus concentrate on harvesting the plants available at a given season.

Besides the spatial succession of resource productivity, post-fire forest succession is also significant. In the well-watered forests of the Nez Perce territory, however, post-fire succession is rapid. Recovery rates depend on the time of year a fire occurs and on its intensity. Even if the entire tree population is destroyed, many nonarboreal species reappear in a year or two (Mueggler 1965). They regenerate from underground parts often unharmed by fire. Their shade rapidly suppresses the heliophytic plants initially growing in burned areas. Thus, a community of herbs and shrubs is quickly re-established. Apparent stability is attained when an overstory typical of the habitat forms. This lengthy process of community succession was important to the Nez Perce only in limiting their food supply: the

early seral stages are most productive. Competition for nutrients, water, and light is intense at these stages. Plants which grow fastest and earliest under prevailing conditions dominate.

The rapid growth of herbs and shrubs resulted in great quantities of palatable foods, both for Nez Perces and browsing animals. Huckleberries (*Vaccinium* spp.) and serviceberries (*Amelanchier* spp.), for example, both produce more fruits in sunlight, and the two were important foods for the Nez Perce. This rapid growth also meant abundant forage and hence higher animal populations which resulted in greater hunting success for the Nez Perce. This aspect of post-fire succession was known by the prereservation Nez Perces according to my informants. Apparently the Nez Perces periodically burned forest areas to encourage new growth. Fire was thus an important aspect of the Nez Perce environment.

Effective Environment

Ecologists recognize that some elements of a population's environment are more directly influential than others. Directly relevant aspects of the environment are termed the effective environment (Allee et al. 1949:1). Steward (1955:39) holds also that ". . . primary attention be paid only to relevant environmental features rather than to the web of life for its own sake." Unfortunately, relevant environmental features are not always apparent, and vary from habitat to habitat and society to society.

For these reasons I shall restrict my discussion of the Nez Perce effective environment to subsistence--food--resources. Resources such as cattails or rushes for mats were important and highly valued, but hunting, fishing, or root digging was the main effort. Such exploitative activities occupied much of the Nez Perces' time in spring, summer, and fall. Other

items seem to have been picked up while people were "rustling around" as one informant put it. Further, food resources were temporally more restricted than others.

Fish, a wide variety of plants, and large game mammals were the primary food resources. Anadromous fish comprised perhaps 50% of the Nez Perces' diet in early historic times. Perhaps 25-40% of their diet was vegetal, and the remaining 10-25% was game. Fisheries use declined somewhat after 1820 (Hewes 1973) and I believe the importance of game rose. This was especially true of the most mobile Nez Perce, who were called /kosáynotitoqan/ --'eastern people; sophisticated people.' They regularly travelled to the Great Plains after buffalo, some staying there several years. Others, /aláynotitoqan/--'western people; stay at homes'--probably existed on much the same diet as their fathers. The situation was thus "unstable": some people regularly went east, some at irregular intervals, and some not at all.

Diet varied in two ways. First, some families preferred more or less of a particular resource. Second, variation resulted from the seasonal availability of resources. For example, salmon formed a large share of the diet during spring salmon runs. As people moved away from stream-side settlements during summer, mammals became more important. In the fall salmon again became important as the fall runs were exploited, and later, when the people were living on stored goods. Anadromous fish were least important in the diet in late winter and early spring because stores were reduced by use and spoilage. At that time non-anadromous fish became much more important.

Fish Resources

Fish were the most important Nez Perce resource. Three sorts of fish formed significant parts of the diet at different times of year. Anadromous

salmonids were the most important. They composed up to 50% of the Nez Perces' diet (Walker 1967b:9). Great quantities were dried and stored for winter use, but often the amount was inadequate. In late winter and early spring non-anadromous fish were highly prized. Like salmon, resident fish were most vulnerable when they congregated to spawn. The third sort, those not spawning in concentrations, were only occasional additions to the diet. These three sorts of fish will be tentatively identified and the times of their collection outlined in this section. Also, usage estimates and effects on resource "scheduling" are discussed. Members of each group will be treated in the order of their collection, which depended upon seasonal progression.

Anadromous Salmonids

"Salmon" were by far the most important fish in terms of total weight used and percent of diet. Three species of true Pacific salmon were used: /kalláy/--'silver salmon (*Onchorhynchus kisutch*), /qoyxc/--'blueback salmon (*Onchorhynchus nerka*), and /naćó.?x/--'chinook salmon (*Onchorhynchus tshawytscha*). The fourth, /hé.yey/--'steelhead (*Salmo gairdneri*)--is not a true salmon. Instead, it is a trout of the same species as nonmigratory rainbows. Each is a different population because of differences in life history, size, and distribution.

Silver salmon do not spawn in the Nez Perce region (Scott and Crossman 1973), although my oldest informants claim that they once did. At present, /kalláy/ travels no further than the streams flowing into the Columbia River from the Cascade Mountains. The Nez Perces caught them as well as other salmon when visiting relatives and friends at Celilo Falls and The Dalles on the Lower Columbia River (Anastasio 1955:53, 1972; Walker 1967b).

Steelhead were the earliest large salmonid available in Nez Perce territory. Steelhead--/hé.yey/--ran twice, first during high water in early spring then again in the fall. According to my informants, not all fall run steelhead spawn immediately. Instead some stayed in the main streams until the following spring and then ascended to spawn. During winter they were difficult to find, and though some effort was made to obtain them they composed only a minor portion of the winter diet. /hé.yey/ usually weighs about 6 pounds, but individuals of 20 pounds were not unusual.

Bluebacked salmon appeared in the Clearwater River about July. Other stocks appeared earlier in the Snake River. The Nez Perce word /qoyxcál/ refers to the season roughly equal to June. It was used by people along the river and its tributaries above the Clearwater River. Its use distinguished them from those of the Clearwater area, who referred to the same period as /tustimása.tal/--'traveling to the upper counter (after roots).' /qoyxc/ average about 5 pounds in weight.

Finally chinook salmon is in some ways the most important. /nacó.ʔx/ figures more prominently in myths than other forms (cf. Phinney 1934). It is the largest salmonid, averaging over 20 pounds, and some weigh more than 100 pounds. Chinook are generally the most highly preferred. It runs after the blueback salmon, and reaches its spawning grounds in late August and September. During this time many Nez Perces were in the high mountains hunting but chinook were often obtained at the same time since they must have been highly vulnerable in the small streams. Even in 1974 so many chinook ascended the Lochsa River that "chinook trails" were visible in the rocky bottoms of long shallow reaches. These trails showed as light, brilliant paths where chinook had polished the rocks with their fins as they swam

upstream. The "Indian Post Office" (Fig. 12) on the Lolo Trail indicated the place where many Nez Perce descended to the Lochsa River to fish.

Other "Anadromous" Fish

Salmon were vulnerable because of their concentrations during migration and spawning. Two other fish used by the Nez Perce were also anadromous. They include /hésu/--'lampry eel (*Entosphenus tridentatus*)'-- and /múkuc/--'sea run sucker (*Catostomus* ?).' Lampry eels were a delicacy and like all delicacies they were enjoyed only by gourmets. They appeared about the same time as the blueback salmon. Lamprys, however, did not spawn in stream headwaters, but in the mainstreams of major rivers. Ocean run suckers, now rare, also spawned in the same sections of rivers. These two species were less vulnerable than the salmonids.

Non-anadromous Fish

Several important varieties of resident fish are also most vulnerable during spawning season. Whitefish (*Prosopium williamsoni* ?)--/címey/--are most vulnerable in late January and February when they converge on sand bars to spawn. Chiselmouth (*Acrocheilus alutaceus*)--/titéwxc/--run up sidestreams of major rivers in February and March. Following them the suckers (*Catostomus platyrhynchus*, *C. macrocheilus*, *C. columbianus*)--/qí.yéx/--enter the lower parts of streams to reproduce. Also an unidentified fish, /kú.sis/--'mudfish'--was eaten as well.

Trout were taken in spring and summer. Two kinds are native to the area, /wawáim/--'cutthroat trout (*Salmo clarki*)'--and /isiám/--'Dolly Varden or bull trout (*Salvelinus malma*).' Both spend the winter in large streams, but ascend to smaller, higher streams during spring flood. In fall, as stream volumes decrease, they return to relatively high volume streams.



Less is known about /qí.lex/--'sturgeon (*Acipenser transmontanus*). Although it is classed as anadromous (Scott and Crossman 1973), my informants state that it is not so in the Snake River and its tributaries. Rather, it seems to have vague seasonal movements much like the squawfish. Some thought the flesh a delicacy, yet others would not eat it because /qí.lex/ was thought to eat humans (Scrimsher 1967). In any case, a special waterproof glue made from the sturgeon was very highly regarded.

Discussion

Fish were a major Nez Perce resource. Many species were significant because they were concentrated in early spring. Anadromous salmonids comprised perhaps 50% of some Nez Perces' diets. Estimates of salmon use have been made by Hewes (1947; 1973) and reworked by Walker (1967b). Both indicate that at least 300 pounds of salmon were used by each person every year. This estimate is low.

Hewes' (1947; 1973) estimate is based on two assumptions about all Plateau groups. He assumes that (1) 200 calories/day sustained "the average native consumer," and (2) 50% of the diet was salmon. He suggests that a yearly consumption of 365 pounds of salmon would supply slightly less than one-half a person's caloric requirements and that 305 pounds would satisfy the "average" person's yearly protein requirement. He believes (1973:140) that his assumptions are more or less correct because his per capita use estimate closely matches Craig and Hacker's (1940) crude estimate of 365 pounds per person per year.

Hewes (1973: Table 1, p. 136), however, estimates Nez Perce consumption at 300 pounds per person per year. There are two reasons for this. First, Nez Perces did not use salmon for fuel, as the Columbia River people

did. Second, the Nez Perce were farther upstream, and presumably less dependent on fish and more dependent on game. Based on the lower use estimate and Mooney's (1928) population of 4000, Hewes (1973: Table 1, p. 136) states that the Nez Perce caught 1,200,000 pounds of salmon per year.

Walker (1967b:19) believes that per capita salmon use was about 560 pounds per year, but accepts Hewes' per capita use estimate as an absolute minimum (1967b:25). His total estimates are higher, and determined in a different way. According to his informants 10-20 days a year were "peak days" in the salmon runs. On peak days 300-700 salmon weighing from 10-40 pounds could be taken per fishing station. The weights and numbers of salmon were verified by missionary reports (Drury 1936:136, 1958:270-272, 1963 II:158). The missionary Spalding mentioned 50 active fishing stations in Nez Perce territory (Drury 1936:167). Multiplying the minimal number of fish taken on a peak day (300) times the minimal number of peak days (10), Walker estimates that 3000 fish at least were caught at each fishing station. Again multiplying by the minimal average weight (10 pounds) and the number of fishing stations (50), an estimated total of 1,500,000 pounds of salmon were caught per year. This figure is 300,000 pounds higher than Hewes'. But Walker (1967b:25) estimates the Nez Perce population at 5000, and thus arrives at a minimal per capita salmon use estimate of approximately 300 pounds per person per year.

This amount is a minimum estimate. There were probably more than 50 fishing stations. My informants state that villages were found near or at salmon fishing stations. Schwede (1966) enumerated 132 Nez Perce villages. Ten could not be exactly located either by informants or through ethno-historical sources. Examination of Schwede's data shows that of the

remaining 122, 94 (77+%) were on the Snake, Clearwater, Salmon, or Grande Ronde Rivers; 22 villages (18+%) bordered small tributaries of these major streams, and 6 (4+%) were unrelated to them.

Using Schwede's 94 stations, i.e. villages, and multiplying this figure by the minimal numbers of fish, pounds of fish, and peak days, a rough figure of 2,820,000 pounds of salmon per year, or roughly 560 pounds of salmon per year per person is obtained. This reasonably approximates the figure that Walker (1967b:19) prefers to ascribe to the Nez Perce. Per capita use of salmon was probably higher. These figures do not include fish obtained in trade or at fishing stations outside of their territory (Walker 1967b; Anastasio 1955, 1972). Furthermore, there were fishing camps, such as those on the Lochsa River below the "Indian Post Office" on the Lolo Trail. Also not included in Hewes' (1973), Schwede's (1966, 1970), or Walker's (1967b) studies are other transitory fishing locations, such as at large boulders and in small eddies, where salmon were "gigged" as they rested. Obviously these estimates are rough, but it is also obvious that Nez Perces utilized a tremendous amount of salmon, probably more than two million pounds per year.

Distribution of spawning populations in mountain watersheds varied unpredictably for several reasons. Among them are devastating forest fires, which may lead to silting of spawning grounds. If streamside forests were destroyed, sunlight would raise water temperatures beyond the tolerance of salmon through reduced amounts of dissolved oxygen (Hewes 1973). Beaver dams may block spawning grounds (Cook 1940), or cause them to silt up. Even larger variations may result from unknown factors, such as the salmon "crash" at Kettle Falls (Chance 1973).

These variations were partially mitigated by village location. Because no major tributaries enter the Snake below the Clearwater River, virtually the entire salmon population spawning in the Snake River drainage basin reached the Clearwater-Snake River confluence. At each confluence upstream, greater and greater proportions diverged.

Partly for these reasons, villages were on the mainstems of the major streams of the area. Examination of Schwede's (1966: Appendix) village location data show that 57% of the villages were downstream of the North Fork and Clearwater Rivers or the Grande Ronde-Snake River confluence.

The occurrence of peak salmon fishing days is unpredictable. Moreover, their arrival in spring is variable. Consequently no set exploitative schedule was followed from year to year. In fact, roots sometimes matured well before salmon arrived, although delays in the appearance of both were often coincident. Lewis and Clark (Thwaites 1905 IV:354) reported in 1806 that "A great portion of the Choppunish we are informed are now distributed in small villages through this plain collecting quawmash and cows, the salmon not yet having arrived to call them to the river." Also salmon sometimes were unavailable because of high water.

When both salmon and roots were exploitable, people went where they wished. Again Lewis and Clark reported that one of their command "visited a village about 8 ms. above . . . he informed us that there were but 8 persons at home; the others were either hunting, digging roots or fishing" (Thwaites 1905 V:63-64).

Even though salmonids were the major fish resource, non-anadromous fish often assumed great importance. This was because their spawning concentrations in January and February preceded the salmon migration

when winter stores were low. Estimates of the amounts of non-anadromous fish taken are not possible on the basis of available evidence.

Summary

The Nez Perces used three kinds of fish: (1) true anadromous fish, (2) fish which live in trunk streams but spawn on side streams, and (3) those which live all their lives in the mainstems of stream systems. Two kinds dominated in the Nez Perce diet. The most important of these were the anadromous salmonids: /nacó.ʔx/--'chinook salmon,' /hé.yey/--'blueback salmon,' and /kalláy/--'silver salmon.' Eleven other fish were important as well. Only two are anadromous, but the others, except for sturgeon, were captured during their concentration in spawning areas. These fish were important because they were vulnerable in early spring, when food stores were low, possibly spoiled, and other food resources were of relatively low quality. The sturgeon was not vulnerable, and formed an occasional part of the diet.

Plant Resources

Plant resources were the second mainstay of Nez Perce subsistence. Plant resources were used for a variety of purposes. Three analytic classes are apparent: medicine, industrial, and food plants. Knowledge about medicinal plants was esoteric and private. Most were not generally known, and the identities of many herbal medicines are no longer available. Despite their medical and social importance, medicine plants were unimportant in Nez Perce dispersion since they were collected by solitary individuals. Medicine plants will not be discussed. Industrial plants, such as /tóqo/--'cattail (*Typha* spp.)'--will also not be discussed because most could be obtained in the same vicinities as some food plants. Since food plants were the most

restricted temporally, the timing of their availability was the most critical factor in scheduling resource exploitation. Collection of /tóqo/, for example, occurred when food plants in the vicinity of a cattail locality were mature. Thus, this section is a discussion of food plants.

Food Plants

The Nez Perces used a wide variety of plants as food. Most important were plants with large edible tubers. Lewis and Clark stated:

. . . to its present inhabitants nature seems to have dealt with a liberal hand, for she has distributed a great variety of esculent plants over the face of the country which furnish them a plentiful store of provision; these are acquired with but little toil, when prepared after the method of the natives afford not only a nutritious but agreeable food [Thwaites 1905 V:11-13].

In this discussion 34 plants will be identified. Other food plants such as cat's ear (*Calochortus elegans*), are not discussed since they formed only a very minor part of the diet and because they had little influence on people's movements.

Temporal and spatial distribution of plant resources will also be treated because they were important factors in scheduling economic activities. It also affected the composition of groups formed to obtain them as well as reciprocity between those groups. Furthermore, temporal variation influenced the well-being of individuals, especially in early spring. Finally, the food values of the three most important roots will be discussed.

Vegetable Foods

Most food plants are members of the Umbelliferae (Parsley), Liliaceae (Lily), and Rosaceae (Rose) families. Species of parsley and lily produced highly nutritious and locally abundant "roots." In all but exceptional cases the edible underground parts are less than 6 inches deep. Thus they

were gathered with relative ease. Several rose species produced highly valued berries. Other important berry-producing families were the Grossulariaceae (Gooseberry) and Ericaceae (Huckleberry).

The plants are described in sequence of maturation. The times given are approximate because of variation in time of ripening. For example, 1972 was a particularly early year, and /qéqí.t/--' (Lomatium canbyi)'-- was ready for collection in mid-March in the Lewiston area. Usually it is not ready until April. In 1975, however, /qéqí.t/ was especially late; it did not mature until mid-May. It was still available in some places as late as the first week of June. Appearance times vary spatially, thus downstream plants mature before those upstream because of milder temperatures.

The plants will be identified by Nez Perce name, common English name, and scientific name (Appendix B). Plant names follow Hitchcock and Cronquist (1973). Voucher specimens for many have been deposited in the Marion B. Ownbey Herbarium at Washington State University and were identified by Joy Mastrogiuseppe (personal communication 12 II 1974).

/titálam/--' (Lomatium dissectum)'--refers to the ultimate potato-shaped root of this plant. The upper root of the plant, called /í.cus/, is very oily and consequently not eaten. It is abundant on the slopes of the major river canyons where fine textured soils are well-drained. /titálam/ was not a preferred food because of its poor texture and bad taste. Moreover, the root is difficult to gather: each sample I attempted to collect was over 2 feet deep. My informants called it starvation food, and said that it was gathered in January and February. It was difficult to locate because the above ground parts were deteriorated, leaving only a small dry stock.

/ilqú.lx/--' (Lomatium salmoniflorum)'--is the earliest blooming food plant in the region. It first appears in late January to late February in

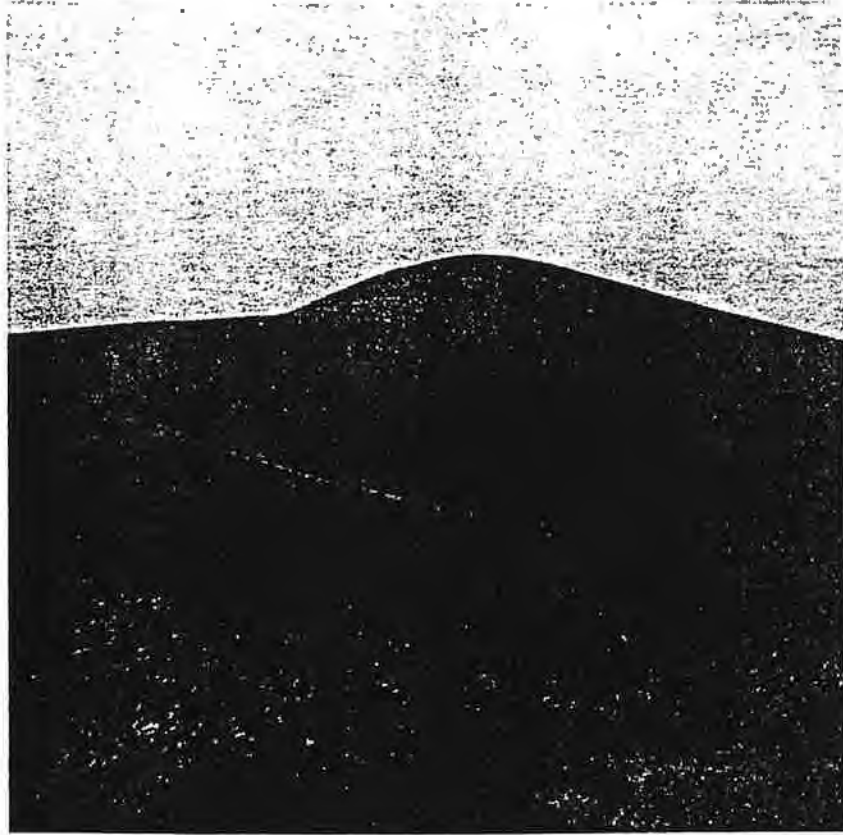
the Lewiston area. /ilqú.lx/ grows on very rocky soils, inactive talus slopes, and in shallow soils. Both the herbaceous above ground parts and the stout root were eaten. The leaves served "as a kind of garnish" while the roots, though not tasty, were fresh food in the spring. They were especially prized when stores were depleted.

/qéqí.t/--'? (*Lomatium canbyi*)'--this was the most valued spring plant. It is especially common in "lithosolic" habitat types as discussed by Daubenmire (1970:39). Relatively dense /qéqí.t/ stands occur on the gentle slopes of ridge tops, which are most common in the Lagwai-Lewiston area (Fig. 13). They ripen latest and in least profusion towards Kamiah. The Kamiah area residents rarely stored them but the downstream groups did dry them for winter use. /qéqí.t/ tastes like kerosene to many people, but this seems to be an attribute of /cící.ta/--'? (*Lomatium gormanii*), a plant very similar in appearance and habitat. The root of /qéqí.t/, unlike /cící.ta/, is bald.

/cící.ta/ is distinguished from /qéqí.t/ by the presence of many fine rootlets on the bulb. Both plants apparently occur in the same habitat. In my experience, one dominates the other. What leads to this dominance is unknown, but it seems related to the intensity of soil disturbance.

/stíme.x/--'yellowbell (*Fritillaria pudica*)'--blooms shortly after /qéqí.t/, but at lower elevations. /stíme.x/ is common on steep slopes where the soil is relatively deep, moist, and stable. It was primarily a supplementary food plant because its bulb is small.

/wewí.m/--'? (*Lomatium grayi*)'--unlike other *Lomatium* species, which were prized for their roots, the stems of /wewí.m/ were eaten in March or April since, after blooming, the plants become hard and woody. /wewí.m/ is very abundant in some limited areas, and grows singly throughout the canyons.



/pasx/--'balsamroot sunflower (*Balsamorhiza sagittata*)'--balsamroot sunflower was collected from April to May. The root was baked and the stems were eaten fresh. It is sometimes profuse on relatively high ridges within the canyons; in such cases, it borders a plant community rich in /wewim/, which generally grows just downslope. This was primarily a seasonal food.

/katámo/--'hackberry (*Celtis douglasii*)'--is especially abundant on the low alluvial fans of the primary streams. It is a primary floristic feature of a distinct habitat type (Daubenmire 1970:73). The large seeded fruit was crushed and dried for winter use. It was not commonly used by groups along the Clearwater River, where the small tree is relatively uncommon. It was collected in late April or May.

/kayapásx/--'serviceberry (*Amelanchier alnifolia*)'--grows throughout the region, but it is best known from the canyons. It was not preferred to /kikéye/--'serviceberry (*Amelanchier utahensis*)'--which is generally found at higher altitudes. /kayapásx/ blooms in March to April, and matures in May or June.

/kai/--'golden currant (*Ribes aureum*)'--is also known as a canyon plant. It bloomed in late March or April, and its fruits were available from May to June. It was less preferred than /kayapásx/.

/cátóxc/--'wild hyacinth (*Brodiaea douglasii*)'--is a common, though not abundant, plant. It grown in moist deep soils in both the canyons and plateaus; consequently, the bulb was gathered over a long period. Partly because it does not grow closely bunched together, and partly because it has a relatively small bulb, /cátóxc/ was primarily a supplement to other plant foods. It was nevertheless highly valued.

/míttip/--'elderberry (*Sambucus cerulea*)'--is a common shrub which carries great numbers of flowers and berries. This lowland elderberry

produces as many as three generations of flowers between June and September. Presently shrubs are found in well-watered, generally protected spots in the canyons and plateaus of the region. In the Clearwater area elderberries were commonly stored for winter use.

/qámsit/--'cous, biscuitroot (*Lomatium cous*)'--was one of the most intensively gathered food plants. It is found on well-drained soils, generally ridge tops. /qámsit/ grows in great profusion in the canyons, on the plateaus, and in restricted areas of the Clearwater River bottoms. On the river bottoms it blooms earliest, but does not produce large roots. May and early June is the main collection season, after the seed had matured. Three major camps were occupied on the plateaus during June for collecting this root: /tálmáxs/, near Craigmont, Idaho; /qapsqápsnime/, near Cottonwood, Idaho; and /temémme/, near Grangeville, Idaho (Fig. 14).

This root, along with camas, formed the bulk of the plant foods stored for winter use. A good digger gathered 50-75 pounds of /qámsit/ in a single day. As the specific epithet implies, Whites commonly call /qámsit/ cous. The Nez Perce term /qaws/ is applied to any *Lomatium* root that has been dried for storage.

/laqáptat/--'cous, biscuitroot (*Lomatium* sp.)'--grows with /qámsit/, but is not nearly as common. The root is not shaped like /qámsit/, but is round like /qéqí.t/. It was preferred to /qámsit/, but its relative scarcity precluded digging it exclusively. It was collected in May and early June. It was valued as a seasonal dietary supplement.

/se.x/--'wild onion (*Allium* spp.)'--blooms from May through June. They are found in shallow rocky soils or soils subject to frost heaving. /se.x/ was not generally collected for winter storage, but was a



supplement during their season. Spinden (1908) reports that some Nez Perces cooked it like camas.

/péqiy/--' (Lomatium triternatum var. triternatum)--also was a supplementary source of vegetable food. It, too, grows in rocky soils which are well-drained or subject to frost heaving. It grows at roughly the same elevations as /qámsit/, and seems to have been collected at the same time.

/ku.yá/--'frasera (Fraseria fastigiata)'--grows both in the lower ponderosa pine forests and in wet meadows within the pine forest. My informants say it also grew in wet prairie meadows which are now farmed. It was thus a plateau resource. /ku.yá/ was collected as a supplementary plant food in late June and early July while the Nez Perces were at the great root grounds of Camas Prairie.

/pílus/--'gooseberry (Ribes spp.)'--were plateau and foothills resources. They were collected while still green in late June and early July as well as when ripe in August. They were eaten fresh and dried and stored for winter use.

/tims/--'chokecherry (Prunus virginiana var. melanocarpa)'--is found both in the canyons and plateaus. They bloom from May through June, and have an equally long period during which the fruits are ripe. They were eaten fresh, and ground, including the stone, for drying and storage.

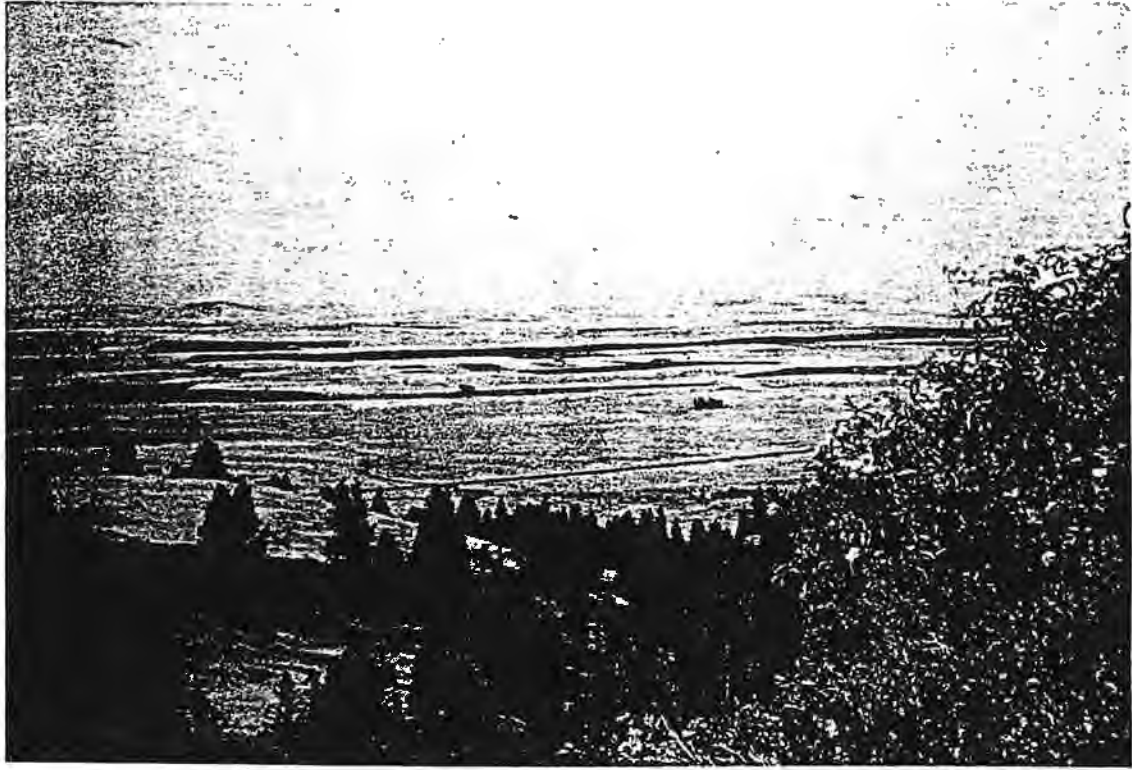
/títux/--'elk thistle (Cirsium scariosum), a 3 to 4 foot high thistle, is solitary, and grows throughout the area's plateaus and mountain meadows. Both the stalk and root were eaten, but the root was especially favored. They were gathered before the flower had set seed in late July or early August. It was a seasonal supplement, and the roots were not generally stored for winter use.

/l6.las/--'sego lily; mariposa lily (*Calochortus eurycarpus*; *C. nitidus*; probably others)'--is found in seasonally dry marshes and flood plains from the canyons into the mountains. However, /l6.las/ is known primarily as a prairie and mountain plant. In the mountains it is found mostly on the terraces of rivers, especially near McCall, Idaho. It was collected from late June through August as a seasonal supplement.

/yiqew/--'? (*Lomatium* sp.) is found on dry open slopes in the lower portion of the ponderosa pine zone. This plant, though often abundant, was not preferred and was rarely stored. The root is slightly smaller than a pencil and is somewhat bitter. It was collected in June.

/capci.lay/--'spring beauty (*Claytonia lanceolata*)'--is now confined to open ponderosa pine forests and mountain stream terraces. Formerly it grew on the prairies near Craigmont, Idaho. There the roots of this perennial were an inch or more in diameter. These were dug in late June or early July, and formed a supplementary part of the diet.

/qemes/--'camas (*Camassia* spp., especially *Camassia quamash* var. *quamash*)'--is the best known of the roots used by the Nez Perces. Their territory was especially well-known for the vigor and abundance of the /qemes/ growing there, and numerous other groups came to exploit these grounds (Anastasio 1955:48). The most famous of the camas meadows was /oyayp/ at Weippe, Idaho. The Camas Prairie (Fig. 15), too, was well-known, and even today small "lakes" of camas bloom near Grangeville. Less well-known were the small "holes" of the mountains and the large, well-used grounds near Moscow, Idaho and Pullman, Washington. These different locations had camas marshes which matured at different times; the lowest, warmest ones were exploited in early to mid-June; the highest, coldest ones could be worked until September. As Daubenmire noted (1970:78) the disturbance caused by



digging may have aided the establishment of seedlings. Further, he felt there was no evidence to indicate "overexploitation" of these grounds.

Camas was, along with /qámsit/, the primary root stored for winter use. Citing other sources, Anastasio (1972) says that a winter supply could be gathered in 4 to 5 days. Harbinger (1966) said that a good digger could gather 80-90 pounds per day of hard labor, while less intensive work would yield 40-50 pounds easily. A week of hard undivided labor would produce about 500 pounds of cooked roots suitable for winter use. Such intense work on a single resource did not occur. Many other activities were undertaken when people were living at these main grounds. My informants estimate that women gathered camas for two to three weeks.

/cilflx/--'sunflower (*Balsamorhiza incana*)'--this plant is found in dry soils during middle and late July, especially in the plateaus. Its root was not favored, and though some may have stored it, /cilflx/ was primarily a supplementary food at the time it was collected.

/cawitx/--'yampa; wild carrot (*Perideridia gairdneri*)'--was a highly favored food plant. The roots, which have the size, texture, and flavor of young carrots, were gathered in July before they set seed. Afterwards, the root becomes hard and flavorless. These grow over the prairies and in open pine forests. Yampa is not not, at least, abundant. It was stored for winter use.

/támsas/--'rose hip (*Rosa nutkana* var. *hispida*; *R. woodsii* and other species)'--was not a favored food. Fertile plants producing rose hips grew in thickets throughout the moist grasslands of the area, but they were especially abundant south of the Snake and Clearwater Rivers. /támsas/ was collected as a supplement, except in years when other fruits were in short

supply. Then it was gathered and dried in quantity for winter use. Late July and early August was the collection time.

/taxtáx/--'thimbleberry (*Rubus parviflorus*)'--grows throughout Nez Perce territory. Those found in the mountains, however, were favored. /taxtáx/ is particularly abundant in the early stage of post-fire forest succession. They apparently were not gathered in quantity by many people, though some were dried and stored for winter use.

/kikéye/--'serviceberry (*Amelanchier utahensis*)'--is common throughout the Nez Perce region. Again, those which grew in the mountains were most favored, and great quantities were gathered and stored for winter food. They ripen first in the canyons, about late June, and are ready at their highest elevations during August and early September. Like other berries found in the forest, /kikéye/ is favored by fire and becomes most productive 10 to 15 years after a burn.

/mexséme mittíp/--'mountain elderberry (*Sambucus racemosa* var. *melanocarpa*; *S. cerulea* ?)'--was also favored over elderberries found in the canyons and plateau. However, it was rarer. This food was collected in August and September in the foothills of the Bitterroot range. This plant is also favored by fire: those I have seen were all in small openings of the forest.

/cemí.tk/--'huckleberry (*Vaccinium globulare*)'--was the only huckleberry species I collected, although others are found in the area (e.g. *V. membranaceum*). These berries were collected in the *Abies lasiocarpa* zone. They were picked in August and September. Along with /kikéye/, /cemí.tk/ was the major berry collected by the Nez Perce and was highly valued. The huckleberry's productivity increases as a result of fire.

/ʔálaʔala/--'little fire; fireberry; Grouseberry (*Vaccinium scoparium*)' --was another valued high altitude plant. It is found in secondary growth timber stands or in openings on high mountain ridge tops. Its production from year to year seems more variable than other berry crops, however. In years of high production the berry patch is bright red, hence the Nez Perce name. The berries are small, and the Nez Percés made wooden combs to rake the berries from the plants into baskets. These berries were dried for winter use when abundant. Fire favors the growth of /ʔálaʔala/ through the removal of taller plants which suppress its growth.

/ho.póp/--'pinemoss (*Alectoria jubata*)'--a lichen, is found throughout the forests of the Nez Perce area. The preferred plants are found in the high mountains. "Pine moss" grows on a variety of tree species, but those found on larch were especially favored. Those of pine are also edible; on the other hand, lichens growing on fir trees are considered inedible. /ho.póp/ has been called famine food (Spinden 1908:205; Haines 1955:14). Both sources cite Lewis' and Clark's journals (Thwaites 1905 V:137), who report the Nez Percés using lichens from pine trees during famine. The identification of the lichen is uncertain, however, since they were gathered in the winter at relatively low elevations. Given the amount of labor required in obtaining /ho.póp/, and the fact that it is gathered in summer at high altitudes, and requires considerable effort to prepare, it seems unreasonable to assume that /ho.póp/ was a famine food.

/telx/--'hawthorn (*Crataegus columbiana*)'--and /sísnim/--'(*C. douglasii*)'--were collected late in the summer in the canyons and plateaus. As noted in the previous section, hawthorns are so abundant along streams that they form their own peculiar habitat type. Hawthorn fruits were ground and dried for winter use.

The Nez Perces depended primarily upon 34 kinds of plants. Actually, over 34 plant species were used because the Nez Perce taxonomic system "lumps" some species distinguished in the Linnean system. The plants are found in a variety of habitats which are productive at different times of year. Thus, their collection times were staggered. Despite yearly variation in "absolute" time of maturation, the sequence of availability remained relatively stable.

Discussion

The spatial and temporal distribution of these food plants is their most salient feature. This distribution is mainly controlled by temperature and moisture relationships. A second feature is the extraordinarily high food value of the most important root foods, /qémes/ and /qámsit/. Finally, the time of collection of several plant foods relative to plant maturity has important implications for the conservation of these resources.

Four important "zones" have been described: one characterized by sagebrush or rabbitbrush, the second by snowberry, the third by Oregon boxwood, and the last by huckleberry. These are important markers of temperature/moisture relationships affecting the Nez Perce economy. As each zone became increasingly dry, it lost productivity, and the people moved to exploit the next highest zone. The canyons support 12 vegetable foods at a critical season for Nez Perces because of winter productivity and spring blossoming resources there. The second and third zone support 19 food plants. These zones are the plateaus and foothills in the region. The fourth and highest zone contains 6 resources. These appear in the late summer in the high mountains.

The yearly sequence of residential movement was a response to plant resource maturation through spring and summer. Canyon plant resources

became unavailable by late May or early June because of desiccation. Because of the restricted habitat areas, the canyons did not provide enough food for the people's needs the following winter. Consequently, they went to the plateaus, where productivity was highest. When productivity fell off there, because of continued drying, the Nez Perces repaired to the mountains. Thus, food plants were available for 6 or 7 months each year.

The conservation of these plants was affected by the timing of their collection. Many of the root foods, especially such important ones as /qéqí.t/, /qámsit/, and /qémes/, were not collected in quantity until their seeds had ripened. This was important in maintaining the stands of these plants which thrive in disturbed soils. By digging after the seeds ripened, the people insured that plant seeds would be distributed in "prepared" seed-beds. This may have been especially critical for camas, which is restricted to habitats with poorly aerated soils. Increased aeration resulting from digging probably increased nutrient cycling rates. Furthermore, not all /qémes/ roots were collected: small bulbs were left in the soil. Some people distinguished between "male" and "female" bulbs, and utilized only female bulbs. The depth of disturbance was about 12 to 18 inches; the largest, most prized bulbs being found deepest. Disturbance was extensive. Women used digging sticks--/tuqes/--to loosen the soil, then sorted through the clods, breaking them up by hand, to gather the appropriate bulbs.

By digging after the seeds were ripe, the people were sure of getting tasty roots. This timing is important since stored nutrients are depleted by the fruiting process. Prior to seed maturity the root is soft, somewhat spongy, and flavorless. Once the seed has set, however, the root gains a finer texture and flavor. They probably also had higher nutritional value as well.

Scrimsher's (1967:64-69) data show that at least some food plants have high nutritional values. The two major roots, /qémes/, and /qámsit/, have roughly 1695 calories per pound (375.0 cal/100 gm) and 1475 calories per pound (325.0 cal/100 gm), respectively, after cooking. Further, camas has an extraordinary protein content: 5.4 ounces per pound of camas (33.6 gm/100 gm). Cous has a far lower protein content, about 1 ounce protein per pound (6.2 gm/100 gm). The important spring plant resource, /qéqít/, has similar values: about 1500 calories per pound (330 cal/100 gm) and about 3/4 ounce protein per pound (4.5 gm/100 gm). Serviceberry has 1556 calories per pound (364.8 cal/100 gms) and almost 1 ounce of protein per pound (5.8 gm/100 gm). As noted in the previous section, these were all plentiful and preferred plant foods.

These values exceeded those of steelhead trout and, for example, beef liver. Steelhead has 885 calories per pound and 3.4 ounces of protein per pound: a caloric value little over half that of camas and a protein content one-third less! Liver has values slightly lower than camas. The only non-plant resource approaching camas in caloric value is lamprey eel with 1498 calories per pound (330 cal/100 gm); and the almost 3 ounces of protein per pound (18.6 gm/100 gm) which eel contains is only about 75% that of camas.

Hewes (1973:134) arbitrarily used 2000 calories per day as the necessary daily food allowance for the average person in the "Pacific Salmon Area." In order to make our estimates of plant use comparable we will use the same total. It is apparent that plants commonly used by the Nez Perce more than adequately supplement salmon. If the diet was plant foods, then the following estimates give an idea of the amount of roots gathered. If camas is the sole source of plant food, only about 195 pounds would satisfy

the yearly caloric requirement of an average adult. If cous was the only supply of plant food, then 222 pounds would satisfy the yearly caloric needs of an adult.

Unfortunately, there is no way to estimate the percentage of use for any given plant food; some were only supplements, some were delicacies, and some were used extensively in season. Of the plants stored for winter, however, camas and cous were the most important. These staples may have formed 90% of the vegetable diet at that time. If, for argument's sake, we take September 1 as the last day fresh plant foods are available, and March 1 as the first day fresh vegetable foods are available, then 212 days worth of stored plant foods were required. This would be about 107 pounds of camas per "average" adult, or about 128 pounds of cous.

Even though there are too many "ifs" in this section already, one more guess will be worthwhile. Given a family of five, with two adults and three children, and given that children consume three-fourths of an adult's allowance, a very rough estimate of a family's consumption can be made. Such a family would require roughly 450 pounds of camas per year, assuming it was the sole source of plant food.

Summary and Conclusions

The major plant foods used by Nez Perces included 34 species. These were collected from January (when gathering was done only in extremity) until September and possibly October. Most vegetables were used only in season, but a few, most notably /qémes/, /qámsit/, and, in some cases, /qeqí.t/, were stored for winter use. All are remarkably high in caloric value, and camas contains an extraordinary amount of protein. Berries were also used to a great extent, and the most commonly stored of these were serviceberry,

huckleberry, and fireberry. Serviceberry has high values of calories and protein: possibly huckleberry and fireberry are similarly high in food value. Estimates of plant food consumption on a species basis are impossible, but overall plants probably comprised at least 30-40% of the Nez Perce diet. Rough calculations on that basis suggest that 110-130 pounds of stored roots would suffice "the average adult" for about 200 days.

Game Resources

Hunting also was a major food-getting activity. Approximately 15-30% of the yearly food supply resulted from this activity.

The Nez Percés hunted a wide variety of animals. Three classes of these occur: /wu.líwtelikin/--'hoofed animals,' /ceptu.télikin/--'pawed, furry animals,' and /weyu.télikin/--'flying animals.' Only hoofed animals were hunted extensively. The others formed ancillary portions of the subsistence economy.

These "ancillary" forms are important in that they throw light on the general nature of hunting; /ceptu.télikin/, in particular, and /weyu.télikin/ usually were taken as the opportunity chanced. Hunting is setting up opportunities for killing prey by forcing it into a vulnerable position. Sometimes the tactics work, sometimes they do not. In many instances, pawed animals or flying animals were caught in the situation intended for other animals. Also, they were occasionally chanced upon during some other activity and killed: Lewis and Clark's account of a bear feast is an excellent example of this (Thwaites 1905).

However, the use patterns of /ceptu.télikin/ are unclear. When questioned about this reported incident, one informant said: "People did eat the meat of pawed animals. They sometimes jerked it and dried it; but they

did not hunt it for food. Sometimes they killed mountain lions, too. It was part of the old belief." Apparently, pawed animals were used primarily as part of ritual; or, perhaps, some such as /ya.ká?/--'black bear (*Ursus americanus*)'--were used for food, while others, such as /koya.má/--'mountain lion (*Felis concolor*)'--were used as part of ritual. Or perhaps it was an individual matter.

Ducks, geese, and several kinds of grouse were hunted or trapped. Snares were set for water birds by some people. On the other hand, grouse were mostly taken by chance, especially those in the mountains (/tú.ye/--'blue grouse [*Dendrapagus obscurus*], /?éni/--'fool hen [*Canachites canadensis*], and /waswásno/--'ruffed grouse [*Bonasa umbellus*']). On the other hand, /qáxno/--'prarie chicken; probably sharptailed grouse (*Pediacetes phasianellus*)'--were hunted in the winter during cold spells, when they roosted in the trees of protected canyons.

Major Food Animals

Animals of the most important class, /wu.líwtelikte/, were hunted extensively. There is a subclass of edible hoofed animals, /?ímes/. Inedible hoofed animals, the second subclass, included only the horse--/síkem/. Historically six kinds of /?ímes/ occurred in Nez Perce territory: elk (*Cervus canadensis*), whitetailed deer (*Odocoileus virginianus*), mule deer (*O. hemionus*), mountain sheep (*Ovis canadensis*), mountain goat (*Oreamnos americanus*), and moose (*Alces alces*). Two others, bison (*Bison bison*) and antelope (*Antilocapra americana*), were hunted on the Great Plains.

The most important /?ímes/ in the Nez Perce region were elk, mule deer, and whitetailed deer. All /?ímes/ follow a seasonal pattern of migration; the summers are spent at higher elevations than winter. For some in

the area, however, ranges are more localized. This is especially true of whitetails at the lowest elevations.

Elk wintered in forested foothills and low basins, but some were found in the deep canyons. My informants indicate that the highest winter quarters are in the *Tsuga heterophylla* zone, where browse, the elks' major winter food, was plentiful. Large herds, up to 130 animals, have been reported by informants. Despite these concentrations, hunting intensity was low at this time of year. Only those populations near winter villages were disturbed.

Elk drift towards summer range as the snow melts and the plants become productive. Temporary reversals in movement coincide with spring snowstorms and delayed plant development. By late June, they reach their summer grounds. Summer range is in heavily forested zones, and areas with burns or parks are preferred, apparently because of the herbaceous plants there. Wallows are frequented throughout the summer. Rutting season may begin in late July, and is well underway by late August, and lasts until mid-September. Breeding behavior, including bugling and tree marking, is most intensive in the early rut, and harems of 10 to 15 females join a bull. These disperse after-rut, and the elk remain in the high country through the first light snows, beginning their return to the lower elevations when about 6 inches of snow accumulates.

Whitetailed and mule deer differ slightly in habit and habitat, both from elk and from each other. Whitetails prefer summer ranges in relatively heavy forest with deciduous undergrowth. Consequently, they usually stay at lower elevations than either elk or mule deer. Also, they go into rut later than the elk and mule deer. Unlike elk, but like mule deer, they apparently breed during migration. During winter, whitetails are at lower elevations

in habitats essentially similar to their summer range, but when the snows are heavy, they "yard up." This natural historical knowledge about white-tailed deer agrees closely with Pengelly's (1963) description of deer in the northern Rocky Mountains.

Mule deer prefer the high open forests of the *Abies/Xerophyllum* and *Abies/Vaccinium* habitat types for summer range. Their rut is later than elk, but earlier than whitetailed deer; it begins in late September and lasts into October. Because of their summer ranges' elevation and early snows, the buck may be migrating at breeding time. These too, travel all the way to lower forest zones, where the open *Pinus/Agropyron* and *Pinus/Symphoricarpos* plant associations attract them. Again this natural historical data, familiar to all Nez Perce hunters, closely matches that of published descriptions of mule deer populations (Russell 1932; White 1960).

Mountain sheep occupy a much more restricted range than elk or deer. Their summer ranges are in high, especially droughty areas. In winter, they descend into the Salmon River and Hell's Canyons. Mountain goats, also, have highly restricted ranges in droughty habitats (cf. Brandborg 1955). Neither species was an important food source. They were primarily hunted by Nez Perces of the Kamiah and Salmon River areas.

Occasionally moose were taken. These usually solitary animals have ill-defined ranges. Summers are spent near small cirque lakes and tarns in the high country. But studies of Rocky Mountain moose (Stevens 1970) indicate that water plants are not a necessary part of the moose diet. Fire-berry--/?ála?ala/ (*Vaccinium scoparium*)--and subalpine fir--/lálx/ (*Abies lasiocarpa*)--are important winter foods. Like mountain sheep and goats, moose are not abundant, and were not a large portion of most Nez Perces' diets.

Discussion

Three large mammals produced the majority of Nez Perce hunting products: elk, mule deer, and whitetailed deer. The wide variety of forest habitats supported relatively high populations of all three animals. Because of more restrictive habitat requirements, mountain sheep, mountain goats, and moose were not so abundant.

Some travelers through the area claimed that there was not much game, however. Lewis and Clark's party, for example, starved on their crossing of the Lolo Trail (Thwaites 1905 III:66-77). Leege (1968:241) cites several sources indicating that the highest known elk populations in the Lochsa River area occurred in the 1930s and again in the 1950s. Both peaks resulted from increased browse due to forest fires. The most important browse species are redstem ceanothus (*Ceanothus sanguineus*), willow (*Salix* spp.), and mountain maple (*Acer glabrum*). All have reduced vitality and frequency under forest trees, and are favored by forest fire (Larsen 1929; Mueggler 1965; Pengelly 1963). Thus, fire also favors higher populations of elk and deer (Leege 1968; Pengelly 1963; Thilenius and Hungerford 1967), probably moose (Stevens 1970), and possibly mountain sheep and goats. Leege's implication is that fires were not widespread until the turn of the century, and that populations of large cervids were therefore low.

My informants are aware of this relationship, particularly between elk, deer, and seral shrub communities. Along with many other hunting and gathering peoples of the United States (Stewart 1951), the Nez Perces burned these cervids' winter ranges in order to increase winter browse. In his reconnaissance of the Bitterroot Forest Reserve, Leiberg (1900:385-390) detailed fires as old as 1719. His estimate of the acreage subjected to devastating forest fires between the years 1719 and 1865 is 2,270,000 acres,

or roughly 3660 square miles, of the 5000 square mile Reserve. This includes forest acreage which was burned but did not lose its tree cover, as well as repeated burns. He attributed most of these burns to the "Indians." These areas were primarily in the winter ranges of elk and deer.

The paucity of game attributed to the Nez Perce area by Leege (1968), Anastasio (1972), and others can probably be attributed to the ignorance of the reporters. The area is difficult to hunt without intimate geographical knowledge. Because of the heavy vegetation in this area, successful hunting requires knowledge about locations of salt licks, wallows, beds, and trails habitually used by game. Summer and winter ranges of mule deer, for instance, are occupied by members of the same sub-herds from year to year (Russell 1932; Gruell and Papez 1963), and knowledge of these locales is obviously critical for hunter success. To people unfamiliar with the area, then, there may seem to be few animals when there are relatively many.

Partly for this reason, people consistently re Hunted the same areas from year to year. Knowledge about particular hunting areas was detailed. One informant, who is in his forties, said that his uncles could direct a drive by describing the peculiar features of rocks and trees. Continued use of the same hunting areas occurred also because of a feeling of care for, and maintenance of, campsites--/wi.séwyenikes/. At these campsites people cached equipment that was difficult to carry through the heavily forested terrain; for example, tipi poles and sweathouse frames.

Hunting intensity varied through the year. It was highest for a given species immediately before and during the rutting season. This was due partly to competing subsistence activities. For example, a great reduction in hunting intensity resulted from a scheduling conflict between the late spring salmon runs, root collection, and hunting (Spinden 1908), each of which

required a single task group to be in a different locale at the same time. Consequently a choice was made between the activities. In this case, virtually all Nez Perce split their time between salmon fishing and plant collection. On the other hand, hunting intensity increased when hunting could be carried out at the same time and in the same area as other subsistence activities. For example, berry gathering in the high mountains where elk and deer were located increased hunting opportunities.

In addition, variation may be partly attributed to a concept of animal and plant "maturity." According to my informants, elk and deer are "mature" from late July through September, that is, before and during rutting season. Mature animals were desirable because they are fat, easily prepared for storage, and taste best. The criteria for judging an animal mature are its increased physical strength and sexual activity. Hunting activity was greatest during late summer.

Animals taken late in the rutting season and afterwards are edible. However, the animal's meat, especially of males, is leaner, "tastes sour," and "smells." This is attributed to sexual activity. "Overmature" animals can be eaten fresh, but are better tasting when jerked and smoked. Therefore, fall, winter, and spring were times of only moderate hunting intensity even though the canyons of the Snake River and its major tributaries were often snow-free and the animals were concentrated. From April through June elk and deer were considered poor food. Despite the fact that they put on weight and are increasingly active, traditional informants claim, "They are not worth hunting. The meat causes stomach trouble." Hunting intensity is lowest during this time of year, and occurs only if other food sources are exhausted.

Hunting activity, then, was related to a concept of animal "maturity" and its intensity varied directly with the physical and sexual activity of the prey. These are fairly objective criteria, but a third subjective criterion, taste, was important. Taste was only partly attributed to physical activity. It was also related to browse maturity. "Good browse" for elk and deer occurs during July, August, September, and rarely, October. The plants are then mature; shoots have reached full growth. During winter the plants are quiescent and thus not "good food." From April through June the browse plants are immature, causing poor quality meat.

The Nez Perce had two basic hunting tactics, the ambush and drive. Both tactics forced the prey into the open. In an ambush, hunters waited until the animal went to a regularly visited place, such as a wallow or salt lick. In a drive, a group of men drove the animal from hiding to a regularly used trail where yet another hunter waited. Each method required intimate knowledge of a locale; thus, hunters usually went to the same locales yearly. The hunting itineraries I know have similar patterns: they enter the mountains following a major ridge system, then cross to another system to come back out. Camps are about 6 to 10 miles apart. Each camp heads a drainage basin which is hunted from 2 to 8 days. Hunters moved on quickly if hunting was poor. If it was good, then roughly 8 days were required to prepare the game for storage and packing it.

Summary and Conclusions

From 10 to 25% of the Nez Perce diet resulted from hunting. The primary food animals were elk, whitetailed deer, and mule deer. Other animals, 'pawed animals' and 'flying animals,' formed only an ancillary part of the diet. Nez Perce natural historical knowledge about game animals closely

matches that in wildlife management literature (Brandborg 1955; Franklin, Mossman, and Dole 1975; Gruell and Papez 1963; Leege 1968; Pengelly 1963; Russell 1932; Stevens 1970; Thilenius and Hungerford 1967; White 1960). Despite reports of poor hunting in Nez Perce territory, game populations were probably high. The relationship between fire and big game populations may have been recognized by Nez Percés. In any case they repeatedly burned about 3660 square miles (75%) of the 5000 square mile Bitterroot Forest Reserve which Leiberg surveyed in 1900. Hunting intensity was related to a concept of animal "maturity," and was greatest when animals were in prime condition.

Summary and Conclusions

Southeastern Washington, northeastern Oregon, and northern Idaho is an environmentally diverse region. Within this area occupied by the Nez Perce Indians, three geological provinces border one another. The Blue and Northern Rocky Mountain Provinces strongly modify the essentially marine climate of the area. As a result, both precipitation and temperature generally vary directly with altitude rather than latitude. Heavy montane precipitation produced deeply incised streams. Because precipitation is greatest during winter, the region's vegetation is richer than would be predicted from the desert-like summer temperatures and relatively warm winter temperatures. These variations in the physical environment have corresponding variations in the terrestrial biological environments.

Two major biomes are located in the area, and the boundary between them occurs at roughly 2500 feet in elevation. Steppe occupies the area below this boundary, and is generally confined to the rolling loess hills characteristic of the Columbia Plateau Province. Forest communities are

found above 2500 feet. Between these biomes a "typical" steppe community is dominated by ponderosa pine.

A complex mosaic of vegetational habitat types occurs on a transect from the lowest to highest elevations. Habitat types vary from arid steppe communities to mesic alpine forests. The lower, generally westward boundaries of these communities are produced by summer drought, while the higher, generally eastward boundaries are caused by winter cold. Four "zones" are relevant to Nez Perce ecology. The first of these is formed by a series of summer dormant plant communities in the deep canyons. In spring they produced a variety of necessary early food resources which supplemented depleted winter stores of the Nez Perce people. The others are primarily dormant in winter. Those on the basalt plateaus and montane foothills are most productive from June through July. In late summer they too aestivate. The fourth zone, the mountains and the "holes" they contain, produces important resources in August and September. These times of productivity partially constrained the Nez Perce economic activities (Fig. 16). As each zone became productive, then dormant, the people moved from one to the other.

The streams produced one of the most important resources of the Nez Perce and anadromous fish comprised as much as 50% of the people's diet. At least 2,000,000 pounds of salmon were caught every year. Non-anadromous species were important before the salmon runs when they were an important dietary addition. The availability of anadromous and non-anadromous fish is directly related to spring runoff. Thus, the well-being of the people at this time of year, dependent as they were on stored food, varied with early spring temperatures. For example, Lewis and Clark, on their return trip in 1806, remarked on the short rations of the Nez Perces at Kamiah. Because of the exceptionally heavy snow cover and the late spring they complained of

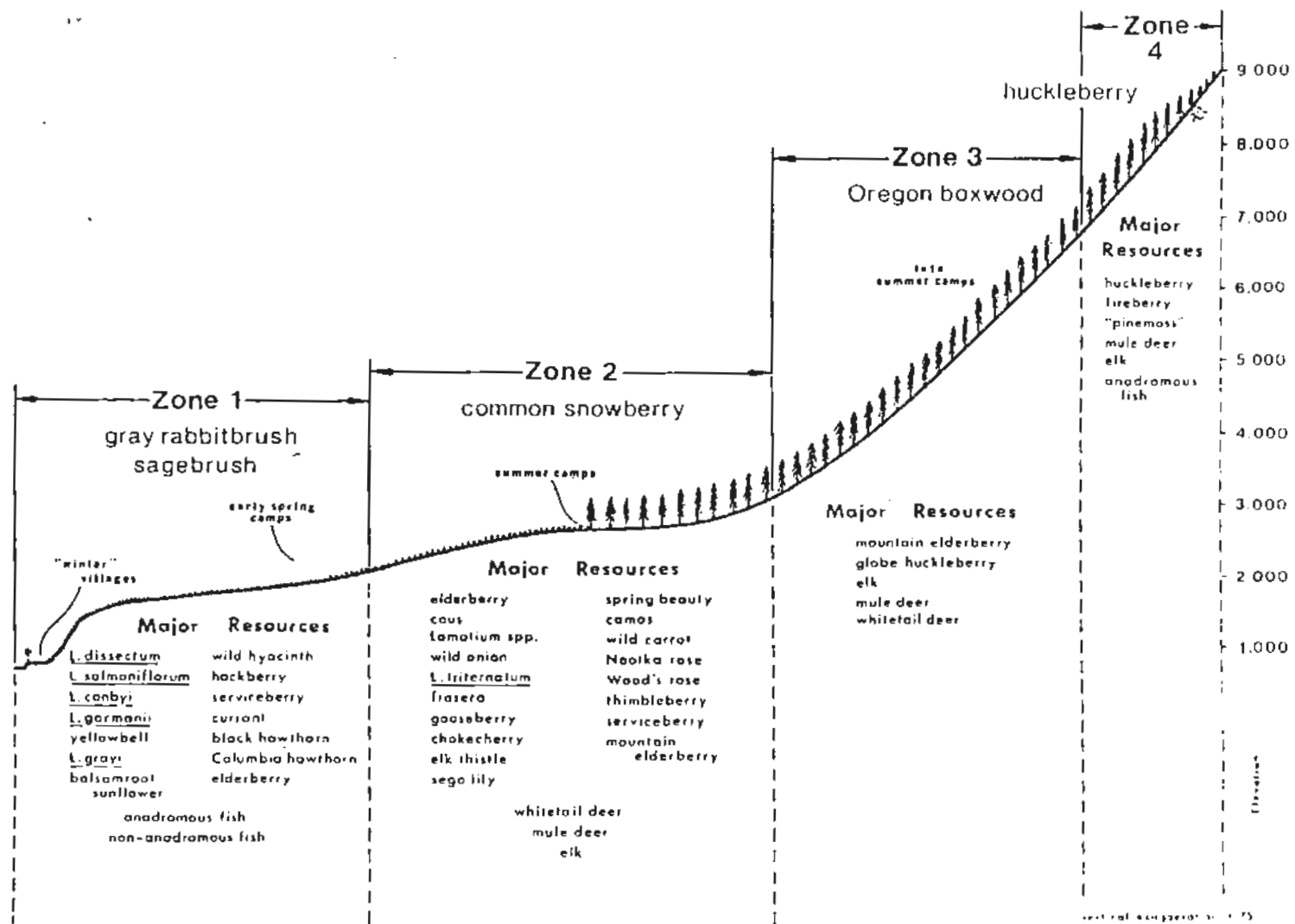


Fig. 16. Resource zones of /iɛpweme/ Nez Perce.

being "detained near five weeks in consequence of the snows," on 14 June 1806, and could not cross the mountains until 24 June 1806 (Thwaites 1905 V:134, 146). It was there that they reported the Nez Perces eating "pine tree moss."

The Nez Perces depended primarily on 36 plants for food. The time of spring plant availability is highly variable, but summer plants vary less. Both spring and summer root plants are abundant in limited habitats. Locational predictability and certainty of productivity are important aspects of plant resources. In this respect they are like fish resources. Harvesting apparently insured future root yields by favoring seedling establishment.

Unlike fish and root resources, berry productivity varies spatially. In this respect they are like game animals. Both berry and game resources increase after fire, which the Nez Perces used to increase the productivity of these important winter foods. Hunting and berrying success was variable.

Besides being constrained by their environment, the Nez Perces also affected it through root collection and fire. Root collection probably favored the seedling establishment of food plants thriving in disturbed soils and camas. Fire favored plants palatable to elk and deer, and was a tool used to manage the game populations of the area. Further, fire increased the abundance of several berries important in Nez Perce winter food supplies.

Virtually all Nez Perces participated in the food quest. While resources were available 6 to 8 months per year, they were not evenly distributed in space or time. These ecological constraints were partially alleviated by environmental manipulation through root collection and fire. Nevertheless, no single person, or even a small group of people, could consistently exploit all necessary resources. Some areas produced more than

others, some years were more productive than others. There were also longer cycles; for example, those associated with game animals and berries, whose abundance depended upon plant succession after fire. Personal accidents could also cause failure to exploit sufficient resources. Several social structural features served to dampen these temporal-spatial variations in resource availability. These were (1) dispersion and (2) dispersal.

CHAPTER 3

KINSHIP

The diverse, variable Nez Perce environment posed a two-sided problem: how to disperse people, yet maintain links between them. Nez Percés were dependent on mutually exclusive resource areas, which reduced pressure on resource locales, thus insuring enough resources for everyone. At the same time, linkages were maintained so that variations in resource productivity did not unduly affect dependent subpopulations. A variety of mechanisms accomplished these goals. One mechanism was kinship.

Kinship in Nez Perce society was ecologically important because it dispersed people, localizing groups in particular areas. It also provided a personally known set of alters to which ego turned if he or she was unsuccessful in subsistence pursuits. Kinship thus transcended time and space.

In this chapter I will describe the relationships which performed these functions. Previous work with Nez Perce kinship has been done by Aoki (1966a, 1970a, 1970b) and Lundsgaarde (1963, 1967). Aoki's work has been oriented toward formal accounts of the system. Consequently, it stresses parsimonious analytical rules for defining the kinship terms. Lundsgaarde's (1963, 1967) approach was concerned more with kin classes and associated behaviors. My approach is similar.

Lundsgaarde (1963, 1967) presented kinship data which is corroborated by my own more recent work. The first study is a description of the Nez

Perce marriage practices. The second, an outgrowth of the first, is a brief structural analysis of the Nez Perce kin terminological system. There are only three minor differences in data between our work, but analytically some more important differences arise. The differences are attributable to varying approaches, and mine clarifies some ambiguities in Lundsgaarde's (1967) presentation, rather than contradicting it.

Lundsgaarde's (1967) structural analysis is a kind of dual approach. He attempts a brief componential account of Nez Perce kinship terminology, apparently using Murdock's (1949:101-106) nine kinship criteria. Lundsgaarde notes that eight of these are used by the Nez Perces: generation, sex, affinity, collaterality, bifurcation, polarity, speaker's sex, and relative age. The ninth criterion, decedence, is also used, but not specifically pointed out by Lundsgaarde. Lundsgaarde (1967) has trouble dealing with the G+1 consanguines. His problem lies in the complicated relationships between parents' affines.

I will define the categories in the kinship system, then describe stereotyped kin behaviors, especially those of amity and enmity, pertinent to problems of dispersion and linkage. Two important conclusions can be drawn from this information. First, criteria of kinship categories are lines of group fission and fusion. Second, behaviors associated with kinship systems are adaptive, not the systems themselves.

Kinship Terms

The Nez Perce had more than 50 kin terms, including synonyms. But any kinperson could be identified through 47 of these; 14 are affinal terms, 33 are terms of consanguines. Referential affinal terms will be given; the addressive forms are the same as the referential, although some are prefixed

with the first person possessive morpheme. Both referential and addressive consanguineal forms will be given. Referential terms are identified with (r), addressive forms with (a). All terms are in the /pist/ form identified by Aoki (1966a). The terms are presented in sets by generation, the only criterion applied to all kin terms. Generation, in fact, is the only parameter designating four consanguineal kin terms (G±3, 4).

Affinal Kin Terms

Ego's generation is most important in this analysis. Some relationships in other generations are best understood from the viewpoint of G0. The kinship structured interpersonal relationships in ascending generations provided the basic controllable ecological set in which a person operated. Control was exercised through "political" means: the changing alliances of individuals--often marked by variations in recalled kinship relations--allowed people to change group affiliation. Hence, the Nez Perces were deeply concerned with their past. They were also concerned with their future, which could be controlled to a certain extent by building new ties. Affines were therefore important.

Some consanguineal kinship terms in G±1 reflect affinal relationships in the senior generation. Hence the analysis of Nez Perce kinship terminology begins with the affinal system. The affinal array (Table 2) includes 14 terms.

G0--There are nine dyadic relationships among G0 affines (see Table 2). These relationships are marked by behaviors ranging from intimate to highly respectful. Three kin classes occur: spouse, potential spouse, and "in-laws."

"Spouse"--Three terms designate spouses (Fig. 17):

- (1) /i?nwé.pne/--'Wi'
- (2) /há.ma/--'Hu'
- (3) /pe?éks/--'co-wife'

According to one informant, /pe?éks/ is untranslatable. Although the term designates a 'co-wife,' it is a "battle cry." My informant was speaking metaphorically, of course, but tension between 'co-wives' was often great.

TABLE 2. AFFINAL KINSHIP TERMINOLOGY ARRAY

Feature	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
consanguine	-	+	-	-	-	-	+	-	-	+
remove 1	+	+	-	-	-	-	+	-	-	+
remove 2	-	-	-	-	-	-	+	-	-	+
remove 3	-	-	-	+	+	+	+	+	+	+
Gr1	-	-	-	-	-	-	-	-	-	-
death of link	-	-	-	-	-	+	+	+	+	+
ego's sex	+	+	+	+	+	+	+	+	+	+
ego/alter same sex	-	+	-	+	+	+	-	-	+	+
male speaker	-	-	+	+	+	+	+	+	+	+
female speaker	+	+	-	+	+	+	+	+	+	+
?inhá.ma--'Hu'	-	+	-	-	-	-	+	-	-	+
pe?éks--'co-wife'	-	+	-	-	-	-	+	-	-	+
i?nwé.pne--'Wi'	-	+	-	-	-	-	+	-	-	+
pinú.kin--'SpSib/SibSp'	-	+	+	+	-	+	+	+	+	+
cikf.wn--'dead SpSib/dead SibSp'	-	+	+	+	-	+	+	+	+	+
tiwé.ye--'WiBr/ZHu'	-	+	+	+	-	+	+	+	+	+
hikáytiwa.--'WiZHu'	-	+	+	+	-	+	+	+	+	+
ci.ks--'HuZ/BrWi'	-	+	+	+	-	+	+	+	+	+
pe?ékstiwa--'HuBrWi'	-	+	+	+	-	+	+	+	+	+
píses--'WiFa/DaHu'	-	+	+	+	-	+	+	+	+	+
ciwá.go--'WiMo/DaHu'	-	+	+	+	-	+	+	+	+	+
pine.xsin--'HuPar/SoWi'	-	+	+	+	-	+	+	+	+	+
pí.mneks--'SoWiPar/DaHuPar'	-	+	+	+	-	+	+	+	+	+
qe.yet--'dead ChSp/dead SpPar'	-	+	+	+	-	+	+	+	+	+

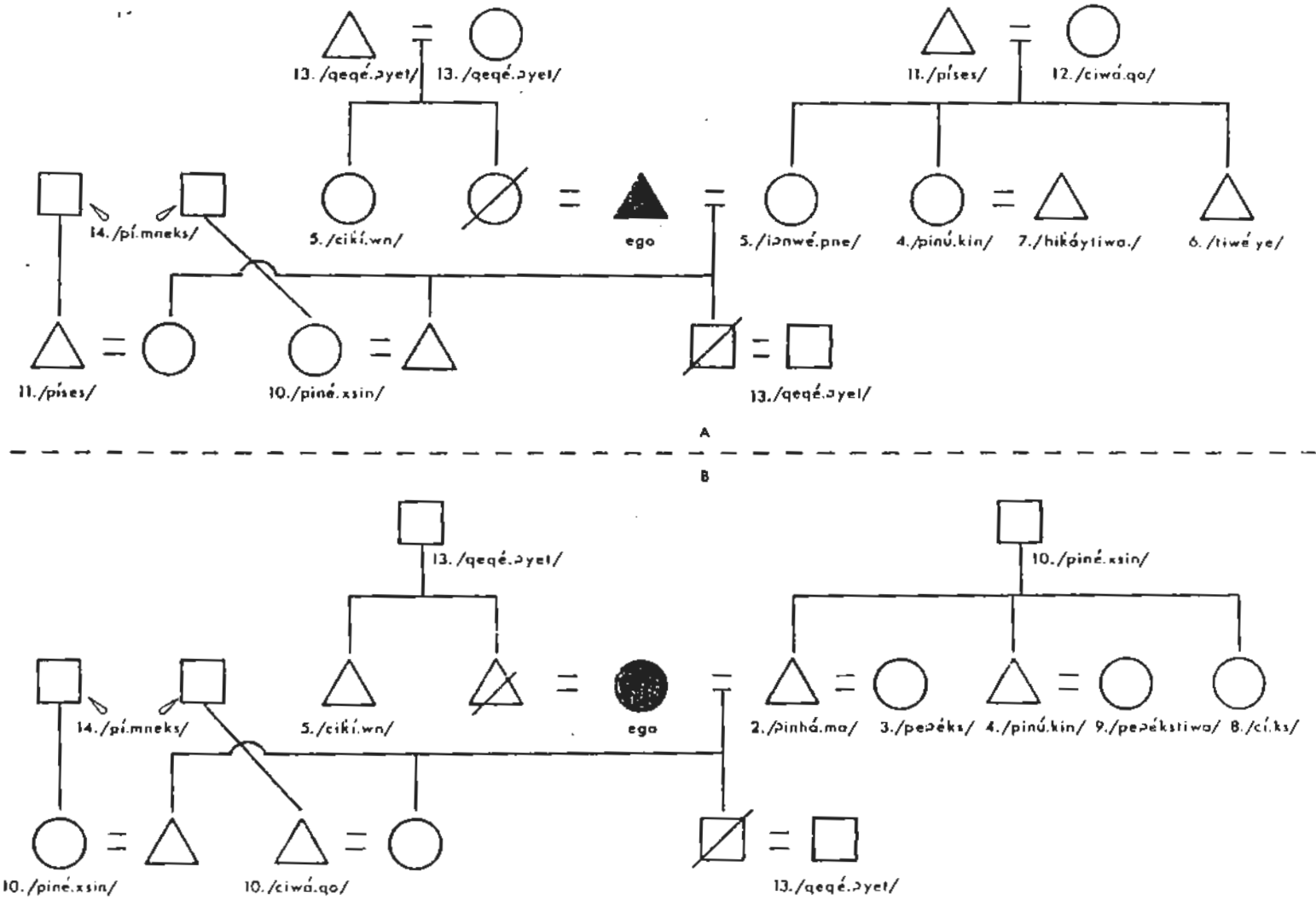


Fig. 17. Affinal kinship terms for male (A) and female (B) egos.

Sisters, therefore, were preferred as 'co-wives,' and the term /peʔéks/ was not used. This preference is expressed in the "potential spouse" category.

"Potential spouse"--Ego's spouse's sibling was a preferred marriage partner (Fig. 17). This relationship is formalized by two terms, both untranslatable:

- (4) /pinú.kin/--'SpSib/SibSp'
- (5) /cikí.wn/--'dead SpSib/dead SibSp'

All GO affines of the opposite sex are called /pinú.kin/, who were ideally preferred marriage partners in sequential marriages. After the connecting link dies, the /pinú.kin/ relationship intensifies and becomes /cikí.wn/. Apparently, men regularly married sisters to produce polygynous unions. On the other hand, I could not elicit a term designating 'co-husband.' Polyandry apparently was not a formally recognized polygamous union. However, de facto polyandry probably occurred briefly and occasionally.

"In-laws"--The "potential spouse" category is also important in other GO affine categories as well. There are four of these terms (Fig. 17):

- (6) /tiwé.ye/--'WiBr/ZHu'
- (7) /hikáytiwa./--'WiSiHu'
- (8) /cí.ks/--'HuSi'
- (9) /peʔékstiwa/--'HuBrWi'

The /pinu.kin/ category is apparent in terms (7) and (9). A man's /hikáytiwa./ --'dish mate'--is his wife's /pinú.kin/. While a woman's /peʔékstiwa/ is her husband's /pinú.kin/ and potentially her co-wife, /péʔeks/.

Finally, it is important to note that these terms are reciprocal. This is obvious for terms (7) /hikáytiwa./ and (9) /péʔekstiwa/, since ego and alter are in identical structural positions vis a vis one another. Why (6)--/tiwé.ye/--and (8)--/cí.ks/--should be used reciprocally is not so

TABLE 3. ARRAY OF CONSANGUINEAL KIN TERMS.

Feature	1. consanguine	2. collateral	3. lineal	4. G4	5. G3	6. G++	7. G+	8. G0	9. G-	10. G--	11. male speaker	12. female speaker	13. male alter	14. female alter	15. male link
him(yu--'blood relative'	+														
so.qútma--'ancestor'	+	+													
wiyápiyim--'descendant'	+	+	+												
pítwit--'GtGtGrRel'	+	+	+												
poxpóxc--'GtGrRel'	+	+	+												
qaláca?--'FaFa'	+	+	+												
?é.le?--'FaMo'	+	+	+												
piláqa?--'MoFa'	+	+	+												
qá.ca?--'MoMo'	+	+	+												
tó.ta?--'Fa'	+	+	+												
?í.ce?--'Mo'	+	+	+												
méqe?--'FaBr'	+	+	+												
cí.ca?--'FaZ'	+	+	+												
táqa?--'MoBr'	+	+	+												
qé.qe?--'MoZ'	+	+	+												
yá.ca?--'OlBr'	+	+	+												
né.ne?--'OlZ'	+	+	+												
?ácqa--'MnYoBr'	+	+	+												
qáni--'MnYoZ'	+	+	+												
nípe--'WnYoBr'	+	+	+												
?áyi--'WnYoZ'	+	+	+												
píctiwe.--'FaCh'	+	+	+												
ilú.twe.--'MoCh'	+	+	+												
pé.qiy--'MnBrCh'	+	+	+												
mám--'MnZCh'	+	+	+												
pá.mta--'WnBrSo'	+	+	+												
pó.y--'WnBrDa'	+	+	+												
?í.ta--'WnZCh'	+	+	+												
miyâc--'Ch'	+	+	+												
qaláca--'MnSoCh'	+	+	+												
?é.le--'WnSoCh'	+	+	+												
piláqa--'MnDaCh'	+	+	+												
qá.ca--'WnDaCh'	+	+	+												

obvious. Perhaps it is related to ideally preferred marriages between sibling groups.

Yet another explanation is possible. The reciprocal use of these terms may be related, again, to the /pinú.kin/ category, and to marriage practices. A MnBrWi is /tiwé.ye/ to ego, and ego's sister is /pinú.kin/ to ego's /tiwé.ye/. Thus, ego's /tiwé.ye/ is potentially at least, ego's ZHu. This "potentiality" may be one reason for the reciprocal use of the term /tiwé.ye/ by two men, even though they do not fill structurally identical positions.

This explanation is supported by informants' references to ideal marriage patterns. Formerly, an ideal pattern would be an exchange of wives (husbands) between two sibling groups. In such an instance, all males would occupy structurally similar positions *vis a vis* one another. The same, of course, is true of the /cí.ks/ category.

The parents of a married couple refer to one another as (14) /pí.meks/ (Fig. 17).

Turning now to generations adjacent to G0; there are four relationships between affines (Fig. 17). The relationship between a woman and her parents-in-law is called (10) /piné.xsin/; this is reciprocal. Reciprocal terms also obtain for the relationship between a man and his father-in-law and mother-in-law. Between a man and his father-in-law, the relationship is called (11) /pises/. The relationship between a son-in-law and his mother-in-law is (12) /ciwá.qo/. Upon death of the affinal link, parents-in-law and child-in-law are (13) /qeqe.?yét/.

Consanguineal Kin Terms

The Nez Perce consanguineal kin terminology includes 30 terms (Table 3). They denote nine generations of kinsmen at the utmost: own generation.

four ascending, and four descending. Thus, the consanguineal system is extraordinarily inclusive, and, in terms of numbers of possible alters, practically unbounded. Marriage within this cognatic group, where links were remembered, was frowned upon.

All of ego's consanguines are (15) /himíyu/--'blood relatives,' a term never used in address if a more exact term is known. All /himíyu/ in generations older than ego's are (16) /soqútma/--'ancestors.' This term is derived from the word /suqt/--'stump.' Those /himíyu/ in descending generations are (17) /wiyápiyim/--'all the generations coming; descendants.' Ego's own generation is an unnamed category.

GO--All sibling terms but two are extended to every known consanguine of GO (Fig. 18a, b).

- (18) a /yá.ca?/
r /pí.yep/--'OlBr'
- (19) a /né.ne?/
r /péhet/--'OlZ'
- (20) a /?ácqa/
r /?ásqap/--'MnYoBr'
- (21) a /qáni/
r /qánis/--'MnYoZ'
- (22) a /nípe/
r /pé.kt/--'WnYoBr'
- (23) a /?áyi/
r /?ácip/--'WnYoZ'
- (24) a, r /ilú.twe/--'MoChn'
- (25) a, r /píctiwe./--'FaChn'

There are two intriguing points in this array. First is seniority. Ego's sex is irrelevant in the parameters typifying elder siblings (Table 3, features 11, 12). In this way, relative age is similar to generation: i.e., throughout the kin terminology ego's sex is irrelevant in typifying elders.

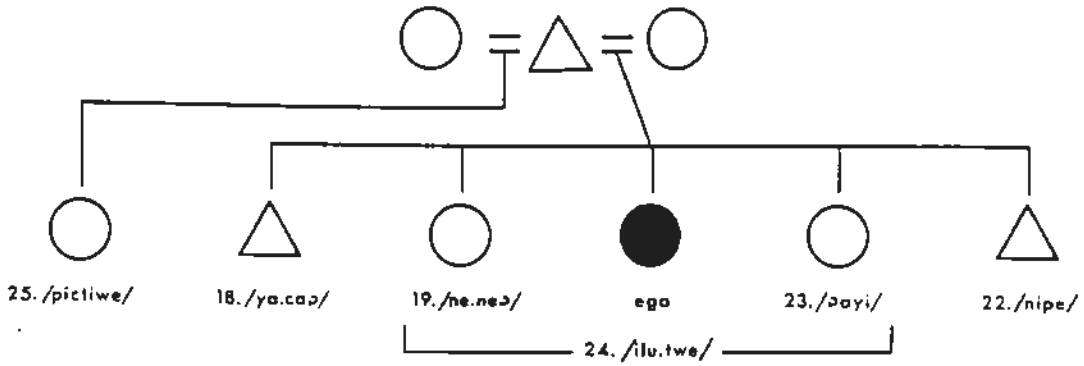
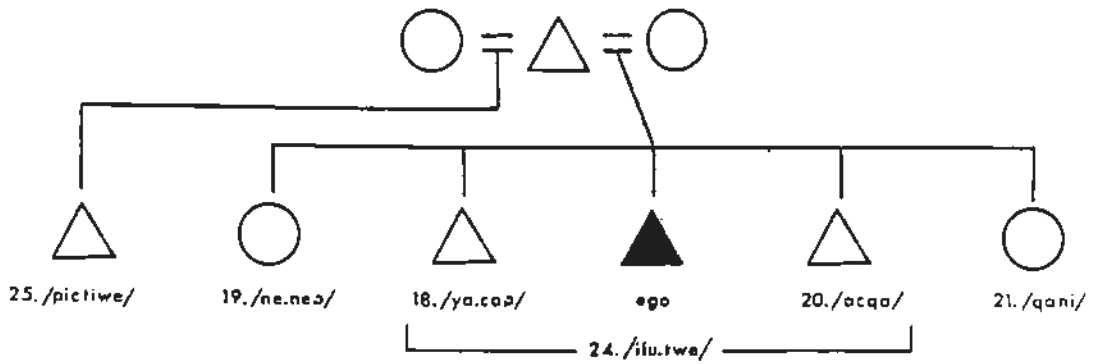


Fig. 18. GO kinship terms for male and female egos.

The converse holds in intergenerational nomenclature, but does not hold in intragenerational terminology. A junior alter's sex is necessary to designate alter in the same generation. This justifies analytically distinguishing generation and relative age.

It reflects, also, some basic sibling patterns, including a dependence relationship on older siblings, and, later in life, differential relationships with siblings-in-law. Despite this, basic status equivalence of siblings is indicated by recognizing the sex of a dyad's junior member: something not done intergenerationally. These relationships will be fully discussed in later sections.

The second interesting point is the terms /ilú.twe./ and /píctiwe./ /ilú.twe./ refers to children of the same mother (/ilú.t/--'belly, womb'; /-tiwe/--'mate'). According to my sources, however, it is sometimes used to address someone especially close affectively to the speaker, of the same sex and generation. Very often this alter is a classificatory sibling within 2-3 degrees of collaterality. /píctiwe./ refers to something sharp. They are children of the same father, but different mothers. This relationship is not usually as close as that of /ilútiwama/--'mother's children.'

G+1--Terms for consanguines in the G+1 generation (Fig. 19) meet Murdock's definition of bifurcate collateral terminology:

Recognition of both bifurcation and collaterality produces so-called *bifurcate collateral* terminology, in which paternal and maternal uncles and aunts are terminologically differentiated from both parents and one another [1949:141; emphasis his].

In the Nez Perce case, lineality, alter's sex, and sex of connecting link (Table 3, features 11-15) are the relevant parameters.

(26) a /tó.ta?/
r /píst/--'Fa'

(27) a /?í.ce?/
r /píke/--'Mo'

- (28) a /méqe?/
r /pí.mx/--'FaBr'
- (29) a /cí.ca?/
r /pí.sis/--'FaZ'
- (30) a /táqa?/
r /pí.tx/--'MoBr'
- (31) a /qé.qe?/
r /pé.qex/--'MoZ'

The parameter "male link" only indirectly typifies G+1 collateral relatives. The terminology of G+1 is most clear in terms of the parents' affinal categories. All mother's /pinú.kin/--'potential spouse'--are ego's /pí.mx/--'FaBr,' while mother's /cí.ks/--'HuZ' and /pe?ékstiwey/--'potential co-wife'--are ego's /pí.sis/--'FaZ.' All father's /pinú.kin/--'potential spouse'--are ego's /pé.qex/--'MoZ,' and father's /tiwé.ye/--'WiBr'--and /hikáytiwa/--'WiSiHu'--are ego's /pí.tx/--'MoBr.'

Thus, the /pinú.kin/ category is retained in the terms for G+1. This retention is congruent with step-kin terms. If marriage with /pinú.kin/ is the preferred secondary marriage, and if the system is consistent, then the use of /pí.mx/--'FaBr'--and /pé.qex/--'MoZ'--for stepfather and stepmother is to be expected. This is the case. As we shall see, the system is consistent for step-child as well.

G-1--In G-1 (Fig. 20a, b) there are six relevant parameters for sorting kinsfolk. Lineality and collaterality (Table 3, features 2 and 3) distinguish own children from others. Ego's sex (Table 3, features 11 and 12) in combination with sex of connecting link (Table 3, feature 15) separates /pinú.kin/'s children from others. If ego's sex, furthermore, is female, then alter's sex (Table 3, features 13 and 14) becomes relevant, unless it is /pinú.kin/'s child.

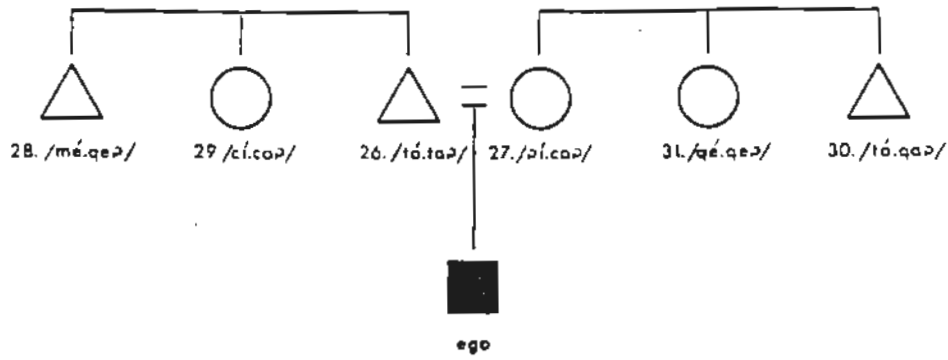


Fig. 19. G+1 kinship terms.

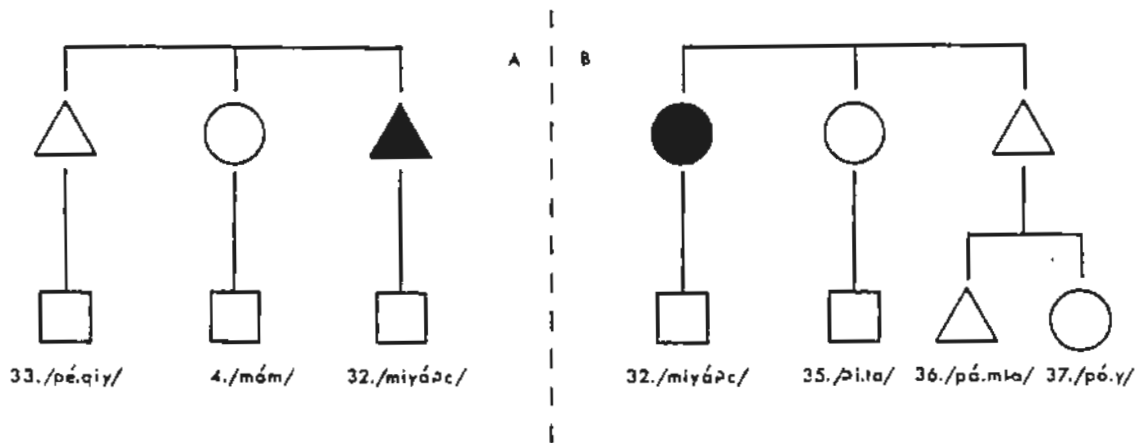


Fig. 20. G-1 kinship terms for male (A) and female (B) egos.

- (32) /miyá?c/--'Ch'
 (33) a /pé.qiy/
 r /peqí.yex/--'MnBrCh'
 (34) a /mám/
 r /pitáxp/--'MnZCh'
 (35) a /?í.ta/
 r /?í.tx/--'WnZCh'
 (36) a /pá.mta/
 r /pá.mtin/--'WnBrSo'
 (37) a /pó.y/
 r /pó.t/--'WnBrDa'

In this case, too, the /pinú.kin/ category is important in terms of categorizing 'stepchild.' A stepchild is called /pé.qiy/--'BrCh'--by a man, and /?í.ta/--'ZCh'--by a woman. A second salient feature is a woman's distinction of the sex of 'brother's' children. The relationship between a woman and her BrSo is a special one of confidence and guidance, and it appears constantly in myths (Phinney 1934).

G+2--The grandparental generation (Fig. 21) is split into four classes on the basis of two parameters. These are sex of connecting link and alter's sex. Unlike the other generations already discussed, the /pinú.kin/ category is no longer relevant. It is important that lineality is not a distinctive feature. Thus, any one member of the G+2 filling these criteria are 'grandparents.'

- (38) a /qaláca?
 r /qaláca?c/--'FaFa'
 (39) a /?é.le?
 r /?é.le?c/--'FaMo'
 (40) a /piláqa?
 r /piláqa?c/--'MoFa'
 (41) a /qá.ca?
 r /qá.ca?c/--'MoMo'

Except for the "honorific" glottal stop for seniors, grandkin terms are reciprocal.

G-2--The second descending generation (Fig. 22a, b) is also divided into four categories. In this instance it is ego's (the senior member of the dyad) sex which is important. Sex of the connecting link in the intermediate generation is the second parameter.

- (42) a /qaláca/
r /peqélis/--'MnSoCh'
- (43) a /piláqa/
r /páplax/--'MnDaCh'
- (44) a /?é.le/
r /píptex/--'WnSoCh'
- (45) a /qá.ca/
r /péqex/--'WnDaCh'

Again, lineality is not a parameter. Therefore, any member of the G-2 fitting these criteria are 'grandchildren.' For example, a woman's brother's daughter's children are /péqex/.

Generation is the only parameter used to denote great- and great-great grandkin. Consequently there are only two terms. All lineal and collateral relatives of G±3 are:

- (46) /poxpóxc/--'GtGrRel'

All members of the G±4 generation are:

- (47) /pítwit./--'GtGtGrRel'

Some Kinship Behaviors

Fortes (1969: Chapt. XII) has emphasized the importance of kinship amity. Basically it implies the necessity of kinsmen supporting one another against non-kin. While amity of this sort is very apparent among Nez Perce kinship groups, and is important ecologically, patterns of enmity are equally important.

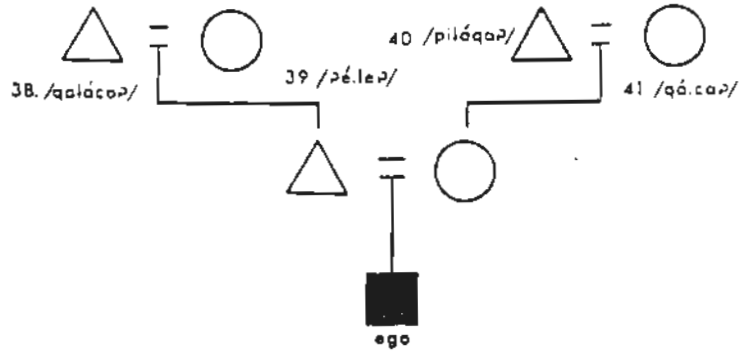


Fig. 21. G+2 kinship terms.

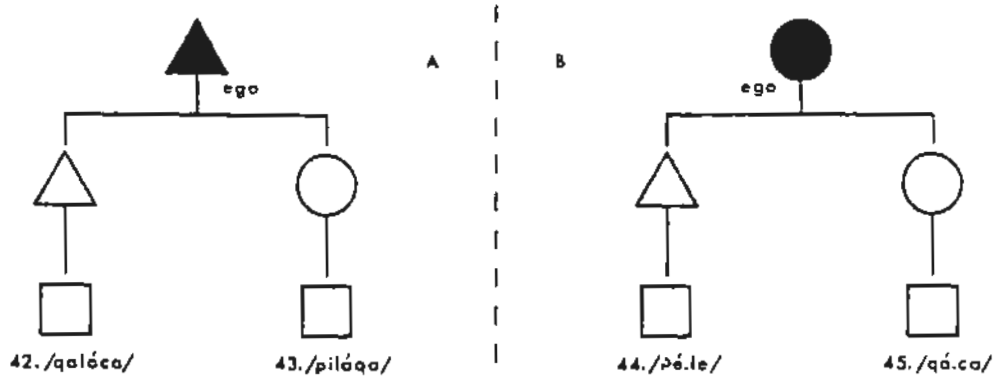


Fig. 22. G-2 kinship terms for male (A) and female (B) egos.

Groups formed on the basis of patterned, stereotyped kinship amity and enmity. These stereotypic behaviors marked a network of alters, but amity and enmity on a personal, non-stereotypic level sometimes vitiated stereotyped behaviors after long association. Such behaviors also defined lines of group succession. They thus determined ecological relationships: kinship, and its associated behaviors, dispersed people, at the same time it linked them. Kinship structured interpersonal relationships provided the basic controllable ecological set in which a person operated. Through alliance, a person could also influence the future.

Siblingship was marked by strong solidarity. Every relative in ego's generation was a sibling. Consequently, ego had a wide range of siblings with whom he could associate. However, there were priorities. /pictiwáma/--'father's children'--and /ilútiwama/--'mother's children'--were supported before others, and /ilútiwama/ usually took precedence. Sibling roles were most fully developed among individuals with the same mother.

Four kinds of siblings were distinguished by sex and relative age; these criteria mark lines of fission within the group. Elder brothers and sisters fulfilled attenuated parental roles. Elder brother--/yá.ca?/--helped in the training of younger brother--/?ácqa/--in hunting, fishing, and other masculine pursuits. Elder brother was also a protector for both younger brother and sister--/qáni/. Elder sister--/né.ne?/, on the other hand, was concerned with the training of her younger sister--/?áyi/, and was a protector-comforter for younger sister and brother--/nípe/. After puberty of both members of male-female dyads, mild avoidance developed. When fulfilled properly, these roles produced an exceptionally strong group of individuals.

These roles were not uniformly fulfilled, however. Hence, even groups of /ilútiwe/--'mother's children'--could fission on the basis of differing affective ties. For example, male siblings more than four or five years older are unlikely to fill the /yá.ca?/ role well. Furthermore, an individual sometimes established 'elder/younger-brother/sister' relationships beyond the range of /ilútiwe/ or /píctiwe./--'father's child.' Thus, children of the same parents did not exhibit uniform internal solidarity. Nevertheless, sibling solidarity was great. Much older /yá.ca?/ and /né.ne?/ often were important sponsors and advisors of their younger siblings.

Fission usually resulted from circumstances other than dispute. Siblings more than four or five years older than ego were active in a wider variety of social domains. Hence, their interaction was relatively attenuated. Brothers and sisters, of course, belonged to different domestic groups. But affective ties were very strong. For example, one man spoke about his younger sister:

One time my sister got sick in the mountains. We got her back home, but she didn't get better. Something was after her. One night she started shouting and I ran to her bed. I couldn't do anything. I was her /yá.ca?/ but I couldn't do anything!

Even after 15 years, he was still deeply affected by her illness and by his inability to help her.

These roles continued even after marriage. Ideally, elder brothers were mentors advising and guiding their younger siblings. These roles became highly attenuated between brothers and sisters because of mild avoidance and usually patrilocal postmarital residence. Also, because males were primarily "dominant," little role conflict was involved.

Conflict leading to fission did occur between brothers, however. Ideally, an adult male was independent; he led a domestic group. The term

/háma/ refers to 'man' or 'husband.' Both are poor translations, however, since the term implies leadership, competence, ability, and independence. In growing towards this ideal, unsolicited advice--/yá.ca?/ assuming leadership --was unwarranted and led to conflicts and schism.

The conflict was very deep. It is apparent in many myths, and male sibling rivalry is spotlighted in "Elder Brother-Younger Brother" (Phinney 1934). A persistent theme in other myths is the assumed incompetence of the youngest of five brothers, who later proves his superiority in a difficult endeavor.

A single sex sibling group often formed the core of a domestic group, the localized productive unit. Brothers, closely spaced in age, ideally formed the core, but a group of sisters could form one. Brothers and sisters together did not form such a core. This mild avoidance pattern dispersed individuals who were emotionally very close. Since reciprocity characterized brother-sister relationships even after marriage, a constant flow of goods circulated from domestic group to domestic group.

Siblings ideally formed a close-knit group, especially those who were termed /ilútiwe/--'mother's child.' This group maintained solidarity throughout its members' lifespans. Because of certain preferential marriage patterns, discussed in a latter section, /ilútiwama/'--mother's children'-- of the same sex tended to stay together. They formed the basis of the domestic group.

Thus, the sibling group is marked by fission and fusion. Fission results from differences in relative age, sex, and having different mothers or fathers. Of these, having different mothers is the strongest isolating mechanism. A group of /ilútiwe/, however, is strong. Relative ages may result in further division, but the affective ties are nevertheless strong.

Difference in sex, of course, produces fission. Again affective ties between brother and sister insure continued interaction. This interaction, through continuing exchange, joins otherwise isolated domestic groups. This type of juxtaposition also may result among /píctiwama/--'father's children.'

Marriage also affects fission and fusion. The fusion is obvious. Marriage expands the number of a person's kinship alters, tying him to an even greater number of individuals. The continued interest of siblings in one another's welfare also means that other members of both sibling groups involved stand ready with aid. Because of fission and mild avoidance of opposite sex siblings, aid is generated from resource locales different from ego's. Therefore, variations in the productivity of ego's resource locale are not likely to be matched in his or her affine's resources. This is an especially important ecological aspect of marriage and subsequent domestic group stability.

The domestic group proper is established through marriage. Basically, two behavioral constellations occur in ego's generation. One of these is the behavior of /háma/--'husband.' Husbands, ideally, provided what might be termed guidance or protection for the family. The term /háma/ connotes leadership and "stewardship." Husbands were always "rustling around" for things the domestic group could use. Ideally, whenever he left the residence, he came back with something useful. Major items were "masculine" foodstuffs or gear, such as game animals, fish, or horses. Gambling, besides providing excitement, was a legitimate mode of getting goods of all kinds.

Marriage also provided a set of alters bound to support both ego and spouse. These alters include /cí.ks/--'HuZ'--or /tiwé.ye/--'WiBr'--who support ego and spouse because of siblingship with spouse. While HuZ and

WiBr rarely join ego's domestic group because of avoidance, their interest in its success remains high.

A good provider was a good leader. Through providing well, a man demonstrated the strength of his /wáyakin/--'guardian spirit,' he protected his family from starvation, cold and other environmental features, he maintained it as a unit *vis a vis* surrounding domestic groups. His foresight and ability to guide his family from season to season was basic to his success. The stability of first marriages in prereservation times seems to have been low (Lundsgaarde 1963; 1967:50). But it increased with a man's experience and the strength of his guardian spirits(s), so that by his mid-thirties to mid-forties a marriage was likely to stabilize.

By the same token wives also were expected to be good providers. They should be industrious--"good root diggers," and capable of producing a wide variety of domestic items such as mats, twined bags, and clothing. On occasion they would fish or gamble, both pursuits yielding goods useful to herself and her family. Some women had guardian spirits, and thus were particularly good providers.

Although men were nominally family leaders, a strong woman might partially usurp his "stewardship," and become a driving force in the group. This, I think, is especially probable when sisters formed the core of a domestic group. Women, then, were providers, both of logistical support, enabling men to remain active in the relatively chancy pursuits of hunting, fishing, and "rustling around," and of vital goods.

Another aspect of being a wife is the ability to get along with /pe?éks/--'co-wife.' The term itself implies great difficulty; /pe?éks/ is "sort of a battle cry." For this reason, men preferred sisters as wives, and women preferred sisters as co-wives. It was felt that the long-standing

reciprocity and sympathy between /ilútiweyasin/--'mother's children'--led to easier relationships as /pe?éks/, a term not used by sisters.

This preference is reflected in the /pinú.kin/ relationship. Although there is no adequate translation for the term, /pinú.kin/ can be glossed as 'potential spouse.' According to Lundsgaarde (1967:52), /pinú.kisin/--'opposite-sex in-laws'--legitimately indulged in extra-marital sexual relationships. Although such license is a striking feature, it is more important as an indication of the closeness and sympathy ideally obtaining between the groups allied by marriage. The opposite-sex in-law relationship--/pinú.kin/--is a means through which such alliances can be strengthened and deepened.

However, a person's /pinú.kin/ may be married to a person who is not ego's consanguine. For a male, that third person is his /hikáytiwa.'--'WiZHu.' This relationship is ambivalent. A man's /hikáytiwa./ is in the same structural relationship to ego's wife as ego's brother. Further, /hikáytiwa./ may be members of the same domestic group as well as of different ones. Thus, a /hikáytiwa./ is, initially at least, an unknown quantity, and the relationship may develop into one of closeness or animosity. Occasionally a man and his WiZHu were members of the same domestic group.

The same holds true for a woman; her HuBrWi--/pe?ékstiwa/--is an unknown quantity. However, unlike /hikáytiweyasin/, if one or another of the husbands dies, /pe?ékstiweyasin/ are likely to become co-wives through the sororate. As mentioned above, this relationship is potentially full of friction.

The relationships of consanguinity and affinity previously discussed produce structural junctions in ego's generation. They form both the core of groups and join diverse social units. Coincident with this juxtaposing of persons, disjunctions occur. These disjunctions are between a man and his wife's

brother--/tiwé.ye/, and a woman and her husband's sister--/cí.ks/. These relationships are ones of avoidance and respect, and rarely appear in the same domestic group. Though the two groups are thus forced apart, they perforce remain closely tied and cooperative because of the consanguineal ties between brother and sister.

The relationship between /tiwéyasín/--'WiBr/ZHu'--is marked by dominance and submission. A man's wife's brother has the right to take any of his personal possessions. For example, a man, Joshua, had crossed the ferry to Spalding, Idaho with his saddle horse. He had just gotten a new saddle of which he was very proud. There he met a distant brother-in-law, who did not recognize him. His brother-in-law said, "Where does Joshua live, he got a new saddle and I'm going to get it." Joshua did not say who he was, but told his brother-in-law where he lived. His brother-in-law left for Joshua's home, while Joshua rode his new saddle on to a relative's place. He stayed there until his brother-in-law left.

In discussions about marriages, it was apparent that satisfactory alliances were finely calculated. Ideally, parents selected appropriate first marriage partners for their children. However, I think that the children actually had a wide latitude in the choosing of a particular spouse. Young unmarried men spent most of their time in the village sweat house--/hitémes/--which essentially served as a dormitory. I suspect that young women also had a dormitory. This residential pattern was rapidly changing at contact, however. At any rate, such a pattern probably led to relatively independent choice of marriage partners by young men and women.

Yet kin group approval of first marriages was important. Consanguineal support was an important factor in marital success. Furthermore, appropriate marriage ceremony demanded their participation. Evidence about

the ceremonies involved in marriage is scanty. The young man's parents sent a go-between to the young woman's parents. If the marriage was satisfactory, the groom's family prepared a feast. Preparations sometimes took "several months," according to my informants. Both the groom's and bride's families "wore their finest." Subsequently, the bride's parents gave a feast. Again the groom's family wore their finest, and took a number of gifts. The bride's family wore "rags," but also had gifts set aside.

At this final feast, the bride's family could trade their poor things for the fine things which the groom's relatives had. This occurred between reciprocal relatives, for example, the groom's father's sister and the bride's father's sister. Further, these "reciprocal relatives" traded food-stuffs or gear. If these trades are satisfactory, they continue as trading partners--/piwátqalayqtin/.

Besides the extraordinary relationships between parents and their children, other important associations between members of adjacent generations are evident. Most important are those between father's siblings and brother's children, as is evident from the terms for step-kin. The outstanding feature about the relationships is the associations which may form. It is these social juxtapositions which lead to eventual entree into particular use areas.

Relationships between ego and senior consanguineal generations had two modes. Father's relatives were particularly concerned with instilling "proper," formal behavior. Mother's relatives were "spoilers," tending to draw ego into proper, but informal, behavior. Each generation, too had a specific mode of dealing with ego.

The first ascending generation was primarily advisory. Parents never struck their children. Instead, they reminded their children of their

relationship is especially intimate. Mother's sister, because of sororate marriage, sometimes became 'mother' to ego: the term for 'stepchild' is /ít.x/.

Similar differences between father's and mother's relatives obtain in the second ascending and descending generations. Father's father, because of his removal, was often the disciplinarian. One informant remembered his /qaláca?/--'PaFa'--this way:

Every two weeks Grampa used to come around. He looked so big. He would ask mom how we'd been. She'd say 'Well George and Charley did this.' She'd remembered everything... Even if only one of us had been bad, he'd say 'Alright, boys come on,' and give us a whipping. I got so I'd run when he came, but it wasn't any good. I thought I'd whip him when I grew up. When I was about 18 I figured I'd do it, so I went over. I got there and found him, but he looked so small--he was only about five foot four--and he was old. So I just laughed and realized what he'd done for me. He was quite an old man, my grampa.

Father's father also dealt with other kinds of discipline, especially training for obtaining spirit power. Because of his age, the relatively greater power at his command, he would take his /qaláca/--'son's son'--aside and speak to him about proper behavior, which attracts /wáyakin/--'guardian spirit power.' Also, he would instruct the boy on how to deal with spirit powers that approach him. This kind of education is more formal than similar kinds given by father and his male relatives.

'Father's mother'--/é.le?/--is also concerned with proper behavior on a day to day basis. For example, two friends were discussing a long trip to a dance. One man's mother was present. She did not speak. During the conversation some children, 7 to 10 years old, came in joking and chasing one another. The man's mother said "Be quiet! Go away! Men are speaking!" The children--her /é.le/--'SoCh'--quieted down and left. In myths, /é.le?/ advises /é.le/, her orphaned son's son, on how to overcome his social

position. I suspect that she is also concerned with the more formal aspects of her son's daughter's training as well.

Mother's father and mother, like other mother's relatives, are somewhat removed from ego. Their roles tend to be approving of ego. Mother's father seems to stress the prerogatives of a person's social position, rather than its duties, as father's father does. Mother's mother, especially, is a "spoiler." A person who exhibits "strong" behavior--who can go farther than others at a task--is called /qacanót/--'without a mother's mother.'

Affinal relationships in G+1 are characterized by avoidance. Males are especially circumspect. A man and his father-in-law--/píses/--interact in a friendly but formal way. Seemingly, /píses/ is inclined to give his son-in-law a chance. A man and his mother-in-law--/ciwá.qo/--rarely interact on a face-to-face basis. Nevertheless, /ciwá.qo/ is an important element in first marriages: she can be either a strong opponent or a powerful supporter.

A woman's parents-in-law--/piné.xsin/--are a more potent force in a first marriage than her own mother. Very often a woman's mother-in-law was critical and occasionally would try to put her into difficult situations.

One informant stated:

When I was first married I didn't know how to fix fish. One time we were camped up in the mountains. My husband and his uncle had caught a lot of fish. My mother-in-law said, 'I've got to go to town, George (my husband) will take me. Bake those fish.' She knew I didn't know how. They left. I started to clean the fish, but couldn't do a good job, I didn't know how I was going to bake them. Then my husband's uncle took pity on me. He showed me how to cook them. When my mother-in-law got back, all the fish were done. She just looked at me.

Generally speaking, consanguineal relationships had two modes: "disciplinary" and "supportive." Although given relatives have specific "ideal" behavioral complexes regarding ego, variation in actual behavior was great. Father and father's relatives attended to ego's "discipline." The more

removed from ego, the more overt the discipline. An alter's interest in ego's discipline rapidly drops off given more than two degrees of removal. A similar boundary marks close relatives of mother, who give support.

Affinal relations are complex. They are designed, however, to keep two groups allied through marriage. Specific mechanisms maintaining alliances include (1) levirate and sororate marriages, and (2) the /pinú.kin/--/cikf.wn/--'potential spouse'--and /qe.yet/--'dead spouse's/child's parent/spouse'--relationships. Affinal relations split siblings into two or more ecologically distant groups.

In this section we have briefly sketched some of the economic implications of Nez Perce kinship. Tenure, the localization of people to specific areas of land, is transferred consanguineally, while affinal relations obviously disperse people--transferring them from domestic group to domestic group. These same lines, once established, provided recognized people upon whom one could depend in times of scarcity through reciprocity and trade.

Quasi-Kinship Terms

Besides kinsfolk, there is another important group for ego: friends. The Nez Perce had five friendship terms. Each term expresses a degree of intimacy between ego and alter. This intimacy graded from the dependence of sibling on sibling to a more formal understanding between trading partners. Three terms are expressed through "coresidential" criteria, while the other two are not. The difference between these two subsets of terms seems to lie in the nature of prestations.

For the closest friends, total sharing seems to be called for. This would include food, clothing, shelter, valuables, and so forth. Coresidence

during at least part of the year was common. The kind of reciprocity changes, however, and grades to balanced reciprocity between trading partners. Also, it is interesting to note that, while close friends share things, those people in trading partnerships exchange unlike things.

Friendship has some aspects of affinity. First, it occurs only between individuals who are not related consanguineally. Friendship is a voluntary alliance between two people. This alliance, because of sentiment for the individuals involved, may effectively join two kin groups. Second, friendship has a dispersive effect for any group. It brings in rights of resource area use initially unavailable to either ego, and provides structural, i.e., regularized, channels of trade. Third, continued alliance depends upon continued prestations. The intensity of the alliance varied with the intensity of trade. Thus, there seem to have been very definite analytical similarities between friendship and affinity.

There are obvious dissimilarities, however. Most obvious is that friendship occurs between members of like sex. Since there are no children, there is no commitment to a continuing group. Further, there is no large commitment between two groups, as in marriage. As a result, interpersonal rivalries are more likely to break up the relationship.

Despite these dissimilarities, the brittleness of friendship should not be overstressed. The friendship tie is one marked by indulgence. This is especially true the closer the friendship tie. In this way, too, friendship resembles long-standing affinal relationships.

Johnson and Bond (1974) have made similar points in a cross-cultural study of friendship between a "tribal" and a "peasant" society. Friendships, unlike some kinship relationships, must be mutually beneficial. In contrast with kinship, the relationship between friends can be unilaterally ended when

one member feels that the exchange has not been equitable or that too much time has passed before the return is made (cf. Sahlins 1965, 1972: Chapt. 5).

The friendship terms employed by the Nez Perce vary from extremely close to relatively distant. I shall discuss these terms beginning with the closest. This term is of peculiar difficulty since it is a kin term proper as well as the beginning of a sequence of friendship terms.

The term /qú?tiwa./--'suckling mate'--has this indulgence as a basic requirement. While siblings can withhold indulgence and still remain bound by kin ties, friends cannot. Amicability, then, is central to the /qú?tiwa./ relationship. This was expressed as /qú?tiweyin/ being ". . . close as brothers. . ."; they are in a relationship of total reciprocity. It is important that the relationship is compared with brotherhood, because groups of brothers, especially siblings of the same mother, ideally form the basic group of production and consumption. /qú?tiweyin/ are "inseparable"; they travel together, which means they also, perforce, form an economic combine.

Men who are not so close as /qú?tiweyin/ are /insfkstiweyin/--'nest mates.' Such men are close but they lack the like-mindedness of /qú?tiweyin/. They are likely to engage in economic activities together. They are not likely to live together.

The greater number of a person's acquaintances fall into the class /láwtiwa./--'friend.' Such friends have a more balanced reciprocity than any of the other classes of friends so far discussed. Nevertheless, they may be coresident in some years, especially during hunting times. /láwtiwama/ also formed impromptu activity groups.

A fourth friendship category is /yelépt/--'trading friend.' These friends were usually members of distant groups. The /yeléptin/ may have known each other since their youth, but they do not fall into the other

categories since they do not or have not lived in the same community. They may be from different ethnic groups. Such friends are in a balanced reciprocity. A "formal" alliance was made between the two persons involved. The agreement between the partners was that each would trade only with the other. They more or less regularly visited one another for several weeks, bringing and receiving certain kinds of usually locally unobtainable goods and exploiting resources peculiar to the locale. Such partnerships were sometimes strengthened by marriage.

In summary, there are five relationships which stress amicability and indulgence. These friendship ties are analytically similar to affinity for two reasons. First, such ties are between individuals not related by consanguinity; second, they give ego entree into resource areas not otherwise open to him. Two major differences between friendships and affinal relations are that friendships do not formally involve ego's and alter's respective kin groups and may be terminated at will by either party. Nevertheless, the friendship ties provided structural lines to other resource areas.

Summary

Kinship was one mechanism by which the Nez Perces adapted to a variable and diverse environment. Their kinship terminology is complex: there are 44 terms for specific kinsmen, and all nine of Murdock's (1949:101-106) criteria enter into their definition. Among the most important of these are generation, sex, and affinity. The specificity of these terms implies a relatively high diversity of expected behaviors.

: In examining some kinship behaviors of G0, G±1, and G±2, there were obviously a number of different expected behaviors. Furthermore, it is apparent that the kinship criteria represent at least potential lines of fission. They correlate well with defining ego's cooperative productive

group. Stereotyped behaviors of amity are especially important in determining this important union of ego and alter's. Behaviors marked by stereotyped enmity are important in isolating and dispersing productive groups.

Generally speaking, consanguinity was primarily localizing in effect because of the high positive value placed on siblinghood. It was siblings, especially brothers, who provide the core of the "ideal" domestic group. But it may also be dispersing in effect under certain conditions. For example, if there was a wide age differential or if the siblings were children of different mothers in a polygynous family. There is, in fact, a wide range of individuals in the Nez Perce category 'sibling.'

The identity of siblings, however, is greatly mitigated by residence, or, more basically, interaction and amicability. If they were not amicable, even same sex siblings of the same mother would not depend heavily on one another. If they do not occupy the same household, but are amicable, then a dispersing effect occurs. However, the further apart they live, the less likely dependence will be. Genealogical distance also, of course, affects this calculus of closeness and dependence.

Although consanguinity has some dispersion effect, affinity is most important in this respect. Marriage brings into the domestic group more rights to resources. It also sets up a series of relatively formal reciprocal socio-economic relationships. Affinity established an alliance, in the general sense of the word, between domestic groups. This alliance, in fact, was sometimes stronger, both in effect and support, than the relationship between siblings.

Affinity was enhanced as a factor in dispersion by broad incest rules and a tendency toward village exogamy. Incest rules exclude all individuals

of ego's kindred up to five degrees of collaterality or to the extent of memory. This, no doubt, was partly responsible for village exogamy. Incest rules thus tend to force marriage with people whose tenured resource areas are distant, and therefore these areas are less likely to suffer from the same variation. Village exogamy, obviously, would have the same effect.

Friendships also concentrate rights to resources in a domestic group. In fact, friendship is very similar, formally, to affinity, though it occurs between people of the same sex. The Nez Perce terms for 'friend,' though, are phrased in terms of age and residence. Again, friends, like affines, have entree to resource areas not otherwise available to ego. Thus, friendship, too, has the effect of dispersal.

Although committed to the point of view that kinship is not reducible to any non-kinship basis, Fortes (1969:255) states:

To think of filiation as a single-track structural relationship misses the point. For, though it is generated and operated throughout life in the familial domain, it is also decisively shaped by and is necessarily effective in other domains of social life. As I have already emphasized, no one is a person only in the kinship domain.

In other words, a field of persons, with whom amicable social relations are possible, is established by kinship; indeed, the fact of kinship requires amity, according to Fortes. This amity, however, is leavened by "non-kinship" considerations.

The Nez Perces had a bilateral kinship system. As Fortes has noted, "In the absence of other controls such a web [of kinship] can stretch out indefinitely, and result in a kaleidoscopic fluidity of social relations" (1969:108). The "other control" in preservation of Nez Perce relations was residence.

CHAPTER 4

SUBSISTENCE AND SOCIAL GROUPS

The Nez Perce were strongly affected by cycles of food resource productivity. These cycles are apparent in Nez Perce social organization, which structured the population temporally and spatially. Hence, it was especially important in an individual's subsistence success, and in the ecological security of the entire population. This chapter describes the various population aggregations that appeared in response to resource periodicity. Such population distribution constitutes dispersion, a critical attribute of any population.

Different patterns of dispersion characterize different patterns of resource distribution, and are thus important to population maintenance (Wynne-Edwards 1962, 1964). According to Wynne-Edwards (1962), all aggregations serve one to three functions: exploitation of a productive resource locality, mating, and information exchange. Social organization, by structuring individuals in time and space, increases the number of encounters with resources. Location of highly productive areas is simply more likely when a population is widespread. Further, the kinds of resources people use depend upon where they are in a particular region, and when they are there. Population aggregation follows communication about relative productivity. Agonistic behavior disperses those aggregations as productivity declines.

This somewhat simplified model fits Nez Perce social organization, except that population clusters appeared in anticipation of high productivity in certain locales. In fact, larger concentrations characterized more productive locales. Large concentrations also occurred at times when little or no productivity was expected anywhere within Nez Perce territory. These groups were often engaged in ritual, an important information-laden activity (Rappaport 1971). Nez Perce social groups will be described in these terms.

Population aggregations define Nez Perce dispersion. Several kinds of aggregations occurred, ranging in size from four or five coresident people to large aggregations of 1500 or more. The largest groups were associated with the most productive locales. All groups appeared regularly on the expectation of resource appearance, and broke up as productivity declined. More permanent and smaller groups, such as villages, also disintegrated under stress caused by low productivity. Schismatic factionalism, discussed in another context (Walker 1968), was the major disintegrative process, but other, more amicable divisions also took place. In following this descriptive tack already published accounts of Nez Perce social organization are ignored. These have a total effect of confusion (Walker n.d.:1). The difficulty lies in the "... ease with which native informants shift between linguistic, ethnic, regional, and political terms when discussing various kinds of social groupings" (Walker n.d.:3). Consequently the use of etic concepts has been various, and even in single works the authors have applied terms variably (e.g. Ray 1939).

Descriptive confusion arises because of the nested structure of Nez Perce social organization. Effective environment varies in a regular manner from downstream to upstream, from earliest to latest availability of any given resource. Linguistic differences also increase the more widely

separated two groups are on any given stream axis (Rigsby 1965a; Aoki 1966a). Intergroup solidarity also is inversely proportional to distance along streams (Ray 1939; Walker 1968). The pattern is one of extreme localization of ecological, economic, and social interest. An informant put it, "You anthropologists call us nomadic, but it is you who are nomadic. My home was never more than 40 miles from where I was raised."

Groups much larger than the village or allied villages probably had little more than a vague reality to most Nez Percés. Large regional groupings are named (see below), but these are primarily words designating distant people; a prime example is /mutúmutu/--'downstream people.' Smaller groups exhibit this same feature. Some large aggregations, such as those on major root grounds (e.g. /oyáyp/; Fig. 23) were not named. The Nez Percés recognize two generic kinds of residence and associated groups: (1) /wispaykás/--'established camp,' and (2) /tewyénikes/--'a place to live; village.' Thus all social groups larger or smaller than a village are the same thing. Hence, the people "easily shift between linguistic, ethnic, regional, and political terms."

These groups are the same because their rules of recruitment are the same. The larger groups are simply structural poses based on different sets of the kinship universe. Recruitment rules are kinship parameters and rules of tenure. Kinship parameters are a dispersal mechanism, providing social pathways for immigration into social groups. Tenure provides for exclusion of individuals; it was an important dispersion mechanism. Hence tenure will be discussed in the next section.

Thus, through localization of exploitative interests, Nez Percés as a whole exploited a wide area. The basic problem in localization is that small groups may suffer from unforeseeable variation in the productivity of

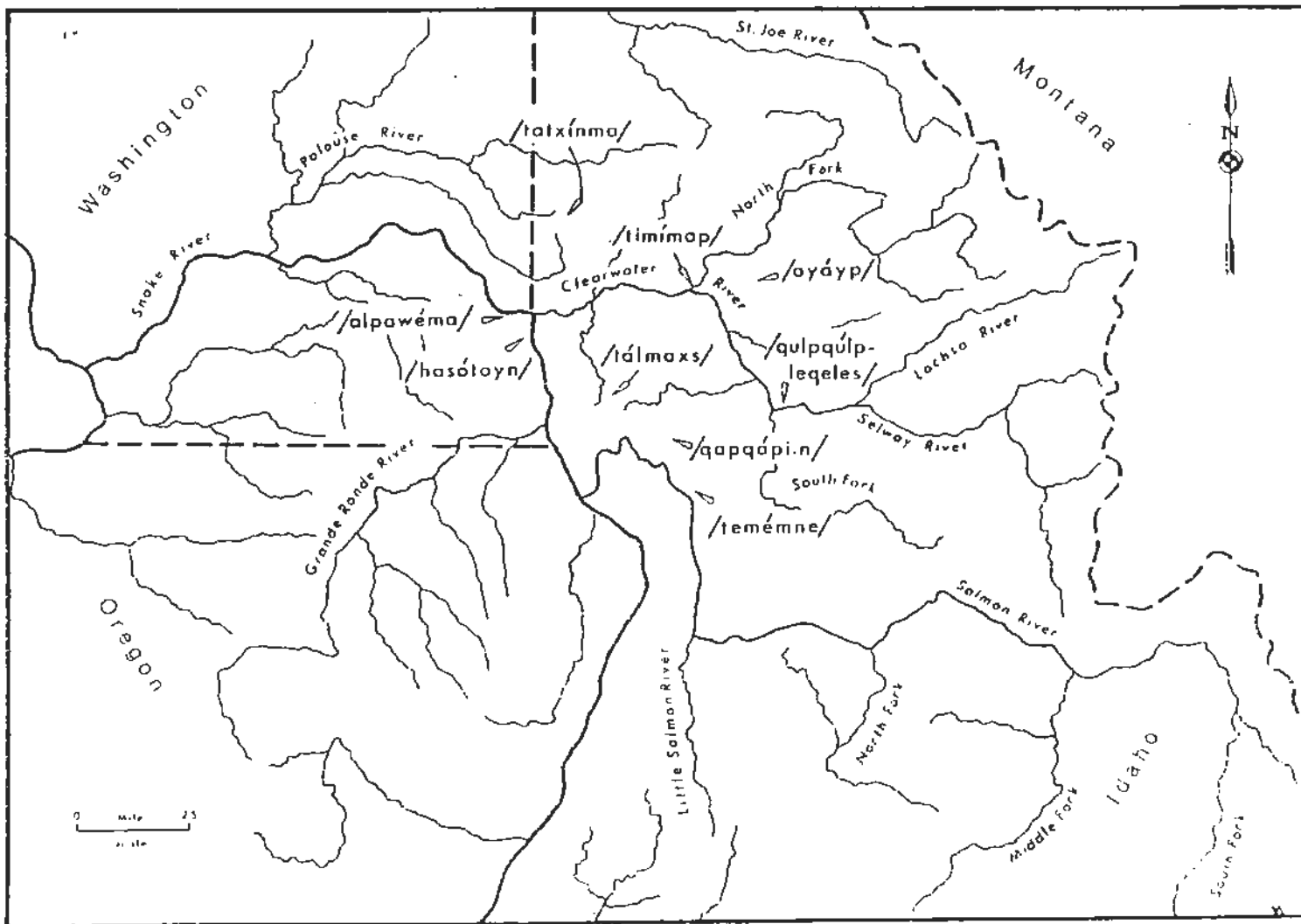


Fig. 23. Locations of major villages and root grounds.

their resource base. Consequently, the isolated primary groups were cross-cut by unnamed secondary groups in which surpluses and environmental information were exchanged.

The isolated primary groups were residential groups and concatenations of kinsmen and friends. Each residential group formed a nexus in a larger kinship and friendship network. Each nexus was a part of a local biotic community separate from the communities that included other residential groups. Individuals and small groups therefore manipulated their environment by modulating their social ties within the larger network. Tenure was an extremely important aspect of these social ties.

Tenure

Nez Perce tenure has two basic aspects. The first is the right of any individual to exploit any resource. The second is what Walker (1967b:14) called "stewardship." This concept is complex, but basically it refers to the individual's right to dispose of products of his or her own labor.

No institutionalized means existed to prevent a person from exploiting a resource locale. As far as I have been able to determine there was no feeling of exclusive "ownership" or prior claim to any resource area. Kamiah residents could use the spring root grounds in the Lapwai area, for example, without "permission" and with no feeling of resentment on the "hosts'" part. During the late spring salmon runs in 1806, Lewis and Clark (Thwaites 1905 II:63-64, 104) reported that many people from the Kamiah area obtained their spring salmon supply from the Snake River below its confluence with the Clearwater River.

These examples of the "free" exploitation of resources must be understood in the context of stewardship. Walker (1967a:14) concluded that

"cross-utilization" of resources was free and virtually uncontrolled throughout the Plateau because there was no exclusive ownership of resources. He also noted that it was nevertheless ". . . customary for visitors to request a *pro forma* approval before exploiting resources in their hosts' territory . . ." (1967a:14). My understanding of stewardship agrees with Walker's basic points.

Stewardship implied care of an access site and the product obtained there. It was established through improvement and maintenance of resources access sites. For example, campsites were maintained by not destroying local sources of wood, by cleaning springs, and by caching articles difficult to transport such as tipi poles or sweat house frames. Fishing sites were taken care of through building and maintaining fish walls, netting platforms, and hardware. Such improvement, however, entailed the right to dispose of the "product," that is, to determine who used those improvements. Thus resources were controlled through access.

Strength of "control" was related to the kind of improvement and regularity of use. Fish wall construction implied intense use and made control of prime fishing sites virtually complete, and "exclusionary powers" possible. In such cases, requests to fish at a certain locale were more than *pro forma*. At the other extreme, temporary campsites could be established anywhere. My informants, in fact, indicated that they did not mind people using their campsite facilities as long as adequate care was taken. A median was established at large root grounds, where campsites were more regularly used and certain digging areas were used on a yearly basis by women (Scrimsher 1967). Even today, individuals regularly use the same campsites from year to year at the Musselshell camas ground. One informant said, "I wouldn't feel right using one of those camps," and avoided entering them.

Through continued use and upkeep, rights to a resource locale access are continued. Because the effort of developing and maintaining a hunting campsite is minimal, rights to its use lapse relatively quickly. On the other hand, the permanency of improvements at a salmon fishing station means that rights to its use never lapse. Thus it is that "boundaries" between groups were clearest on rivers and relatively diffuse away from these mainstems, as Ray (1936) has noted generally for the Plateau.

The idea that people can "misuse" a resource implies a morality about the care of resources. Public remonstrance and shaming were employed to stop destruction of a resource, or "greediness." If these failed, ostracism, which ranged from simple refusal to associate to denial of food or coresidence with the offending party, was used by neighbors to enforce communal will. In one instance, co-villagers refused to aid a family which had thrown out deteriorated stored foods before they were able to replace them.

But denial of access site use or violence were the only way to govern overexploitation. Exclusion of socially distant people on this basis probably occurred. In modern context, in which violence cannot be used, Euroamericans are not told where fishing locales are "because they fish and fish until there is nothing left."

The *pro forma* request for permission to use a resource that Walker speaks of now becomes clear. It was a request for using the hardware, not for exploitation of a resource *per se*. While a person cannot be told not to take game or roots, or fish, he can be told he cannot use the hardware. Since a resource is not worth anything unless it can be obtained, resource control through access was the central fact of tenure. In this way resources

were "free" to anyone, yet people could control them. Thus, resources requiring more hardware are more carefully controlled. This control can, in turn, be related to the regularity of resource appearance.

The most highly controlled resources were fish. As noted in a previous chapter, salmon appeared regularly and in the millions. Perhaps because of these two factors, salmon was a basic part of the Nez Perce diet. Where salmon were caught from dip-netting platforms, traps, or weirs, exploitation was carefully controlled. Other fish were controlled in the same way. Away from these improvements control was less certain and people fished where they pleased.

Roots were also variably controlled. As Scrimsher (1967) noted, some areas of the root grounds were "reserved" for particular individuals who regularly used associated camps from year to year. Camas was a highly productive resource well-localized in space. Other regularly-appearing, well-localized roots also were controlled in much the same way. Less prized or solitary roots were not carefully controlled.

Hunting areas were virtually uncontrolled so far as I could determine. I suspect this to be especially true of the outlying late summer and early fall hunting grounds. The nearer winter and early spring hunting areas, on the other hand, may have been more closely watched.

Access control was also related to the kind of residential group associated with a resource. The most strongly controlled resource, fish, was obtained at localities developed by villages. The more poorly controlled root and game resources were associated with camps. Villages, unlike camps, were permanent. Even if a village were abandoned, anyone taking up residence there later had prior rights to using the associated fishing access site. The corporate nature of the village is manifest in its name as well as its estate:

village names refer to a location and to the people who inhabit it. Established camps--/wispaykás/--are not associated with corporate groups. Furthermore, much hunting and root gathering were done from other kinds of camps, e.g. /halxpawálcit/--'overnight camp'--which were viewed as being even more ephemeral.

Thus the importance of *pro forma* requests for exploitation rights varied with context. The most abundant, localized resources were "controlled" through access. These formed the bulwark of the Nez Perce diet. Less abundant, less localized resources, which made up the critical difference between plentitude and starvation were by their nature less amenable to control. Because of the widespread kin-ties, friendship, and the cultural themes of generosity and amicability, exclusionary "rights" were probably rarely enforced: only those persons deemed irresponsible enough to cause destruction--and furthermore had no kin ties--were likely to be refused use of any resource. Salmon fisheries, root digging areas, and hunting grounds were important territories for the survival of productive organizations.

Different types of productive organizations controlled different resources. Only some "domestic groups," therefore, "controlled" hunting grounds. Villages controlled fishing locations, and streamside groups controlled spring root grounds. By the same token, the specificity of the leader indicates the importance of a resource to a particular domestic group: that is, because of the evanescence of game populations, it is especially important to ask the people directly involved. On the other hand, because of the abundance of fish at a particular locale, it was necessary to ask a village leader only.

This is an extension of the concept of "stewardship" to /atimmimítqiniqa/--'protection; covered by the arms (of a "chief").' The

resource locales themselves were not taken care of, but the people who were dependent on them were. Anything which threatened the resources of these people, such as "greediness," was discouraged.

The exclusionary powers exercised over access sites were mitigated by another basic value: amicability. Rights to access were both "ascribed" and attained. Amicability between kinsmen, unlike that between friends, is required (Fortes 1969; Johnson and Bond 1975). Ascribed rights resulted from kinship and residence. As an individual grew to maturity, he or she increasingly used resource locales and aided in maintaining them. This, in part, established a claim to areas frequented by parents, "grandparents," or "uncles" and "aunts." Because of these ties everyone had access to at least a few resource locales. This was not ascription in the fullest sense. Rather, amicability--the ability to get along--was the "kicker" which opened the resources of kinsmen to a person. The more asocial a person was, the fewer kinsmen would support him. Of course, the converse was also true. Thus an individual with kinship ties to a village where he did not reside could have fishing rights there.

Access to a resource locale could be achieved in two ways. One was through establishing and maintaining friendship ties. Amicability, of course, was the basis of friendship. Friendships were mutual aid unions, and the strength and depth of friendships depended on the extent and overall balance of the interchanges, both material and affective, which occurred. This interchange is a complex calculus which involves a variety of factors (Sahlins 1965b, 1973). As Johnson and Bond point out, ". . . a fundamental purpose of the friendship mode is to limit social obligations to a manageable number of individuals from whom a person can expect at least as much as he gives" (1974:63, emphasis theirs). As they further point out, friendships can be terminated by either party when the balance becomes too uneven.

A second way of achieving access to resources was through establishing residence. The fact of residence implied several things: the most important of which was amicability. A person lived with the people with whom he got along the best. These may or may not be kinsmen. Another important implied relationship is that of aid in maintaining the resource access sites, thus "earning," as it were, access rights.

It is evident that any groups forming under such conditions of tenure were aggregations and at the same time resource holding corporations. It is evident also that this system of tenure allowed a great deal of personal freedom in terms of utilizing resources. Consequently, "political" relations, in the sense of personal association and support, were extraordinarily open. The constraints occurring in this system resulted from the concept of "stewardship"--the right to dispose of the products of one's own labor.

Tenure and Group

There were two broad kinds of groups in Nez Perce society: (1) localized productive groups, and (2) dispersed consumption groups. Both resulted from the interaction of kinship, friendship, and tenure.

Domestic Groups, Task Groups, and Consumption Groups

Individuals had tenure in a variety of resource locales. However, because of the division of labor by sex, neither men nor women could fully use their rights of direct access to available resources. Marriage was the way a person could gain a close opposite sex alter to form the necessary unit to utilize one's resource rights. The domestic group resulted from these unions. It was a special type of task grouping, which was not only an exploitative and economic unit, but also a social, reproductive, and educational unit. Compared to other task groups, the domestic group was durable.

Other task groups in society were adjuncts to the domestic group. These groups also formed on the basis of consanguineal, affinal, and friendship relationships. The distinction between domestic group and task group is somewhat artificial, since under certain circumstances several families might join together on these same bases to form complex domestic groups. Task groups, however, are ". . . of brief duration and explicitly created for exploitative activities" (Helm 1965a:385).

A third social grouping was the consumption group. This group was occasionally equivalent to domestic and task groups. For full effectiveness, however, it had to be large and inclusive of several such groups. It included both affines and "distant" friends such as /yelépt/--'economic partner.' Thus, its formation was contingent upon marriage and domestic group formation. In fact, the domestic groups of one generation used marriage of the first descending generation members to enlarge the set of alters upon whom they could depend.

The bases for forming these groups are similar to those described for Lapp society (Pehrson 1954a, 1957), Lakalai, New Britain (Goodenough 1962), and Interior Drainage Dene (Helm 1965a). These are (1) relative wealth, (2) relative status, (3) relative labor convenience, and (4) relative age. Leadership of such groups seems remarkably similar (Goodenough 1962; Helm 1965b; Pehrson 1954b).

Domestic Groups

The continuity of a society results from both natural and social reproduction. As Fortes (1958:9) points out, the domestic group is the workshop of natural and social reproduction and it is this group ". . . through which the reproductive nucleus is integrated with the environment and with

the structure of the entire society." The maintenance of the domestic group in the face of the chronic and recurring features in the social and natural environment is the functional prerequisite of society. It is this effort which entails the consequences outlined by Aberle et al. (1950:110-111).

One of the major implications of Aberle et al.'s (1950) paper is that social structures, even structural elements, have multiple functions. Domestic groups are not only a workshop of social and natural reproduction but also, as part of their maintenance, an important productive unit. As Gray and Gulliver point out:

The labour and skills necessary for exploiting the natural resources are funnelled through the family in actual application while the goods consumed are distributed through family channels. Individuals obtain their vital sustenance largely through the mediation of the family structure. Thus the family is a principal locus of ecological process [1964:5].

The principal group in Nez Perce society was the domestic group. It was minimally composed of a man, his wife or wives, and their dependents. Its primacy was based on the fact that no individual could fully activate his or her rights in resources because of the sexual division of labor. For example, in some rare instances a man might dig roots, but it was not economically important male activity. In order to support oneself and to cease dependence upon the parental generation, marriage was necessary.

First marriages were often arranged by parents. As one informant put it, the parents watched one another's children carefully in order to choose suitable mates for their own children. Active, hard-working and productive people were preferred for marriage. The fact that a young person had such capabilities was presumptive evidence that the parents were also hard-working. This led to a formal approach to the girl's parents by the boy's parents through a go-between. If the proposal was accepted, then a formal

series of trades began. This confirmed the marriage. This was important for both the senior and junior group since the affines gained could be social and economic assets or liabilities.

The new domestic group in theory could live where it wanted. One informant stated that after the "trades" associated with formal marriage alliance were completed the newly married couple had no obligation to stay with either the husband's or wife's parents. Instead, post-marital residence depended upon relative wealth, status, labor convenience, and age of appropriate alternatives.

Nevertheless, there was a tendency for new couples to be partly dependent on, and resident with, the groom's parents. As the couple became enmeshed in groups coalescing within their own generation, a "neolocal" pattern developed and the couple and their dependents acted independently, residing where their fortunes took them.

Wealthy people, individuals with high prestige, commonly had unrelated people helping them. Although such people were advantageous allies, it was sometimes inconvenient or unrewarding to join them. Inconvenience resulted from distance from one's own kinship group and residence. It could also be unrewarding personally or economically because of intragroup competition for resources.

On the other hand, the resource locales of less prestigious persons might have less pressure on them. In some instances, post-marital residence was with established members of one's own generation. In cases where parent's siblings were of the same age as ego, domestic groups might include uncles and nephews.

Although adequate quantitative data are unavailable, the stability of first marriages seems to have been relatively low (Lundsgaarde 1963). A

number of factors vitiated the strength of the bond. The major factor was the social immaturity of the partners and especially of male's. A man's guardian spirit, a requirement for success in adult life, was rarely manifested before the age of 23 to 29. The strength of the guardian spirit was not fully realized until the early to mid-thirties.

Thus, many newly married couples younger than about 30 years of age experienced variable economic and social success; often they could not maintain a successfully autonomous domestic group. As different opportunities arose within a man's and woman's separate networks, dissolution of the marriage became likely.

Maintenance of the domestic group and an increase in its allies after age 30 also depended on the "strength" of a person's guardian spirit and its fluctuations. Ridington (1968) has shown how spirit power and the political process are related in Beaver Indian society. Fission of Beaver bands occurs when a leader's credibility drops due to sorcery accusations from other band leaders. The same process occurred among Nez Perces, but the same basic process can be related to resource locale productivity, ecological success, and group stability.

An individual's productive success depended entirely on his guardian spirit. Fluctuations in productive success indicated fluctuations in guardian spirit power: thus, an objective measure of power existed. As a person's productivity waned the number of individuals willing and able to remain decreased. Followers left to join leaders with a more powerful /wáyakin/--'guardian spirit'--as evidenced by higher productivity.

A variety of factors entered into an individual's productive success. Among them are: (1) the number of resource locales open to his exploitation, (2) individual initiative, (3) resource locale productivity.

As a young Nez Perce man entered adulthood these factors were especially variable. Further, since he had not taken over primary control of resource localities, he lacked control over the use and distribution of the product of the resource locales. He was in an unfavorable position to maintain his prestige. Furthermore, he lacked the experience necessary to wisely manage his available resources. Thus, his prestige fluctuated widely and unfavorably influenced his interpersonal relationships. Probably the number of a man's marriages was related to the initial strength of his power, and the number of his wives was related to its relative strength for the length of his productive life.

The composition of domestic groups was highly variable not only in terms of the entire population but also for individuals from year to year. In many instances the members of a domestic group included the same set of people that formed a task group. Several types of domestic groups can be distinguished:

1. A nuclear family composed of a 'man'--/háma/, 'wife'--/?inwé.pne/, and 'child'--/miyá?c/. Generally such a group was either briefly separated from a more complex group, a relatively young group, or, if composed of mature individuals, an ecologically unsuccessful couple.
2. A joint family based on a group of either male or female siblings. Most commonly, this "core group" was composed of /ilútiwama/-- 'mother's children.' Occasionally close friends--/qútiwama/--formed the core group. Other occasional members included classificatory siblings, affines, aged relatives, and nephews or nieces. Groups of this sort formed under several situations: in winter, when dependence on stored resources was greatest; during summer and late summer, when plant collecting and hunting produced relatively great amounts of resources. Joint families are considered domestic groups because they are constant, except for relatively brief periods when resources were especially scarce. These groups were influential. Affines of the same generation often coordinated their movement with them.
3. A complex family based on a 'man' and his 'wives.' Other personnel included their children, aged relatives, nephews and nieces. Groups of this kind marked success; consequently their size was often swollen by distant relatives and friends. A man--/háma/--'man,

husband (connotation of leader)' of this nature was widely influential, and was referred to as /walípaqi.n/, /waloqóqi.n/, or, if appropriate, /mióxatmioxat/ or /miyoxat/ (see discussion of leadership below). A complex family which forms the core of such groups is highly successful. The associated people--which may include nuclear families--also benefited from the concentration of resource products. For example, one such man, /icaxáyum/, reputedly owned over 1500 horses, which he loaned to people in need.

4. A few domestic groups were extended families, including three generations.
5. Finally, some domestic groups were composed of grandparents and their grandchildren.

Despite the necessity of coordinated action between families in the subsistence economy, the family acted independently much of the time. A considerable amount of "rustling around" occurred: solitary hunting, fishing, or root digging depending on the family's needs or desires. This independent action was an important determinant of prestige. Anyone could have enough to survive from year to year with a minimal amount of work through depending on the surplus production of other households related by kinship. It was the leaders of these other households who gained social prominence thereby.

Some families, in fact, preferred to live as independently as possible. This was carried to an extreme when a family or even an individual would not live in a winter village. If a person wished to join a group, the choice was strongly influenced by "ecological" factors since relative wealth, status, and "convenience" were directly related to productive resource locales. Three basic types of combines formed on this basis. It was these groups, usually formed generationally, which drew people away from their natal groups.

Task Groups

The major difference between domestic and task groups was temporal stability. Domestic groups were relatively stable, while task groups were

formed to attain some specific goal, and dissolved once that goal was achieved. Task groups were relatively "short term" groups. But in Nez Perce society, recruitment into domestic and task groups was quite similar, and task groups became domestic groups by not dissolving. Or task groups might be composed of members of a single domestic group.

The structurally strongest of these was a sibling group and their spouses who were also siblings. Such groups had a great deal to reinforce their solidarity; all were /pinú.kin/ to every member of the opposite sex, all men and women had similar rights of tenure, and both groups were internally related by ties of consanguinity. However, such groups were uncommon because of the rarity of two families having children of suitable age, temperament, and sex to match one another. Furthermore, the resources and resource areas available to them were relatively limited in number and space. Consequently, chance variations in productivity were more likely to occur in all the areas under their tenure, and dissolution of the group was therefore likely.

More common was a group of siblings and their unrelated spouses. The preferred pattern included a core group of brothers. There were two underlying reasons for this. First, dominance patterns were already well established by the time the group formed: competition for leadership was less intense. Second, despite death of a sibling group member, the combine could remain intact through multiple marriage by one of the surviving brothers. Concomitantly, rights of tenure would remain the same.

Uxorilateral fusion also occurred. In such instances a group of sisters with no "near" male siblings formed the core group. Probably such groups resulted from the chance variations in sex ratios at marriageable age. Structural instability resulted from male competition for dominance

and from death of a sibling group member. In the latter case, the widower's /cikíwn/--'dead spouse's same-sexed sibling'--were already married or were in another group. Thus, because of the impossibility of marriage to a member of the core group, his own rights of access were lost to them, while his rights to the task group's access rights were also attenuated. This is indicative of the inherent instability of uxorilateral group formation in a patri-oriented society (Dunning, 1959a, 1959b).

A third type of task group formation was based on friendships between men. This was especially important in the /qútiwa/ friendship class. Even so, these combines were more brittle than sibling groups because the dissimilarity of kin ties tended to disperse this type of group. More commonly, such friendships added to a sibling group.

These three task groups were manifest in a variety of situations. Most importantly, these were the groups which had claim to the cached goods at a /wi.spaykás/--'camp.' These hunting and berrying groups probably developed the strongest ties of any group in Nez Perce society.

Task groups were also apparent during the summer at large root digging camps. The women formed groups for preparing fresh roots. Task groups whose goals included hunting, fishing, and gambling were formed by men at the same time. Groups of the same sort formed in winter villages.

Members of task groups perform several functions. First, they lead when they must. Second, they "pool" their resources. This is especially so if the core group is of brothers married to sisters. Pooling in such a case is "generalized exchange" (Sahlins 1972:193). Thirdly, they provide rights of direct access to resource areas. This was its major difficulty. If the areas to which the members have common rights of access are not productive enough, then the group split into families. These, temporarily at least,

joined exploitative units in more productive areas. This disruption of ties made joint family formation difficult, but sibling amicability made this task group most likely.

Task groups of this sort did not conjoin to form villages. Exploitative task groups were often spread between villages as a result of a strong tendency towards village exogamy. This also dispersed the rights of access usable by members of commensal units. In order to maintain these widespread rights, families would join to form task groups in alternate years. In one instance, a family maintained rights to hunting in an area on the Salmon River near Riggins and an area between the Little North Fork of the Clearwater River and the St. Joe River. Such spreading of interests was especially common among leading members of a village, primarily because their reputations are widespread and members of other villages know of them and are anxious to ally with them.

Consumption Groups

All the groups outlined so far formed consumption groups in the general sense. In particular they are commensal groups; i.e., they "eat from the same board"; they were face-to-face living and working groups. Consumption groups were not. Instead they were groups whose members did not engage in daily face-to-face relationships.

The number of possible consumption groups based on the relationships of any individual's kinship network and friendship were practically limitless. It is possible to reconstruct the most common of these. There were several important organizational parameters.

First, marriage isolated groups of the same generation through prescribed avoidance. /tewéyi.n/--'WiBr/SiHu'-- and /cíksi.n/--HuZ/BrWi'--

and, to a lesser extent brothers and sisters, avoided one another. Nevertheless, there was strong interest in welfare of opposite sex siblings. Thus, although opposite sex siblings were in separate exploitative units, ties between these units were maintained. This led to exchange of resources. Because of their "enforced" separation in space, coincidence in chance variations in resource availability or capability of getting resources was unlikely. This combination of families forms the primary consumption unit--perhaps the most stable unit in Nez Perce society.

Marriage also established other important economic and ecological relationships. Before a marriage alliance between groups was formalized, the two kin groups engaged in formal exchanges. During these exchanges, members of the groom's family went to the bride's home first, then the bride's family went to the groom's home. On each occasion people who stood in equivalent relationships to the bride or groom exchanged goods. A person's marriage trade partner was called /piwátqalayqt./. If the trades were satisfactory to the /piwátqalayqti.n/--'trading partners'--then they would continue the relationship. Thus, the formation of a domestic group did two things: first, it allowed the bride and groom to fully exercise their rights of access to resources; second, the families of the bride and groom, through establishing /piwátqalayqt./ relationships, gained access to products from different resource areas than their own.

Consumption groups were also based on friendship. The relationship between /yelépti.n/--'trading partner'--was especially important in this respect. Such people would visit one another from time to time to trade. Items traded varied from foodstuffs of particular value to goods to horses. For example, the Nez Perce area was and is noted for its superb camas, and loaves of this liliaceous bulb might be traded for some other item, such as

/tánat/--'pounded salmon.' While visiting a trading partner, his resource locales would be exploited. Since most trading partners belonged to different "ethnic" groups, resource locales far removed from the visitor's territory could be utilized.

Consumption groups, then, were secondary groups. The memberships of such unions did not all engage in face-to-face relationships. The primary items exchanged were finished products, such as camas loaves, clothes, or horses. But along with these culturally important exchanges, there was exploitation of raw resources, and a funneling of otherwise unavailable resources into the visitor's domestic group.

Discussion

There were three basic groups in Nez Perce society. They were the primary means of adaptation and the variations in environmental productivity. Two of these groups were localized: the domestic and task groups. Their differences lie in the goals and duration of each. Memberships of both were quite similar, except that task groups were commonly single sex associations. The similarity of domestic and task group memberships and recruitment made them substitutable for one another. The third group was dispersed, and it was marked by sharing of finished products. This was the consumption group. Unlike the domestic and task groups, the consumption group was a secondary group rather than a primary group: its membership did not interact daily on a face-to-face basis. These groups included kinsfolk who normally avoided one another.

The domestic and task groups were productive organizations. As is typical of hunting and gathering groups (Udy 1964), their membership was voluntary and based primarily on propinquity. In Nez Perce society this

implied kinship and friendship. Both groups were composed of mutually amicable individuals who gained access rights to resources through use and improvement. Since these organizations had small memberships the groups were limited to exploiting a few resource locales. Temporal and spatial variation in resource productivity or availability was therefore strongly influential on the integration of the group and the physical well-being of individuals. Hence, consumption groups aided in maintaining at least minimal levels of resource necessary for supporting the primary groups.

Groups similar to the domestic units have been termed "nodal kindreds" by Goodenough (1962). These are marked by great fluidity of peripheral members and a stable core of usually uterine brothers. In the Nez Perce case, the category /ilútiwa/ probably formed the basis for recruitment into the core groups or nodal kindreds. Despite the tendency for brothers to form such groups, "financial" and political considerations led to dissolution or no formation. The increase of wealth and prestige led to the growth of the numbers involved with the nodal kindred. The necessary factor for the occurrence of nodal kindreds, according to Goodenough, is "environmental instability" (1962:10-11).

It is obvious that, despite these formal bases for primary group formation, groups were formed on the basis of amicability. The most likely individuals to be friendly were /ilútiwa/--'children of same mother,' then /píctiwa/--'children of same father,' then classificatory siblings. Relationships between a person and his or her siblings' children were also close, especially if they were patrilaterally related. Young men and women commonly joined their parent's sibling's domestic or task groups. These were often their first sallies into the wider society. Sometimes agnatically

related uncles and nephews formed the core of domestic or task groups. This was especially likely in instances of generational skewing, when uncle and nephew were the same age.

Consumption organizations were secondary groups. Just as the primary groups were composed of individuals who were formally friendly, at least, consumption organizations were composed of people who were at least formally unfriendly. Avoidance patterns between opposite-sex siblings and same-sexed in-laws of the same generation led to the formation of separate productive organizations. Nevertheless, the strength of the sibling ties produced exchange between them. Continuations of formal exchanges established between affinal kinspeople during marriage preliminaries also added to increased membership in consumption groups.

Villages and Village Combines

Ray (1939:4-8) noted that the village was the primary political group among Plateau inhabitants, except in the eastern Plateau where Plains influence led to a tendency toward tribal organization. My information partially supports this view. Villages satisfied a number of non-economic, economic and ecological ends. They were task groups. The similarity in tasks led to similarities in village location and structure. However, because these tasks were somewhat different from those of less inclusive groups, villages were not simple concatenations of smaller groups. In ecological terms, villages were way stations in the yearly cycle of economically productive activities.

Villages often formed combines. These were groups of neighboring villages whose members exploited neighboring spring resource locales referred to as /-toyam/--'skylines.' Factions cross-cut these villages, so that

members of the same faction often belonged to different villages. In spite of the combine's rather ambiguous membership, the solidarity of the combine was symbolized through a leader and two important ceremonies.

Villages

'Villages'--/teWyéni.kes/--were in part fishing task groups, and its members were people with use rights in associated fishing stations. Nez Perce villages had similar locational attributes, physical layouts, and leaderships. These functional similarities reflected the autonomy of villages and the solidarity of village mates. The broad collateral extension of consanguineal kinship, affinal relationships, and friendships, meant that an individual had a practically limitless set of alters through whom access to village fishing stations and other resources could be gained. Therefore, village residence was determined by amicability and a variety of ecological factors.

Villages were located in zones where people could survive most easily during the least resource-rich time of year and where access to spring resources was easiest. Thus they were in the canyon bottoms. As pointed out in Chapter 2, the canyons remained relatively warm and snow-free during winter, especially near Lewiston and downstream. Thus, resources vital to the Nez Perce subsistence round first appeared in the canyons. Locations of villages within the canyons were determined by a calculus of (1) floodplain activity, and (2) the occurrence of springs, and (3) the occurrence of a number of flat ridge tops nearby.

1 The confluence of sidestreams with the river mainstems offered prime village localities for several reasons. First, each sidestream produces a "bar" that is relatively high and rarely flooded. Second, sidestreams are used as spawning grounds by a wide variety of non-anadromous

fish. These were highly important spring resources which supplemented depleted stored foods. Thirdly, the bars offered excellent opportunities for catching driftwood, a major supply of firewood. Access to spring plant resources, including "starvation" foods, was also of great importance. For example, /qéqí.t/ (*Lomatium canbyi*) and /qámsit/ (*L. cous*) were found below the canyon rims of high ridges. There were also prime grazing localities for horses.

These ecological factors, the major consideration when a person decided where to winter, were most favorable near Kamiah and Lewiston. In these areas, especially near Lewiston, there were large areas of flat ridge tops which were highly productive pastures and spring plant resource locales. Consequently, the confluences of the Snake and Clearwater Rivers and the South and Middle Forks of the Clearwater were marked by the highest population and village concentrations in Nez Perce territory. Other areas simply did not have the abundance of resources that appeared at these major confluences.

Virtually every village exercised control of a salmon fishing station. These were often "improved" localities. Improvements included dip netting platforms, weirs, and traps (Walker 1967a). Control was also the result of customary use, as at /alpáwawe/ (see Fig. 23), where improvements were difficult or impossible to make. Unlike hunting areas, tenure of fishing stations was permanently associated with a particular village (Walker 1967a) and its inhabitants. Undoubtedly, the communal effort required to effectively exploit these areas contributed to village solidarity.

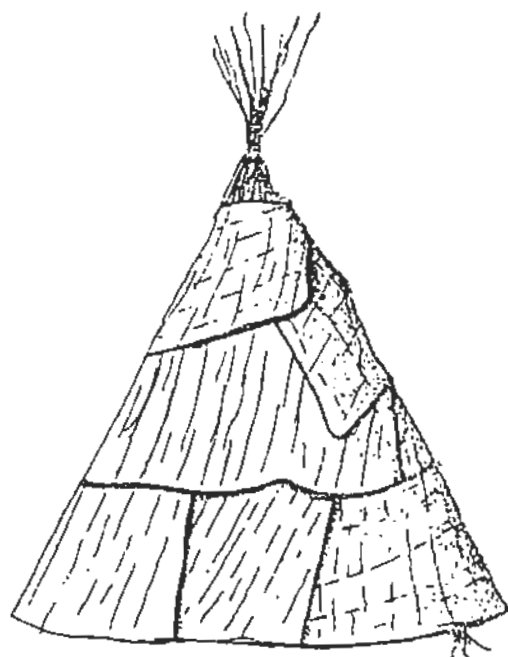
The physical layout of villages can be only inferred. Lewis and Clark (Thwaites 1905 IV:358-359) reported the use of long mat covered lodges in 1805 and 1806. These were multi-family dwellings called /tuqó?init/

(see Fig. 24B). Also in use at the same time was the skin or mat covered conical lodge (Fig. 24A). Spinden (1908) maintained that the skin covered tipi became the dominant house type by 1855. Also in each village were two sweathouses. One of these, the /hi.temés/--'village sweat lodge'--served as a sweat lodge for all males of the community and as a dormitory for unmarried men (Spinden 1908:195). A similar structure for women, the /elwítes/, is reported by my informants and is inferred by Walker (1966: 148) from Phinney's (1934:205, fn. 2) myth texts. Lewis and Clark report a hut for menstruation and birth (Thwaites 1905 IV:355), which probably was the /elwítes/.

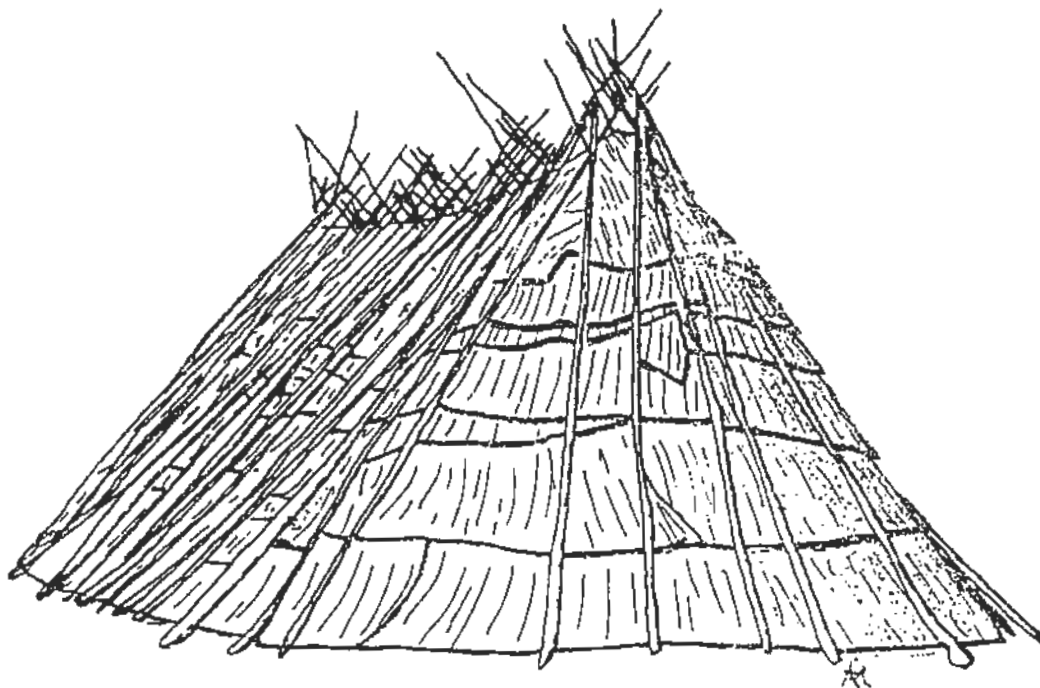
Ideally each village had a /wé.yes/--'dance floor'--where a /wéyikwecit/--'guardian spirit dance' was held. Although I have not seen a /wé.yes/, I can infer some of its features. It was outside the village's residential area, and dangerous at all times because of the residual "power" inhabiting it. Before 'dances' were held in winter, the 'floor' was "cleared" of inimical powers by a powerful /tiwét/--'doctor.' Then a /tuqó?init/--'mat lodge'--was erected over it and the /wéyikwecit/--'spirit dance'--was held. Following the 'dance' the mat lodge was taken down.

The /wé.yes/ was a part of the spirit world, in my understanding, which could be invaded by ordinary people and most /tiwét/ only at the height of their power in winter. Very "fierce" /tiwét/, ones who could clear the /wé.yes/, were not common. Such a doctor lived near the /wé.yes/, in some instances possibly separate from the /tweyóni.kes/--'village.' Because they were uncommon, many villages were without a /wé.yes/, or had one which was used irregularly.

Consequently, not only did village members participate, but also people from surrounding villages came to see the dancers demonstrate their



A



B

Fig. 24. Nez Perce house types.

guardian spirit--/wéyekin/. The dance's ecological importance lay in the fact that a person's power was manifested primarily through economic success. Such success was based on the productivity of a person's resource locales and his ability to utilize them effectively. Thus, by being able to underwrite a spirit dance, a village membership could demonstrate its ecological success. Further, a person, through taking care of visitors, could show how successful his domestic group was. Guardian spirit dances were social ways to get people together in order to exchange information about conditions in their respective resource locales.

This was also true of /qé?uyit/--'first fruits ceremony.' /qé?uyit/ was held when the canyon serviceberries were ripe. This ceremony was presided over by a respected old man, who gave thanks for life and food. Four highly respected elder ladies directed young women on food gathering, preparation, and serving. Young men supplied non-plant foods.

Again, people from neighboring villages came together: the fact of being able to support a first fruits ceremony indicated the success of village members in getting through the critical spring period, when people had the least profusion of resources.

The first fruits ceremony marked a shift in productive pattern from making up a resource deficit, to gathering and storing food for winter use. It also marks a change in area of utilization from canyons to uplands. Here again, people could judge who was going to be successful in the next season.

Sweathouses were a necessary adjunct to all villages. Walker (1966:147) concludes that the men's sweathouse--/hítemes/--was a central element in maintaining village solidarity. Only amicable behavior was allowed while at the sweathouse, and refusal to join in sweat bathing was a grave insult. Indeed, entry into a village was more or less formally

accomplished through sweat bathing. Also, as neutral ground, the informal decision-making meetings usual to Nez Perces took place there. Similar functions were probably also served by the women's sweathouse--/elwites/.

Since they were also dormitories for young men and women, the village sweatlodges were important in terms of domestic, task, and consumption group formation. It was a place where young men or women formed close friendship alliances which lasted throughout life. Further, the /elwites/ was a place where young men could call to court marriageable girls.

Although coresidence and pooling of resources, which at once signify and reinforce amicability and interdependence, are typical of villages, they break down in certain circumstances. There is a story about a "family" that threw out its spoiled, deteriorated foods after several days of fine weather in February. They did this because they were certain to get spring resources soon. Cold weather quickly set in, and their co-villagers, disgusted at the waste, refused to share with them any more. Thus, villages are strongly affected by environmental periodicity, and the denial of sharing under certain, presumably rare, circumstances.

Village solidarity was maintained by voluntary association with a headman--/mióxatmioxat/. Headship of a village fell to men who satisfied several basic political and economic criteria. Foremost among these was a strong following. A headman had to have political and economic backing of a number of people. The core of this group was probably a nodal kindred, but commitment from all village members was expected. A headman had to be open-handed and willing to help any member of the village without regard to kinship or marital ties. He also had to have a following that allowed him to behave in such a way. Such a person was a good ally, and people from other villages were anxious to marry into his family for economic and

prestige reasons. But there were ecological reasons as well. Most importantly, such association provided access to spring resources. Several such associations maximized the number of different areas of access. By allying with a village leader, a person could depend on an economically strong, generous, and stable person.

Ties outside the village were equally important to /mióxatmioxat/-- 'village headman.' By having outside alters, the headman could be economically dependent upon people not involved directly with village politics, and, if village resource areas failed, he had access to other productive resource locales. With these economic and ecological ties, he would be more capable of drawing resources into his own village.

This seems to have been the strongest reason for the semi-hereditary nature of Nez Perce leadership mentioned by Ray (1939). A person born into a strong nodal kindred, already central in village functioning, was more likely to be selected headman than someone who was not. So, a headman not only had to satisfy Nez Perce concepts of an ideal person, but also had to have the political and economic backing of a strong kindred.

As a leader's partisanship waxed and waned, so his prestige and following waxed and waned. A /mióxatmioxat/ who was too partisan lost prestige and following as disgruntled village mates left for more agreeable leaders. As the headman's partisanship waned, his nodal kindred waned, and his economic base eroded. Because of this relationship, headmen often were not the richest men in a village. Thus headmen had to be like "foxes," according to one informant: modest, even handed, and capable. Further, they had to have the power, or charisma, to lead.

No village headman represented others. His opinions were valued because he was capable, but his opinions were not necessarily those his

village mates held. It is important to emphasize that everyone--primarily adult males--could be regarded as leaders. In discussing leadership with one of my informants, he made it especially clear that the term /háma/--'man, husband'--implied leadership as well.

Other formal and important leadership positions in a village included the /léwteqnewet/--'fish headman.' The /léwteqnewet/ distributed the fish caught at the village fishing station. At some villages, particularly at /timímap/ and /qúlpqulplegeles/ (see Fig. 23), these men were especially prominent. Again modest, but not necessarily rich men were chosen for this position. Special criteria for this job included fairness and an excellent memory. These men distributed fish to hundreds of people, remembering who got how much from day to day.

Two more leadership positions in the village were the /wetúwet/ and the /téwyelenewet/. The /wetúwet/--'whipman'--office is unclear, but probably involved at least verbal exhortation and shaming of people who behaved poorly. The /téwyelenewet/--'herald'--announced the decisions reached by the /mióxatmioxat/ in consultation with the leading men of the village.

The separation of these powers was an important aspect of village politics. The effectiveness of the /mióxatmioxat/ depending on his friendly footing with all members of the village. Hence, headmen were /hamqáqayc/--'men with kind words.' These three formal offices isolated the headman from situations rife with conflict which headmen had to avoid. Further, these men acted in concert, mutually legitimizing their actions. This was important in preserving village solidarity.

Village political organization, concerned as it was with resource distribution, was based on factionalism. Factional leaders were rich men

with a great deal of economic and moral power. Such men, /walípaqi.n/-- '(man) like a stake'--and /welóqoqi.n/--'knocks them down'--had a great deal of respect, and their words were always considered.

Such men gained their power in the same way as /mióxatmioxat/, through kinship and friendship ties. As with any leading man, these ties often lay outside the village. Thus factions cross-cut villages. The importance of non-village mates in the political process is reflected in the fact that "outsiders" were often invited to aid in the selection of a new /mióxatmioxat/. Further, when asked how people coordinated their activities, my informants said they depended on information from visiting friends in the surrounding villages. Thus, persons could be politically active in more than one village.

Villages were central to Nez Perce life. Despite the centripetal forces of factionalism and multivillage ties, villages were close knit social units. Their solidarity was based upon common use of fishing locales, common commitment to support a headman, common houses. It was maintained through strictly amicable meetings at sweathouses and by isolating headmen, whose fairness was unquestionable, from conflict situations. The closeness of village mates was also tacitly recognized by a tendency towards village exogamy. Moreover, the solidarity was marked linguistically: people, when asked what group they belonged to, or where they were living, answered with the name of the winter village site. The identification of a person with this place of winter residence was symbolized through the linguistic forms /-me/ and /-pe/--'people (person/place) of'--in addition to a geographical name. For example, /tepweme/ refers to 'a person, group of people, place (an identity)'--/-me/--at the 'confluence of a creek and river'--/-we/--called 'yellow sulphur (?) butterfly'--/(xep)xep/.

But this linguistic marking is somewhat unclear. The term /tepweme/, for example, applied not only to a village at the mouth of Lapwai Creek, but also to a group of six villages occupying Lapwai Canyon. These village combines, which Ray (1939) and Walker (1968) ascribe to Plains influence, were also of importance in Nez Perce life. They, too marked different geographic areas with different resource potentials.

Village Combines

Village combines were variable alliances of villages. While /tepweme/ referred to the six villages in the Lapwai Canyon, other people felt allied to those groups, and as the influence of villages and their leaders waxed or waned, so the people who were /tepweme/ increased and decreased. Small nearby villages would join or leave the orbit of these central villages. Even the leadership of /tepweme/ village grouping did not historically reside in the village /tepweme/, but in /paplawáma/, at the site of Lapwai, Idaho.

Village combines were headed by a /miyóxat/. The selection of a /miyóxat/ was formal. People from surrounding villages all came. By one informant's account, men were nominated, then chosen only if no one had any supportable objections to him. This amounted to a legitimation of a man's morality. He thus gained a great deal of influence.

The direct ecological importance of this position is minor. What was important was the group it identified. These groups probably tended towards endogamy. Further, it was primarily within this group that people freely changed residence. The relative ecological success of task and domestic groups was highly apparent. Success was displayed at winter guardian spirit dances and the first fruits ceremonies which were sponsored by villages.

The amorphous nature of Nez Perce social groups must be emphasized. No one could speak for anyone else, no one could decide for others. Villages formed "combines" because they were cross-cut by kinship and faction ties. Also, many, if not most, people acknowledged the personal and social worth of the leadership. Leaders were selected by people because they fitted their concept of the ideal man. For this reason people listened to their opinions and followed their lead.

Riverside Groups

Village combines, or "bands," had satellite communities. These latter villages sometimes joined with one or another streamside group, but usually they utilized a 'skyline'--/-toyam/--of one "band." For example, the villages on the south side of the Clearwater River from Lapwai Creek up to roughly the North Fork of the Clearwater utilized the breaks south of the river. This area was called /*ɬapatoyam*--'skyline of the village grouping /*xepweme*/. From there up to where the South Fork of the Clearwater turns east was /*kamyáxtoyam*--'skyline of the village grouping /*kamáyxpu*/. Opposite these were /*yéqetoyam*--'skyline of the village grouping /*yéqeme*'-- and /*níxsetoyam*--'skyline of the village grouping /*níxseme*/. Groups utilizing 'skylines' on opposite sides of a river were also grouped together (Fig. 25). They thus formed identifiable riverside groupings which Walker (n.d.) has identified as "bands" (see Discussion below).

These riverside groups were very loosely organized. The people generally acknowledged the leadership of a /*miyóxat*/. Sometimes this leadership was fairly strong. For example, in 1805 Lewis and Clark reported that no "satisfactory" arrangements could be made with the people at Kamiah because their "chief" was away, leading a war party against the Shoshones (Thwaites 1905 IV).

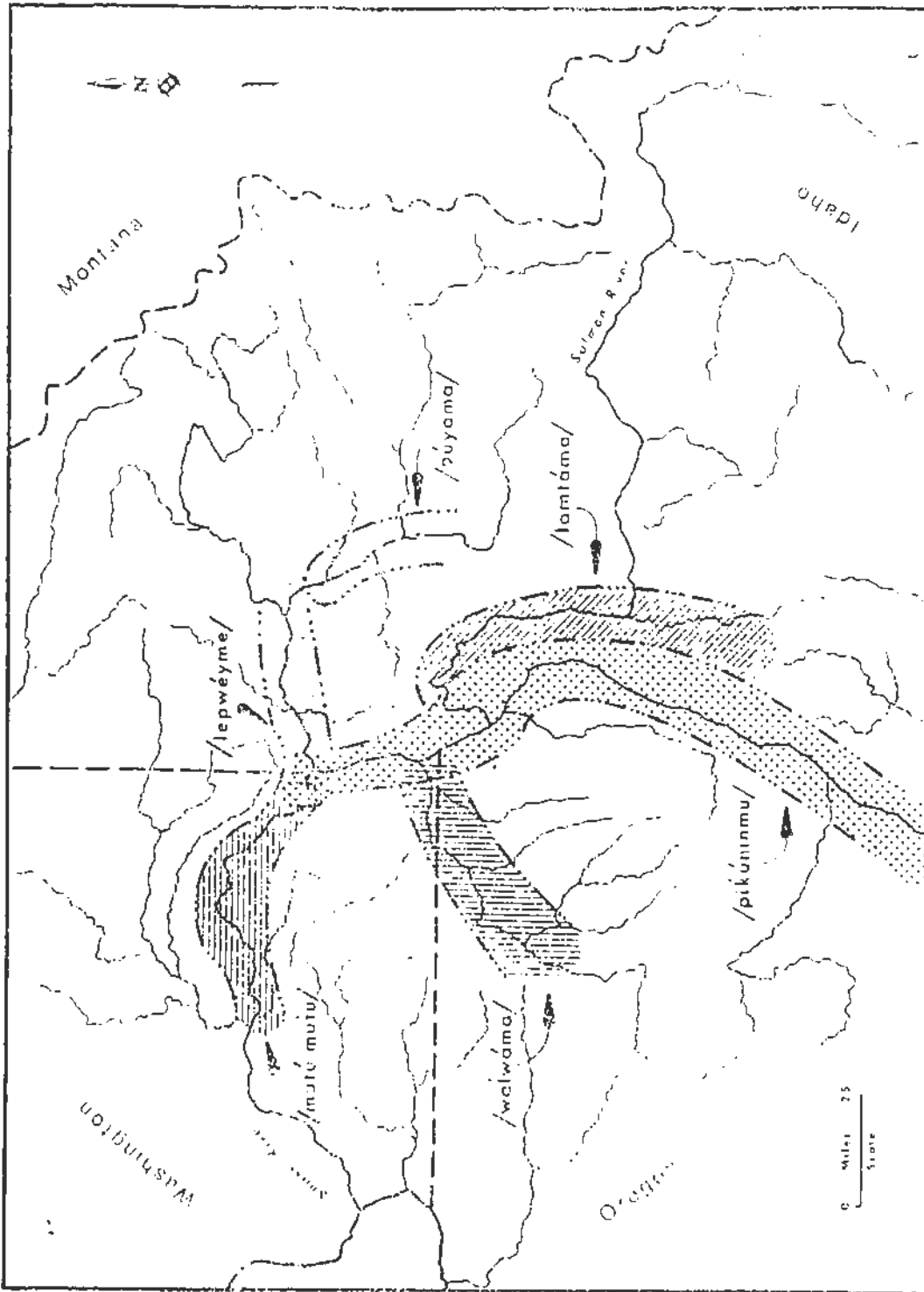


Fig. 25. Major riverside groupings of Nez Perces.

Regional Groupings

Walker (1968:14-15) has identified four regional groupings centered on Kamiah, Lapwai-Lewiston, Salmon River-Wallowa, and the Lower Snake River. These were not "formal," permanent groups. They were strengthened, made more coherent, by White pressure. Walker also claims that these regional groupings joined the large task groups described by Anastasio (1955; 1972). I believe that this gives a false picture of the nature of interaction within the task groups. Instead, such interaction as there was resulted from individual kinship and friendship ties rather than the conjoining of two or more regional groupings. Nevertheless, it is clear the regional leaders arose in the extraordinary events and unparalleled pressure which led to the Nez Perce War of 1877.

Discussion

There were two important non-kinship groupings in Nez Perce society: the village and village combines. Villages were central in the political life of the Nez Perce; they were also ecologically most important. Villages were found where resources were first available each year. Thus, they were in the canyon bottoms. Locations within canyons were determined by a variety of local factors.

The recruitment involved in village membership was based on kinship ties. Village populations, however, were variable. Variation in village populations resulted from "ecological" factors: relative age, relative wealth, relative labor convenience, and relative status. These are the same factors which influence domestic and task group formation. It is important to see that villages were a direct response to ecological factors and at the same time an epiphenomenon of people's economic response to environmental

variability. The cross-cutting of villages by kin groups provided the necessary connections for movement from less successful to more successful groups. These cross-cutting groups formed factions in villages.

Villages closely allied with one another through these factions formed village combines. Such groups were intimately concerned with the welfare of all member groups. Thus, all members of a village combine enter into the selection of various leaders--/mióxatmioxat/ and the /miyóxat/. But villages in the canyons of sidestreams were most strongly bonded: for example, those found on Alpowa, Lapwai and Potlatch Creeks formed major unions, with satellite villages. These major groupings are called bands:

Properly defined the Nez Perce *band* is a named, localized grouping of two or more customarily associated villages intermediate in size between the village and regional grouping and within which there are close kinship ties and economic, ceremonial and military cooperation [Walker n.d.:17-18].

They do not meet either Service's (1962) or Steward's (1955) definition of "band." Both have characterized bands as being (1) virilocal or patrilocal, (2) exogamous, often reciprocally, (3) composed of 30 to 100 or more individuals, (4) having patrilocally extended working groups. Other, composite, bands result from the dislocations caused by contact with Europeans--principally the depopulations produced by epidemic diseases. According to Service (1962:94-107) the anomalous "familistic" societies discussed by Steward result from destruction of the superorganic environment.

As we have seen, however, the Nez Perce "band" had a multilocal residence pattern, is not exogamous, and has a high population. These features indicate a composite band produced by disease through depopulation. Ember and Ember (1972) have examined this proposition. Using the Human Relations Area Files, they attempted to correlate multilocal residence with depopulation. They found that epidemic disease is a ". . . reliable and

fairly strong predictor of multilocality--one which predicts most cases of multilocal residence *among relatively sedentary societies with more than 15 per cent dependence on agriculture*" (1972:394, emphasis mine). Depopulation by any factor is an insignificant predictor of multilocality in societies with migratory bands.

Thus, it does not seem that the Nez Perce band is patrilocal in strict definition. It is, however, composite in terms of distinctive features, but depopulation by disease, though it did occur (Mooney 1928), cannot be a *priori* the cause of this type of polity. Dunning's work (1959a, 1959b) with the Northern Ojibwa seems to provide a better answer: an imbalance in the sex ratio at marriageable age, which leads to uxori-locality in an ideally patrilocal society.

The Nez Perce band was like the "Z-tribe" or dialect tribe described by Birdsell (1973). Such groups are basic, self-defining demographic units. Members of such units are distinguished by (1) a common dialect, (2) a statistically higher rate of intramarriage than expected, (3) some political integration but with no authority invested in leaders, and (4) loose economic cooperation based on kinship. This, in fact, seems to be the general pattern of Nez Perce organization. According to Birdsell (1973) the median size of such a group is 500 individuals. Walker reports a population of 5000 for the Nez Percés (1967a:25) and cites three historic sources estimating that the number of bands was between 10 and 15 (n.d.).

Bands are productive organizations, isolated in time and space. Band members share the product of their joint efforts. Hence, their well-being depended entirely on their own productive effort and the productivity of their effective environment. If one or both of these factors fell below a critical level, the productive organization failed, and its members

suffered a proportionate decrease in well-being. This led to jealousy, witchcraft, and schism (Walker 1968).

Although these productive organizations are spatio-temporally localized, they are not socially isolated. Social ties between localized groups are the channels through which the spatially and temporally localized variations in productivity are evened. For example, people who share the product of a fishing station also share game, even though they do not share hunting areas. Thus, one group can make up the deficit in another group's hunting productivity. Such unions of production units are consumption organizations. The ties that bind these organizations together are kinship, friendship, common rights of tenure, and coresidence.

Kinship and friendship are obvious intergroup ties. They are permanent. In adult life they transcend time and space. Obligations and rights entailed by these ties cannot be denied without denying the relationship, thus cutting off mutual support in an uncertain world. Common rights of tenure and coresidence are not so obvious. In Nez Perce society individuals exercised rights of tenure in several different resource locales, and they went to one or another of these on the basis of its productivity and the amicability of the people they were likely to meet there. But these factors varied from one type of resource locale to another. Thus, the roster of personnel differed from task group to task group. Because these productive organizations were also consumption units, the product of different types of resource locales was shared across the boundaries of the isolated productive organizations associated with them.

Each productive unit, then, forms a portion of a larger social unit of consumption. A production unit is isolated from its allies by time and space, and thus by membership. Because these productive units are

impermanent, in the sense that they coalesce and disperse in response to resource availability, and because individuals are members of more than one kind of production organization, Nez Perce social organization is a nested series of productive/consumption groups.

Summary and Conclusions

These ill-defined sociopolitical entities in some ways were similar to the Mescalero resource-holding "corporation" described by Basehart (1967). These latter groups were not fully corporate in that they lacked authority posts and decision making procedures (see Brown 1974). Despite calling them corporations, Basehart said that resource holding "corporations" were not groups in the formal sense. Even so, these analytic groups had continuity, formed bounded systems of social organization, and could be considered as jural entities. The boundaries of these social entities were marked by "free" rights of access to resources. Basehart contends that:

. . . from an economic perspective, this would appear to be the essence of a corporation. Alternatively, Mescalero may be conceptualized as a jural community, since freedom of access to resources involves the recognition of jural norms defining resources as common property of all Mescalero [1967:287].

Such groups were aggregations of people with similar rights to resources.

The Nez Perce social entities were similar to this. The basic prerequisite for entry into one of these groups was having rights to resources in a given area. Yearly cycles of Nez Perce group coalescence matched the periodicities in their effective environment because the individuals comprising them had rights of tenure to the same resource locales. As the productivity of these locales waxed and waned, individuals exploited then left them. The groups therefore resulted from similarities in tenure held by various individuals. Members of such groups were commonly kinsmen, but

friends and enemies could also share these rights. They were manifestations of the basic Plateau theme of personal freedom identified by Ray (1939).

Only one corporation is easily discerned from the coincidence of these rights--the village. As corporations, villages were organized to exploit fish during their spawning runs. Salmon, especially, were important in this respect because coordinated community action was required to construct fishing stations. Village members were recruited on the basis of their rights to fish captured in a fish trap. Unlike other groups, villages had a variety of formally chosen and relatively permanent leaders. These leaders were invested with and exercised a limited amount of authority. Over the years of contact with White Americans, these leaders gradually took on greater authority.

Of course other socio-economic activities, including some kinds of salmon fishing, occurred within a village. These activities, perhaps facilitated by village life, were not part of that corporation's concern--and its leaders had little to do with these other activities, instead, these activities formed the goal of much smaller task groups and domestic groups. The task groups were concatenations of members from various domestic groups. Often they were single sex groups aimed at completing a particular job. Membership in such groups was based on friendship and kinship.

A domestic group attempted to join successful task groups and villages. The group's relative success at this enterprise led to the formation of occasional groups--consumption organizations--which evened out productive differences between them.

Domestic groups attempted to form alliances with other domestic groups, both within and between villages, through consanguineal, affinal, and friendship ties. It is the members of allied domestic groups which form

task groups. The domestic group's relative success in using these ties to produce a surplus determined its relative status. It also led to the formation of informal consumption groups, which evened out productive differences between relatively successful and unsuccessful domestic groups, and produced a following for the successful domestic group's head. It is the rights to resources which are critical. Thus, the state of affairs entirely molds the character of leadership of all social entities.

Villages and the various groups which compose them formed the amorphous combines. These combines--often a closely allied group of villages on a side-stream--indicated their solidarity through participation in winter spirit dances and first fruits ceremonies. In some ways these were competitions in which the membership and success of the group was demonstrated by (1) the very fact that a dance could be sponsored, (2) the extent of participation, (3) the apparent ease with which the influx of people were supplied with succor, (4) the numbers of dancers in the ceremonies, and (5) the relative power of the participants and their favors to the audience. The first fruits ceremonies were demonstrations of early productivity. From these indications "marginal members" made their decisions about alliances. Thus, on a fairly high level the small groups and villages of people formed combines symbolized by winter spirit dances and first fruit ceremonies. On a relatively high level these, too, formed "corporations," or, as I call them, combines, symbolized through participation in spirit dances and first fruits ceremonies.

In the same way Nez Perces were part of Plateau-wide resource holding corporations. Non-Nez Perce--relatives, friends, and trading partners--held rights in the resources of the Nez Perce territory, just as Nez Perces held rights in those other areas. Anastasio (1955, 1972) has outlined this wider

network; the portion of the network associated with salmon has been most fully documented by Walker (1967b).

CHAPTER 5

SUMMARY AND CONCLUSIONS

Ecological analyses describe the structure and function of biological systems in terms of energy sources and flows. They are descriptions of functional systems; that is, systems which maintain a certain property (or properties) through variation in homeostatic mechanisms, or state coordinates. Because functional systems do work, they need energy. Hence interaction between state coordinates of biological systems is related to getting energy and using it. Functional biological systems include human populations.

A complex set of homeostatic mechanisms operates to maintain human populations. A basic analytic division distinguishes two subsets of state coordinates: environment and society. Since the entire set is functionally integrated, variation in one produces variation in the other. Certain values or conditions of a population's environment are necessary in maintaining the population's society through selection of relatively successful behaviors. Society, then, is a set of coordinated behaviors which, among other things, functions to maintain a human population exhibiting them, despite variations in its energy sources.

There are two important characteristics of populations which are homeostatic responses to environmental variation. They are dispersal and dispersion. For prereservation Nez Perces certain behaviors which constituted the kinship system provided the basis for dispersal, the immigration into or emigration from localized groups. The results of these many personal

interactions resulted in the dispersion evident in residential groups. These groups, through tenure, controlled certain resource areas, and their fortunes varied in response to changes in the productivity of the area.

The physical setting, the energy resources--or effective environment --and the periodicities of the Nez Perce environment have been described in Chapter 2. Patterned responses that maintained the population in the face of these patterned variations have been seen in the kinship system described in Chapter 3. The results of these responses, and their relationship to the environment have been shown in Chapter 4.

Two of the most influential physical factors in Nez Perce territory were the physical geography and climate. These two factors produced a set of conditions unique at this latitude in North America. Three physiographic zones important to the Nez Perce can be delimited: (1) the deep canyons through which flow the mainstems of the Snake, Clearwater, Grande Ronde, and Salmon Rivers; (2) the plateaus, ranging in altitude from 2000 to 2500 feet and covered with rolling loess hills; (3) the montane zone, ranging from roughly 2500 feet to 10,000 feet in altitude. These zones resulted from a complex history of vulcanism and orogeny. The climate is dominated by maritime air masses driven into the Northern Rocky Mountains and Nez Perce territory by the prevailing westerly winds. When these rise along the plateau and the mountains, moisture is produced. Precipitation on the plateaus is roughly 18 to 22 inches per year, while the high mountains have a little more than twice as much. On the other hand, the canyons receive much less rain, about half that which falls on the plateaus. Temperature differences are equally as wide, but much more influenced by local physical factors. The combination of physical and climatic features produced a variety of habitats.

The plant communities responding to these differences include two major physiognomic types, steppe and forest. Both were complex mosaics of habitat types. The most important to the Nez Perce in terms of plant foods were the most restricted habitats, for example, the lithosolic, stream border, and moist swale communities. Yet another important and pervasive aspect was the periodicity exhibited by these communities.

Five zones, characterized by the dominant shrubby species, can be recognized. They are distinct because of the relative temperature-moisture relationships found in each, and may be roughly correlated with the physiographic zones in the area. The canyons and lowest plateaus were characterized by gray rabbitbrush. This is the most xeric shrub species found in the area. It marks steppe communities limited by high temperatures and low moisture. The other major set of steppe communities is marked by snowberry and its xeric analog, Nootka rose. These steppe communities are limited primarily by low winter temperatures. The lowest montane zone is characterized by snowberry and its analog, mallow ninebark. This, because of the overstory of ponderosa pine or Douglas fir, which inhibited snowmelt, was active somewhat later than the steppe communities dominated by snowberry. These forest communities were limited by warm summer temperatures and relatively low precipitation. The fourth zone--characterized by the shrub Oregon boxwood--was apparently not limited by either temperature or moisture. This is indicated by the wide variety of dominants and seral species. The diversity in both these community aspects are not found elsewhere in the area. Finally, the highest zone is severely limited by low temperatures. Various species of huckleberry are characteristic of this zone.

These zones can be further lumped into three groups important to the Nez Perce. One of these is characterized by sagebrush or its mesic analog,

gray rabbitbrush. The second is characterized by common snowberry or its analogs, rose and mallow ninebark. The third important group is characterized by Oregon boxwood and various species of huckleberry. These groups are equivalent to the three physiographic and climatic zones--canyon, plateau, and montane.

These three broad groups of habitats are important because of periodic differences in productivity. The first, lowest habitat grouping is most productive in the early to late spring. The Nez Perces were at that time in the canyons exploiting fish and plant resources. The various task groups formed in order to gather resources: male groups of several kinds exploited the concentrations of non-anadromous fish, while female groups collected early spring plants. With the arrival of anadromous fish, however, the village became the dominant grouping. Coordinated effort was made by all village members to get salmon, dry it, and store it for the up-coming winter.

This effort lasted until May. As the abundant root supplies of the prairies matured, a major festival was held /qé?uyit/--'first fruits ceremony.' This marked the shift from canyon to plateau resource utilization. Small groups then moved into the uplands where large fields of /qámsit/--'cous'-- and /qémes/--'camas'--grew. At this time, large numbers of Nez Perces, especially those from the villages along the southern side of the Clearwater, went to Camas Prairie near Cottonwood, Craigmont, and Grangeville to gather roots. The high productivity of the highly nutritious roots of these grounds supported large concentrations of people.

These large encampments broke up in August as small groups went into the surrounding mountains. The small size of these groups reflects the

amount of energy available from hunting. Although everyone hunted, the numbers of animals in any one area was so small and so variable that only groups of 20 to 30 individuals were productive.

Residence is seen as a reflection of the dispersion of the Nez Perces in response to recurrent patterns of environmental productivity. It was one way in which the Nez Perce population was maintained. Kinship in its broadest sense provided a complex set of rules for dispersal.

Two immediate conclusions can be drawn from the data presented. First, only some kinship behaviors appear to be directly related to dispersal in response to variation in resources. These behaviors seem systematically restricted to two ascending and two descending generations. Practically speaking, only three generations are functional during any one individual's lifetime: at birth to two ascending generations, at the establishment of ego's domestic group to one ascending, ego's own and one descending generation, and at the establishment of ego's children's domestic group, to ego's own and two descending generations. These limits are marked within kinship terminology by the disappearance of all but one criterion, generation, in categorizing alter.

The greater importance of other kinsfolk in terms of dispersion is indicated by the increasing numbers of criteria which come into play, and thus, psychologically perhaps, provide the categorical distinctions necessary for delimiting increasingly exclusive groups. These groups were commonly competing for the same resources. The closer the kinship tie, of course, the more similar the rights of tenure and residence.

The most rigidly amicable and most likely to share were /ilútiwama/-- 'children of the same mother.' But this imposes a problem: /ilútiwama/ of the opposite sex marry outsiders. The mild avoidance relationship between

"brothers" and "sisters" and strong avoidance of same-sex affines spatially, temporally, and competitively, isolated groups. Hence, competition for a limited number of resources on small resource areas is reduced. At the same time, however, the door is left open for recruitment into other resource areas through equating siblings and "cousins."

Thus, as pressure on a resource locale increased to the point of diminishing returns on a per capita basis, stress on the task group utilizing the areas caused it to break up along logical kinship lines. The emigrants from these groups use these same criteria to immigrate to other groups utilizing less pressured areas.

Second, the size of the residential group was directly related to the energy available from a particular resource locale. The smallest residential groups were found on hunting grounds and small root grounds. Villages were found primarily at or near salmon fishing stations. The largest temporary groups were formed on the large and productive root grounds of Camas Prairie and /oyáyp/--'Weippe, Idaho.' Exceptions to these general correlations of resource and group size can be seen. Exceptionally large groups were found at /timímap/, /qúlpqulplegeles/, and opposite Asotin, Washington. These three localities were exceptionally favorable for fishing with the techniques known by the Nez Perces. But again, entree to these areas was the result of dispersal mechanisms found primarily in the kinship system.

Previous interpretations of Nez Perce intergroup relations have been advanced. First, Anastasio's (1955, 1972) work indicated that Nez Perce ethnic units were allied with other non-Nez Perce ethnic units. This statement is too inclusive on the basis of the evidence presented here. Instead individual Nez Perces established important affective and economic alliances with non-Nez Perce people. Consequently, by following the same rules of

behaviors used with Nez Perces, task and/or residential groupings with non-Nez Perces are easily accounted for without postulating ethnic group alliances. The fact that such understandings were apparently shared throughout the Plateau obviously supports Anastasio's (1955) basic thesis that the southern Plateau formed a distinct social system. The present work shows some of the rules which make this system work.

Second, Schwede's (1966, 1970) work is also clarified. Nez Perce settlement patterns were indeed governed, to a great extent, by biophysical factors, but through a variety of circumstances. The physical location of energy sources governed the location of Nez Perce settlements.

Third, Walker's (1967b) brief account of stewardship has been expanded. Stewardship was an important part of Nez Perce life. The concept refers to the idea that individuals had the right to dispose of the products of their own labor. This was particularly important in terms of limiting access to resource locales, especially fishing areas, and thus was central to concepts of tenure. The stewardship concept of tenure had a strong effect on dispersal and dispersion. Partly through this means people were competitively isolated from one another, and variations in resources were mitigated through trade between these isolated groups.

Walker's work on the cross-utilization of resources is further supported by my data. The canyon resources discussed in this dissertation were both more abundant and earlier appearing downstream from the Nez Perce area. People with trading contacts in the lower reaches of the Snake and Columbia River drainages had a large reservoir of energy to draw upon. In effect, the length of the productive year for such people was two to three months longer than for Nez Perces without such contacts. Many rich men, according to my contacts, had both trading partnerships and affines with down-river groups.

Further, Walker's (1968) work in schismatic factionalism among Nez Perces is somewhat clarified. His basic thesis, that schismatic factionalism was a major acculturational motif of Nez Perce history, is not challenged, but it was not a *de novo* pattern. It is apparent that factionalism most probably was a basic facet of Nez Perce adaptation to energy sources. Stress on any group, induced by lowered energy throughout, fractionated Nez Perce groups during prereservation times. As with other groups (Fried 1975) political stress, created by the invasion by Euroamericans, simply produced fractionation along the same lines of structural "weakness."

Evidence presented in this dissertation generates and supports a major hypothesis: Nez Perce social organization is a model of the population's niche, i.e., the multiple dimensions of Nez Perce organization map the "hypervolume" of their environmental role. Consequently, from an individual's point of view, the "environment" is the social system. As a result, individuals can affect their ecological security by manipulating the social system.

Two conclusions about broader anthropological theory can be drawn. First, many anthropologists, while admitting that environment is important in understanding human groups, have held that kinship systems are not influenced by the environment; that is, they are not adaptive. For example, bilateral systems are found in hunting and gathering, agricultural, and industrialized groups. Kinship systems, as any behavioral system, are subject to a number of selective forces, among them are those which are associated with getting a living. Thus, an investigator cannot expect to find all kinship behaviors to be related to environmental pressures. Many are only broadly related to environmental features. These behaviors provide strategies for dealing with patterns of environmental variation.

Second, the approach I have followed in this study implicitly supports the "organismic analogy" used by some anthropologists, most notably the functionalists. It is clear, given the theoretical approach followed here (Cancian 1960) that no analogy is involved. Rather, organisms, populations, and societies are expressions of the same kind of thing, a functional system. Thus, one would expect consistencies in approach and in results when studying all three kinds of phenomena. Instead of dealing with analogous entities, anthropologists and ecologists are dealing with homologous ones.

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 1930 The Salishan Tribes of the Western Plateau. Bureau of American Ethnology Annual Report 3.
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✓1966 The Nez Perce Sweat Bath Complex: An Acculturational Analysis. *Southwestern Journal of Anthropology* 22:133-171.

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✓1967b Mutual Cross-Utilization of Economic Resources in the Plateau: An Example from Aboriginal Nez Perce Fishing Practices. *Laboratory of Anthropology Report of Investigations No. 41.*

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✓1968 Conflict and Schism in Nez Perce Acculturation. Pullman: Washington State University Press.

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1970 Stage and Statistical Models in Plateau Acculturation. *Northwest Anthropological Research Notes* 4:153-165.

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1968 The Bihor of India and Some Comments on Band Organization. In *Man the Hunter*. Richard B. Lee and Irven DeVore, eds. Aldine Publishing Company. Pp. 126-131.

1969 The Bihor of Hazaribagh. In *Contributions to Anthropology: Band Societies*. David Damas, ed. *National Museum of Canada Bulletin* 228:142-156.

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APPENDIX A

NEZ PERCE PHONEMES

ENGLISH, SCIENTIFIC, AND NEZ

PERCE RESOURCE TERMS

Plant Names

Common Name	Scientific Name	Nez Perce Name
1. Balsamroot sunflower	<i>Balsamorhiza sagittata</i>	/pasx/
2. Beargrass	<i>Xerophyllum tenax</i>	/yé.ye/
3. Black hawthorn	<i>Crataegus douglasii</i>	/císnim/
4. Bluebunch wheatgrass	<i>Agropyron spicatum</i>	-
5. Camas	<i>Camassia quamash</i>	/qémes/
6. Cascades azalea	<i>Rhododendron albiflorum</i>	-
7. Cat's ear	<i>Calochortus elegans</i>	?
8. Cattail	<i>Typha</i> spp.	/tóqo/
9. Cheatgrass	<i>Bromus tectorum</i>	-
10. Columbia hawthorn	<i>Crataegus columbiana</i>	/telx/
11. Common chokecherry	<i>Prunus virginiana</i>	/tímssiway/
12. Common snowberry	<i>Symphoricarpos albus</i>	/cícaqiy'cícaqiy/
13. Cous	<i>Lomatium cous</i>	/qámsit/
14. Cow parsnip	<i>Heracleum lanatum</i>	-
15. Douglas fir	<i>Pseudotsuga menziesii</i>	/pa.ps/
16. Elderberry	<i>Sambucus cerulea</i>	/míttip/
17. Elk thistle	<i>Cirsium scariosum</i>	/títu.x/
18. Engelmann spruce	<i>Picea engelmannii</i>	/héslips/
19. Fireberry	<i>Vaccinium scoparium</i>	/?ála?ala/

45.	Sandberg bluegrass	<i>Poa secunda</i>	-
46.	Sego lily	<i>Calochortus eurycarpus</i>	/l6.las/
47.	Sego lily	<i>Calochortus nitidus</i>	/l6.las/
48.	Serviceberry	<i>Amelanchier alnifolia</i>	/kayapasx/
49.	Serviceberry	<i>Amelanchier utahensis</i>	/kikéyc/
50.	Snowbrush ceanothus	<i>Ceanothus velutinus</i>	-
51.	Spring beauty	<i>Claytonia lanceolata</i>	/capcí.lay/
52.	Subalpine fir	<i>Abies lasiocarpa</i>	/patóysiwey/
53.	Sunflower	<i>Balsamorhiza incana</i>	/cilílx/
54.	Thimbleberry	<i>Rubus parviflorus</i>	/táxtax/
55.	Tufted hairgrass	<i>Deschampsia cespitosa</i>	?
56.	Western hemlock	<i>Tsuga heterophylla</i>	?
57.	Western redcedar	<i>Thuja plicata</i>	/tála.tat/
58.	Whitebark pine	<i>Pinus albicaulis</i>	/lalx/
59.	Wild hyacinth	<i>Brodiaea douglasii</i>	/cátóxc/
60.	Wild onion	<i>Allium</i> spp.	/se.x/
61.	Wood's rose	<i>Rosa woodsii</i>	/tamsásnimsiway/
62.	Yampa	<i>Perideridia gairdneri</i>	/cawítx/
63.	Yellowbell	<i>Fritillaria pudica</i>	/stiméx/
64.		<i>Lomatium canbyi</i>	/qe'qí.t/
65.		<i>Lomatium dissectum</i>	/títalam/
66.		<i>Lomatium gormanii</i>	/c'ic'í.ta/
67.		<i>Lomatium grayi</i>	/wewím/
68.		<i>Lomatium salmoniflorum</i>	/ilqú.lx/
69.		<i>Lomatium triternatum</i> var. <i>triternatum</i>	/péqiy/
70.		<i>Lomatium</i> sp.	/yíqew/
71.		<i>Lomatium</i> sp.	/laqáptat/

Fish Names

Common Name	Scientific Name	Nez Perce Name
1. Blueback salmon	<i>Onchorhynchus nerka</i>	/qoyxc/
2. Chinook salmon	<i>Onchorhynchus tschawytscha</i>	/nacó.ʔx/
3. Chiselmouth	<i>Acrocheilus alutaceus</i>	/titéwxc/
4. Cutthroat trout	<i>Salmo clarki</i>	/wawáxim/
5. Dolly Varden	<i>Salvelinus malma</i>	/íslam/
6. Lamprey eel	<i>Entosphenus tridentatus</i>	/hé.su/
7. Mudfish		/ku.sis/
8. Sea run sucker	<i>Catostomus?</i>	/mu.kuc/
9. Silver salmon	<i>Oncorhynchus kisutch</i>	/kállay/
10. Steelhead	<i>Salmo gairdneri</i>	/hé.yey/
11. Sturgeon	<i>Acipenser transmontanus</i>	/qí.lex/
12. Sucker	<i>Catostomus columbianus</i>	/qíyex/
	<i>Catostomus macrocheilus</i>	/qíyex/
	<i>Catostomus platyrhynchus</i>	/qíyex/
13. Whitefish	<i>Prosopium williamsani?</i>	/címey/

Animal Names

Common Name	Scientific Name	Nez Perce Name
1. Antelope	<i>Antilocapra americana</i>	/c'ókolaynin/
2. Bison	<i>Bison bison</i>	/q'óq'álx/
3. Black bear	<i>Ursus americanus</i>	/yá.ka?/
4. Blue grouse	<i>Dendrapagus obscurus</i>	/tú.ye/
5. Elk	<i>Cervus canadensis</i>	/wewúkiye/
6. Fool hen	<i>Canachites canadensis</i>	/?é.ni/
7. Moose	<i>Alces alces</i>	/sáslaqs/
8. Mountain goat	<i>Oreamnos americanus</i>	/caxisxis/
9. Mountain lion	<i>Felis concolor</i>	/koya.má/
10. Mountain sheep	<i>Ovis canadensis</i>	/tinun/
11. Mule deer	<i>Odocoileus hemionus</i>	/tewísín/
12. Prarie chicken	<i>Pediocetes phasianellus</i>	/qaxno/
13. Ruffed grouse	<i>Bonasa umbellus</i>	/waswásno/
14. Whitetailed deer	<i>Odocoileus virginianus</i>	/tipítewisin/

CURRICULUM VITAE

Alan G. Marshall
Professor of Anthropology
Lewis-Clark State College
500 8th Avenue
Lewiston, Idaho 83501

September 1998

PROFESSIONAL INTERESTS

Cultural Ecology ("Environment as Text"); Theory of Practice ("Material Dimensions of Social Organization"); Ethnography of Northwestern North America and Japan ("The Natural Order"); Ethnicity ("Nature and Identity").

EDUCATION

Washington State University, Ph.D., 1977 (Anthropology)
Dissertation: "Nez Perce Social Groups: An Ecological Interpretation"

Washington State University, M.A., 1971 (Anthropology)
Thesis: "An Alluvial Chronology of the Lower Palouse River Valley and Its Relation to Local Archaeological Sites"

University of Minnesota, B.A., 1967 (Anthropology)

PROFESSIONAL EXPERIENCE

Present (since 1986). Professor, Division of Social Sciences, Lewis-Clark State College, Lewiston, ID 83501. Teaching, advising, and committee responsibilities; research and community service.

Present (since 1984). Affiliate Professor, Department of Anthropology, Washington State University, Pullman, WA 99164-4910. Graduate committee responsibilities.

1994-1995. Consultant: Snake River Independent Review, Vancouver, B.C. Nez Perce Tribe-Idaho Power Company Fisheries Mediation.

1984-1989 Key Consultant, Center for Northwest Anthropology, Washington State University, Pullman, WA 99164-3112.

1988 Research Associate; Department of Oriental Languages, University of California, Berkeley, Berkeley, CA 94720. Sabbatical leave during Spring semester.

1981-1986 Associate Professor, Division of Social Sciences, Lewis-Clark State College, Lewiston, ID 83501. Teaching, advising, and committee responsibilities; research and community service.

- 1978-1981 Assistant Professor, Division of Social Sciences, Lewis-Clark State College, Lewiston, ID 83501. Teaching, advising, and committee responsibilities; research and community service.
- 1977-1978 Assistant Professor, Department of Sociology and Anthropology, North Dakota State University, Fargo, ND 58102. Teaching, advising, and committee responsibilities; research.
- 1976-1977 Visiting Professor, Department of Societal and Urban Studies, Boise State University, Boise, ID 83725. Teaching and advising responsibilities; research.
- 1975-1976 Instructor, Department of Sociology and Anthropology, North Dakota State University, Fargo, ND 58102. Teaching, advising, and committee responsibilities; research.
- 1974-1975 Independent Research: Kinship and social organization, Boulder, CO.
- 1972-1974 Doctoral Research: In residence on Nez Perce Indian Reservation, Lapwai, ID.
- 1972-1973 Ford Foundation Fellow in Anthropology, Department of Anthropology, Washington State University, Pullman, WA 99164-4910.
- 1969-1972 Teaching Assistant, Department of Anthropology, Washington State University, Pullman, WA 99164-4910.
- 1970 Field Foreman, Archaeological Field School, Department of Anthropology, Washington State University, Pullman, WA 99164-4910.
- 1967-1969 Research Assistant, Department of Anthropology, Washington State University, Pullman, WA 99164-4910.

PUBLICATIONS

- Writing projects: Nimipunm hipt [Nez Perce Sustenance]; "Reincarnation of the Spirits;" "Social Adaptations in the Nez Perce Seasonal Round;" "Foucault, History, and Anthropology."
- In press: "Socrates Meets Two Coyotes" *Journal of Philosophical Research*. [co-author: Kurt Torell]
- In press: "Unusual Gardens: The Nez Perce and Wild Horticulture on the Eastern Columbia Plateau," IN *Northwest Lands and Peoples: An Environmental History*. Dale D. Goble and Paul Hirt (Eds.). Seattle, WA: University of Washington Press.
- 1991/92 Applied Anthropology in an Academic Bureaucracy. *High Plains Applied Anthropologist*, 11/12: 143-167.
- 1991 Euro-American Attitudes and the Native American Experience, In J. Sanford Rikoon and Judith Anderson (Eds.), Interpreting Local Culture and History. Moscow, ID: University of Idaho Press, pp. 167-174.
- Review of "Ecological Imperialism: The Biological Expansion of Europe, 900-1900" (Crosby). *American Indian Quarterly* 15, 4: 109-110.

- 1989 Review of "A Great Basin Shoshonean Sourcebook" (Thomas). American Indian Quarterly 13, 1: 95-96.
- 1986 Review of "Tales of the Nez Perce" (Hines). Journal of American Folklore 99: 322-323.
- 1985 "Is a Bull Female?" American Ethnologist 12: 541-543.
- "Prairie Chickens Dancing...': Ecology's Myth", In Idaho Folklife: Homesteads to Headstones, Louie W. Attebery, Ed. Salt Lake City: University of Utah Press. pp. 101-107.
- 1980 "Villages, Demography, and Subsistence Intensification on the Southern Columbia Plateau." North American Archaeologist 2: 25-52. (Co-author: Kenneth M. Ames)
- "Anthropology as Oral History." Idaho Humanities Forum 2: 3-4.
- "Introduction," In Jane Gay Photograph Collection Catalog. Lillian Dawson, comp. Boise, ID: Idaho State Historical Society. pp. ix-xiii.

REPORTS

- 1993 "Nez Perce Geography." Report to Nez Perce National Historical Park, Spalding, ID.
- 1987 An Evaluation Report on "Co ur d'Alene Tribal Language Project--Phase 02." Project funded by the Idaho Humanities Council, Boise, ID. 8 December.
- An Evaluation Report on "Nez Perce Music Archives." Project funded by the Idaho Humanities Council, Boise, ID. 4 September.
- 1986 "Science, Mathematics, and Nez Perce Ways of Knowing." Report to the Northwest Area Foundation. Co-Authors: O. Reese Parker and Eugene Trainor. 114 pp.
- 1983 An Evaluation Report on "Coeur d'Alene Tribal Memory Preservation." Project funded by the Association for the Humanities in Idaho. 10 April.
- 1980 An Evaluation Report on "Nemipum Himtakt (Nez Perce Language Instruction)." Project funded by the Association for the Humanities in Idaho. 16 November.
- 1979 An Evaluation Report on "...Our Responsibility for Nature." Project funded by the Association for the Humanities in Idaho. 5 November.
- 1973 "Aboriginal Nez Perce Subsistence." Report to the Smithsonian Institution. 33 pp. Mimeo.

PAPERS READ AT PROFESSIONAL MEETINGS

- 1996 "Plato Among the Nez Perc es." 70th Annual Meeting of the Pacific Division, The American Philosophical Association. April 4. Seattle, WA.
- 1995 "Plato Among the Nez Perc es." 48th Annual Northwest Anthropological Conference, Portland, OR.

- 1991 "Wild Horticulture: The Nez Perce Subsistence Base." 90th Annual Meeting, American Anthropological Association, Chicago, IL.
- "Enchanted World: The Natural Organization of Nez Perce Society." 24th Annual Chacmool Conference, University of Calgary, Calgary, Alberta.
- "Nez Perce Subsistence." 44th Annual Northwest Anthropological Conference. Missoula, MT.
- 1990 "Unusual Gardens: Native Plant Production on the Plateau of Northwestern America." Annual Meeting, American Society for Ethnohistory, Toronto, Ontario.
- 1989 "Resource Management Conflicts in North Central Idaho." 88th Annual Meeting, American Anthropological Association, Washington, D.C.
- "Discipline and Genealogy in Fieldwork." Annual Meeting, Society for Applied Anthropology, Santa Fe, NM.
- 1988 "Reincarnation of the Spirits." 87th Annual Meeting, American Anthropological Association, Phoenix, AZ.
- 1987 "Making History--Building Deviance," 86th Annual Meeting, American Anthropological Association, Chicago, IL.
- "The Continuing Death of the Spirits Among the Nez Perce, 1892-Present." Annual Meeting, American Society for Ethnohistory, Oakland, CA.
- 1986 "Constructing Deviance." 85th Annual Meeting, American Anthropological Association, Philadelphia, PA.
- "Deconstructing an Ethnography: Michel Foucault and Anti-Modernism." 39th Annual Northwest Anthropological Conference, Moscow, ID.
- 1983 "Revisionist Anthropology: The Southern Plateau of Northwest North America." Symposium on Canadian-Columbia Plateau Archaeology. XIth International Congress of Anthropological and Ethnological Sciences, Vancouver, BC, Canada.
- 1979 "The Reason There is No More Game in the Mountains...: Ecology's Myth." Annual Meeting, American Folklore Society, Los Angeles, CA.
- "The Socioeconomic Bases of Nez Perce Settlement and Settlement Pattern." 44th Annual Meeting, Society for American Archaeology, Vancouver, BC, Canada.
- 1978 "Social Adaptations in the Nez Perce Seasonal Round." 31st Annual Northwest Anthropological Conference, Pullman, WA.
- 1977 "Values in the Nez Perce Adaptation to Resource Distribution." 30th Annual Northwest Anthropological Conference, Victoria, BC, Canada.
- "Social Organization as Niche Structure." 30th Annual Northwest Anthropological Conference, Victoria, BC, Canada.

"What Archaeologists Don't Find: Proto-Historic Nez Perce Settlement Patterns in the Lower Snake River Region of Southeastern Washington and Northern Idaho." 4th Annual Meeting, Idaho Archaeological Society, Boise, ID.

- 1971 "Post-Glacial Precipitation Changes: New Evidence from Marmes Rockshelter, southeastern Washington." 24th Annual Northwest Anthropological Conference, Moscow, ID.
- "An Alluvial Chronology of the Lower Palouse River Canyon." 37th Annual Meeting, Northwest Scientific Association (Geological Section), Moscow, ID.

GRANTS, FELLOWSHIPS, AND CONTRACTS

- 1996 Contract. Nez Perce National Historical Park, Spalding, ID. Nez Perce Geography: maps and stories.
- Participating Humanist/Evaluator. Idaho Humanities Commission grant to Idaho Public Television/Montana Public Television to produce "In the Tracks of Chief Joseph."
- 1995 Contract. Snake River Independent Review, Vancouver, B.C. Study of Nez Perce Fisheries in Hell's Canyon.
- 1994 Contract. U.S. Forest Service, Hells Canyon National Recreation Area, Enterprise, OR. Kirkwood Bar Archaeological Project.
- 1994 Contract. U.S. Forest Service, Clearwater National Forest, Grangeville, ID. Lolo/Nez Perce Trail Project.
- 1993 Expert Witness. Traditional Nez Perce use of Wallowa Lake, Wallowa Co., OR.
- 1992-93 Contract. Expert Witness. Nez Perce Fisheries. Nez Perce Tribe of Idaho.
- 1989 Grant, "Nez Perce Language Project" to Nez Perce Survivors' Guild from Idaho Humanities Council to develop language teaching materials.
- Grant, "Contemporary Native Geography in North Central Idaho." Lewis-Clark State College Small Grant Program for development of base maps and initial survey of north-central Idaho.
- 1984 Investigator, National Park Service Study of "Nez Perce Oral History." Dr. Ken Reid, Principal Investigator, Center for Northwest Anthropology, Washington State University, Pullman, WA 99164-3112. Development of bibliography relevant to Nez Perce oral history.
- Fellowship, National Endowment for the Humanities Summer Seminar "Ethnic Groups and the State." Dr. Paul R. Brass, Director, Department of Political Science, University of Washington, Seattle, WA 98195. Research into modern nativistic religions in the Plateau region as responses to cultural hegemony.
- Grant Co-Director, "Science and Native American Education," Grant from Northwest Area Foundation to Lewis-Clark State College, Lewiston, ID 83501 for developing and applying a culturally relevant natural science curriculum in Nez Perce Tribal School, Lapwai, ID 83540.

- 1979 Grant, Participating Humanist, "A Calendar of the Jane Gay Photographic Collection." Grant from Idaho Humanities Council to catalog collections in Idaho State Archives. Mr. Jim Davis, Director, Idaho State Library, Boise, ID 83725.
- 1972 Fellowship, "Ford Foundation Dissertation Fellowship in Ethnic Studies" for study of historical Nez Perce environmental relations.
- Grant, "Smithsonian Institution, Urgent Anthropology Small Grants Program" for study of Nez Perce ethnotaxonomy.
- 1968-1972 National Defense Education Act, Summer Grants, Washington State University, Pullman, WA 99164.

RESEARCH EXPERIENCE

- 1995- present Philosophical Studies: Plato.
Religious experience in the the diffusion of Lakota ceremonialism.
- 1989-1995 Development of Nez Perce Language curriculum.
- 1989-1993 Nez Perce Geography.
- 1988 Sabbatical Leave (Spring Semester): Research Associate, Department of Oriental Languages, University of California, Berkeley, CA 94720. Studies in interpretive analysis and post-modernism; Japanese gardens.
- 1986-1988 Analysis of Nez Perce fishing rights controversy.
- 1984-1986 An annotated bibliography of Nez Perce sources; religious expression of Nez Perce ethnicity.
- 1984-1985 Development of natural science curriculum for Nez Perce Tribal School based on Nez Perce concepts of nature and learning. 1972-1978 Cultural ecological analysis of aboriginal Nez Perce subsistence, land tenure, and social organization.
- 1970-1971 Correlation of archaeological strata with alluvial and aeolian stratigraphic units, southeastern Washington.
- 1968-1970 Correlation of archaeological strata with alluvial and aeolian stratigraphic units, southeastern Washington.

PROFESSIONAL ACTIVITIES

- Present (since 1993) Editorial Board for "Occasional Papers and Monographs in Cultural Anthropology and Linguistics," Boise State University, Boise, ID.
- Present (since 1993) Nez Perce Tribal Foundation (Board Member).
- 1987-1995 Editorial Board for journal "Northwest Folklore."
- 1987-1992 Reviewer for journal "American Indian Quarterly."

- 1989 National Endowment for the Humanities Grant Reviewer. Reviewed biennial grant applications from the State Humanities council of Alaska.
- 1987 Arts and Humanities Committee, Idaho Centennial Commission (Committee Member). Reviewed grant applications.
- 1983 Nez Perce Tribal Foundation (Board Member).
- 1982-1985 Association for the Humanities in Idaho (Board Member). Reviewed grant applications; made policy recommendations; personnel management.
- 1987-1989 Book Reviewer for journal "Academic Library Review." Over ten reviews published.
- 1987 National Endowment for the Humanities Grant Reviewer. Reviewed biennial grant applications from the State Humanities Councils of Nebraska, Washington, and Oregon.

OTHER RELATED ACTIVITIES

- 1997 Panel Organizer: "Indian Treaties and State Law." Seventeenth Annual International Exchange Conference, October 29, Lewis-Clark State College, Lewiston, ID.
- 1996 Panel Organizer: "Remote Sensing and Native Cultural Preservation." Sixteenth Annual International Exchange Conference, October 25, Lewis-Clark State College, Lewiston, ID.
- 1993 Panel Organizer: "Lost Environments, Disappearing Civilizations." Thirteenth International Exchange Conference, Lewis-Clark State College, Lewiston, ID.
- 1989 Session Co-organizer: "The Political Economy of Space and Place." 88th Annual Meeting, American Anthropological Association, Washington, DC.
- Panel Organizer: "Minorities in the USSR." Ninth International Exchange Conference, Lewis-Clark State College, Lewiston, ID.
- Executive Director, Second Annual Native American Awareness Week, Lewis-Clark State College, Lewiston, ID.
- 1988 Panel Organizer: "Native Policy in Comparative Perspective: I & II." Eighth International Exchange Conference, Lewis-Clark State College, Lewiston, ID.
- 1987 Panel Moderator: "U.S.-Philippine Relations." Sixth International Exchange Conference, Lewis-Clark State College, Lewiston, ID.
- 1986 Panel Organizer: "The Effects of Industrialization on the Traditional Cultures of Korea, Japan, and Taiwan." Fifth International Exchange Conference, Lewis-Clark State College, Lewiston, ID.
- 1985 Panel Organizer: "U.S.-Japan Relations: Emerging Stereotypes." Fourth International Exchange Conference, Lewis-Clark State College, Lewiston, ID.
- 1984 Invited Address: "The Cultural Significance of the New Nez Perce Tribal Code." 8 November, Moscow, ID. Sponsors: Idaho Legal Foundation, Clearwater Bar Association, University of Idaho School of Law.

- 1982 Keynote Address: "People and Wildlife in Idaho: Before Settlement." Public Symposium on Man, Wildlife, and the Public Lands. 16-18 September. Boise, ID. Sponsors: Idaho Chapter of the Wildlife Society, Boise State University, Association for the Humanities in Idaho.
- 1982 Co-chairman, First International Exchange Conference, Lewis-Clark State College, Lewiston, ID.
- Panelist: "Euroamerican Attitudes and the Native American Experience." Conference on "Interpreting Local Culture and History." 5-6 November, Coeur d'Alene, ID. Sponsor: Idaho State Historical Society and the Association for the Humanities in Idaho.
- 1981 Public Lecture: "The Allotment of the Nez Perce Reservation: 1890-1895." 18 January. Sponsor: Boise Public Library.
- Public Lecture: "Nez Perce Reservation Life at the Turn of the Century." 20 January. Sponsor: Nez Perce County Historical Society, Lewiston, ID.
- 1980 Presenter: "Native American Health Practitioners in the Northwest." 25 April. Bureau of Indian Affairs, Portland Area Office, Public Health Unit.
- Independence Day Speaker: "The Meaning of Native Americans to America." Talmaks Association, Nez Perce Nation, Lapwai, ID.
- 1979 Public Lecture: "Nez Perce Contributions to Regional Settlement by Euroamericans." 10 April. Clarkston Kiwanis Club, Clarkston, WA.
- 1977 Seminar Panelist: "Drug Abuse: An Individual's Problem or a Community Concern?" 1-8 June. Boise, ID. Sponsor: Idaho Department of Health and Welfare Substance Abuse Program.
- 1976 Conference Chairman: Tri-College Sociology and Anthropology conference, 4th Annual Meeting, North Dakota State University, Fargo, ND.

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Present (since 1993) Committee on Ethics in Research on Human Subjects.

1992-1997 Committee on Ethnic Diversity.

1988-91 Member, General Education Committee and Curriculum Committee, Lewis-Clark State College, Lewiston, ID 83501.

- 1984-1986 Chairman, Athletic Advisory Committee, Lewis-Clark State College, Lewiston, ID 83501.
- 1984-1986 Faculty Representative, National Association of Intercollegiate Athletics, Lewis-Clark State College, Lewiston, ID 83501.
- 1982-1984 President, Faculty Association, Lewis-Clark State College, Lewiston, ID 83501.
- 1982-1984 Chairman, Faculty Senate, Lewis-Clark State College, Lewiston, ID 83501.
- 1981-1982 Vice-Chairman, Faculty Senate, Lewis-Clark State College, Lewiston, ID 83501.
- 1980-1981 Secretary, Faculty Association, Lewis-Clark State College, Lewiston, ID 83501.

Fish Used by Nez Perces
(based on Aoki 1970, 1994; Marshall 1977)

“fish without scales”; anadromous fish		/léewliks/
1. Eel, lamprey	<i>Entosphenus tridentatus</i>	/héesu/
2. Salmon, chinook	<i>Onchorhyncus tshawytscha</i>	/nácoo`x/
3. Salmon, “kokanee”		/táytay/
4. Salmon, silver	<i>Onchorhyncus kisutch</i>	/kállay/
5. Salmon, sockeye	<i>Onchorhyncus nerka</i>	/q`oyxc/
6. Salmon, steelhead	<i>Onchorhyncus mykiss</i>	/héeyey/
7. Sturgeon	<i>Acipenser transmontanus</i>	/qílex/
8. Trout, bull	<i>Salvelinus malma</i>	/`íslam/
9. Trout, cutthroat	<i>Salmo clarki</i>	/wawátlim/
10. Trout, “brook”		/píickatyo/

“Fish with scales”; native resident fish		/cúuyem/
1. Chiselmouth	<i>Achrocheilus alutaceus</i>	/titéwxc/
2. ‘mudfish’		/`kuusis/
3. Northern Pikeminnow	<i>Ptychocheilus oregonensis</i>	/qíiyex/
4. ‘sea-run sucker’		/muu`kuc/
5. squawfish	see “Northern Pikeminnow”	
6. Sucker	<i>Catostomus</i> spp.	/qíyex/
7. Whitefish	<i>Prosopium</i> sp.	/címey/

8. “Fish with scales”; non-native fish /lixliksín/

Myths Whose Central Characters Live in Water

How Eel Lost His Bones in the Bone Game	Aoki and Walker 1988 Slickpoo 1973
Sucker and Whitefish	Aoki and Walker 1988 Slickpoo 1973
Water Buffalo and Deer-child	Aoki and Walker 1988
Frog at Hatway	Aoki and Walker 1988
Turtle and Squawfish	Aoki and Walker 1988 Slickpoo 1973
Frog and Squawfish Dance	Aoki and Walker 1988 Walker 1994
How the Salmon Found Out That They Shouldn't Go Up Potlatch Creek	Aoki and Walker 1988 Slickpoo 1973 Walker 1994
Mussel-Shell Killers	Aoki and Walker 1988 Slickpoo 1973 Walker 1994
Sea Monster	Phinney 1969
Turtle with Bull Raced	Phinney 1969
The Maiden and Salmon	Phinney 1969
The Beaver Brothers and the Modest Maiden	Phinney 1969
Sun, Moon, and Frog-Girl	Slickpoo 1973
Sucker and Mosquito	Slickpoo 1973
How Water Animals and Land Animals Had a War	Slickpoo 1973
Coyote Meets Killer Baby and the Musselshell Girls	Slickpoo 1973
Coyote Breaks the Fish Dam at Celilo	Slickpoo 1973
How Coyote Roasted Salmon	Slickpoo 1973

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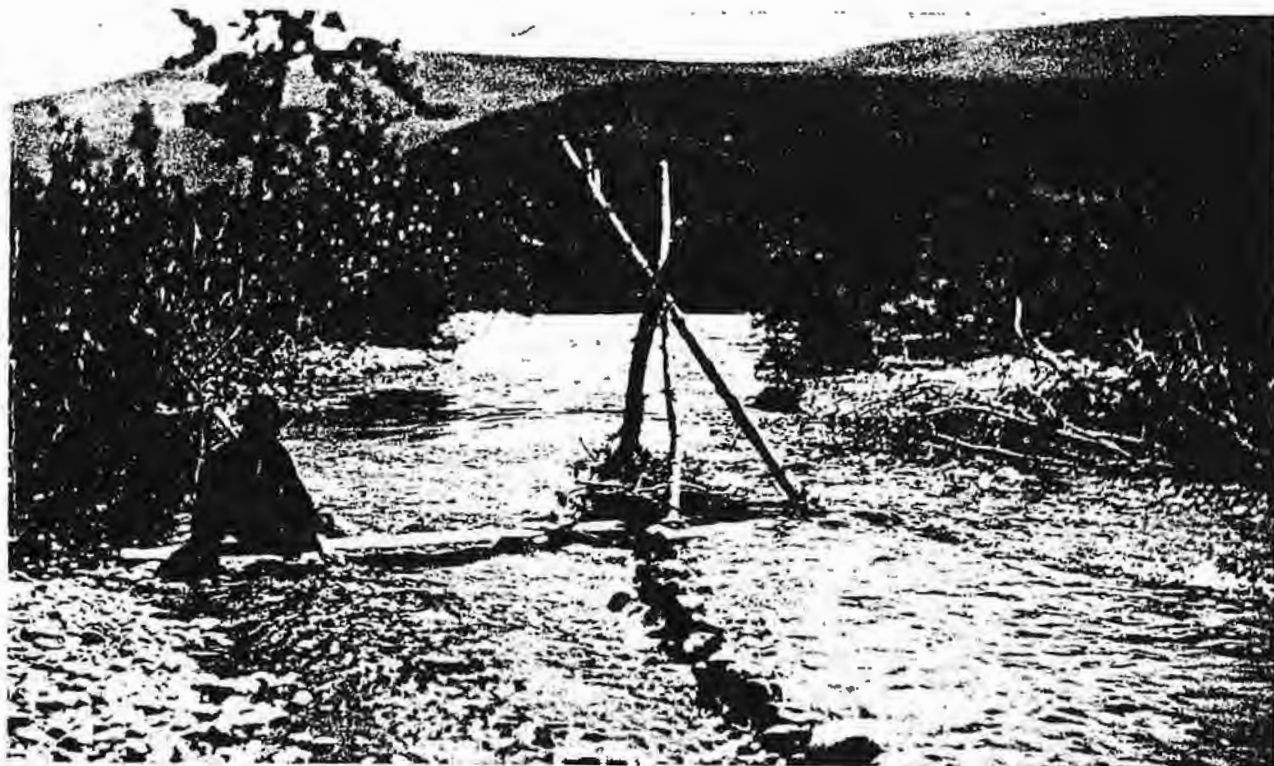
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Man Tending a Fall Trap on Lapwai Creek (Haines 1955)

MUTUAL
CROSS-UTILIZATION OF ECONOMIC
RESOURCES IN THE PLATEAU:
AN EXAMPLE FROM ABORIGINAL
NEZ PERCE FISHING
PRACTICES

by

Deward E. Walker, Jr.

Washington State University
Laboratory of Anthropology
Report of Investigations No. 41

1967

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PREFACE

Appreciation is due the Nez Perce tribe of Idaho and the National Science Foundation, Grants G-13754 and GS-930, for financial support of this study. It is devoted to an ethnohistorical and ethnographic investigation of patterns of mutual cross-exploitation of economic resources in the aboriginal Plateau. Approximately one year has been required for its completion. The author has directed the research in its entirety and is solely responsible for any statements contained herein. However, he has been assisted directly by a number of research assistants. They are Richard Blandau, Linda Brew, Joan Brodhead, Naomi Campbell, June Ross, and Jerri Sandberg. Indirect anthropological assistance has come from Richard Daugherty, Bruce Rigsby, John Ross, Allan Smith, and Theodore Stern. Roald Fryxell provided many useful substantive as well as editorial suggestions.

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Finally, I am greatly indebted to Stephen Allured and Frank Leonhardy of the Washington State University for their assistance in preparing the illustrations and to Joanne Peterson for typing this report.

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INTRODUCTION

Until the 1850's portions of the present states of Idaho, Oregon and Washington were occupied by the Nez Perce Indians. They possessed a home territory estimated at 27,000 square miles (see Fig. 1), an area considerably larger than the one they were assigned in the treaty of 1855. However, they customarily exploited a much larger territory conservatively set at 230,000 square miles (see Fig. 1). They ranged from Kettle Falls in the north to Burnt River and American Falls in the south and from Willamette Falls in the west well out into the Plains, certainly as far as the territory of the Crow, but probably much farther (see Fig. 2). Although some trips were made outside this larger area deep into the adjacent Northwest Coast, Great Basin and Plains culture areas (see Fig. 1), they were not frequent enough to be called customary.

This ancient pattern of wide travel was typical of most peoples of the aboriginal Plateau and stemmed primarily from reliance on anadromous types of fish. However, geographical variation in other valued materials such as sea shells, furs of various kinds and lithic materials also encouraged travel and trade. With the arrival of Euroamericans and the subsequent introduction of the reservation system and a new economy, this system was transformed drastically. Mutual exploitation of resources during the late nineteenth and twentieth centuries was very different from the well developed and apparently very ancient aboriginal Plateau patterns which have been clouded by recent litigation. A case in point is the limited financial settlement granted the Nez Perces when the Celilo fisheries were inundated by The Dalles dam. Their claim was sharply contested by the other tribes involved as well as by the Army Corps of Engineers. Recently proposed legislation and acts of state game commissions indicate that substantial doubt continues to exist with respect to Nez Perce fishing rights on the Columbia River and its tributaries outside their aboriginal territory. The sometimes mutually conflicting claims of those opposing the Nez Perces can be summarized as follows:

1. The Nez Perces have no rights at Celilo or other points on the Columbia and its tributaries.
2. The Nez Perces did not come to Celilo or other places on the Columbia and its tributaries until very recently, following the construction of railroads and highways.
3. The Nez Perces may have come down to Celilo and other places on the Columbia and its tributaries in aboriginal times, but they did not fish. Any fish they obtained came from trading with the people who owned the fishing sites. Nez Perces customarily restricted their fishing to the Snake and Clearwater rivers.
4. The primary reason Nez Perces visited the Columbia and its tributaries was to trade. Fish was only one of several items they obtained in this manner. Others were sea shells, seal and otter pelts, and other items not present in Nez Perce territory.

Fig. 1. Culture Areas and Ethnic Groups of the Northwest with Nez Perce Territory and Area of Effect of Resource Exploitation.

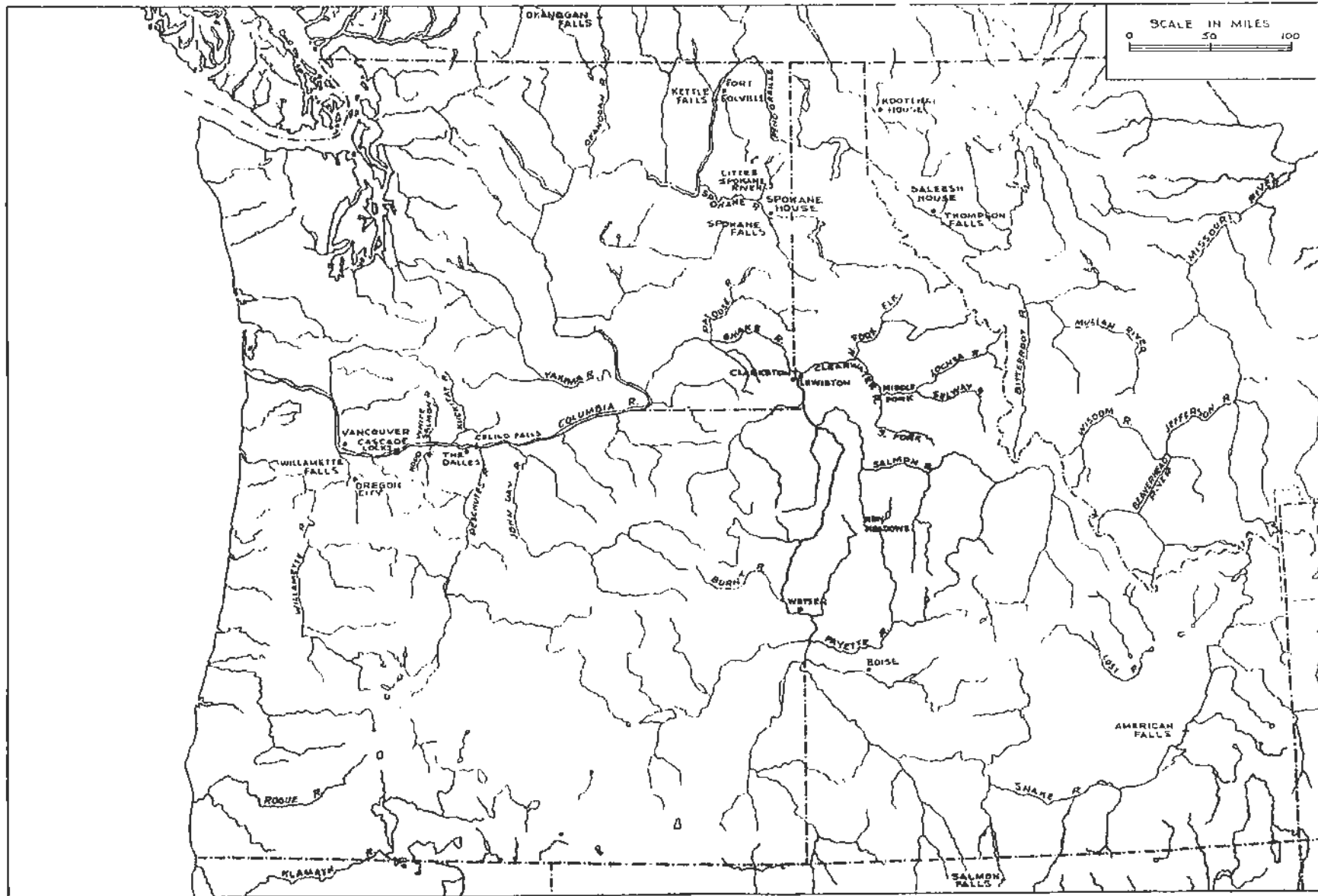


Fig. 2. Northwestern Water Courses and Sites of Ethnographic and Ethnohistoric Importance.

5. Rights to fish at Celilo and other sites on the Columbia and its tributaries are tribal rights and have never belonged to particular individuals, families, or villages. Thus, even though a Nez Perce might have possessed a relative in another tribe and customarily fished at his site, this fact is irrelevant as far as tribal rights and compensations are concerned.

On the other hand, the claims of those favoring the Nez Perces can be summarized as follows:

1. The Nez Perces together with other neighboring tribes such as the Cayuse, Umatilla, Palouse, Yakima, and Spokane regularly fished in common on the Columbia and its various tributaries.
2. The Nez Perces regularly fished at sites outside their territory such as those found at Spokane Falls, Celilo Falls, Willamette Falls, those found at the confluences of the Snake and Columbia, and Little Spokane and Spokane, the Okanogan and Columbia, and the mouths of the Yakima, the John Day, the Deschutes, and the Klickitat rivers.
3. Downriver fishing outside Nez Perce territory was customary because: (a) the salmon arrived much earlier downriver and were in better condition than when they got to Nez Perce territory, (b) the salmon runs were not always equally productive in Nez Perce territory, because of extended high water in some years, and in others because of spawning problems, and (c) the salmon runs (while variable) were always substantial at fisheries such as Celilo Falls, Willamette Falls, Spokane Falls, and Kettle Falls.
4. Fishing at places like Celilo Falls always was preferred because of the concentrated nature of the salmon run. Whereas the salmon in Nez Perce streams often were relatively dispersed so that lengthy effort was required to catch them, the salmon at fisheries such as Celilo were concentrated and large supplies could be caught quickly.
5. The Nez Perces traded at practically all places they visited outside their territory. Trading was conducted among the Plains groups, the Flathead, the Pend d'Oreille, Spokane, Coeur d'Alene, Umatilla, Cayuse, Tenino, Wasco, Wishram, Yakima, and even among the coast tribes whom the Nez Perces visited occasionally. They traded for a variety of articles not present in their home territory, or which they did not make such as the fish pemmican manufactured among the groups on the Columbia. Very little, if any, trading was conducted for the purpose of obtaining fish. The Nez Perces regularly fished for themselves when engaged in trading ventures on the Columbia and its tributaries and thus rarely were required to trade for fish other than for specially prepared fish products such as pemmican.
6. Relatively large numbers of Nez Perces, often in conjunction with neighboring groups such as the Cayuse, Umatilla, and Palouse regularly wintered in the Pasco-Wallula area, at The Dalles, and at Celilo Falls, subsisting on fish obtained there, at least partially through their own fishing activities.

7. When fishing at Celilo Falls and other places on the Columbia and its tributaries, the Nez Perces did so primarily at the fishing sites of their relatives and trading partners. However, any site not being used by its owner could be used by visiting groups.

As used here, aboriginal refers to that system of Plateau cultural patterns which cannot be traced to direct Euroamerican influence. Although explorers arrived in the region shortly after 1800, few changes in subsistence patterns took place until after the establishment of reservations in 1855. The aboriginal patterns which were in existence before entrance of non-Indian groups to the Plateau culture area will be described under two headings, Plateau patterns and Nez Perce patterns. Because the questions considered here involve, by their very nature, more than one group, it is impossible to proceed by focusing only on the Nez Perces. Nez Perce fishing can be understood only in terms of that greater social and economic system centering in what anthropologists call the Plateau culture area (see Fig. 1).

This study requires the combined use of the ethnographic and the ethno-historical methods. Employing these two approaches to the same questions ensures great accuracy, because they provide mutual checks on the data gathered. Briefly, the ethnographic method is a means of describing a culture from direct observation and the statements of native informants. In this study and most other ethnographic studies of American Indians, direct observation of the patterns in question is impossible, and reconstruction is based primarily on descriptions of the dwindling group of elderly, native informants who still are knowledgeable regarding the former culture. Among the specialized techniques developed by anthropologists employing this method are repeated cross-checking of informants, comparison of findings with known patterns among neighboring cultures, and various tests of logical consistency in both informant accounts as well as the reconstructed patterns themselves.

Anthropologists use the ethnohistorical method primarily to gain clues concerning the form of past cultural patterns, and where possible, to verify their ethnographic inferences. Of great importance to them are the recorded observations of the first explorers among cultures they are studying. Important aspects of this method are primary reliance on first hand observations (sometimes called "primary sources" as contrasted with later interpretation or repetition of first hand observations), evaluation of such observations in terms of the training and ability of those recording them, cross-checking the accounts for consistency and conflicts, and overall interpretation of the observations in light of logical consistency and anthropological fact and theory. Taken together the ethnographic and ethnohistorical methods comprise the most powerful research approach anthropology has to the topics under investigation here.

EVIDENCE OF MUTUAL CROSS-UTILIZATION OF
ECONOMIC RESOURCES

Until recent years the Plateau was largely an ethnographic unknown. Aside from the work of Dr. Verne F. Ray, still at the University of Washington, Seattle, few anthropologists had major research commitments in the area. Ray's numerous works need not be listed here, but it is important to note that very few of his pioneering observations are open to question. More recent research has expanded and refined his early insights rather than contradicted them. An illustrative example of recent contributions to the ethnography of the Plateau is the work of Anastasio (1955). Although Ray (1939) has repeatedly emphasized the substantial ethnic interaction typical of Plateau peoples, Anastasio has added substantially to our knowledge of its forms and extent. Perhaps the most important conclusion he reaches is that the many ethnic groups of the aboriginal Plateau can be regarded as a single social system (1955:92). He says,

Therefore, we would say that the norms of intergroup relations and the relevant ceremonies, ritual beliefs, and values form part of an intergroup culture. The component groups were bound together by their acceptance of this culture, which made it possible for them to perform a number of tasks jointly and which permitted the peaceful solution of disputes and other common problems. On this basis we would say that the area was a society, in the general sense of the term, and more specifically a political entity.

The mechanisms of intergroup relations regulating interethnic relations in the aboriginal Plateau according to Anastasio (1955:91) were norms permitting peaceful settlement of disputes, co-utilization of resource sites, peaceful congregation of large multiethnic groups, group responsibility guaranteeing welfare of persons and property of visiting members of other groups, formalized trading and gift exchange between ethnic groups, and finally the extension of kinship relations between ethnic groups. Although it is neither desirable nor necessary that each of these mechanisms be described or illustrated in detail, it is essential that those concerned with aboriginal rights to resources among ethnic groups of the Plateau be apprised of several major findings of this and other recent studies verified and amplified in our own research.

Plateau Patterns of Mutual Exploitation

1. Aboriginally, the Plateau was an area marked by great cultural similarity, substantial interethnic movement, and marked ambiguity of territorial boundaries. Both direct and indirect evidence for this finding comes from the following sources:

Chalfant (n. d. a: 2, 3, 7, 16, 24, 26, 36; n. d. c: 5, 7, 8, 66-7, 75, 112; n. d. d: 248, 250-51; n. d. e: 37-8), Curtis (1907-30, 8:49), DeSmet (1906: 282), Douglas (1914: 127), Drury (1958: 121; 1963, I: 97, 123, II: 158, 170, III: 120, 187), Elliot (1909, 10: 305), Gibbs (1855: 403, 416, 423-25; 1877: 169-70, 197), Hulbert & Hulbert (1935: 159), Indian Claims Commission 1959b: 8, 42-43, 48), Johansen & Gates (1957: 16, 18), Lewis (1906: 193, 196), Merk (1931: 42, 53, 55), Ordway (1916: 254, 290), Parker (1838: 127-34, 275-96), Ray (1955b: 6; 1962: 60),

Spier and Sapir (1930: 197-227), Stevens (1855: 150, 416), Suphan (n. d.: 12, 22-23, 35, 54), Swindell (1942: 17-18, 34, 163), Thwaites (1959, 3: 81, 4: 289), U. S. Office of Indian Affairs (1869: 126), Walker (1965-67).

2. It has been argued by some anthropologists that in the aboriginal Plateau the territory occupied or exploited by a given ethnic grouping belonged to it in a general sense; but substantial research shows overwhelmingly that such rights did not carry the right to exclude others from the use of fish, game or other resources located in the territory. Both direct and indirect evidence for this finding comes from the following sources:

Anonymous (n. d.: 21), Baenen (1965: 17), Chalfant (n. d. a: 2, 7, 16, 18, 24, 26, 35-36, 44; n. d. c: 75-77, 80, 113-115), Gibbs (1855: 423; 1877: 186), Indian Claims Commission (1959b: 31), Lewis (1906: 157), Relander (1955: 42, 48), Smith (1940: 26), Suphan (n. d.: 22-23, 35, 54), Swindell (1942: 164), Walker (1965-67).

3. Cross-utilization of resources among ethnic groups in the aboriginal Plateau was the rule, not the exception; such resources included game, fish, roots, berries, furs, skins, stone, and other materials not distributed evenly throughout the area. Both direct and indirect evidence for this finding comes from the following sources:

Baenen (1965: 17), Bashford (1918: 149-50), Brosnan (1929: 176), Chalfant (n. d. a: 7, 16-18, 24-25, 35-36; n. d. c: 75-77, 80, 113-115; n. d. d: 248, 251), Davidson (1953: 13-14), Douglas (1914: 127), Drury (1958: 134; 1963, I: 97, II: 170, III: 187), Elliot (1909-10, 10: 339, 343), Fletcher (n. d.: 27-28), Gibbs (1855: 423), Indian Claims Commission (1959b: 31), Lewis (1842: 654-655), Parker (1838: 127), Ray (1954: 3, 8; 1955b: 4-6), Relander (1955: 44, 48), Ross (1855, I: 19, 125), Schafer (1909: 45), Skeels (1949: 271), Suphan (n. d.: 22-23, 35, 54, 56), Swindell (1942: 34), U. S. Office of Indian Affairs (1869: 126), Walker (1965-67), Washington State University Archives (1858-78, Packets 11B & 15B).

4. The ethnic groups of the Columbia River and most of its tributaries lacked tribal organization in the political sense of the word. Thus, there can be no question of aboriginal "tribal" ownership of resources in most cases; this came later when treaties established reservations, head chiefs, etc. Instead, families, villages, and occasionally, bands may be said to have possessed stewardship over certain resources such as fishing sites. Rights to membership in such groups were determined importantly by birth, and cross-utilization of resources between different families, villages, bands, or ethnic groups was mediated primarily through the kinship ties knitting together the peoples of the aboriginal Plateau. Both direct and indirect evidence for this finding comes from the following sources:

Anastasio (1955: 92), Baenen (1965: 17), Chalfant (n. d. e: 38), Davidson (1953: 11), Gibbs (1855: 425; 1877: 197), Jacobs (1937: 70), Ray (1939: 4-24), Suphan (n. d.: 16-19, 20, 22-23, 25, 35), U. S. Office of Indian Affairs (1877: 179), Walker 1965-67, Washington State University Archives (1858-78, Packet 4A).

5. Annual as well as geographic variation in the quality and quantity of resources in the Plateau was substantial in the aboriginal period. Thus, subsistence activities required regular, extensive travel throughout the Plateau. This is evidenced by the presence in most Plateau languages of names for the fisheries and associated geological features. Further, eastern groups such as the Nez Perces, Cayuse, Spokane, and Flathead regularly journeyed into the Plains to hunt buffalo, to trade and to raid. This exploitation of the buffalo in the Plains was similar to their exploitation of the salmon and other resources of the Columbia and its tributaries in the central and western Plateau. Both direct and indirect evidence for this finding comes from the following sources:

Anastasio (1955: 16-33), Chalfant (n. d. c: 66-67, 77, 80; n. d. d: 248), Drury (1958: 103, 121, 134; 1963, I: 82, 123, II: 170, 206, 279, III: 104, 187), Fee (1936: 19), Gibbs (1877: 197), Griswold (1954: 27-28, 45), Hewes (1947: 30-31, 35, 40-41), Indian Claims Commission (1959b: 16), Kip (1897: 11), Merk (1931: 42, 94), Ordway (1916: 254, 290, 334), Ray (1954: 4-5), Relander (1955: 48), Ross (1849: 314-16; 1855, I: 19), Stevens (1855: 130, 198-199), Swindell (1942: 34), Thornton (1849: 385), Thwaites (1959, 3: 105), Walker (1965-67), White (1950: 209), Wilkes (1845: 108).

6. Most Plateau ethnic groups relied on salmon for at least fifty per cent of their diet. Thus, any decrease in this resource was critical and was compensated for by (1) movement to other salmon fishing areas, (2) increased reliance on roots and/or game, or (3) some combination of 1 and 2. Similarly, the severe winters, so destructive of game, which occur regularly in the Plateau, often forced groups such as the Nez Perces and the Yakima to go down the Columbia in the early spring at least as far as Willamette Falls to intercept the earliest part of the salmon run. Both direct and indirect evidence for this finding comes from the following sources:

Brosnan (1929: 176); Chalfant (n. d. c: 7, 41, 77, 80), Drury (1936: 167, 1958: 134-135, 270-272, 291; 1963, I: 200, II: 158, 299, 309, III: 120), French (1961: 345), Gibbs (1855: 403, 413, 1877: 169-170), Haines (1955: 12), Hewes (1947: 30-31, 212-229), Ordway (1916: 301, 302, 306, 334), Ray (1954: 4; 1962: 56, 80-81, 84, 86, 89, 90-91, 98), Relander (1955: 43-44, 48), Stevens (1855: 198-199; 1900: 20), Walker (1965-67).

Nez Perce Patterns of Mutual Exploitation

1. Aboriginally, the Nez Perces regularly visited many areas in the Great Basin, Northwest Coast, Plateau, and Plains for purposes of fishing, hunting, raiding, recreation, and trade. Early explorers observed them repeatedly in places such as southern Idaho and Oregon, the Willamette Valley, the western Plains, at the confluences of the Spokane and Little Spokane, the Snake and Columbia, the Deschutes and Columbia, the John Day and Columbia, the Yakima and Columbia rivers, and at principal fisheries such as those found at Celilo, Kettle, Willamette, and Spokane falls.
2. The Nez Perces were one of the most mobile tribes of the Northwest and with their neighbors the Cayuse were the military masters of the Plateau and strong contenders for dominance in the western Plains and northern

Great Basin. Both direct and indirect evidence for the first and second Nez Perce findings comes from the following sources:

Adams (1930: 15), Anastasio (1955: 37, 44-54), Baenen (1965: 17), Bagley (1920: 33), Bakeless (1947: 269, 309), Bancroft (1875: 316), Bashford (1918: 44, 149-150), Brewer (1929: 114), Brosnan (1929: 2), Burns (1966: 13), Canse (1930: 83, 160, 215), Chalfant (n.d.b: 3, 23, 59; n.d.c: 2, 5, 7-9, 66-67, 77, 80, 112, 115), Coues (1897: 853, 879), Curtis (1907-30, 8:49), Drury (1958: 135, 205, 292, 329; 1963, I: 54, 67, II: 107-109, III: 187), Dryden (1949: 236, 239), Dunbar and Phillips (1927: 117-118), Elliot (1909, 10: 305, 339, 343), Farnham (1843: 291), Ferris (1940: 73, 96), Fletcher (n.d.: 27-28), French (1961: 348, 357, 378), Griswold (1954: 40, 44, 112), Gunther (1950: 178), Haines (1939: 52, 82; 1955: 37), Hulbert and Hulbert (1935: 159), Indian Claims Commission (1959b: 42), Johansen and Gates (1957: 16), Judson (1916: 223), Kerns (1917: 181), Kip (1897: 11), Lewis (1906: 193), Lewis (1842: 654-655, 787), Lewis and Phillips (1923: 76), Merk (1931: 53, 55, 95), Parker (1838: 275-280, 296), Payette (1962: 124), Pollard (1946: 55), Ray (1954: 6; 1955b: 4-6; 1962: 60), Relander (1955: 44), Ross (1849: 126; 1855, I: 19, 52, 232, 241, II: 24, 132), Simpson (1931: 44, 53, 55, 127), Skeels (1949: 271), Spier and Sapir (1930: 227), Stevens (1855: 130, 150), Stevens (1900: 20), Suphan (n.d.: 35, 54, 56), Swindell (1942: 34), Thwaites (1959: 289, 297, 355), Walker (1965-67), White (1950: 209).

3. By the time of contact the Nez Percés had been influenced superficially by Plains cultural patterns, but they remained basically Plateau in their cultural orientation. Principal Plateau elements in their culture were:

Riverine settlement patterns.

Reliance on aquatic foods as a major element in their diet.

A complex fishing technology.

Mutual cross-utilization of subsistence resources with other ethnic groups of the Plateau.

Extension of kinship ties into other ethnic groups of the Plateau through systematic intermarriage.

Extension of trade links throughout the Plateau by institutionalized trading partnerships.

Relatively simple political organization.

4. From a long range point of view the aquatic foods available in Nez Perce territory may have been adequate for their needs, but seasonal and annual fluctuations required regular exploitation of fisheries throughout the Plateau. Factors frequently affecting the availability of aquatic resources in Nez Perce territory (summarized by Hewes 1947), and in the Plateau generally, are water depth, temperature, bottom deposits, water movement, length and severity of winter, and extended high water in the spring. Despite substantial variations in the upper reaches of the Columbian tributaries, fish runs rarely, if ever, failed at the major fisheries on the Columbia proper. Nez Percés also were drawn to the downriver fisheries because of the ease with which large catches could be taken there and

because of the opportunities they provided for trade. The third and fourth findings favoring the Nez Perce view, as listed above, draw on the ethnographic research of Anastasio (1955), Chalfant (n. d. b; n. d. c), Griswold (1954), Hewes (1947), Ray (1939; 1954; 1962), and Suphan (n. d.), but are based primarily on previous research by Walker (1965-67).

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INTERPRETATIONS

Plateau Patterns of Mutual Exploitation

In his excellent analysis of fishing in northwestern North America, Hewes (1947: 29) states that aquatic environments may cut across many distinct land ecological systems and unite into a single economic system people who occupy seemingly diverse territories; he cites the Columbia River as an example. His analysis suggests that the Plateau can be regarded not only as a single political system as Anastasio has shown, but also as a single economic system. Although archaeologists long have recognized the overwhelming technological similarities of the region (e.g., Daugherty 1962), a recent study by Griswold (1954) has added much to our understanding of the reasons for this. In agreement with Hewes, he has approached this subject through an analysis of Plateau fishing practices. He concludes that a primary stimulus to extensive Plateau travel and trade was the variable food quality of salmon at different points on the Columbia. Although their flesh is rich and oily in the lower reaches of the river, it becomes less and less so as they ascend the river. Most Indian informants contacted are well aware of this phenomenon and have special words describing the quality of the salmon at various stages in their ascent of the river. On the other hand, while the fish are in their best condition in the Columbian estuary, the wet climate of the region makes their preservation difficult. Gibbs (1855: 423-25) early noted the substantial dried fish traffic between the coast peoples and those of The Dalles-Celilo region. Thus, although the fish are in their best condition at the mouth of the Columbia, they can be cured more easily somewhat further inland where the warm, dry winds of the interior dry them quickly. Both factors contributed to the substantial upriver and downriver travel and trade in salmon products.

Whereas peoples of the interior, such as the Nez Perces, sometimes journeyed to the coastal regions for the high quality salmon found there, they also went in order to intercept the runs early. Griswold (1954: 27-28) regards this as another important stimulus to travel and trade in the Northwest. Also contributing to this were the differential abundance of runs in the upper and lower regions of the Columbia and the variable distribution of aquatic foods throughout the region. Not only were there substantial variations in salmon spawning areas, but natural obstacles, primarily high falls, also prevented anadromous fish from entering several parts of the Plateau (cf. Hewes 1947). Ethnic groups residing in such areas, e.g., the Flathead and Coeur d'Alene, customarily fished in areas outside their own territories such as the Clearwater drainage in Nez Perce territory (Hewes 1947: 111-114). In fact, among such interior peoples there seems to have been a regular, seasonal pattern of travel down and back up the Columbia and its tributaries not only to intercept the runs early, but also to exploit them at the various fisheries along the way as they ascended the rivers. Our research (Walker 1965-67) shows clearly that the Nez Perces and other eastern groups also made regular autumn trips to Columbia River fisheries in order to obtain winter stores from the fall runs. Dried fish and fish products were a basic part of their diet throughout the year.

Hewes (1947: 31) has corrected an early misrepresentation of the residential patterns of Plateau peoples in this regard. Wissler (1938: 10) erroneously spoke of "instability of residence" in the region when in fact, Hewes notes that, ". . . nothing could be more stable than the repetition, year after year, of the same shifts of residence from winter village to a round

of summer fishing camps, invariably at the same sites, and in the same sequence." There are numerous historically documented examples of regular movement across the Plateau for subsistence purposes in the aboriginal period. For example, Rigsby (1965: 90-91) has recorded the regular movement of the Klamath into The Dalles-Celilo area for purposes of fishing. Chalfant (n. d. d: 248-51) has recorded the customary presence of Spokane in Coeur d'Alene, Colville, and Kalispel territories for subsistence purposes. The large, multiethnic congregation taking at least 600,000 lbs. annually at Kettle Falls (Hewes 1947: 109, Chalfant n. d. d: 80-86) is a particularly clear example of this practice. One chief from Kettle Falls described this falls as supporting eight tribes (Washington State University Archives, Packet 11B).

It should be recognized that this cross-exploitation was not limited to fish, but also included game and particularly roots. The customary presence of Umatilla and Cayuse in Nez Perce territory for fishing and hunting purposes is well documented (Gibbs 1855: 425; Indian Claims Commission 1959b: 31). In fact it seems safe to conclude that among Plateau peoples generally there were no bars whatsoever to cross-exploitation of resources. The term "steward" used by Drucker when referring to fish control on the Northwest Coast and applied by Suphan in The Dalles-Celilo area (Suphan n. d. : 22) is a very accurate appraisal for the entire Plateau. Of course, it was customary for visitors to request a pro forma approval before exploiting resources in their host's territory, but this does not imply exclusiveness of ownership. Clearly, the evidence lends little if any support to the exclusiveness of ownership so characteristic of Euro-American culture and increasingly so of contemporary Indian cultures of the area. It has been suggested also by some anthropologists that the territory occupied by Plateau ethnic groupings belonged to them in a general sense, but there has been no conclusive evidence that this carried with it the right to exclude others from the use of any basic resources located therein. The recent ethnographic research in the region has been rather explicit in denying the existence of exclusive rights to resources in the aboriginal period, e.g., Suphan (n. d. : 25), Fried (n. d. : II-6-7, III-1), and Chalfant (n. d. a: 26, 44). However, evidence for this conclusion is not lacking in the ethnohistorical literature. For example, Gibbs (1877: 186) noted for the Puget Sound groups in the last century that

As regards the fisheries, they are held in common, and no tribe pretends to claim from another, or from individuals, seignorage for the right of taking. In fact, such a claim would be inconvenient to all parties, as the Indians move about, on the Sound particularly, from one to another locality, according to the season.

This first-hand observation by Gibbs gains considerable meaning when considered in light of the well-known ethnographic fact that Plateau peoples were much less property-minded than Northwest Coast peoples.

Although probably given in good faith in most instances, the affidavits concerning exclusive ownership of fish resources collected by Swindell (1942: 180) and others in recent litigation do not reflect aboriginal cultural patterns. Instead, they reflect late 19th century developments that stem primarily from competitive commercial exploitation of Columbia River and Northwest Coast fisheries. By 1850 salmon were being exported from the Northwest Coast to places as distant as Chile (Hewes 1947: 199) and by 1896, the commercial catch had come to equal that of the aboriginal catch at its height. This was facilitated by innovations such as canning and the fish wheel technique (now banned) formerly used at The Dalles-Celilo fishery (Hewes 1947: 199-209).

Increasing pressure on fish resources, brought by commercial exploitation, resulted in several attempts by Euroamericans to preempt control of important fisheries. Further, the subtle transformation of the Indian from a primarily subsistence fisherman to a commercial fisherman in the employ of fish corporations had much to do with the growth of exclusive attitudes among Plateau peoples. Hewes (1947: 197) has outlined this widespread transformation for the Northwest as a whole.

By 1900, a large number of fish were being sold by Indians to provide the cash they needed to participate in the money economy that was replacing the older, largely subsistence economy. Of course, subsistence fishing continued to be an important aspect of the native economy in certain areas and remains so today. However, the widespread BIA policy of retaining Indians on reservations during the 19th century caused those Plateau groups not situated close to commercially exploited fisheries to be largely unaffected by these developments. Further, the BIA and associated missionary agencies frequently exerted strong pressure on their charges to become farmers and abandon traditional subsistence pursuits. It is common anthropological knowledge that these two policies served to severely restrict interethnic movement throughout the Plateau in the nineteenth and early twentieth centuries. Primary dependence on fishing was restricted to a relatively few groups immediately adjacent to the commercially important fisheries. The exclusiveness of land ownership attitudes that also developed during this period encouraged groups such as the Yakima to claim exclusive ownership and control of the fisheries in The Dalles-Celilo area which border their reservation. This is quite understandable when one considers how financially important they had become to them with development of commercial exploitation. Several Wayam informants have recounted the numerous fights among Indians occurring around Celilo in the early 1900's. Whereas these fishing sites had been open to visitors in the aboriginal period, they quickly became closely guarded property. Those who had once been welcome, in some cases, were now forcibly ejected. Although such adjacent groups as the Yakima dominated the situation largely because of proximity and superior numbers, it should be remembered that both the Yakima and Klikitat proper are said to have traded for at least some of their fish there aboriginally (Hewes 1947: 107). The strong Yakima claim to Celilo fisheries derives partially from the fact that a few Wishram and Wasco settled on what became the Yakima reservation through the treaties of 1855. Of course, this is not the place to evaluate the strength of the Yakima Reservation's claim to fishing rights at Columbia River fisheries. However, it is appropriate here to point out that the twentieth century patterns of ownership and fish exploitation among Indians on the Columbia River probably bear little resemblance to aboriginal patterns. The testimony contained in the Celilo hearings clearly reveals the fallacy of attempting to determine aboriginal from contemporary patterns. In fact, several anthropologists have noted informally that the proposed Corps of Engineers financial settlement probably increased the already strong notions of exclusive ownership among parties to the settlement. Not only were many statements of the supposedly elderly and knowledgeable informants highly contradictory, they contain entirely indefensible statements such as the assertion that Nez Perces never came to The Dalles-Celilo region until construction of railroads and highways in the twentieth century, and then only to trade. Such statements are common even today. Another expression of this distortion of historical and ethnographic fact is seen in the Celilo hearings, where the Corps of Engineers uses the absence of Nez Perces on the intertribal fish commission as evidence that they had no rights, or at best, limited fishing rights in the area.

As we have seen, major anthropological treatises have demonstrated that the aboriginal Plateau comprised a single social and economic system. Physical and biological scientists have noted that from the point of view of different types of land environments it is one of the most varied in North America (Figs. 43a, 43b, 44a and pp. 85-89 in Fryxell et. al. 1965). This ecological variation also produced a great deal of aboriginal interareal movement, particularly clear in the lengthy trade networks. Two main trade routes crossed the Plateau, one from north to south and another from east to west, with many feeder routes connecting various groups with each of the main trunks. The north-south route ran from Okanogan and Kettle Falls southward, connecting ultimately with the northern Great Basin of southern Oregon and Idaho (see Fig. 2). Griswold (1954: 42) believes this to be a very old route, and his interpretation is in agreement with the closely similar cultural records which archaeologists have detected between portions of British Columbia and The Dalles-Celilo region. The east-west route actually extends from the mouth of the Columbia, where it was dominated by the lower Chinook, east through The Dalles-Celilo area on past the junction of the Snake and Columbia rivers, and eventually through Nez Perce and Flathead territory into the Northern Plains where it connected with another trade network centering on the upper Missouri River (see Fig. 2).

Not unexpectedly the materials traded along these routes were varied. The Plateau tribes carried eastward coastal commodities such as the shells of Dentalium, Haliotis, and Olivella (all of which were used widely for ornamentation), and Plateau products such as salmon pemmican, salmon oil, woven bags, horn bows, wooden bows, greenstone pipes, lodgepoles, wild hemp, berries, meats, moose skins, spoons and bowls of mountain sheep horn, and basketry. In return the Plains tribes traded buffalo robes, feather bonnets, catlinite pipes, obsidian, buffalo horn, buffalo bone beads, paints, buckskin clothing, and horse equipment (Griswold 1954: 41-42). Direct archaeological evidence, consisting of hundreds of Olivella shells and obsidian fragments recovered from the Marmes Rockshelter site on the western edge of aboriginal Nez Perce territory, demonstrates that similar exchange of materials had begun at least 7,000 years ago (Fryxell and Daugherty 1962: 25).

The Nez Percés were the only direct link between The Dalles-Celilo region and the northern Plains. Their importance in introducing Plains influences to the Plateau is common anthropological knowledge (cf. Ray 1939). The Nez Percés and other Plateau groups employed a number of mechanisms to facilitate this trade. Important among them were the annual trade fairs held in places like The Dalles-Celilo area, the Yakima Valley and the junction of the Snake and Columbia rivers. In 1814 Alexander Ross (cf. Griswold 1954: 115-116) visited one such fair in the Yakima Valley which he described in the following statement:

We had scarcely advanced three miles when a camp of the true Mameluke style presented itself; a camp of which we could see the beginning but not the end! It could not have contained less than 3,000 men, exclusive of women and children, and treble that number of horses. It was a grand and imposing sight in the wilderness, covering more than six miles in every direction. Councils, root gathering, hunting, horse-racing, foot-racing, gambling, singing, dancing, drumming, yelling, and a thousand other things which I cannot mention, were going on around us.

It is important for our purposes here to note that this and other trade fairs such as those in The Dalles-Celilo region and at the junction of the Snake and Columbia rivers were held during the season when fish and roots were abundant. Congregations of this size were not feasible during other seasons because of the relative paucity of food. People attending dug roots, fished, and hunted as a matter of course, even though they might also trade specially prepared foodstuffs they brought from home. In any event, it is clear that the trade in foodstuffs was a relatively minor part of the trading.

During these fairs, Nez Perces and other peoples of the Plateau regularly employed the trading partner relationship. This arrangement consisted of a virtually permanent agreement between two individuals from different ethnic groups to trade only with one another when their two groups met at such affairs. At the death of one partner, the relationship would be reestablished with another member of the same group, usually a close relative of the deceased. Sometimes this relationship was reinforced by intermarriage between families of trading partners. As we shall see, this practice is of singular importance in understanding the rules governing cross-utilization of resources among Plateau peoples.

Ray (1939: 8-9) has noted for the Plateau in general a tendency towards what has been rightly called political "atomism." He asks,

Why, in the light of these facts pertaining to village or band autonomy, are names such as Sekani, Sanpoil, and Tenino used? If the people themselves had no such common names and no common organization, why are they introduced into the discussion, apparently in self-contradiction? The answer is partly historical, partly theoretical. Early settlers, traders, missionaries, and government officials carried with them from the east the notion that all Indian groups were of necessity organized along tribal lines. Upon learning a village name from a native, the Whites immediately and indiscriminately applied it to all the Indians of the vicinity.

Ray concludes with the observation that the names are justified as labels for carriers of similar cultures, i. e., ethnic groups, but not as labels for political units. Such group names as Tenino, therefore, do not refer to political entities but to ethnic groups. After acknowledging the accuracy of Ray's observations, Suphan, a government ethnologist, concludes from more recent research that in The Dalles-Celilo area, fishing stations were held in the family and not by the village or ethnic grouping (n. d.: 21). Partially echoing Suphan in this respect is Griswold (1954: 109), who cites Spier (1930: 175) and Swindell (1942: 151) to provide evidence of very weakly developed patterns of village political organization, and adds that this political simplicity may be linked with the property concepts of The Dalles Indians. Each family group possessed fishing rights to a particular station on the river, and the fish caught by each family were theirs to distribute in any manner they chose, regardless of the opinions of headmen or other village authorities.

Trading partnerships, systematic interethnic marriage and rudimentary political organization relate to cross exploitation of resources in several ways. For example, it is quite clear from numerous sources that interethnic, economic exchanges in the aboriginal Plateau were essentially individual affairs. The trading partnerships are an example. Another is the deliberate intermarriage of social advantage, a practice which was common in the Plateau

until quite recently. Swindell (1942: 150), among others, has noted that when members of tribes related through intermarriage came to a fishery with nothing to exchange, i. e., not interested in trade, they were permitted to fish for themselves at some of the stations. Nez Perces have stated uniformly that one fished with his relatives when he went to Celilo Falls and other fisheries on the Columbia. Regulation of cross-utilization of resources through kin ties among the ethnic groups of the Plateau clearly was the rule during the aboriginal period. It was not a matter decided at the "tribal" or "band" level in most of the Plateau, because as anthropologists have shown, few such political entities existed. Neither was it a matter regulated by the village headman in most instances. Instead, it was a matter to be settled among relatives. The Nez Perces in particular were much given to intermarriage with other Plateau groups because of their position as a primary link in the Plateau and Plains trade network. In fact, Nez Perce was a lingua franca from the Bitterroots in the east to The Dalles-Celilo region in the west. As the politically preeminent ethnic grouping of the interior Northwest, they occupied a position similar to the Chinookan masters of the lower Columbia. Expressive of their freedom of movement and resource exploitation in the region was Ogden's (cf. Suphan n. d.: 56) observation that the Nez Perces trapped beaver near the Deschutes (see Fig. 2). In fact, they were credited with eliminating this resource along the Deschutes before 1850. Other early observers also reported them fishing in this area just below The Dalles (cf. Suphan n. d.: 35) and on the Deschutes (cf. Suphan n. d.: 54). Yet another pre-1850 observer reports them to have been fishing regularly at the mouth of the Little Spokane River (Bagley 1920: 33).

Of substantial importance to this study is the degree of dependence on aquatic resources typical of aboriginal Plateau peoples. Hewes (1947: 212-29) has developed an interesting set of techniques for estimating fish consumption in the aboriginal Northwest. One is based on normal human calorie requirements. He suggests a figure of 2000 calories per day, per capita for the region. Using the total estimated population, 337,150, he obtains a crude annual calorie demand estimate of 246,199,500,000 calories. Converting this into pounds of food required annually, he obtains 122,084 short tons of food. He assumes further that this demand must have been met largely by fishing and sea mammal hunting in northwestern North America, since other natural foods available in the region are notoriously low in food value, particularly the local tubers such as camas and bitterroot. Of course, in some areas the contribution of game to the diet was substantial. Taking a deliberately conservative stance, however, Hewes estimates that only one-half of the food requirements in the aboriginal Northwest were met by fish. This yields an annual, per capita figure of 365 pounds and is based on the fact that salmon flesh yields nearly 1000 calories per pound. Taking the analysis further, he obtains an annual catch of 123,367,500 lbs. for the region, or about 15% of the modern commercial catch of 800,000,000 lbs. Using a second method based on minimal protein requirements, he obtains an annual catch figure of 103,135,750 lbs. Thus, he concludes that in view of the data limitations, the average annual catch was somewhere between 100,000,000 and 130,000,000 lbs. per year.

Taking this figure, he then checks its validity through comparisons with on-the-spot observations of native fish consumption in the early period of Euroamerican penetration of the region. There is unusually close agreement when one considers that the exceptional areas of unusually high consumption, up to 1000 lbs. per capita, per year was caused not only by the high calorie demands typical of colder climates, but also by the use of fish for dog food or for fuel (Thwaites 1959, 3: 123). Interestingly, his average, annual, per

capita figure for the entire region, 365 lbs. is the same given by Craig and Hacker (1940) for the Columbia River region. Of possible interest here also is the fact that the modern Indian catch at Celilo, a 307 lbs. per capita figure based on an estimated population of 13,000, falls somewhat below the aboriginal figure (Hewes 1947: 221).

Table I contains Hewes' estimates of fish consumption for all northwestern groups considered in his study. This table is based on Mooney's aboriginal population estimate for North America and thus is subject to revision (Hewes 1947: 8) as better population estimates become available. However, it should also be noted that other estimates for the Columbia River catch exceed those of Hewes and Craig and Hacker. For example, Griswold (1954: 36-37), agreeing with Hewes' conclusion (1947: 103) that the Lewis and Clark estimate was too low, calculates an average, annual, per capita consumption for The Dalles-Celilo region of 800 lbs. His estimate suggests a total catch bordering on 4 million lbs. It might be noted that Swindell's estimated 18 million lb. figure for the Columbia River drainage (1942: 13) based as it is on an average, annual, per capita consumption of 365 lbs. would be low if Griswold's estimates are correct. A little known use of fish typical of the Columbia from Celilo at least up to the junction of the Snake and Columbia rivers reinforces the impression that Hewes' estimates are low. This use is for fuel. Observed by Lewis and Clark (Thwaites 1959, 3: 123), and confirmed in my own past research (Walker 1965-67), this use was prompted by the absence of wood fuels along this stretch of river. When one considers the high per capita consumption of fish typical of Alaskan groups who feed fish to their dogs, an 800 lb. average, annual, per capita consumption in the Middle Columbia region of the Plateau seems a most reasonable estimate.

Thus in light of the known annual dietary dependence on fish among aboriginal societies of the Plateau, it seems safe to conclude that the range was between 365 and 800 lbs. per capita with the average probably close to the median, i. e., 583 lbs. (cf. Fig. 3). However, as will be seen in the instance of evaluating Nez Perce use of salmon, determination of this figure for particular groups in most of the Plateau will require substantial, additional research.

Nez Perce Patterns of Mutual Exploitation

With the arrival of the horse in the first half of the 18th century, the Nez Percés and their neighbors such as the Cayuse, Umatilla, Yakima, Palouse, Spokane, and Coeur d'Alene came under extensive Plains influence. Although undoubtedly in contact with the Plains before this time, Plains influence became sufficiently pronounced after the introduction of the horse to make some of the groups, particularly the Nez Percés, resemble Plains rather than Plateau societies in certain aspects of their material culture. That this was a thin veneer which overlay, but did not greatly change, basic Plateau patterns has been made clear by Ray (1939) and several more recent researchers (e. g., Anastasio 1955 and Lundsgaarde 1963).

Perhaps the most fundamental cultural patterns the Nez Percés shared with other Plateau societies were in the area of subsistence. For example, Nez Perce settlement patterns remained primarily riverine in orientation. Like other societies of the Plateau, the Nez Percés spent winters in the river valleys in seasonally permanent settlements; during the summers, the Nez Percés engaged in travel throughout the Northwest on well-established routes

TABLE I

Hewes Estimates for Aboriginal Fish Consumption
in the Northwest¹
(in pounds of fresh fish per year)

<u>Native Groups</u>	<u>Est. Pop.</u>	<u>Estimated Consumption:</u>	
		<u>Per Capita</u>	<u>Total by Groups</u>
<u>Western Alaska</u>			
Nuwuk, Kopak, Nunatak	3,000	100	300,000
Malemiut	1,600	200	320,000
Kinugumiut, Kaviagmiut	2,800	300	840,000
Unaligmiut	1,600	200	320,000
Ikogmiut	400	800	320,000
Magemiut, Kaialigmiut	5,000	365	1,825,000
Nuniwagmiut	1,500	100	150,000
Kuskokwagmiut	7,200	1,000	7,200,000
Togiagmiut, Chingig- miut, Nushagak	1,300	500	650,000
Okulmiut	3,700	500	1,850,000
sub-total	28,100	av. 407	13,775,000
<u>South-Central Alaska and Aleutians</u>			
Aleut	16,000	280	4,480,000
Koniag	8,800	500	4,400,000
Tanaina	1,200	500	600,000
Chugachmiut	1,700	500	850,000
Eyak	800	300	240,000
sub-total	28,500	av. 416	10,570,000
<u>Northern Interior</u>			
Alaska Kutchin	1,600	475	760,000
Yukon Terr. Kutchin	2,200	200	440,000
Ahtena	500	600	300,000
Khotana, Kalchana (except Tanaina)	3,200	690	2,208,000
Tahitan, Taku-tine	2,500	260	650,000
sub-total	10,000	av. 445	4,358,000

¹Table slightly modified in form; totals verified by mechanical calculator.

TABLE I (Continued)

<u>Native Groups</u>	<u>Est. Pop.</u>	<u>Per Capita</u>	<u>Total By Groups</u>
<u>Northwest Coast</u>			
Northern Tlingit	2,000	500	1,000,000
Southern Tlingit	7,500	500	3,750,000
Haida	9,800	400	3,920,000
Tsimshian proper	3,500	400	1,400,000
Niska, Gitksan	3,500	500	1,750,000
Haisla	1,300	500	650,000
Heiltsuk	1,400	500	700,000
Bella Coola	1,400	500	700,000
Kwakiutl	4,500	365	1,642,500
Nutka	6,000	300	1,800,000
Makah, Quilleute, Quinault	4,000	365	1,460,000
S. E. Vancouver Is.	9,200	500	4,600,000
North of Fraser R.	7,400	600	4,440,000
Fraser Delta	3,900	1,000	3,900,000
Nuksak, Lummi	800	600	480,000
Clallam, Chimakum	2,400	365	876,000
Skokomish, Nisqualli, Twana, Puyallup, Snoqualmi, Sno- homish, Skagit	6,000	350	2,100,000
sub-total	74,600	av. 485	35,168,500
<u>Columbia-Fraser Plateau</u>			
Tlatskanai	1,600	365	584,000
Lower and Upper Chehalis, Owilapsh, Cowlitz	1,200	365	438,000
Klikitat, Yakima, Wana- pum, Palus	11,200	400	4,480,000
Nez Perce	4,000	300	1,200,000
Tenino, Umatilla, Walla- walla	2,900	500	1,450,000
Wailatpu (Cayuse)	500	365	182,500
Wenatchi, Sinkiuse, Spo- kan (part)	3,500	500	1,750,000
Wenatchi-Spokane (part)	2,400	500	1,200,000
Kalispel, Coeur d'Alene, Pend d'Oreille, Flathead	2,800	100	280,000
Okanogan, Lakes	2,200	500	1,100,000
Kutenai	1,200	300	360,000
Chilcotin	2,500	600	1,500,000
Lillooet	4,000	600	2,400,000
Thompson, Nicola	5,150	900	4,635,000
Shuswap	5,300	500	2,650,000
Carrier, Babine	8,500	600	5,100,000
Bannock, N. Paiute, N. Shoshone	3,000	50	150,000
sub-total	61,950	av. 438	29,459,500

a) Gulf of Georgia
b) Puget Sound

TABLE I (Continued)

<u>Native Groups</u>	<u>Est. Pop.</u>	<u>Per Capita</u>	<u>Total by Groups</u>
<u>Oregon Coast to NW California</u>			
Chinook	22,000	400	8,800,000
Tillamook	1,500	320	480,000
Yaquina, Alsea, Siuslaw	6,000	320	1,920,000
Kus	2,000	300	600,000
S. W. Ore. Athabaskans	8,800	300	2,640,000
Tolowa	1,000	365	365,000
Hupa, Chilula	1,500	365	547,500
Yurok	2,500	365	912,000
Karok	1,500	450	675,000
Wiyot	1,000	300	300,000
Nongatl, Mattole	4,000	200	800,000
Lassik, Wailaki, Sinkyone			
sub-total	51,800	av. 335	18,039,500
<u>Willamette Valley- Klamath Lakes</u>			
Kalapuya	3,000	100	300,000
Takelma	500	300	150,000
Shasta, Chimariko	3,000	300	900,000
Klamath, Modoc	1,200	20	24,000
Achomawi, Atsugewi	3,000	100	300,000
Mountain Maidu	1,000	77	77,000
sub-total	11,700	av. 149	1,751,000
<u>California</u>			
Kato	500	247	123,500
Yuki, Coast Yuki	3,000	100	300,000
Wintu (Sac'to drainage)	2,000	300	600,000
Wintu (Trinity)	1,500	300	450,000
Wintun	2,500	365	912,500
Yana	1,500	300	450,000
F'thill, Maidu, Nisenan	4,000	200	800,000
Plains, F'thill Miwok	9,000	200	1,800,000
Costanoan,	7,500	10	75,000
Valley Yokuts	11,000	50	550,000
F'thill Yokuts	7,000	50	350,000
Western Mono	2,000	5	10,000
Pomo (Except Lake)	6,000	100	600,000
Wappo, Coast Miwok	3,000	75	225,000
Patwin	6,000	300	1,800,000
Valley Maidu	4,000	300	1,200,000
sub-total	70,500	av. 181	10,246,000
Grand total	337,150	av. 357	123,367,500

exploiting various resources. Their summer travel took them the length and breadth of the Plateau. Of course, they also went deep into the Plains to exploit the buffalo, to trade and to raid other groups. A number of Nez Perces even spoke Flathead and Crow (see Fig. 1) until very recent times. As we have seen, early Euroamerican pioneers in the Northwest regularly observed the Nez Perces in such widely divorced places as The Dalles-Celilo region, Kettle Falls, Willamette Falls, the junctions of the Columbia and Snake, the Columbia and John Day, the Columbia and Deschutes, and the Spokane and Little Spokane, most areas of western Montana, and the northern Great Basin in present southern Idaho and Oregon (see Fig. 2). Furthermore, it is a matter of historical record that Nez Perces traveled as far as St. Louis in the 1830's, and my own research has shown that Nez Perces also visited the Salt Lake area occasionally. A Walla Walla and Nez Perce party reputedly journeyed to the Sacramento area in the 1840's. There are numerous Nez Perce myths which describe the Pacific Coast in great detail, partially confirming reports that they knew the region well. Finally, the names of Columbia River fisheries, the various peoples along the way, and prominent natural features are known by most elderly Nez Perces. Thus their widespread, seasonal movements throughout the Plateau and adjacent regions served to link them closely with other Plateau groups and Plateau culture in general.

Although Nez Perce intermarriage with other ethnic groups of the Plateau is substantial at the present time, it was even more prevalent in the past according to elderly informants. This was particularly true with chiefly families as Ray has noted, but it permeated all levels of society. For example, the Nez Perces, Cayuse and Palouse were so intermarried at the time of first contact that it was virtually impossible to distinguish them. A number of early observers have commented on this, particularly for the Nez Perces and Cayuse. However, Nez Perces also frequently intermarried with the Yakima, Wishram, Coeur d'Alene, Spokane, and Flathead. Some Nez Perce families today even speak of having had relatives around Oregon City (presumably among the now disintegrated Kalapuya) whom their grandparents regularly visited.

Nez Perces regularly visited their relatives when travelling throughout the Plateau. Relatives were their primary links with other areas for purposes of resource exploitation. As late as the 1950's Nez Perces were fishing with their relatives among the Yakima and Wayam in The Dalles-Celilo region. Such relatives in turn regularly came to the Nez Perce reservation for hunting. Kin ties were augmented by numerous trading partnerships among other Plateau groups. This custom too was preserved by Nez Perces into the twentieth century, particularly among Sahaptin-speaking groups like the Umatilla, Yakima, Palouse, Wayam, and Klikitat. As with relatives, such trading partners provided lodging, food and access to local resources such as roots, special types of stone, game, furs, and fish.

Even though possessing the horse and a superficial resemblance to the bison-dependent societies of the Plains, the Nez Perces were impressively dependent on aquatic foods in the aboriginal period. In this they also closely resemble other Plateau societies. For example the Nez Perces regularly took the following types of fish: chinook, silver, dog, and blueback varieties of salmon; Dolly Varden, cut throat, brook, lake, rainbow, and steelhead varieties of trout; several kinds of suckers and white fish, sturgeon, squaw fish, lampreys, and an unidentified but numerous minnow. In recent years they also have begun to take the nonindigenous carp, bass, and catfish. The four types of salmon mentioned were the most important and best liked fish.

Eels, sturgeon and the unidentified minnow were delicacies, whereas the several forms of trout, suckers, whitefish, and squawfish were of secondary importance.

The extent of the annual Nez Perce harvest of aquatic foods can be best appreciated by quotes from on-the-spot observers such as the missionary Spalding. For example, during his first years among the Nez Percés, Spalding (Drury 1936: 167) noted that on one day when he visited a fishery, they caught

. . . 202 large salmon weighing from 10 to 25 lbs. . . There were probably as many taken at 50 other stations [that day] in the Nez Perce country. . . . These fisheries will always be of great importance to this mission [Lapwai].

Mrs. Smith (Drury 1963, III: 120), wife of the missionary Asa Bowen Smith, who resided at Kamiah in Nez Perce territory (see Fig. 2) during the late 1830's, observed that, "Here also is their salmon fishery. With their fish weir they may catch hundreds every night." While on an outing with the Nez Percés in the Wallowa Valley, Spalding recorded 300 salmon taken on July 25, 1839 and another 600 to 700 on July 27, 1839 (Drury 1958: 270-72).

That such daily catches were typical of the region is clear from Mrs. Elkanah Walker's description of fishing among the neighboring Spokane (see Fig. 1) in June of 1839 (Drury 1963, II: 158). She says:

At first a barrier [weir] was constructed near some falls, ten miles from this place. . . . At that place salmon were taken only during high water, and then not in great quantities as the barrier extended only a part of the way across the river. . . . As the water fell another barrier was built farther down, and extended across the entire river; and when completed men, women, and children made a general move to the place. If I judged correctly I saw there at one time near one thousand persons and the number rapidly increasing. From four to eight hundred salmon were taken in a day, weighing variously from ten to forty pounds apiece.

On other occasions the Nez Perce daily catch was given as several hundred, which is the regular figure obtained from elderly informants. During the runs, therefore, it is safe to conclude that the daily Nez Perce catch ranged some 300 to 700 salmon weighing from 10 to 40 lbs. My own research (Walker 1965-67), elaborated by Schwede (1966), indicates that Spalding's estimate of fifty fishing stations for Nez Perce territory also is a minimal figure. Taking the minimal 300 fish per day times the fifty fishing sites, one obtains a figure of 15,000 fish caught per day during the height of the season. Informants estimate that between June and October, there would be from 10 to 20 peak days when the catch would range from 300 to 700 salmon. Again taking the minimum figure of 10 such days, the average annual salmon catch in Nez Perce territory would be approximately 150,000 fish. Also taking their average weight as the minimal 10 lbs., the annual Nez Perce catch of salmon would be 1,500,000 lbs., or 300 lbs. per capita, precisely the figure given by Hewes for the Nez Percés (cf. Table I and Fig. 3). This is derived from a population of 5000, however, and not Mooney's figure of 4000 used by Hewes, since recent research shows this to be a more accurate estimate (Walker and Leonhardy n.d.). Therefore, the Hewes estimate of the average, annual Nez Perce salmon harvest must be taken as an absolute minimum. It was probably

a good deal larger (cf. Fig. 3). Given the size of this catch and its consequent importance in the Nez Perce diet, it is not difficult to understand why downward fluctuations in the size of runs were critical. As we have seen for the Plateau generally, such fluctuations were one of the primary reasons for Nez Perce fishing in other parts of the Plateau as well as for other Plateau groups fishing in Nez Perce streams. As we have seen, also, such normal fluctuations were one of the primary stimulants of trade and travel in the aboriginal Plateau. Accumulating evidence suggests that this is a very ancient pattern, long antedating the appearance of the horse.

My ethnographic research (Walker 1965-67) also shows that Nez Perce fishing techniques were typical of the Plateau. Construction of weirs and traps (see Figs. 3 and 4) involved large-scale undertakings, and required cooperation among whole villages. Occasionally several villages would join together to construct a weir as in the case of the major weirs on the Middle and North forks of the Clearwater. Of course, these varied according to stream size, the weirs being located on somewhat larger streams than the traps. Weirs and traps rarely survived the high water and had to be rebuilt annually. A large percentage of villages (cf. Schwede 1966) were located in direct association with either a weir, a trap, or at least a good dipping platform.

Dipping platforms were of two types as may be seen in Figs. 6a and 6b. They were either natural projections of the bank or a prepared platform extending out over the water. It was essential that they be over an eddy, for the bag of the dip nets had to flare out upstream in order to net the salmon successfully. In many instances, artificial eddies were produced by sinking logs into the stream as in Fig. 6b. Another dipping platform, still visible in many places on the banks of the Clearwater and Snake rivers may be seen in Fig. 7. These we call fish walls and they were described first by Lewis and Clark (Thwaites 1959, 7: 107) who say,

We proceeded on passed a great number of fishing camps where the Natives fish in the Spring. The stone piled up in roes so that in high water the Sammon lay along the side of the line of rocks while they would gig them.

Fish walls were built at different elevations on the bank in order to adjust to variations in water heights. Spears, leisters and dip nets were used with these platforms as with those seen in Figs. 6a and 6b. Another type of platform, a floating one, may be seen in the canoes abreast technique illustrated in Fig. 8. This was employed where construction of weirs was unfeasible because of the extreme width of the water course. Consequently, Nez Perces living on the lower reaches of the Clearwater and Snake rivers were those most familiar with it. The man standing either dipped or speared, while the man in the rear steered the canoe and bludgeoned the salmon taken by his partner. Yet another use of the canoe in this manner is seen in Fig. 9 where the canoe floated downstream crossways of the stream. This was restricted to single canoe parties not exploiting a heavy run, unlike the use of canoes seen in Fig. 8. Further, this single canoe technique was used at night with spears and torchlight.

Aboriginal Nez Perce fishing implements also closely resembled fishing implements of other groups in the Plateau. Most of them may be grouped under nets, spears, and hooks. As may be seen in Figs. 10 and 11, Nez Perce dip nets were both single and double handled, the latter form being by far the most common. A dip net's length depended primarily on the height of the

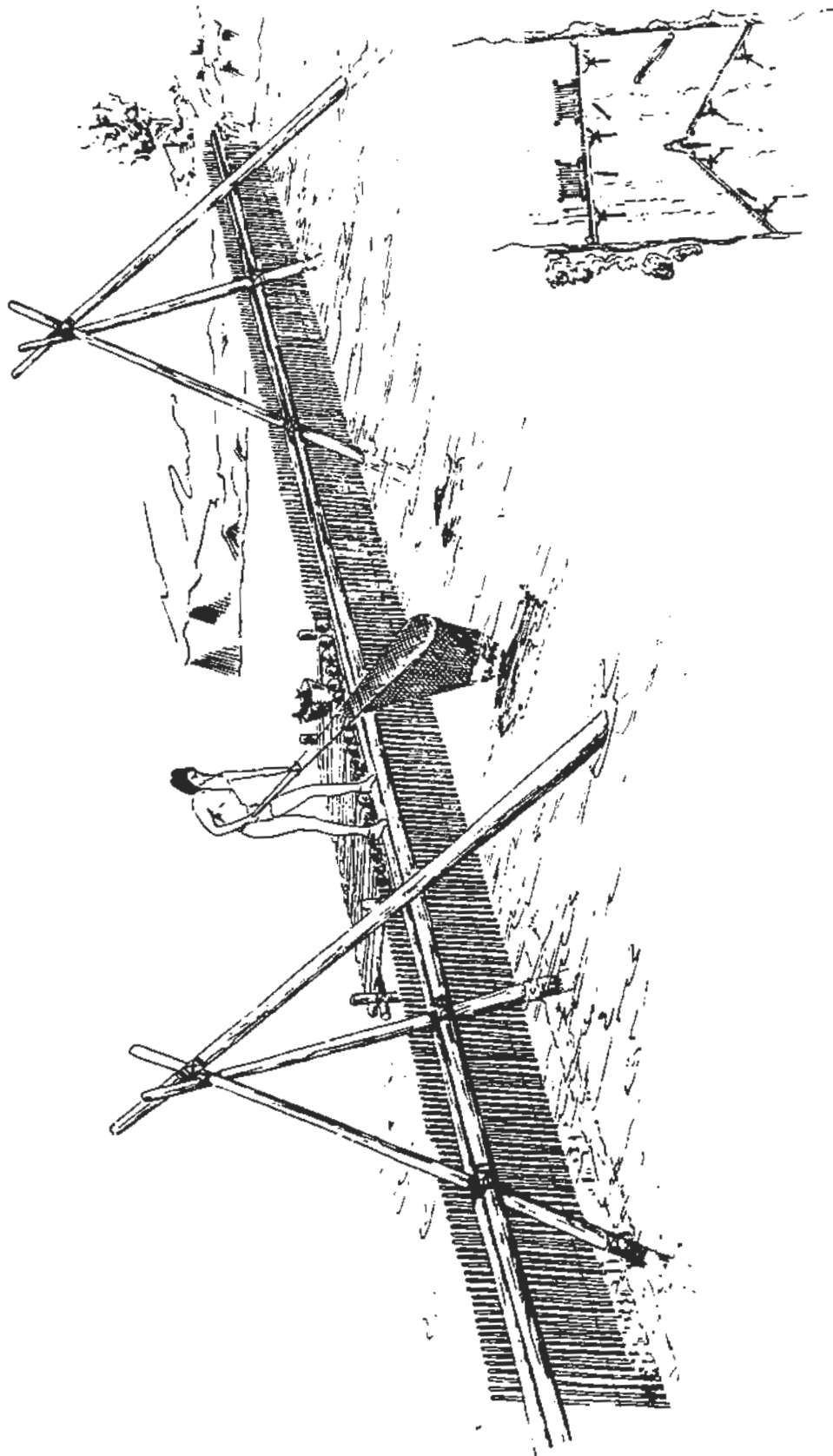


Fig. 4. Nez Perce Double Weir

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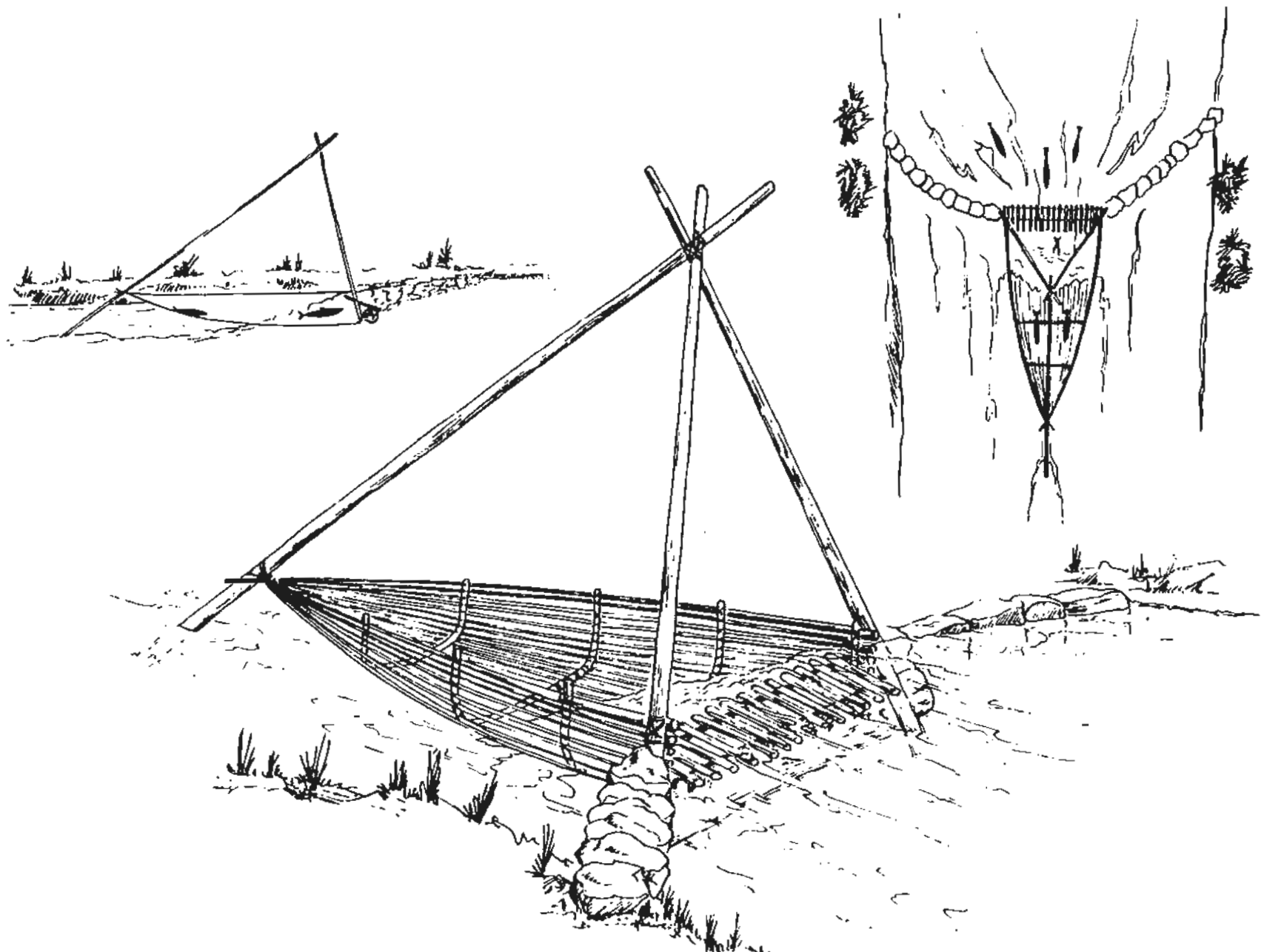
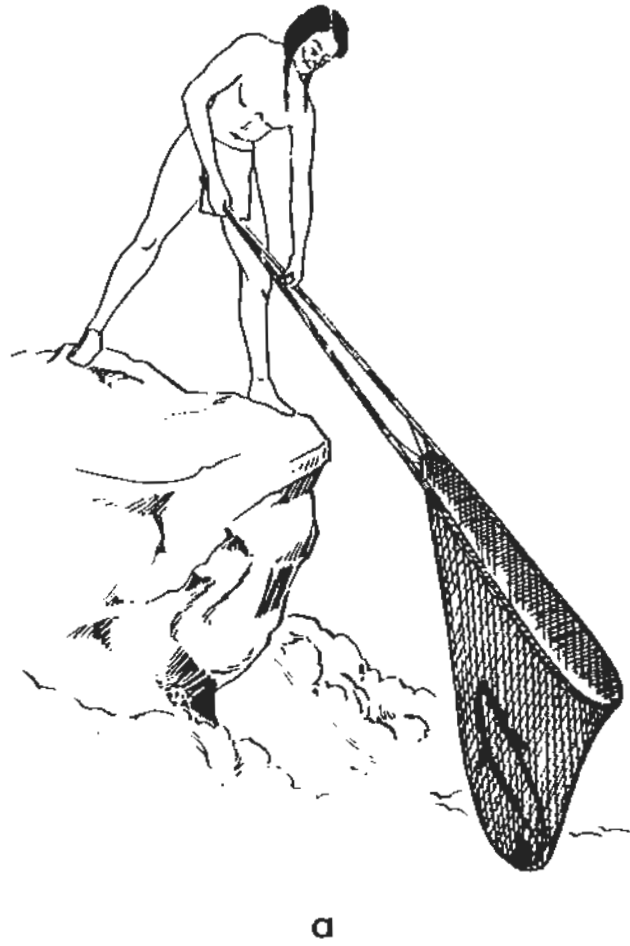
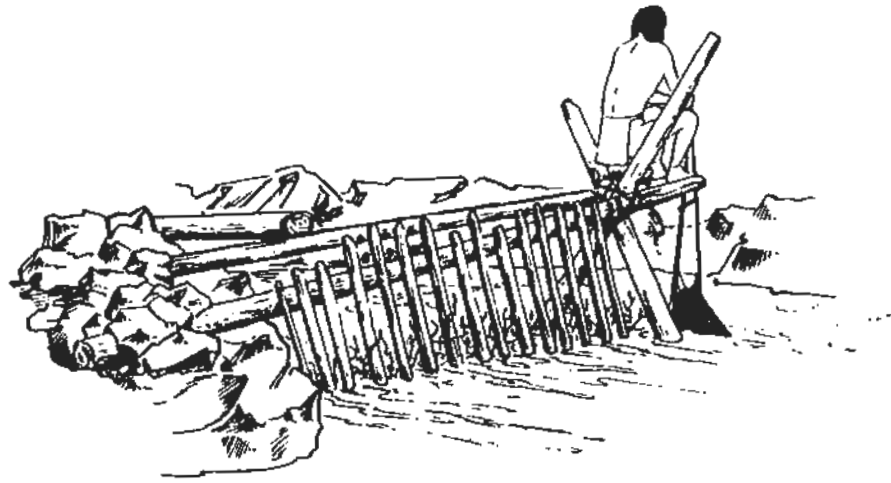


Fig. 5. Nez Perce Fall Trap

Fig. 5. Nez Perce Fall Trap



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Fig. 6. Nez Perce Dipping Platforms

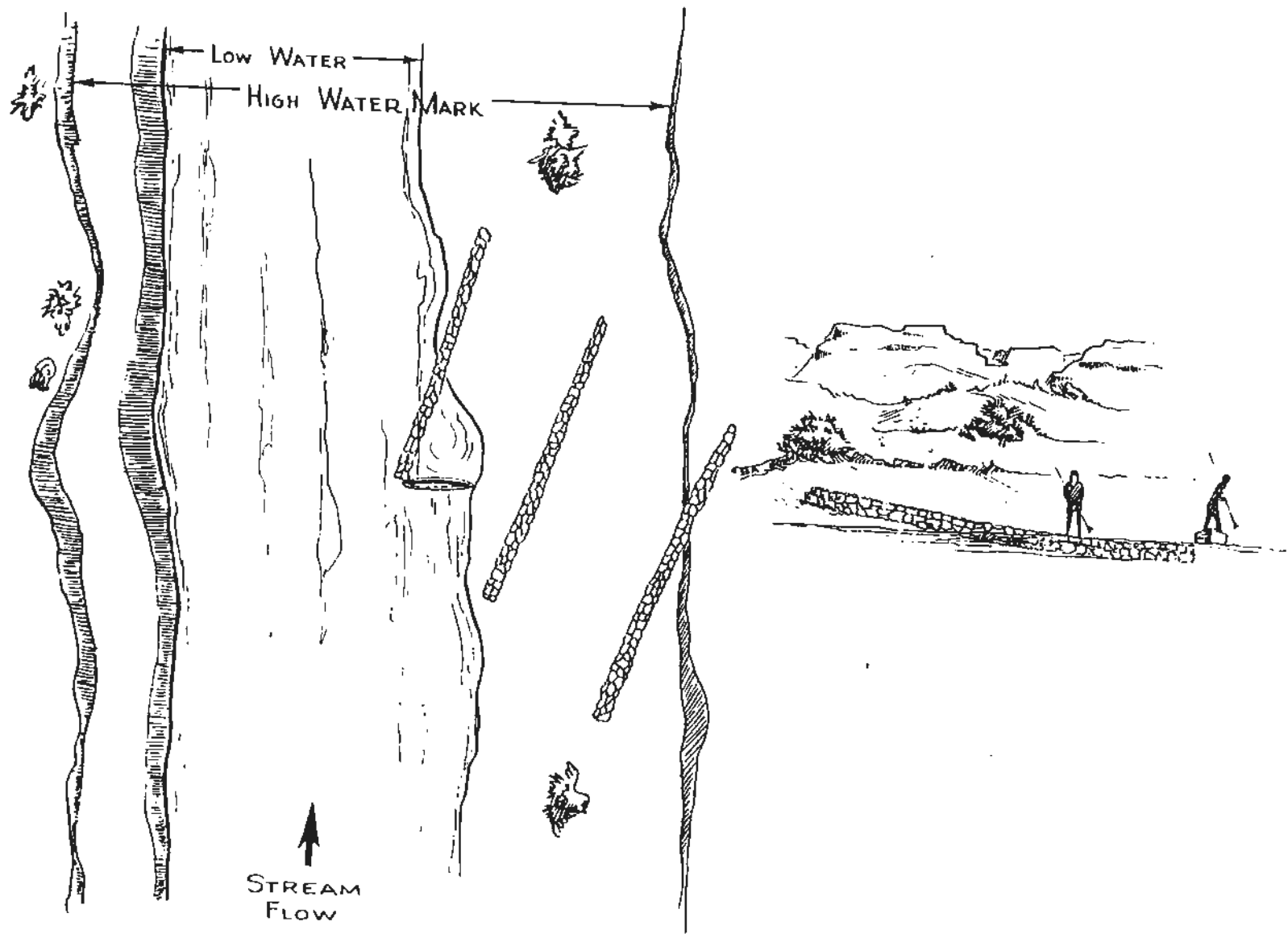


Fig. 7. Nez Perce Fish Walls

Fig. 7. Nez Perce Fish Walls

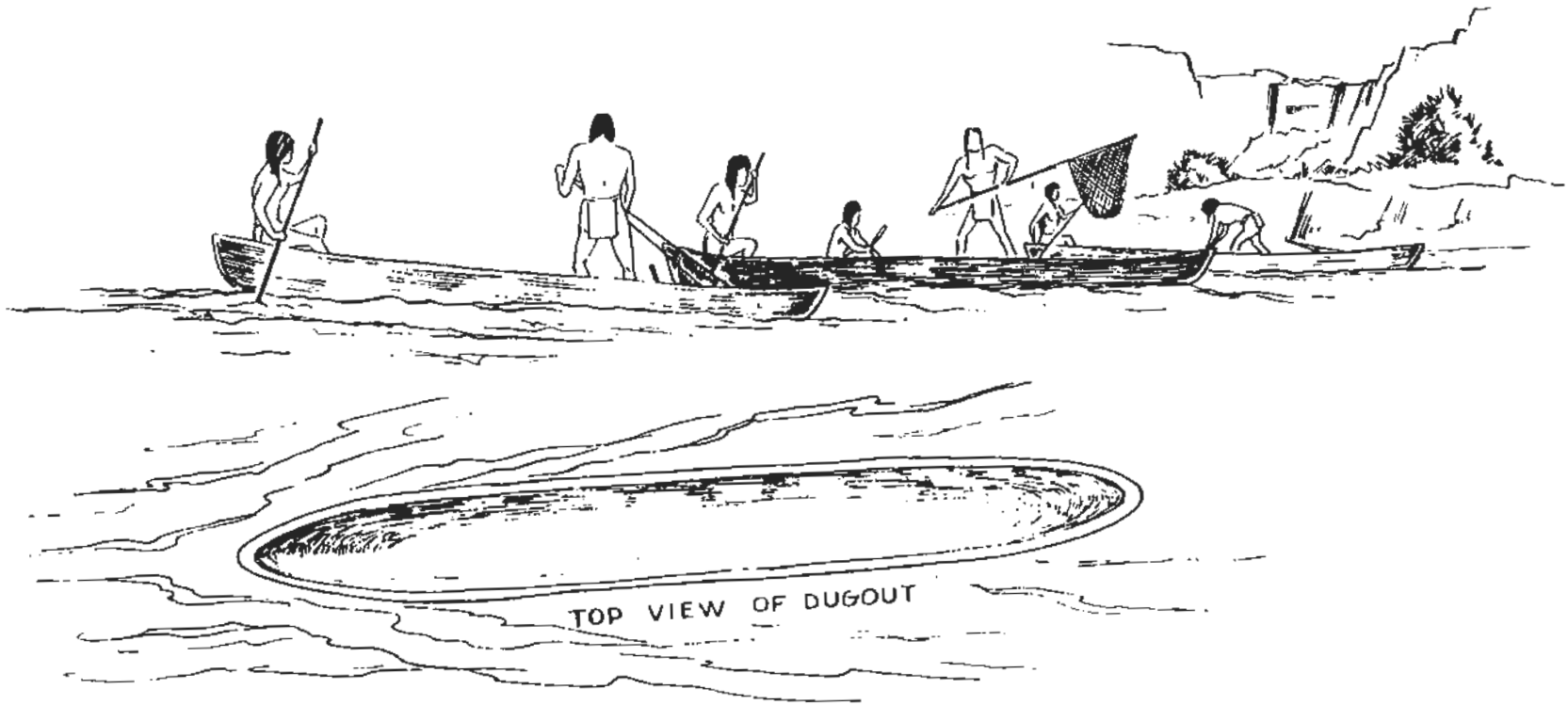


Fig. 8. Nez Perce Multiple Canoe Fishing During Fish Runs

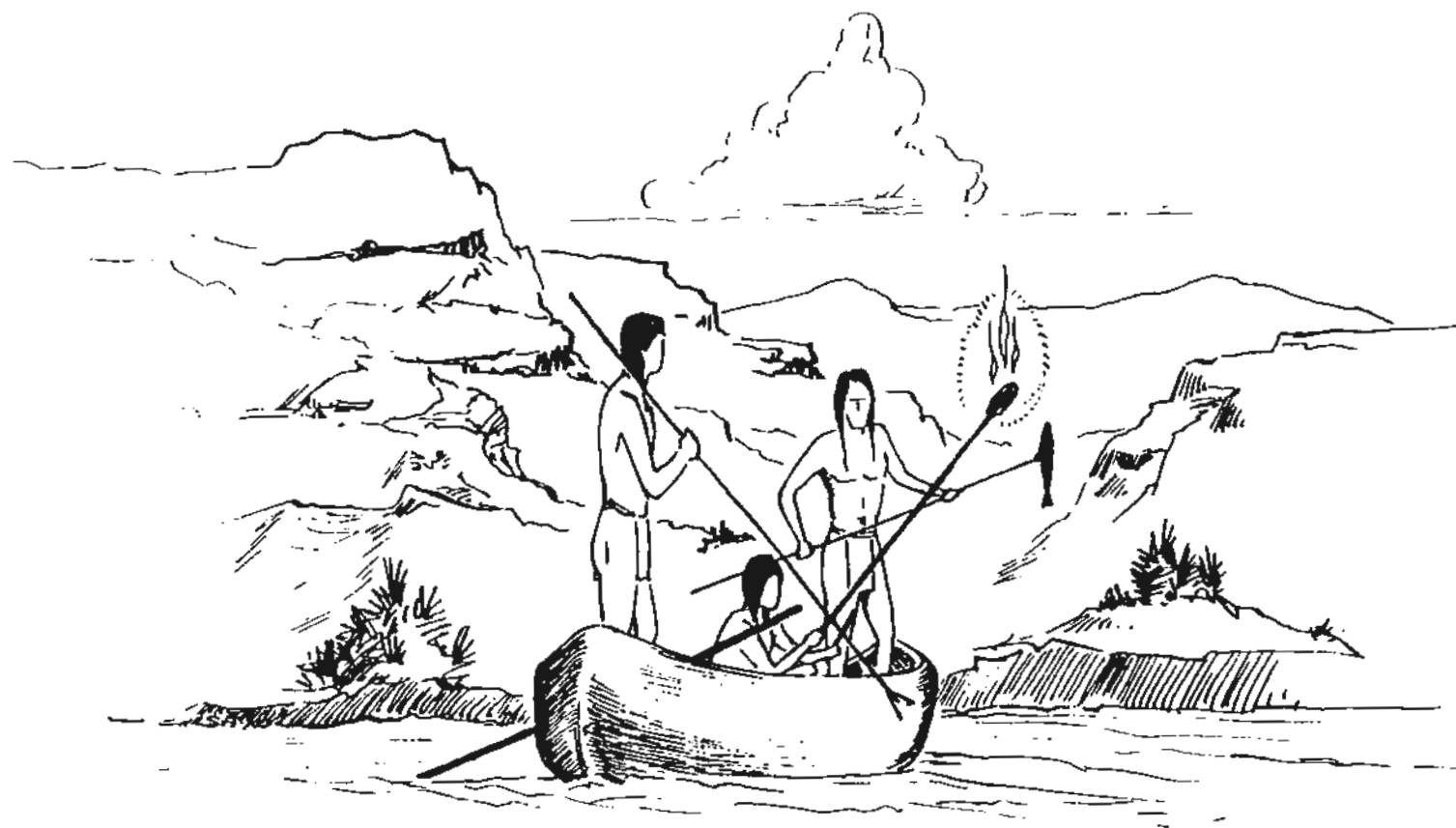


Fig. 9. Nez Perce Torchlight Fishing by Canoe

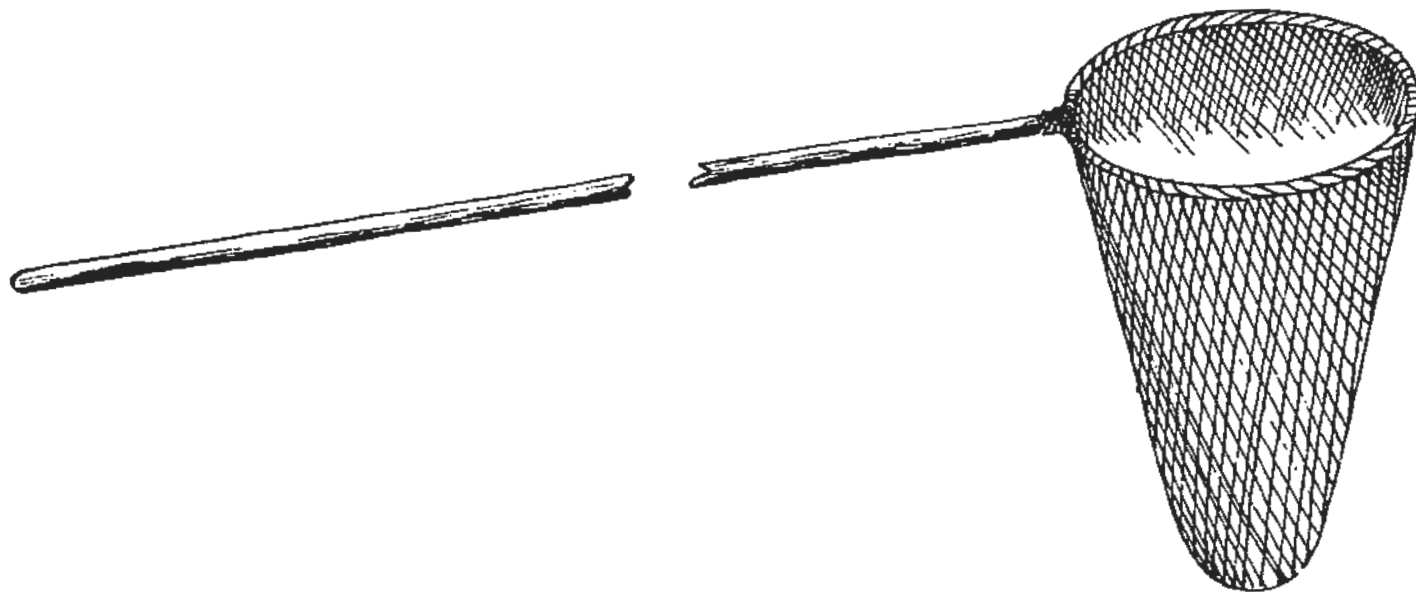


Fig. 10. Nez Perce Single Handled Dip Net

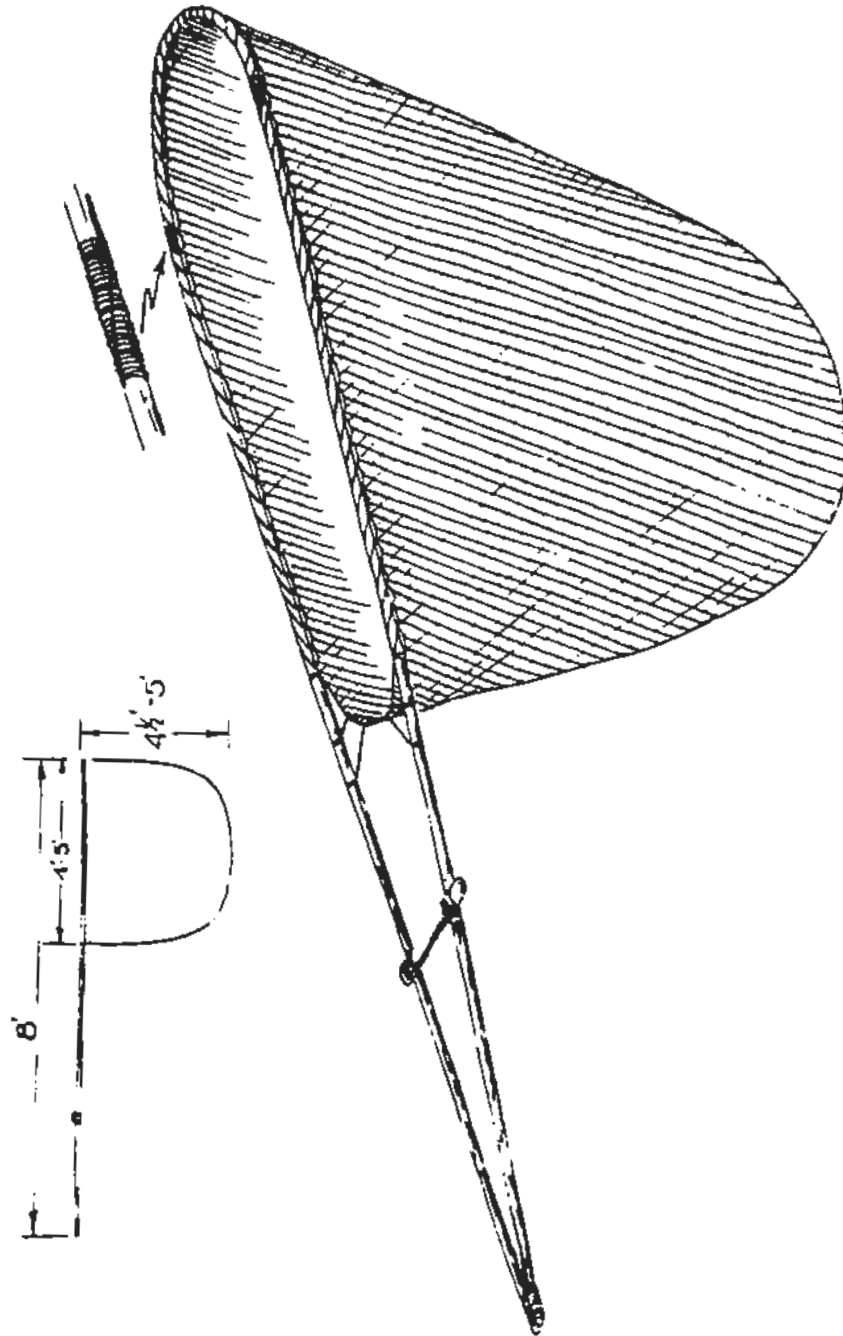


Fig. 11. Nez Perce Double Handled Dip Net

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dipping platform above the water's surface. The size of the hoop as well as the net mesh were determined by the type of fish to be taken. For example, chinook required a large hoop and net gauge, whereas eels took a smaller hoop with very small gauged net. Manufacture of dip nets took much time and required great skill.

The Nez Perces also employed a seine in the manner depicted in Fig. 12. This was used at the mouths of tributary streams as well as in pools. However, it is not clear at present if the Nez Perces employed the gill net principle in any of their fishing apparatus, but they certainly had ample opportunity to know of the principle from downriver peoples who employed it aboriginally.

Nez Perce fish spears were of two principal types, a single toggle harpoon device and a leister. The harpoon seen in Fig. 13 was used to pierce the salmon after which the harpoon head became detached, remaining in the flesh. The harpooned salmon then was hauled in by the attached line. A detachable head largely eliminates the possibility of the salmon twisting free. Were it to remain attached to the shaft, it would be sufficiently resistant for the salmon to twist free. The three-pointed leister seen in Fig. 14b was a particularly popular device for taking salmon and other fish. As may be seen, the construction permits its use along rocky bottoms with little danger of breaking the point or barbs. In some instances spearing sites would be improved by lining the stream bottom with light-colored stones to enhance visibility. Unlike the single toggle harpoon, however, this implement was not thrown, and informants say that they measured up to 15 feet or more where dipping platforms were well above the water line. The more fragile implement seen in Fig. 14e was for smaller fish like trout, and often was used by persons standing in the water.

The Nez Perces also developed a long-handled gaff, the hook end of which may be seen in Fig. 13a. During aboriginal times, the hook was made of antler, but was replaced by iron in the first third of the 19th century. Antler was preferred over bone for its superior flexibility. Informants suggest that bone is brittle and breaks easily under the pressure of gaffing a large fish. Like the harpoon toggle, this hook was detachable and used with a line in order to avoid having the fish twist free. It was used most frequently around the mouths of smaller streams and required a deft touch to locate and successfully gaff the fish resting in secluded nooks and crannies.

Although all of the foregoing fishing implements were used by males, women and boys used the remaining two Nez Perce fishing implements, the horse hair sniggle and the gorge. The sniggle seen in Fig. 14d was made of horse hair and stuffed with bait. When fish bit it, their teeth became ensnared in the hair, and the fish could then be jerked quickly from the water. The bone, or in rare instances, stone gorge seen in Fig. 14c varied considerably in size and use. A smaller version was used by women and boys to take fish like trout, whereas a larger version with eel as bait was employed for sturgeon. So far as is known this was the only way Nez Perces caught sturgeon, though they regarded it as a delicacy.

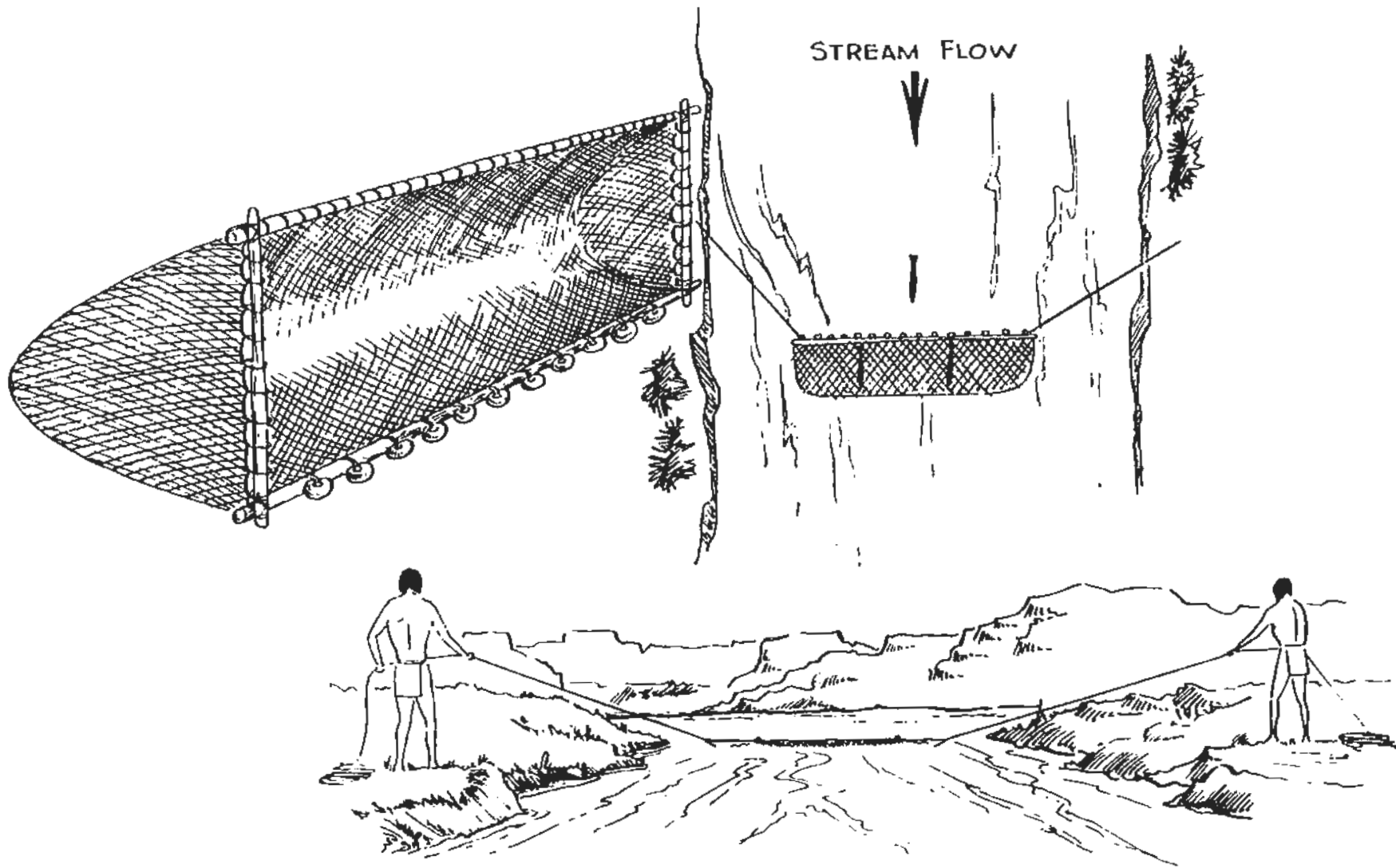


Fig. 12. Nez Perce Seine

Fig. 12. Nez-Perce Seine



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Fig. 13. Nez Perce Single Toggle Harpoon

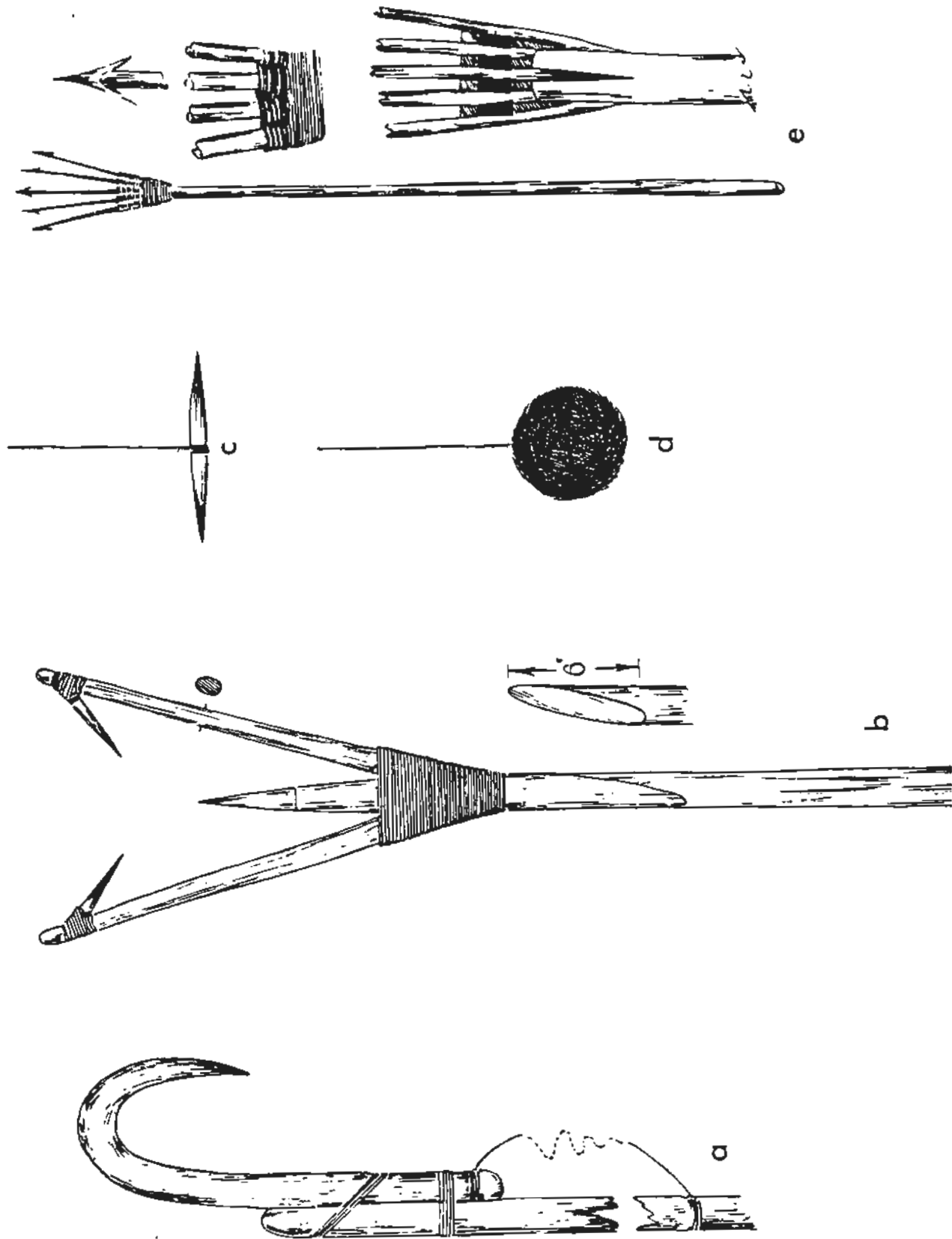


Fig. 14. Nez Perce Fishing Implements

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SUMMARY AND CONCLUSIONS

In conclusion, it is clear that the aboriginal Plateau may be viewed as a single social and economic system. The ethnic groups of the region were unified by common exploitation of aquatic foods concentrated in a single, major river system. Second, the peoples of the Plateau were unusually dependent on aquatic foods primarily because of their great abundance. Both published and unpublished data indicate that at least a fifty per cent dependence was characteristic for aboriginal groups in most of the region. Third, because of the seasonally fluctuating nature of this basic resource, substantial--though highly patterned--population movement was typical of the region. Variations in time of arrival of the salmon runs, in degree of physical concentration of the fish, and in overall abundance of the runs (particularly in the upper reaches of the Columbian tributaries) were the principal stimulants of this movement by aboriginal groups. However, travel and trade in the region also were encouraged by great ecological diversity. A substantial number of items customarily were traded over the length and breadth of the Plateau, and the main trade routes extended out even into adjacent culture areas such as the Northwest Coast, Plains and Great Basin.

Specific cultural patterns facilitating this movement and exchange throughout the region have been described. For example, cross-utilization of resources among the various ethnic groups of the Plateau was facilitated by the institution of "stewardship." As described by Drucker for the Northwest Coast and applied by Suphan in the central Plateau, this resembles Ray's idea of the host-guest relationship (1939: 15-17). A pro forma permission to use resources usually was secured under this arrangement, but it clearly did not involve any notions of exclusive ownership. Further, any resource areas not being exploited at a particular time were open to all friendly groups on what can well be called a usufruct basis, i. e., they belonged to those using them only so long as they were actively exploiting them. Two other cultural patterns, which greatly aided the wide ranging cross-utilization of resources typical of the aboriginal Plateau, were trading partnerships and interethnic marriages. Both were practiced systematically and were of primary importance in implementing general exchange. Possibly as a result of the mutual need for cross-utilization of resource areas, notions of territoriality and trespass were only weakly developed. Thus, the lack of strong feelings of territoriality, combined with the rudimentary political organization of most Plateau people, clearly encouraged interethnic movement, trade and mutual cross-exploitation of resources.

Prior to Euroamerican penetration of their aboriginal territory, the Nez Percés possessed overwhelming Plateau affinities. They were integrally tied to most ethnic groups in the region through trading partnerships, established trade dependencies of various kinds, and systematic intermarriage. Further, they were the military masters of the region and regularly encountered by early explorers engaged in trading, fishing, trapping, raiding, and sundry other activities throughout the area. Particularly expressive of their Plateau cultural affinity was their complex fishing technology. This in turn was related to a heavy reliance on aquatic foods indicated clearly in the journals of the early explorers, missionaries, and government agents as well as in our own ethnographic research; at least a fifty per cent reliance seems justified from the evidence. Further, their annual cycle of movement within their home territory and throughout the Plateau culture area as a whole was closely adjusted to the cycle of fish abundance. When moving down the Columbia in

the early spring and back up to their territory as the season progressed, the Nez Perces also engaged in substantial trading. Their full knowledge of down-river peoples, fisheries, and geographic features reflects the intensity of mutual cross-exploitation of resources that was typical of the aboriginal Plateau.

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NORTHWEST ANTHROPOLOGICAL RESEARCH NOTES

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THE RELATIONSHIP OF ABORIGINAL NEZ PERCE SETTLEMENT PATTERNS TO
PHYSICAL ENVIRONMENT AND TO GENERALIZED DISTRIBUTION OF FOOD RESOURCES

MADGE L. SCHWEDE

Introduction

Aboriginal Nez Perce settlement patterns developed in a region of great ecological diversity. The area extends eastward from the semi-arid steppe lands of Washington and Oregon, across the grassland-forest ecotone, to the alpine meadows of the Bitterroot Mountain Range in Idaho. In this paper, my goal is to determine the relationships between aboriginal Nez Perce settlements and several environmental variables: elevation; size of related streams; and immediate availability of fish, game, and root resources.

Aboriginal Nez Perce settlements fall into two broad types: village, tew?yeni-kes; and camp, wi-se-s. Walker (n.d.) defines the Nez Perce village as a group of people living perennially in a named geographical area they are thought to own through a vested interest in the area, regardless of temporary absence by village members. A camp is a group of people living on a seasonal basis in a named geographical area they are thought to own by usufruct. Ownership here consists not of vested rights but rather of use-rights, applicable only when a particular group is occupying an area. Except for a few large summer gatherings traditionally held at camps in the uplands, the average camp population probably was at most one-half the average village population which was 30-40 individuals (Walker n.d.; Walker and Leonhardy n.d.).

The master list of villages and camps used in this study (Schwede 1966) has been compiled from the following sources: Chalfant (n.d.), Curtis (1911), Fletcher (n.d.), Ray (1962), Spinden (1908), Thwaites (1904-05), and Walker (n.d.). The environmental data are drawn from a variety of sources. The U. S. Corps of Engineers, U. S. Geological Survey, and Jepson Work Map Relief Series maps comprise the cartographic resources for the study. A modified version of the Horton (1945) system was used to order streams according to size. The geographic locations of the customarily exploited food resources were drawn from Chalfant (n.d.), Ray (1962), Walker (n.d.), and informants. Wherever possible ethnohistorical research is combined with corroborating ethnographic field work.

The ethnographic sources used here rarely agree entirely with respect to village and camp locations. Parallel research by Walker (n.d.) indicates that in the Nez Perce case, early ethnographers relied unduly on informants who were unfamiliar with many settlement locations. To avoid such problems, it was determined which geographical areas were known best by particular informants who were then used only in such areas and not for the entirety of Nez Perce territory. By cross-checking one informant against another, it was possible to eliminate many conflicts in the construction of the master list of 295 settlements (Schwede 1966). This device also helped clarify the

locations of several resource areas. Finally, it should be cautioned that although the total number of villages recorded is probably close to the aboriginal number, the original number of camps cannot be ascertained. Villages, being located in river valleys where the contemporary Nez Perce population is concentrated, are much more likely to be remembered by present informants than are the many upland camps, most of which are unused at the present time. Furthermore, some earlier ethnographers in the region concentrated on recording villages and ignored the camps. Thus it has been possible to use these earlier listings as memory aids for informants primarily when dealing with villages. Nevertheless, it may be assumed that the master list contains a representative sample of camps in use prior to the historical period.

Substantial ethnographic and ethnohistorical information was gathered on factors affecting settlement location. When questioned concerning reasons for village location, informants stated that temperatures were warmer in the lowlands during the winter than in the cold and snowy uplands. Some informants gave additional reasons such as the ready availability of driftwood, fish, and game; the last being driven down from the uplands by cold temperatures and snow. A few informants made the observation that villages were often located at important points on main travel routes, either where trails crossed or where important streams met. When canoe travel was more prevalent, confluences were important as intersections in main travel routes. The use of canoes and more recently horses to transport food resources long distances permitted selection of village locations more in terms of such criteria as availability of driftwood, protection from winds, and proximity to stream confluences. Camp site locations, however, relate more closely to resource availability. Good fishing and ready accessibility to rich root fields and summer hunting areas are the principal reasons given by informants for the specific locations of camps in the uplands.

Informants also provided vital interpretive information on the aboriginal annual cycle of economic activities. Fish were taken the year round, but the majority were caught during the spring and fall runs. On the other hand, roots were taken during the late spring, summer, and early fall primarily in the upland areas. Winter was a time of hunting, particularly when big game was forced down from the uplands by cooler temperatures and heavy snows. Other less important food resources exploited seasonally were berries, nuts, birds, a few seeds, and Plains bison. Some informants believed that accessibility to main routes of travel influenced the location of certain camps, especially camps where large, intertribal gatherings took place during the summer.

Analysis

Three hypotheses are proposed:

1. Village settlements tend to be established at lower elevations, whereas camp settlements may be established at higher elevations.
2. Villages tend to be established near large tributaries, whereas camps tend to be more evenly distributed among the spectrum of stream sizes.
3. The frequency of village and camp settlements in a given region is

positively correlated with the number and type of food resources in that region.

In testing the first hypothesis the elevation given for each settlement is an average of the elevations of the two contour intervals between which the settlement is located. Elevations are determined for 114 villages and 134 camps or 84% of all known settlements. The remaining 16% cannot be located or cannot be classified as to type of settlement. The elevation encompassed by Nez Perce territory ranges from 300 feet, the lowest point, to about 10,000 feet, the highest point. In Table 1 it is seen that of the 114 villages over half (64%) are below 1,000 feet, 98% are below 2,500 feet, and all are located below 4,000 feet. Of the camps for which elevation has been determined, less than one-third (30%) are below 1,000 feet, less than one-half (46%) are below 2,500 feet, and the majority (54%) are located between 2,500 and 6,500 feet. Thus, village settlements are found at relatively lower elevations, while most camps occur at relatively higher elevations; camp clusters appear at two widely separated points -- between 500 feet and 2,000 feet and between 2,500 feet and 3,500 feet elevation.

TABLE 1

RELATIONSHIP BETWEEN VILLAGE AND CAMP SETTLEMENTS AND ELEVATION

Elevation	Villages		Camps	
	Number	Per Cent	Number	Per cent
0-500	4	3	1	1
500-1000	70	61	10	7
1000-1500	33	29	30	22
1500-2000	4	3	14	10
2000-2500	2	2	8	6
2500-3000	0	0	20	15
3000-3500	0	0	22	16
3500-4000	1	1	6	4
4000-4500	0	0	8	6
4500-5000	0	0	5	4
5000-5500	0	0	5	4
5500-6000	0	0	2	1
6000-6500	0	0	3	2

Total settlements used in this hypothesis were 114 villages and 134 camps.

Settlements considered to be in association with river size are within a one mile radius of the mouth of a tributary. Because 111 settlements are not so related, only 184 of the 259 settlements are used in testing the second hypothesis, that villages tend to be established at confluences of large and middle-sized tributaries, whereas camps tend to be established at the confluences of large and small-sized tributaries. As may be seen in Table 2,

97 villages and 87 camps are used in testing the second hypothesis. Beginning with the smallest streams as the first order, all water courses in Nez Perce territory are classified according to their sizes which range up to the ninth order, i.e., the Snake River.

It is apparent from Table 2 that camps are more widely dispersed throughout the spectrum of different sized streams than are villages. Whereas 82% of the villages are concentrated near 7th and 8th order tributaries, only 49% of the camps are so located. A large portion of the remaining camps, 37%, cluster about 4th and 5th order tributaries. The remaining 14% of the camps are associated with 2nd, 3rd, 6th and 9th order streams. The 17% of villages not located on 7th and 8th order streams are distributed through 3rd, 4th, 5th, and 6th order streams. Thus, it seems safe to conclude that villages are associated with relatively larger tributaries and camps with both large and medium-sized ones.

TABLE 2

RELATIONSHIP BETWEEN VILLAGE AND CAMP LOCATIONS AND SIZE OF TRIBUTARY

River Size	Villages		Camps	
	Number	Per Cent	Number	Per Cent
1	0	0	0	0
2	0	0	3	3
3	4	4	6	6
4	4	4	9	10
5	8	8	21	27
6	1	1	3	3
7	38	39	33	37
8	42	43	11	12
9	0	0	1	1
TOTAL	97		87	

The final hypothesis tested, that the frequency of village and camp settlements in a given region is positively correlated with the number and type of food resources in that region requires preliminary comment. Eighty-seven per cent of the total aboriginal area (containing 500 of the 590 six-mile square units used in the comparison) is employed in the test. This reduction was necessitated by the absence of reliable data on resource exploitation in that part of aboriginal Nez Perce territory contained in the present states of Washington and Oregon. The area used contains 165 settlements whose precise location and type are known, or slightly more than half of all known Nez Perce settlements. The relationship of resource availability to selection of a settlement location cannot be a simple one. That they are related, however, emerges clearly when one views the results contained in Table 3.

TABLE 3
RESOURCE AVAILABILITY BY SIX-MILE SQUARES

Six-Mile Squares	Villages		Camps	
	Number	Per Cent	Number	Per Cent
With an Ethnographic Record of Food Exploitation (46)	74	87	67	82
Type of Food Exploitation Not Ethnographically Recorded (464)	11	13	13	18
TOTAL	85	100	80	100

Of the 85 villages contained in the area surveyed, 74 are in the 46 squares containing ethnographically reported exploitation of fish, game, or roots. Likewise, 67 of the 80 camps contained in the area surveyed are located in the 46 squares containing known exploitation of fish, game, or roots. Second, it is clear from Table 3 that aboriginal Nez Perce were highly selective in the fish, game, and roots they exploited in their territory; only 46 (or 9%) of the 500 squares investigated contained ethnographically verified, regular, annual exploitation of food resources.

There is, moreover, a relationship between the number of food resources in an area and the type of settlement or settlements there. It is clear from Table 4 that villages tend to be found most often in association with fishing sites rather than root gathering areas, and at least often with traditional hunting areas. On the other hand, while still strongly associated with fishing sites, camps tend more frequently to be found in association with root gathering and hunting areas, again reflecting their highland location. Fishing, therefore, tends to be most determinative of settlement locations, root fields less so, and game areas least of all despite the fact that camps are associated more often with roots and game than are villages.

The relationship between number of resources and number of settlements is obvious but also complex. Table 4 suggests that the number of villages tends to increase when one-resource areas are compared with two-resource areas. The number of camps actually decreases when one-resource areas are compared with two-resource areas, but dramatically increases in areas with three food resources. Furthermore, no villages are found in areas containing three food resources.

Conclusion

Briefly restated, the findings are as follows:

1. Nez Perce settlements do cluster at certain elevations -- villages

primarily between 500 and 1,500 feet, and camps in two principal clusters; one group between 500 and 2,000 and another between 2,500 and 3,500 feet elevation. Furthermore, camps tend to be more dispersed throughout the total range of elevation than are villages.

TABLE 4
RELATIONSHIP BETWEEN VILLAGE AND CAMP SETTLEMENTS
AND TYPES OF RESOURCE AVAILABILITY

Squares	Villages		Camps	
	Number	Per Cent	Number	Per Cent
<u>With one food resource</u>				
fish	25	75	19	52
roots	8	25	13	36
game	0	--	4	12
Sub-total <u>19</u>	<u>33</u>	<u>100</u>	<u>36</u>	<u>100</u>
<u>With two food resources</u>				
fish/roots	29	70	7	46
fish/game	12	30	7	46
roots/game	0	--	1	8
Sub-total <u>19</u>	<u>41</u>	<u>100</u>	<u>15</u>	<u>100</u>
<u>With three food resources</u>				
fish/game/roots	0	--	16	100
Sub-total <u>8</u>	<u>0</u>	<u>--</u>	<u>16</u>	<u>100</u>
TOTAL	74		67	

2. A majority of all aboriginal Nez Perce settlements cluster about certain types of stream confluences. A large number are associated with confluences with 7th and 8th order tributaries. However, even though half of all camps considered are in association with confluences with 7th and 8th order tributaries, a substantial number of camps are associated with 4th and 5th order tributaries. Furthermore, camps are more dispersed throughout the range of different sized confluences than are villages.

3. Nez Perce settlements cluster in areas containing customarily exploited resources, but they correlate with different resources in complex ways. Both villages and camps are most often associated with fishing sites, less often with root gathering areas, and least often with hunting areas; but villages tend to be more often associated with fishing sites. Villages are found more frequently in those areas containing two resources but never in areas with three resources.

It is clear that the Nez Perce were extremely selective in using their

environment if their choice of village and camp sites is any indication. In fact, they used only 9% of the total area considered in this study on a regular, annual basis. This suggests the Nez Perce were not using all the resources available to them in their environment. More comparative study of Plateau settlement patterns is needed to clarify the intricate ecological and cultural relationships which must have ordered the lives of the Nez Perce.

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women settled on the streams. These Canadian French were Roman Catholics, and their half-breed descendants who still adhere to that faith are spoken of by the Nez Perce as *Ah-ly-ma*, though the name is not applied to Roman Catholics who are full-bloods.

21. *Is-kin-'ne-wa-'wee*. From *is-kit*, a trail, [and] *ne-wa-'wee*, following the creek [Couse Creek]. The village stood where the trail leading to the Blue Mountains followed the creek. This was formerly a large village, but its inhabitants were destroyed through the action of one of its prominent men. The story of the event is current through the tribe, and is used to point a moral. *Is-kin-'ne-wy-'ma* was an ambitious man, who desired to make himself great. He boasted of his strength and valor, and sought to lead war parties. He rallied his village by crying: "The *Pe-ku'-nin-mo* are not fierce, but I am fierce!" He sent messengers to the villages of his own group, and even to other villages and tribes, bidding the warriors join him in a great expedition against the southern Indians. At last he set forth with more than six hundred warriors, among whom were men from the friendly Walla-walla [Wallawalla], Palouse [Palus], and other tribes. They took the trail to the west and then turned south, where they met the Bannocks in battle. In the face of danger *Is-kin-ne-wy-'ma* showed neither valor nor leadership and suffered a terrible defeat. Not one of the great company which went forth with him was ever heard of again. The name of this would-be warrior became a tribal synonym for boasting and deception. Parents would check a braggart youth with the admonition: "Don't be like *Is-kin-ne-wy-'ma*!" [Several sources have documented the existence of this village. Schwede confirmed the name but stated that it referred to many trails; she was unable to locate it (1966:No. 194) and placed a different village in the vicinity of Couse Creek (1966:No. 181). Shawley placed a trail along Couse Creek and an unnamed camp at its mouth (1984:Map 10). Paul also placed a site at the mouth of Couse Creek (1987:No. 192)].

Group 5

The name of this group has been lost. So also [has] its independent organization, as it had no "leader" village. The people subsisted almost wholly on fish; but if they desired to go and hunt to secure meat, they were obliged to ask permission of No. 18, the "leader" village of Group 4. The people of Group 5 were not numerous, nor were their villages important. They were situated in rather a barren region. The group comprised Nos. 22, 22a, 23, [and] 24 -- all located on the Snake River. The reservation established by the Treaty of 1863 did not cover these villages, and consequently they had to be abandoned. The people removed to the reservation, and there changed their mode of life.

22, 22a. *Il-lar-kart-'part-poo*. Both villages bore the one name, and were in fact one village. No. 22 was occupied in winter, as there were woods near by; No. 22a was occupied in summer. High cliffs rose on both sides of the villages, and the heat caused by the reflection of the sun on the rocks gave rise to the name of the place; *il-lar-kai'-wit* meaning the bright light that accompanies summer heat. The region hereabouts was barren. The Indians said: "The white people do not like this place, as nothing will grow here." Consequently the natives were not intruded upon. To this village those who were not in sympathy with the Christian element in the tribe resorted in the winter to hold their old-time practices, as they were here out of reach of the progressive Indians, the missionaries, and the teachers [Schwede confirmed that this village was located on both sides of the river and stated that its name referred to the sunny side (Schwede 1966:No. 182). Paul placed this village more generally at Buffalo Eddy (Paul 1987:No. 47).

Buffalo Eddy is well known for its rock art and is administered by the National Park Service as part of the Spalding unit of Nez Perce National Historical Park].

23. *Te-lee'-wah-we*. *Te-lee*, from *te-lil*, a large immovable rock; *wah-we*, from *e-you-wah-we*, mouth. Such a rock stood where the creek on which this village was situated emptied into the Snake River. The settlement was large on account of the fine salmon fishing at this place [Schwede stated that the name referred to a galloping place for horses but she was unable to locate it (Schwede 1966:No. 193)].

24. *Hah-wah-nah'-heesph-po*. From *Ha-wah-nah*, mosquito. The swarms of this pest infesting the bottomland where this village stood on the Snake River, gave name to the place [Paul confirmed that the name was associated with an abundance of mosquitoes and placed this village above the mouth of Ten Mile Creek on the Washington side above Asotin (Paul 1987:No. 187)].

Group 6

The name of this group has been lost. The people were warlike and numerous, and claimed to form a distinct group; yet in the quest for food they were under the direction of No. 18, of Group 4. They hunted in the Blue Mountains which lay to the west, when they had obtained permission to do so from No. 18. In all other matters they were under the leadership of No. 28, in their own group. All of Group 6, and five men from No. 29, took part in the Treaty of 1855; and when the Treaty of 1863 was made, the reservation then established did not cover the territory occupied by this group. The villages had, therefore, to be abandoned. This was accomplished peaceably with all except No. 28, which took part in the Joseph War of 1877. This group comprised Nos. 25, 26, 27, 28, [and] 29. No. 28 was the "leader" village in everything except the hunt [The villages in Group 6 extended from the lower part of Hells Canyon past the confluence with the Clearwater River and into the lower Snake River region. This area includes the modern communities of Asotin and Clarkston].

25. *Sahk'som-mo*. This village was situated on a fine lot of bottom-land. [No description of the meaning of the Nez Perce name for this village was provided by Fletcher but it may refer to an osprey or fish hawk (Schwede 1966:No. 177). It was located in the vicinity of Tenmile Rapids on the Snake River on either the west side in Washington (Schwede 1966:No. 177; Shawley 1984:No. 143) or the east side in Idaho (Paul 1987:No. 189)].

26. *Wah-yie'-wa-we*. *Wah-ha*, the name of a creek; *yie-wa-we*, a euphonious adjustment of *eym-wa-we*, mouth. This village lay at the mouth of the creek *Wa-ha* [Ten Mile Creek], in the west bank of the Snake [(Schwede 1966:No. 180)].

27. *Ah'-na-toe-eno*. Situated at the mouth of the *Ah-nah* [Ten Mile Creek], a creek noted for its delightful water. Early in the 19th century this village was composed mainly of women, who were remarkable for their gentleness. Nearly all the men had been killed in battle [Fletcher did not provide a translation for the name of this village. According to other sources, its name may refer to down river (Schwede 1966:No. 178) or to a canyon mouth suddenly encountered (Paul 1987:No. 190)].

28. *Ah-so'-toe-e-no*. In this village lived a noted chief whose family for three generations had been prominent as leaders in the religious mysteries, and also in war and hunting. These chiefs had borne the name *Ah-pos-wah-hyte*. The last of their number was the famous Looking Glass, one of Chief Joseph's most important officers in the war of 1877 [this

village was located in the vicinity of Asotin Creek and extended on both sides of the Snake River (Schwede 1966:No. 173; Paul 1987:No. 141). Archaeologists have documented sites (45-AS-9 and 45-AS-86) in Washington (Sprague 1959) and Idaho (10-NP-151, Sappington 1985). For a summary of the meaning of the village name see Sprague (1959). This village has been severely affected by developments in Asotin, Washington, and Hells Gate State Park in Idaho and has been partly inundated by Lower Granite Reservoir (Gurcke with others 1979)].

29. *Al-pow-nah*. This village, on the west side of the Snake at the mouth of the *Al-pah-hah* [Alpowa Creek], is the last Nez Perce village on that side of the Snake. Here the people were mixed with the Palouse [Palus] Indians, and more than one language was spoken in this village [The name for this well known village refers to a hot or sunny place (Schwede 1966:No. 142). Archaeological excavations were conducted here (45-AS-82) in the early 1970s and these investigations were among the most extensive ever undertaken in the southern Columbia Plateau (Brauner 1976). Block excavations uncovered late prehistoric and protohistoric houses. This site is now almost completely inundated by Lower Granite Reservoir (Gurcke with others 1979:36)].

Group 7

The name of this group has been lost. The villages lay down the Snake River, and joined those of the friendly Palouse [Palus Indians]. The people lived mainly by fishing, although they hunted to some extent. They were not considered as warlike as the *Pe-ku'-nin-moo* or the *Will-lu-wo*. No. 69 was the "leader" village. When the time arrived for digging camas on the grounds claimed by this group (69a on the map), near the present town of Moscow, Idaho [this village has been well documented (Schwede 1966:No. 110; Shawley 1984:No. 211; Paul 1987:No. 133], messengers were sent by the chief from the "leader" village to all the villages of this group. In three days all the people came and camped together near village No. 69, and then all moved out to the camas ground. When the ground was reached each village camped by itself; there was no camp in common. All the group seems at this time to have been directly under the control of the chief who was of the "leader" village, who kept order, so that there was no confusion or disorderly behavior. *Ky-ky-mas* was the name of their last chief. This group comprised Nos. 66, 67, 68, 69, 70, 71, [and] 72. When the Nez Perce reservation was established, in 1863, the region occupied by these villages was not included, and all were sooner or later abandoned [These were the westernmost Nez Perce villages. These sites were located on the lower Snake River so that all have been affected by Lower Granite and Little Goose reservoirs].

66. *Wit-kee-'sp*. This village took its name from the stream on which it stood, and which here emptied into the Snake River [The name for this village refers to the alder tree (*Alnus* sp.) (Schwede 1966:No. 147; Paul 1987:No. 163). It was located about three miles down river from Alpowa, probably in the vicinity of Steptoe Canyon (Paul 1987:No. 163) although Schwede places it farther downstream (Schwede 1966:No. 147). All recorded sites in this vicinity were inundated by Lower Granite Reservoir (Gurcke with other 1979)].

67. *Toe-ko'h-pe*. From *toe-ko'h*, a sort of cave, or hole, formed by many stones. A number of such places were in the vicinity of this village site. The village had disappeared before the beginning of the last century [Reid and Gallison (1995:262) suggest the caves or holes

may refer to three shallow rockshelters reported by Nelson (1965:6) opposite Wild Goose Island, or to talus pit clusters near Ridpath or opposite Swift Bar].

68. *Yak-e-you-wa-we*. A large village stood, as its name implies, at the mouth of the creek named *Yak*, which here empties into the Snake River [at the mouth of Yakawawa Canyon; the name refers to something wide, possibly the stream (Schwede 1966:No. 150). An archaeological site at this location (45-WT-52) was inundated by Lower Granite Reservoir (Gurcke with others 1979:61)].

69. *Pa-lote-pe*. *Pa-lote*, muddy; *pa-lote-pe*, muddy and slow river. This was the "leader" village of the group. From here orders were issued in reference to the quest for food [This village was located just below Truax, Washington, between Yakawawa and Wawawai canyons; the name has also been interpreted as referring to a light green color (Schwede 1966:No. 152). All sites in this area were inundated by Lower Granite Reservoir (Gurcke with others 1979)].

70. *Wah-nah-we*. The multitudes of mosquitoes that were in this region gave name to this village. These people became possessed of large herds of horses, and about the middle of the last century they moved in a body to the Yakama tribe in Washington on account of the horse-stealing habits of the white men in their vicinity [the name may possibly be associated with the harvesting of sunflower seeds (Schwede 1966:No. 154). This area is now known as Wawawai; a late prehistoric to protohistoric archaeological site was recorded at this location (45-WT-39). It was examined by archaeologists from 1968 to 1971 (Adams 1972; Yent 1976) and then inundated by Lower Granite Reservoir (Gurcke with others 1979:61). A Whitman County park is located here today].

71. *Ah-tok-sos*. From *tok-ses*, a fording place. *Ah-tok-sos* literally means, where the people came out of the stream. The native name has been corrupted to Texas. Texas ferry is now a white settlement [This village was first reported by Lewis and Clark in 1805 (Moulton 1988:265) and a historic settlement was later located at Texas Rapids known as Riparia. The location on Billy Williams' map should be much farther west and nearly opposite the mouth of the Tucannon River. Schwede discussed a village with a similar name and attributed it to Fletcher but this is nowhere near Riparia which she properly located (Schwede 1966:No. 155). Apparently she looked at the place name without looking into the history of the site. Another interpretation of the Nez Perce name is that it referred to an exclamation (Schwede 1966:No. 155). This site (45-WT-1) has been investigated archaeologically and dates from ca. 8000 BP to the historic period (Miss and Cochran 1982; Carley and Sappington 1984; Reid 1991). Most of this site has been inundated by Lower Monumental Reservoir].

72. *Ah-la-mo'-tan*. The Nez Perce name of this village was *Ah-mo-toe-in*, but the people were much mixed with the Palouse and the name became changed. In this village two languages were spoken—Nez Perce and Palouse. Beyond this village there was no Nez Perce settlement [This site is associated with Almota, Washington (Schwede 1966:No. 156; Paul 1987:No. 247) and the area is still known by this variant of its Nez Perce name. The name may refer to heaped up fire (Schwede 1966:No. 156) but its meaning is uncertain (Paul 1987:No. 247). Almota is actually considerably east of Riparia so again there is some confusion in the location of this village. This site was partially inundated by Lower Monumental Reservoir].

Group 8

The name of this group has been lost. The "leader" village was No. 31. The villages lay along the Snake River near its junction with the Clearwater, and extended up the latter river some twenty-five miles. Beside its descriptive name, the "leader" village was known as *Tah-mal-win-wes*, from *tah-mal-wit*, law or command, and *wes*, from *wetes*, land. From this village were issued the commands respecting the hunt. Under orders from this village the people could hunt toward the Blue Mountains, and toward the north, and on the west side of Craig Mountain. Its control in reference to hunting could reach to Groups 5, 6, and 7, though its power was not as well recognized by 5 and 6 as [it was] by 7. It had no power to permit hunting in the territory of the *Nak-ki'-ma* division, or for crossing the mountains into the buffalo country. When the hunting seasons approached, messages were sent from the "leader" village No. 31 to the "leader" villages Nos. 53 and 54, to ask if the people of Group 8 would be allowed to hunt to the east, in the buffalo country. If the request was refused, the messengers were instructed to ask when the hunting would be allowed. If the reply fixed a time, the message was graciously received and obeyed by the group. The group comprised Nos. 30, 31, 32, 33, 34, 35, 36, 37, [and] 38. The sites of the last five villages of this group were included in the reservation set apart for the tribe by the Treaty of 1863. The remaining villages were abandoned not long after the treaty, the people removing to the land reserved for the tribe [All the villages in this group were located along the lower Snake and lower Clearwater rivers. This is the most densely populated area within traditional Nez Perce territory and many of these sites have been impacted by Lower Granite Reservoir and by the construction of railroads, highways, and other developments].

30. *Tu-ka-yute'-po*. From *tu-ka*, a reed. This was a small village. The inhabitants were much mixed with the Spokane Indians [Another interpretation of the name of this village is that it referred to a cliff or rock going into the water; it was located on the south side of the Snake River about three miles above the mouth of Alpowa Creek (Schwede 1966:No. 141). All sites in this area have been inundated by Lower Granite Reservoir (Gurcke with others 1979)].

31. *Suck-ko'-ly-e-kin-ma*. From *suck-ka*, heaps of sand, and *ly-e-kin*, shore or bank. The name is descriptive of the site where the village stood. This was the "leader" village, and was spoken of as *Tah-mal-win-nes*, the place of command over the land. While this village controlled the movements of the people in the quest for food, it does not seem to have had any special authority over warlike undertakings [Schwede provided a similar interpretation of this village name (1966:No. 139). North Lewiston is located here today].

32. *Pah-ah'nup*, or *Pa-mah-po*. The name indicates a point or island where two rivers come together. Here the Snake and Clearwater join. On the site of this ancient village Lewiston, Idaho, now stands [Schwede agreed with this interpretation but applied the name to other side of the Snake River where Clarkston, Washington, is now located (1966:No. 138). Although partially inundated by Lower Granite Reservoir, archaeological reconnaissance has confirmed the location of this site (45-AS-99; Gurcke with others 1979:37, 65) and test excavations indicate that it dates back to ca. 5000 BP (Sappington 1991)].

33. *Hat-way-ma*. From *Hat*, part of *Hat-ta*, the name of a stream [Hatwai Creek] coming down from the uplands to the Clearwater; and *way*, from *e-you-wah-we*, mouth. This village was at the mouth of the *Hat-ta*. Villages 32 and 33 were near kindred; individuals lived sometimes in one village and sometimes in the other. The people could not intermarry—"it would have been the same as if a man had married in his own village." [This village was first reported by Lewis

and Clark in October 1805 (Moulton 1988:253). Another interpretation of the site name is that it referred to an old woman (Schwede 1966:No. 131); this may be a reference to the name of a particular woman, *Ott-way*, who once lived here (Shawley 1984:Nos. 10, 37) but the meaning remains uncertain (Paul 1987:No. 42). This village has been the subject of extensive archaeological investigations and is the oldest radiocarbon dated site (10-NP-143) in the Clearwater River region with one age of over 10,000 BP; at least ten housepits dating from ca. 6000 to 3000 BP have also been investigated (Ames and others 1981; Sappington 1994). Much of the site is now covered by U.S. Highway 12, Corps of Engineers facilities, and Nez Perce tribally owned businesses].

34. *Yah-toe-e-no*. This village stood at the mouth of the *Yah-ka*, or Bear Creek, now called the Potlatch [River]. Through this valley, which leads up from the Clearwater River to the uplands, passed the trail to the trading post on the Upper Columbia at what is now Fort Colville [Fort Colville]. This village, although not large or important in the days before the advent of the white men, became so after the establishment of the trading posts, as here dwelt one of the chiefs empowered by "King George" to give wives to aspiring hunters. This was the village where Billy's father "took a new wife." [This village has been well documented ethnographically (Shawley 1984:No. 245; Paul 1987:No. 38). A variation on the interpretation of this site name is that it referred to where the river joined another stream (Schwede 1966:No. 102; Paul 1987:No. 38). This village was important in the history of the Lewis and Clark expedition as the party stayed here on both trips across the Plateau. Among other details, they reported a large Nez Perce mat lodge, the presence of Coeur d'Alene visitors, Lewis became involved in an altercation with a Nez Perce man over the party's eating of dogs, and a Lewis and Clark medal was found in a burial at this site in 1899 (Moulton 1991:209-219). The site (10-NP-102) was tested by archaeologists from 1967 to 1971 and the occupation dated from ca. 3000 BP into the historic period; it has been heavily disturbed by railroad and highway construction (Toups 1969; Sappington 1994:26)].

34a. *Yak-kam'-ma*. This village was situated upon a tributary flowing from the west [either Little Potlatch Creek or the Middle Fork of Potlatch River] to the *Yak-ka* [Potlatch River]. Here [in the vicinity of Juliaetta, Idaho] occurred a fierce battle with the Spokanes [Spokan] at the end of a long warfare. During these hostilities the inhabitants of *Yak-kam'-ma* built a breastwork of stone filled in with earth across the valley, or gulch, as a wall of defence [defense]. The origin of the feud between the Spokanes and the Nez Perce is one of the folk-tales of the people, which runs as follows:

In the latter part of the 18th century a feud arose between the Nez Perce and the Spokane [Spokan] Indians, growing out of the following incident: There was a man who lived at *Hat'-way-wa* (No. 33). He was fond of birds, and particularly of two eagles that had their nest near by. He used to listen to their calling to each other, and they gave him much pleasure. One day two brothers who were hunting came along, and the cries of these birds annoyed them. One said: "O, bother the birds!" He strung his bow and shot one bird, which fell by the stream pierced by the arrow. The next day the man said: "Why is it so still? Why do I not hear the cry of the eagles?" And he started to ascertain the cause. As he went he came across the eagle, with the arrow through its body. He pulled out the arrow, noted its mark, and started to find its owner. He discovered the young man and killed him, because he had killed the eagle that the man loved. This young man was married to a woman who was part Spokane. A son was born to her soon after. The mother went to her Spokane relatives, and brought up her son to believe it was his

duty to avenge his father's death. When he was grown he gathered a band of Spokanes, and they went to the *Hat'-way-ma* village and killed nearly all the people. The young man sought and found the man who was his father's slayer. When he found him he cried: "What did you do to my father? Why did you make widows?" And, waxing angry, he thrust his knife into the old man, shouting: "Go to sleep!" For years after there was war between the Nez Perce and the Spokanes, but before Billy was born the two tribes had smoked the pipe of peace and become friends again [This village has been well documented ethnographically (Shawley 1984:No. 246; Paul 1987:No. 172). Another interpretation of the name of this village is that it refers to something being scattered out on a hillside (Schwede 1966:No. 104). In support of Fletcher's translation, the upper tributaries of the Potlatch River are known today as Big Bear Creek and Little Bear Creek].

35. *Lap'-way-ma*. The name *Lap-way* comes from *lapit*, meaning two. Two streams, one from the south and one from the east, unite from where the *Lap-way* [Lapwai Creek] enters the Clearwater. It was on this village site that the mission of Mr. Spalding was started. Here the first mill was built and printing press set up, and the school and church was founded in 1836. After the Treaty of 1863 the government placed the agency for the tribe at this place. [This well documented village was first reported by members of the Lewis and Clark Expedition in October 1805 (Moulton 1988:255). Another interpretation of the name include a reference to butterfly or place of butterflies (Schwede 1966:35; Shawley 1984:93) but this meaning remains uncertain (Paul 1987:123). The area is now known as Spalding and is administered by the National Park Service as part of Nez Perce National Historical Park. Archaeological investigations have documented a long span of human occupation at this site (10-NP-108) dating from ca. 10,000 BP to the present (Chance and others 1985)].

36. *Yah'toe-en-moo*. *Yah-ta* is the name of a creek. The village name signifies to come over the *Yah-ta* [This village was located at the mouth of Pine Creek and its name may be derived from over-ripe *ye't yet* or *cous* (Schwede 1966:No. 100) although Paul (1987:No. 44) stated it had an unknown meaning].

37. *Tah'-sa-hah'po*. *Sa-hah-pi*, between. At this place on the Clearwater there is a great eddy [Big Eddy] a which seems to divide the stream, hence the name. There was a large settlement at this point [This village has been documented ethnographically although several authors have provided conflicting interpretations. Schwede discussed a village at Big Eddy but she provided a different name and then applied this name to a site at the mouth of Bedrock Creek (Schwede 1966:Nos. 98, 99); Shawley discussed a place name at Big Eddy but he also located the village slightly downstream (Shawley 1984:No. 214); and Paul (1987) has an unlabeled dot at this location on his map but there is no mention of the site in the text. A prehistoric site (10-NP-105) was investigated here archaeologically from 1967 to 1971 prior to the development of a rest-stop by the Idaho Transportation Department. Numerous late prehistoric housepits were investigated and the occupation at this site dated from ca. 8000 BP to the historic period (Toups 1969; Sappington 1994)].

38. *Mah'toe-en-no*. *Mah-kah*, snow, is the name of a canyon which here opens into the Clearwater River. Patches of bottomland are found along the banks of the small creek which finds its way through the deep canyon to the river. Indian homes with gardens and little fields flourish on these patches today, but formerly the only inhabitants were in the village at the mouth of the canyon. This village was the last to the east that acknowledged the leadership of No. 31 [This well documented village (Schwede 1966:No. 101; Shawley 1984:No. 88; Paul 1987:No.

39) was located between the mouth of Cottonwood Creek and the community of Myrtle, Idaho. An alternate interpretation of its name is that it refers to something sweet smelling (Schwede 1966:34); Paul stated that the meaning of this name was unknown (Paul 1987:123)].

Group 9

The name of this group has been lost. The villages were upon the [lower and main stem of the] Clearwater River, and commanded that stream from the "Big Canyon" [near Peck, Idaho] to a creek [Jim Ford Creek] some six or eight miles beyond the North Fork of the Clearwater. The "leader" village was No. 40. From this village permission to hunt on Craig Mountain was given, as also to fish in the Clearwater. Group 8 sometimes applied for permission to hunt, while, on the other hand, Group 9 sometimes asked the same permission from No. 31, of Group 8. Groups 7, 8, and 9 early came under the influence of the traders and fur companies, and on the whole have shown less sturdiness in resisting the evils arising from contact with the white men than have other portions of the tribe, although there are many individual exceptions to this general statement. The group comprises Nos. 39, 40, 41, [and] 42. All of these were included in the reservation of 1863.

39. *My-'ik-sone-no*. *My-'ik*, sand. This village was noted for its feasts [Schwede could add nothing to this entry (1966:No. 91); there are no other known references to this village].

40. *Lock-ka-yah-'ma*. *Lock-ka*, pine trees. This was the "leader" village of the group. From it issued permission to fish and to build dams [walls or weirs to obtain fish] in the Clearwater, and also to hunt on Craig Mountain. This village, also, was noted for its feasts [This village was located on the west side of the mouth of Big Canyon Creek and its name was reported by a recent Nez Perce informant as referring to an open space (Schwede 1966:No. 92)].

41. *Ta-wah-'poo*. This village stood at the mouth of the *Ta-wah* (now called the Orafina creek) [Orofino Creek]. *Ta-wah* is derived from *ta-wis*, meaning antlers, this creek being a noted hunting ground for deer. Many people lived here [The location has been confirmed by more recent Nez Perce informants (Paul 1987:No. 81) but this name actually refers to the group of people who lived on Orofino Creek (Shawley 1984:No. 169). A much different interpretation of the name of this village associated it with the negative effects of a place cursed by a shaman (Schwede 1966:No. 82)].

42. *Mis-sah'e-you-wa-we*. From *mis-sah*, what for?, and *e-you-wa-we*, mouth. This was a small settlement [at the mouth of Jim Ford Creek (Schwede 1966:No. 37; Shawley 1984:Nos. 89, 182). The name was also interpreted as referring to lying or to a liar (Schwede 1966:32)].

Group 10

This group belongs to the *Nak-ki-ma* division of the tribe, and was called *We-am-mo*. The villages of this group covered the region now known as Kamiah valley, a stretch of bottom-land from three and a half to four miles long, spreading in the middle to nearly a mile and a half in width, through which the Clearwater flows. Judging from the depressions of the long communal houses, the villages must have been quite close together. The people of this group were not so warlike as those of Group 11. They were protected by the latter, as, owing to the character of the valley, no enemies could reach it except through the territory claimed by Group 11. No. 49 was the "leader" village, but authority for hunting came from Nos. 53 and 54 of

Group 11. Group 10 comprised Nos. 43, 44, 45, 46, 47, 48, 49, 50, [and] 51. All these villages were included in the treaties of 1855 and 1863, so there was no removal of the people when the reservation was established. They were among the most progressive of the tribe. [By progressive, Alice Fletcher meant receptive to missionary influences. By all accounts there were numerous sites in the Kamiah valley but there is no means of delineating them all. It appears that there were multiple names for the same sites and that different studies have reported various numbers and locations of sites].

43. *Ho-li-'e-poo*. *Ho-li*, elbow. The village lay in the bend of the river—a small village, and very old, on the west bank of the Clearwater [This village is not well documented. The origin of its name could possibly be a Salish word (Schwede 1966:No. 68)].

44. *Ny-ouse-so'*. The name characterized the ground, which was damp. A mist was sometimes seen rising from the spot. Here was quite a good-sized settlement. Today the site is covered with fields and Indian homes [This village location was confirmed by one recent Nez Perce informant. Another possible interpretation of the name is that it referred to a slope (Schwede 1966:No. 67)].

45. *Ko-lo'*. From *ko-lah*, a slight elevation. A small village was here. The people of *Ko-lo'* and also of Nos. 43 and 44 were, at the beginning of the 19th century, very much afraid of horses, and hunted the deer a-foot [No one has been able to provide additional information concerning this site (Schwede 1966:No. 69)].

46. *Ty-yi'nap-po*. From *ty-yime*, summer. A warm spring bubbled up at this place and many people lived here [Another interpretation of this name is that it referred to middle or mid (Schwede 1966:No. 70). This site may also correspond to the location of the Heart of the Monster at East Kamiah (Schwede 1966:No. 49; Paul 1987:No. 195) which is now owned by the National Park Service and administered as site No. 15 within Nez Perce National Historical Park. The Heart of the Monster is significant in Nez Perce mythology and the story was first recorded by Fletcher (Sappington and Carley 1995)].

47. *Will-lu-'e-mal*. The word signifies "great hospitality." The people of this village were noted for their honesty and kindness and the absence of *tewats*, or men of the sorcerer class [see Fletcher's discussion of *tewats* (Sappington and Carley 1995) and Walker (1989) for additional information]. They gave feasts of deer, fish, cous, and camas. The village was quite a populous one [Without stating a source, Schwede said that this name referred to running (Schwede 1966:No. 71)].

48. *Kamiah-wa-ta-ly-'e-poo*. The name means, the people living on the lower part of the Kamiah creek [Lawyer Creek]. This was a large village [The root word for Kamiah is spelled variously but refers to Indian hemp (*Apocynum cannabinum*) (Harbinger 1964:57; Shawley 1984:No. 52; Paul 1987:No. 70). This village was placed on upper Lawyer Creek by a recent Nez Perce informant (Schwede 1966:No. 51)].

49. *We-am-'ma*. From *we-am*, many springs. At the beginning of the 19th century this was a large village of 500 people or more, but before the middle of the century it had been almost depopulated by the black measles, introduced by the Walla Walla or Cayuse Indians. As many as thirty or forty persons died in a day. Many hundreds of the Nez Perce tribe perished. About the same time smallpox was brought by Spanish blankets from the southwest. For a time the region was almost deserted, as the people fled to the buffalo country, by way of Spokane. It was this scourge of measles that led to the Whitman massacre by the Walla Walla [Wallawalla and Cayuse] Indians [in November 1847] [Without stating why, Schwede said that the name refers to

traveling and coming into an area (Schwede 1966:No. 72). Another version of this name equates it with the Kamiyah area and the people who lived there (Shawley 1984:Nos. 102, 239).

50. *Kip-la-loo*. This name is derived from the word *kip-kip*, which indicates the movements of a person hitching himself along by his hands. During the 18th century (some Indians say longer ago) a man lived here who was a cripple. He was a skill[ful] maker of nets, and the village took its name from him. It was a very small village on a small bottom, on the west side of the Clearwater [According to a recent Nez Perce informant, the name refers to being bunched up together like snakes in a ball (Schwede 1966:No. 61)].

51. *Te-sy'yak-poo*. The name designated the white rocks that rise at this point. This was a large village on the east side of the Clearwater. It was the village of "Billy", the maker of the map [A similar translation is that the name refers to "rocks sticking out" (Paul 1987:No. 72)]. This site may possibly have an association with the Nez Perce word for skunk; if this is the same place, it was also an important fishing site (Schwede 1966:No. 52; Shawley 1984:No. 185)].

Group 11

This group was known by the name *Tsy-was-'poo*. All of its villages were on the South Fork of the Clearwater River except No. 52, which lay on the main stream a little east of where the river forks. This appears to have been the leading group not only of the *Nak-ki'-ma* division, but of the entire tribe. The positions of the villages had certain strategic advantages. They commanded the approaches from the east and the south—the two points from which incursive enemies came. Moreover, they also commanded direct access to Camas Prairie, an important upland stretch well known to surrounding tribes, and which was a meeting ground for trade. It was the custom for all the villages on the Clearwater to camp on this prairie in the month of May and there dig camas roots, near where the town of Grangeville, Idaho, now stands. A kind of market was also held at this place. The Spokanes brought bear, beaver, mink, and martin [marten] skins from the Columbia River mountains; the Umatillas, woven bags and, later, horses; the Walla Walla, embroidered bags, called *ka-kah-pah*; the Palouse, salmon and, later, horses; the Flatheads, buffalo robes; while the Nez Perce traded camas and deer and elk skins. A later market was held in early summer (June) on an upland lying east of Group 10, now called Weippe Prairie. Here belated exchanges were finally made. The people of Group 11 were in frequent conflict with the Snakes on the south and the Blackfeet on the east, and stood as a barrier or guard to the groups lower down the Clearwater, and even to those west of Craig Mountain. It is said that they always met danger with this cry: "Although I die, although I die, it is good! It is not a common death!" The "leader" was No. 53 and 54. They were spoken of as "brothers." The two were really one village; they could not intermarry, as they were one band. Only this "leader" could give permission to enter the buffalo country or hunt in the mountains to the east or south. They also controlled war excursions. Not only were they "leader" in this group, but their voice was potent in the councils of Group 10 and of all the *Nak-ki'-ma* people. As the Indians said: "Their words were heard and respected by the *Pu-nin'-moo* and all the intermediate groups." In fact, this seems to have been the controlling group of the entire tribe. When Lewis and Clark entered the Nez Perce Country they first met the people of Group 10, but their presence was at once made known to Group 11, and their peaceful passage down the Clearwater to the Snake [River] was made possible by the willingness of this group to allow them to go unmolested. It was because of the influence of this powerful group that these explorers were not

irectly attacked by the warriors of the *Pu-nin'-moo*. Speaking Eagle, the leader of the party that went to St Louis in 1832 [1831], came from a village of Group 10, but all of his companions were from villages in this group. When, in 1834, Dr. Whitman and Mr. Spalding crossed the Rocky Mountains, they were met far to the southward by a delegation sent by the leading villages of this group, and were safely escorted by it through the Nez Perce Country. All the villages of this group except Nos. 64, 65, and 77 were included in the reservation established by the Treaty of 1863. This group comprised villages 52, 53, 54, 55, 56, 57, 58, 64, 65, and 77. The "leadership" was with the twin villages 53 and 54.

52. *Ah-kakh-tse'ween*. From *Ah-kakh*, (magpie) and *tse'ween*, promontory. This was a populous village on the east side of the Clearwater River, not far from the mouth of the South Fork. Many depressions marking the sites of the long houses were perceptible at the time this map was drawn. [Alice Fletcher was photographed standing in house pits at this site (Sappington and Carley 1995:Fig. 3). The name and general location of this site has been well documented by more recent ethnographic information but there are conflicting interpretations about the meaning of the name. Schwede provided the most comparable match stating that it referred to magpie point (Schwede 1966:No. 44). However, Shawley associated the name with a rock formation on the hill resembling a "Buffalo hat" and placed the village nearby (Shawley 1984:No. 2) while Paul assigned the location to the ridge and translated the name to an association with "buffalo hump" based on a narrows in the river (Paul 1987:No. 210). Extensive archaeological testing here in the 1980s confirmed the presence of prehistoric and protohistoric housepits at this site (10-IH-1395) and dating indicates that it was occupied from ca. 2500 BP into the historic period (Sappington and Carley 1987)].

53. *Took-poo'-e-ma*. This village took its name from the South Fork of the Clearwater, *Took-coo-pa*, from *took-coop*, straight, as the river here runs directly south for quite a distance. The village was near the point where the South Fork empties into the Clearwater River itself. This was one of the twin "leader" villages of Group 11 [The location of this band and village has been confirmed by other accounts (Schwede 1966:No. 14; Shawley 1984:No. 193; Paul 1987:Nos. 62, 63). Another interpretation for the name of the South Fork is that it refers to "where something has been burned" (Shawley 1984:No. 193). Limited archaeological testing suggests that the site (10-IH-1310) has been disturbed and possibly destroyed by the operation of a log mill (Sappington and Carley 1983:8-14). The town of Kooskia is located here today].

54. *Pe'toe-e-no*. This was the "brother" village to No. 53, and shared with it in leadership, the twin villages being one band. Their commands were obeyed throughout the entire tribe. *Pe'toe-e-no* was on the bottomland on the west side of the South Fork not far from the mouth of *Pe'tat* canyon (now called Cottonwood canyon). On the map, Nos. 53 and 54 should have been placed a little nearer together, and closer to the South Fork branch of the Clearwater [The meaning of this name remains uncertain (Paul 1987:No. 308). Schwede placed several villages in this vicinity but she did not attribute any of them to Fletcher (1966:26). The town of Stites is located in this vicinity today].

55. *Pe-tat-e-you-wah-we*. *Pe-tat*, the name of Cottonwood canyon; *e-you-wah-we*, mouth. This was a small village at the mouth of this canyon where it opens into the South Fork. It was not far from No. 54 [The location of this village was confirmed by information from Curtis, Chalfant, and Nez Perce informants (Schwede 1966:No. 8; Shawley 1984:No. 115; Paul 1987:No. 58). The name appears to be a reference to cottonwood (Shawley 1984:No. 115)].

56. *La-we-kas'-po*. *We-kas*, a cache. Near the site of this village was a cave [near a place in the river] where fish could be easily caught, and where they could be stored for a time without spoiling. The soil was favorable for the building of caches, and there were many at this place. There was quite a large village here on the east side of the South Fork. The people subsisted mainly on fish [The location of this village was confirmed by Nez Perce informants (Schwede 1966:No. 15; Paul 1987:No. 218). Another interpretation of this name is that it refers to a basalt shelf in the river which was a major fording place in low water (Shawley 1984:No. 71). The site is now covered by the community of East Kooskia].

57. *Kee-kits-see-'weesph-poo*. *Kits-see-we*, crooked. At this place grew many trees which were queerly twisted and very crooked. It is said that these trees grew from the twigs which were used by mystery men [*tewats*] when, after the sweat-bath, they thrust the twigs down their throats. After using them in this manner they planted them, and they grew into gnarled and crooked trees. The village here was a large one. After the agents of the fur companies had penetrated into this region, "King George" made one of the hunters of this village a "chief", and authorized him to "give new wives" [This village was probably located at the mouth of Rabbit Creek on the east side of the South Fork of the Clearwater (Schwede 1966:No. 6; Paul 1987:No. 309 in text, but omitted from his map)].

58. *Took-pa'-ma*. This was a large village. Where it lay, the [South Fork of the Clearwater] river ran straight, without bends. It took its name from *took-coopa*, straight [Other sources place additional sites along the South Fork but none correspond with this name and Fletcher's description is too vague to correlate with contemporary geography].

64. *Lum-ta'ma-po*. *Lum-ti*, the end. This was the furthest village up the Salmon River, and was at the mouth of Whitebird Creek, *Sa-ma-ta*. The people of this village refused to enter into the treaties of 1855 and 1863. They joined with Chief Joseph in the war of 1877 [A Nez Perce band was associated with Whitebird Creek (Shawley 1984:No. 69; Paul 1987:No. 5) and their village is well known based on its role in the war of 1877 (McDermott 1978; Wilfong 1990). Another interpretation of the name of this site is that it referred to being permanently dissatisfied (Schwede 1966:No. 254). This site is now owned by the National Park Service and administered as Site 13 of Nez Perce National Historical Park].

65. *Nee-pa'-ha-ma*. From *nee-pa*, a cave. This village stood on the stream *Te-pah-he* [Rock Creek] where it entered the Salmon River. The stream is said to take its rise in a cave where there is ice nearly all the year round, and the village took its name from the cave [Several ice caves have been reported at the head of Rock Creek in the breaks just below Tolo Lake. Confirmation of this village has been provided by several Nez Perce informants. Another interpretation of the name is that it refers to the term of address used by an older sister for her younger brother (Schwede 1966:No. 252; Paul 1987:No. 14). Archaeological investigations were conducted at several sites along lower Rock Creek in the 1960s, including Weis Rockshelter (10-IH-66) and the Cooper's Ferry site (10-IH-73) at the mouth of the creek which may correspond to *Nee-pa'-ha-ma*; prehistoric occupation in this areas dates from ca. 10,000 BP into the late prehistoric period (Butler 1962)].

77. *Hoo-koo*. The word means, at the foot of the mountain. After this village was deserted the site became a favorite stopping place for hunters and travelers, and received the name *Pa-yak-'sa-wit*, tent, because of a close grove of trees that grew there. Their branches were so closely interwoven that they afforded a shelter from the storm as effective as a tent. A portion of this grove remained in 1891, and formed the picturesque entrance to the town of Mt. Idaho,

which occupied the place where the ancient village, *Hoo-koo*, stood [Other interpretations of *Pa-yak-'sa-wit* stated that this name referred to a raw hide house or a buffalo hide tipi (Schwede 1966:No. 2; Shawley 1984:No. 117; Paul 1987:No. 16)].

Group 12

The name of this group was *Sal-wah'-poo*, meaning the people of the *Sal-wah*, as the Middle Fork of the Clearwater was called [According to contemporary geography, the segment designated the Middle Fork begins at the confluence of the Lochsa and Selway rivers at Lowell, Idaho and extends to the mouth of the South Fork at Kooskia where the two forks form the main Clearwater. Most early accounts did not distinguish between the Middle Fork and the Selway]. Whatever may have been the power and position of this group, it had lost its prestige before the beginning of the 19th century. Only one village survived at that time. The sites of the villages of this group are spoken of as the oldest villages of the tribe. It comprised Nos. 59, 60, 61, 62, [and] 63. It is not known which was the "leader" village. The one village that survived until the beginning of the last century took its commands from the "leader" of Group 11 (Nos. 53 and 54). The lines of the reservation established by the Treaty of 1863 did not include the sites of villages 61, 62, and 63; the others were deserted by the middle of the last century.

59. *Tuk-ae-tack'poo*. In the vicinity of the small village at this point were found many stones suitable for use as the pounding stones of the bottom of the baskets in which the Indians pulverized the camas into flour. This site was said to be a good place to throw nets [Fletcher did not provide a translation for the name of this village and Paul said the meaning was unknown (Paul 1987:No. 310). However, two interpretations have been provided: this name referred to something going uphill which probably indicated that there was a trail here (Schwede 1966:No. 16) or it referred to "anyplace where you come out of a fording place" (Shawley 1984:No. 209). This site (10-IH-1009) was tested in the early 1990s as part of the development of a picnic area by the Clearwater National Forest; the occupation was radiocarbon dated from ca. 4000 BP to the historic period. In support of the description by *Kew-kew'-lu-yah*, net weights were among the artifacts recovered (Sappington 1994)].

60. *Kam'-nak-ka*. The name is derived from *kam-ma*, which furnished the fiber out of which fish nets were made [this is the same plant, Indian hemp, for which Kamiah was named]. A large village was once at this place. [Other sources provide similar data (Schwede 1966:No. 17; Shawley 1984:No. 59; Paul 1987:No. 153). Looking Glass' village was located here in 1877 (Wilfong 1990:121). The site (10-IH-820) is now part of Kooskia National Fish Hatchery. Recent archaeological investigations indicate that it dates from ca. 4500 years BP into the historic period (Sappington and others 1997)].

61. *Sits-ah'-lu-poo*. The word denotes a stony place. Here was the only surviving village of this group at the beginning of the 19th century [Despite providing different names, the meaning of this name was tentatively confirmed by Nez Perce informants. However, their understanding of the location of this site makes it seem questionable. Schwede correlated this village to a camp with a different name (Schwede 1966:No. 25) while Paul placed it on the Selway River in his text but omitted it from his map (Paul 1987:No. 312)].

62. *Sotes'poo*. The word means, a bend in the river. This village disappeared before the beginning of the last century, and the sites of the long houses are now covered with forest trees [This name was reported to be based on *so'c*, which is Salish (Schwede 1966:No. 20)].

63. *Ne'hu-lat-poe*. This is said to be the oldest village site known to the Nez Perce. It lies near a pass through the Bitterroot Mountains, more than sixty miles up the Middle Fork of the Clearwater River [actually the Selway River], and about seventy miles from the "buffalo country." There is a tradition that from this village all the villages of the tribe came. At the present time the site is covered by forest trees, and here grow some of the largest of the trees known in this region. There is no tradition by which to fix the time of its occupation or desertion [*Kew-kew'-lu-yah's* map clearly places this site on the Selway River. Traditional Nez Perce trails followed a braided system and there were alternate routes for the main route over the Bitterroots (Shawley 1984; Broncheau-McFarland 1992). Based on Chalfant, Schwede erroneously placed this site about a mile above the mouth of Brushy Fork on the Lochsa near Lolo Pass (Schwede 1966:No. 37) but this location is well north of the site indicated by *Kew-kew'-lu-yah*. Examination of his map indicated that this village was located at Bear Creek. Recent investigations by Nez Perce National Forest archaeologists have resulted in the discovery of a site here with a radiocarbon assay of ca. 3000 BP].

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Endnotes

¹ The General Allotment (also known as the Dawes Act and the Severalty Act) of 1887 was intended by Congress to assimilate American Indians into mainstream American society. It was designed to break up the tradition of tribally held land on reservations and to transform individual Native Americans into land-owning farmers and ranchers. Each head of a family was to receive one-quarter section (160 acres), each single person over eighteen as well as each orphan was to receive one-eighth section (80 acres), and all other single persons under eighteen born prior to an allotment order were to be assigned one-sixteenth section (40 acres). Individuals were allowed to select their holdings and the process took four long seasons for Fletcher to complete. The act benefited Euroamerican settlers by allowing them to purchase all unallotted lands with the proceeds intended to be used for the education and advancement of each tribe as determined by the government. Prior to the Allotment Act, the Nez Perce Reservation included over 750,000

acres; after approximately 2000 allotments were made to members of 250 families, the remaining 542,000 acres was declared surplus and opened for settlement in 1895.

² James Stuart was employed by Fletcher in June 1889 for a salary of sixty dollars per month. Needing a "competent and trusty man who understands both languages" as her driver, she considered James Stuart to be "well educated, having attended the Chimawe School at Salem, Oregon. . . He reads and writes and bears a good reputation as to his character" (Fletcher 1889-92b:5 June 1889). She reports his excellent and loyal service, in spite of having his life threatened for working with her on allotment (Fletcher 1889-92b:26 December 1889). During the second year of allotment, Fletcher requests that Stuart's salary be raised to seventy dollars per month for "the expense of living in the wilderness" and because "he is the only man I know on the reservation with sufficient education, general intelligence and honesty of act and speech to serve in the capacity of interpreter in allotting lands . . ." (Fletcher 1889-92b:4 January 1890). James Stuart was the grandson of Fletcher's informant Nancy Corbett (Fletcher 1889-92c:9). Throughout her 1889 correspondence Stuart is spelled "Stewart." From 1890 through the completion of allotment and in the Allotment Book (Fletcher 1889-92c), it is spelled "Stuart."

³ Frederic Ward Putnam was a major anthropological figure in the late nineteenth century. He was curator of the Peabody Museum at Harvard University from 1875 to 1909 and Peabody Professor of American Archaeology and Ethnology from 1887 to 1909. He was responsible for the education of many early anthropologists and for establishing a number of academic and museum programs in the United States (Willey and Sabloff 1993:48-52).

⁴ Sisters Sue and Kate McBeth were Presbyterian missionaries who worked among the Nez Perce from 1873 to 1915. They provided considerable support for Alice Fletcher and facilitated her allotment and research. "I am lingering here a day longer to get a little more out of Miss McBeth's *ms.* so that I can do more intelligent work among the Indians" (Fletcher 1889-92a:20 August 1890). Kate McBeth also published a history of the Nez Perce (McBeth 1908). After leaving Idaho Fletcher wrote to Kate McBeth for linguistic assistance. Sending a list of 220 names taken from her registry of the tribe and arranged alphabetically, Fletcher asks McBeth for their translation. Fletcher relied on McBeth's expertise of the language and requested answers to a number of questions (Fletcher n.d: Fletcher to McBeth, 9 and 30 January 1895):

. . . I want to get a few facts for each name if possible. I want to get a translation of the name and I would like to know how it is composed . . . I shall be glad to have you correct the spelling if you will, making it agree with your form of spelling the language . . . I notice that a very large number of female names end in "my." Can you explain that! . . . I notice that the syllable "roe" occurs often in female names. Can you explain this. You can write the translations of the name in the vacant line.

Filled lines and two different styles of handwriting suggest that McBeth translated the names and returned the list to Fletcher.

⁵ Francis La Flesche was an Omaha Indian who became a noted anthropologist. He co-authored several articles and books with Alice Fletcher including *The Omaha Tribe* (1911).

⁶ Lewis and Clark arrived in Nez Perce Country in September 1805 and remained among the Nez Perce for two weeks before departing in canoes for the Pacific Ocean. On their return the expedition stayed among the Nez Perce from May to July 1806. The expedition spent more time among the Nez Perce than with any other Plateau tribe and they clearly thought highly of their hosts. The journals of the expedition provided detailed information on many aspects of Nez Perce life as it existed at this time (Sappington 1989).

⁷ The North West Company was established in the Pacific Northwest in 1807 and it controlled the fur trade in this area from 1814 to 1821. In 1818 the North West Company built Ft. Nez Percés near Walla Walla in southeastern Washington to serve as a trading center for the Nez Perce and other Plateau Indians. The North West Company merged with the Hudson's Bay Company in 1821.

⁸ Ft. Colville (correctly spelled Colvile in reference to the Hudson's Bay Company) was built at the confluence of the Kettle and Columbia rivers in northeastern Washington by the Hudson's Bay Company in 1825 to serve as its Colvile District headquarters. From that date until 1860 Fort Colvile was the main supplier of trade goods between the Cascade and Rocky mountains (Chance 1973).

⁹ They actually departed in late summer and arrived in early fall 1831. George Catlin was a noted painter of American Indians in the 1830s and he is discussed by Fletcher below. His book has been reprinted (Catlin 1973).

¹⁰ Speaking Eagle was also known as *Tipyahlanah* and *Kipkip Pahlekin*. He was a warrior about 44 years old who came from the village of the Kamiah leader called *Tunnachemootoolt* by Lewis and Clark in 1806 (Josephy 1965:96).

¹¹ More correctly, *Ka-ou-pu* was the son of a Nez Perce man from the Kooskia/Stites area and of a Flathead woman (Josephy 1965:96).

¹² *He-yonts-to-han* was also known as *Hi-yuts-to-henin*, he was about 20 years old and was related to *Tipyahlahah* (Josephy 1965:96). His portrait was painted by Catlin (Catlin 1973:Plate 207).

¹³ His name has also been spelled *Tawis Geejumnin* and translated as "No Horns on his Head," or "Horns Worn Down Like Those on an Old Buffalo"; he was also about 20 years old (Josephy 1965:96). His portrait was painted by Catlin (Catlin 1973:Plate 208).

¹⁴ The Lolo Trail was the main route from Nez Perce Country to the buffalo country in western Montana (Broncheau-McFarland 1992).

¹⁵ Henry Harmon Spalding, a Protestant missionary, arrived among the Nez Perce in 1836. His mission was on Lapwai Creek in the Clearwater River valley at present day Spalding, Idaho.

¹⁶ Marcus Whitman was a medical doctor and missionary among the Cayuse Indians from 1836 to 1847. His mission was near Walla Walla, Washington.

¹⁷ Nez Perce mission at Lapwai.

¹⁸ There is an error here since Boise was not founded until the early 1860s and it is located in southwestern Idaho well away from Cayuse territory.

¹⁹ Lieutenant Colonel Edward Steptoe was the leader of a U. S. Army expedition from Fort Walla Walla against a confederation of Plateau Indians including members of the Spokane, Yakama, Coeur d'Alene, and Palus tribes. The force was defeated near Rosalia, Washington, in 1856.

²⁰ Isaac I Stevens was the first governor and Indian agent for Washington Territory from 1853 to 1857. In 1857 he became Washington's delegate to Congress and later became a major general for the Union during the Civil War. He was killed at the Battle of Chantilly in northern Virginia in 1862.

²¹ The first treaty with the Plateau Indians was made by Isaac Stevens near Walla Walla, Washington, in 1855.

²² After the discovery of gold on the Nez Perce Reservation in 1860, a second treaty was conducted at Lapwai, Idaho, in 1863. This treaty reduced the 1855 reservation of ca. 7.7 million acres to its present size of ca. 750,000 acres.

²³ There are various spellings of this name. Haruo Aoki (1975) derives the Nez Perce *nimipu* from Numic *nimi* meaning "person, Indian."

²⁴ Numerous references occur in the accounts of early travelers, and in the oral histories of both Nez Perce and Euroamerican settlers in northeastern Oregon, to chronic and longstanding hostilities between the resident Nez Perce and intrusive Numic-speaking peoples from the south. The invaders are variously referred to as "Snakes," "Shoshokoes," "Diggers," "Shoshones," "Bannocks," and "Pokatellas."

Nez Perce warrior Yellow Wolf, born in the Wallowa Valley in 1855, told his biographer of a maternal great grandfather "killed in battle with the Pokatellas, fighting for possession of Wallowa Valley" (McWhorter 1983:24). In the winter of 1834, Captain Benjamin Bonneville encountered an assembly of at least 100 families of "Diggers" living in "crescent shaped brush windbreaks" near the mouth of Powder River (Irving 1986:224-225). Not long afterward, a burial mound marking the grave of a Nez Perce killed by "Shoshokoes" was pointed out to Bonneville in the Grand Ronde valley (Irving 1986:245-246). The missionary Henry Spalding referred to a "large number of Snakes lurking around to steal" in the mountains above Wallowa Lake in July 1839 (Drury 1958:271). In one entry Spalding attributes two set fires to the Shoshone while in another he records "several horse tracks seen, four snake arrow points found." The Horner manuscript includes several explicit but undated references to conflict between the Nez Percés and "Snakes," "Shoshones," or "Sheepeaters." As secondhand as these accounts may be, they paint a picture compatible with those given by natives and eyewitnesses. Thus, Battle Creek, a first order tributary of the Snake River in Hells Canyon (river mile 242.3), functioned as a base camp for Shoshone raiders until the Nez Perce drove them out (Horner 1940s:23-24). Cemetery Ridge, at the head of Tully Creek where Bonneville exited the Imnaha in February 1834, was named after a fight between the Nez Perce and "renegade Snake Indians." The Snakes

were defeated and their bodies were buried beneath cairns on the ridge (Horner 1940s:63). At Corral Creek and at Fence Creek, both tributary to the Imnaha just east of the Chesnimnus country, fights are reported between Nez Perces and Snakes (Horner 1940s:73-74). At Hurricane Creek on the north slope of the Wallawas, "roaming Snakes" wiped out a Nez Perce family fish camp (Horner 1940s:144). The most northerly fight mentioned occurred on the north side of the Grande Ronde River near the mouth of Rattlesnake Creek where a "hard battle" between Nez Perce and Shoshone groups left 17 dead (Horner 1940s:155).

²⁵ By contemporary geography, the Selway River is distinct from the Middle Fork of the Clearwater. The Lochsa and Selway rivers merge at Powell, Idaho, where they form the Middle Fork. The Middle Fork then flows west until it meets the South Fork at Kooskia, Idaho and these streams form the main stem of the Clearwater.

²⁶ The attack on the Nez Perce village at White Bird Creek on 17 June 1877 was a major defeat for the U. S. Army. For more information see McDermott (1978) or Wilfong (1990).

²⁷ More detailed descriptions by Fletcher describing these structures have been published elsewhere (Sappington and Carley 1995).

²⁸ More detailed descriptions by Fletcher describing the whippers has been published elsewhere (Sappington and Carley 1995).

²⁹ The southern boundary of Nez Perce Country defined by the Treaty of 1855 also accords with this interpretation. In Article 1, the 58 Nez Perce signatories claimed land to "the crossing of Snake River, at the mouth of Powder River." In Article 2, they were ceded land "to the crossing of the Snake River fifteen miles below the mouth of the Powder River" (Kappler 1904:702-703). By comparison, Schwede's placement of village Group 1 is much closer to the southern border defined by the "steal" Treaty of 1863.

³⁰ Horner's toponomy for Wallowa County place names says of Imnaha: "In the very early days the Im-na-ma-ha Indians were very nearly wiped out of existence by the Snake Indians as it was territory claimed by both sides—by the Snakes and by Joseph and his father's father. The latter was chief of Bekoonan, a country south of the Salmon River" (Horner 1940s:146). "Bekoonan" corresponds in name, position, and contested situation with Billy's village Group 2 *Pe-ku'nin-moo*.

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ALICE CUNNINGHAM FLETCHER'S "THE NEZ PERCE COUNTRY"

ROBERT LEE SAPPINGTON
CAROLINE D. CARLEY
University of Idaho

KENNETH C. REID
JAMES D. GALLISON
Rainshadow Research

Abstract

Alice Cunningham Fletcher was the first anthropologist to study the Nez Perce Indians. She spent four field seasons, from 1889 to 1892, working among the Nez Perce as a Special Agent of the United States government allotting land. At her request, a Nez Perce elder prepared a map of Nez Perce territory that included the locations and descriptions of 78 traditional villages as they existed in the early nineteenth century. This 1891 map and her accompanying manuscript are published here for the first time.

Editors' Introduction

Alice Cunningham Fletcher (1838-1923) was a well known anthropologist in the late nineteenth and early twentieth centuries (Mark 1988). She was sent to the Nez Perce Reservation as a Special Agent of the United States government in order to implement the allotment program mandated by the Dawes or Severalty Act of 1887.¹ She spent each summer and fall from 1889 to 1892 working among the Nez Perce in north central Idaho. In addition to her allotment work, she attempted to acquire ethnographic data whenever possible. As the first anthropologist to work among the Nez Perce, she was in a unique position to record data that would be unavailable to later anthropologists and historians. Fletcher prepared two manuscripts concerning Nez Perce culture but neither of these was published during her lifetime. The first was recently published in *Northwest Anthropological Research Notes* (Sappington and Carley 1995). This article represents the publication of the second manuscript, which Fletcher entitled "The Nez Perce Country."

Fletcher worked with a number of Nez Perce people but one of her principal informants was *Kew-kew'-lu-yah* (whose English name was Jonathan Williams although he was usually called Billy Williams), a Nez Perce elder who was born ca. 1815. At her request, *Kew-kew'-lu-yah* prepared a map of Nez Perce territory that included the locations and descriptions of 78 traditional villages as they existed in the early nineteenth century. The basic data for "The Nez Perce Country" was collected on 10 and 11 June 1891. Fletcher provided a biographical sketch of Billy and discussed her methods as indicated below. Because she could not speak the Nez Perce language and Billy could not speak English, it is likely that translation was provided by

James Stuart, a man of Nez Perce and Euroamerican ancestry who served as Fletcher's interpreter² during her allotment work (Sappington and Carley 1995).

Fletcher was obviously excited about this project. Shortly after collecting the data, on 22 June 1891, she wrote to her mentor Frederic W. Putnam,³ a leading anthropologist and curator of the Peabody Museum:

I've secured from one of the oldest and most remarkable men of the Nez Perce tribe a map on which he has drawn all the Nez Perce Country and created all the villages of the tribe, 77 or 78 of them... I've the names of these villages and many curious items.... I want the map to go to the Museum eventually. I shall send a photograph of the old Indian who drew the map. I have tested its accuracy with several old Indians. This is the first time the villages etc. of this tribe have been gained and I've also the inside history of the four men who went to St Louis for teachers in 1832, those whom Catlin painted. I can make a very interesting article when I can get at Catlin's work and contract or supplement [sic] his story.

I thought I would like to send something to the Ass.[American Association for the Advancement of Science] and this map is both interesting and valuable. Later I will place beside it one of our maps and show the same rivers etc. ...I've all the Nez Perce names of the rivers on the map... I don't want any one but the Museum to get it to keep [Fletcher 1889-92a].

Another letter to Putnam on 6 August concerns her presentation of the map and a biographical sketch of Billy Williams at the August 1891 meeting of the American Association for the Advancement of Science in Washington, D.C. From Ft. Lapwai, Idaho, Fletcher reiterated how important she considered this project to be:

I mail with this a paper for the Ass[ociation]. It is in two parts. The first is the paper, the second the legend of the map... I've made a tracing of the important portion of it for my future work here. I hope the paper will please you. It is all new, no one I think has ever gained this information. I have here a field to myself. You will see I have learned some thing of this tribe and I have much more I could add, but I do not wish to be too lengthy. I send my only copy. I have no time to make another, I am sorry to send a ms that is not clean and clear, but I am so closely occupied that I can't do any writing except at catch moments and it would take me days to copy and delay too long. I should like the paper published so as to hold my material...[Fletcher 1889-92a].

The abstract was published in the Proceedings of the American Association for the Advancement of Science in 1891 (Fletcher 1891). Fletcher continued to work on the "The Nez Perce Country," for some time after she left Idaho. In a letter to missionary Kate McBeth⁴ on 30 January 1895 Fletcher wrote from Washington, D.C. and asked a question about Billy's map. One of her introductory comments in the manuscript indicates that she was still working on it in the twentieth century. However, she never completed this project. Shortly after her death, Francis La Flesche,⁵ her adopted son and collaborator on numerous projects, submitted this manuscript to the Bureau of American Ethnology for publication. The manuscript was rejected by J. Walter Fewkes, Chief, Bureau of American Ethnology. In a brief letter to La Flesche dated 4 October 1926, Fewkes responded that "we find, however, that it is not feasible to bring the paper before the committee for publication either by the Bureau or the Smithsonian, and I therefore return it with many thanks" (Fewkes 1926).

Fletcher's research on the Nez Perce was overlooked during her lifetime. Neither of the two principal early ethnographies (Spinden 1908; Curtis 1911) mention her work although they do refer to some of the sites that had already been reported by Fletcher. Subsequently, this manuscript was forgotten until the 1960s when it was located by Deward E. Walker, Jr. One of his students employed it to compose a composite study of Nez Perce settlement patterns (Schwede 1966). Schwede's thesis included nearly 300 sites and incorporated information ranging from Lewis and Clark in 1805-1806 to data acquired from Nez Perce informants. Schwede combined Fletcher's manuscript with other reports and located 75 of those sites based in part on Fletcher's research. Despite this, later researchers did not examine Fletcher's original work and most scholars have relied on Schwede, although some of the information is inaccurate, as indicated by others and discussed below. The published version of Schwede's thesis (1970) intentionally did not include specific site location data.

At some point, probably in the 1970s or early 1980s, a Forest Service employee retyped "The Nez Perce Country" and redrew the map. This appeared to have been done quickly and some obvious errors are evident. Copies of this version were circulated among some scholars, including the first two authors, who obtained a photocopy in 1982. Stephen Shawley may have examined this version of "The Nez Perce Country" because in one of his 251 listings he added in parentheses "Refer to Fletcher notes" (Shawley 1984:101) but he did not cite this manuscript specifically nor did he include it among his references cited. Elmer Paul, a Nez Perce elder, also consulted this version of "The Nez Perce Country" for his own compilation of over 300 Nez Perce place names (Paul 1987). However, most of *Kew-kew'-lu-yah's* locations are omitted and only a few site specific citations are provided, making it difficult to correlate the two studies. In contrast to *Kew-kew'-lu-yah* who drew his map freehand from memory, Paul's locations were placed on modern maps which makes his work easier to use.

As an incomplete work involving mutually unintelligible speakers of two distinct languages that was initiated over a century ago, there are obviously occasional problems with this manuscript. It was typed on a manual typewriter but many comments and additions were added by hand. Inconsistencies have been standardized but, as much as possible, the original spelling and organization have been left intact. All Nez Perce words appear as spelled by Fletcher but we have italicized them; in the original some are in regular characters while others were underlined. In most cases, place names, spellings, and punctuation have been brought up to contemporary standards. Examples include "Clearwater river" to Clearwater River, "Bitter-root mountains" to Bitterroot Mountains, and "Mr" to "Mr." Fletcher made numerous comments and these are indicated by parentheses () while ours are enclosed in brackets [].

The original typed and hand corrected manuscript, Fletcher's copy of the map, and the rejection letter from Fewkes are on file at the National Anthropological Archives at the Smithsonian Institution (Box 18, Ms. 4558 [No. 59]). The map measures approximately 45 x 47 in. and at some point it was cut in half in order to laminate it. It has a compass orientation but no scale. The markings were done originally in pencil; subsequently, some pencil lines were erased and redrawn while others were inked over. The villages were indicated as open circles in red pencil. Due to the original limitations of paper size, rivers, landmarks, and trails often bend away near the edges of the map. Because of its size, condition, various modifications, and its unfinished status the original map would be indecipherable if reproduced as it appears. Therefore, photocopies of the original were traced and re-lettered in order to make it more visible

to readers and future scholars. Spelling and labeling mirror the original but some modern place names have been added for clarification and these have been indicated in brackets.

The map exhibits several conventions typical of native cartography (Gallison and Reid 1996). For example, asymmetrical or irregular linear features such as streams and trails have been rendered symmetrical or smoothed and straightened, with changes in line tending to occur at nodes such as stream confluences. Rivers may appear anastomosed, a condition that rarely occurs in nature. This reflects the use of a continuous line to show streams, trails, and crossings as parts of a single route. Exaggeration and compression are apparent in the size and shape of river basins, and the scale varies internally. In some places, variability of scale probably reflects travel time rather than actual distance.

During the past decade the authors have used Fletcher's manuscript and map to augment various archaeological investigations at sites along the Clearwater and Snake rivers. When appropriate, sites which have been examined archaeologically are noted below. The purpose of this paper is to bring Fletcher and Williams' work the recognition it deserves and to make the data available to other researchers interested in Nez Perce ethnography and settlement, and in Native American cartography in general.

The Nez Perce Country

The accompanying map of that portion of the State of Idaho formerly occupied by the Nez Perce Tribe of Indians was drawn in June, 1891 by *Kew-kew'-lu-yah*, whose English name was Jonathan Williams. He was familiarly called "Billy," and because of his promptitude in attending to all matters committed to his care he received the nickname of "Business Billy." He was one of the most trusted and respected members of the tribe, and retained until his death, a few years after the date mentioned, unimpaired faculties. His memory was remarkable, and his character for truthfulness made his reminiscent statements of peculiar value. The photograph here reproduced [Fig. 1] was taken at the time he made the map [Figs. 2, 3].

Billy's father, *Me-yau'h*, was born during the last decade of the eighteenth century, in the village called *Te-sy'-yak* (No. 51 on the map). His mother, *Is-to'-kop* was a native of *Hoo-koo* (No. 77 on the map). Billy was born at *Te-sy'-yak* about 1815, when recollections of the advent of Lewis and Clark [in 1805-1806]⁶ were still a frequent theme about winter camp fires. Although many white men had come across the mountains, and trappers from the Northwest Fur Company⁷ had found their way to the tribe, still the memory was fresh of the first white men who came and went, and then came again, telling of an ocean to the west, and then disappeared over the eastern mountains. Their conduct was in marked contrast to that of many of the followers, and this difference made them stand out distinctively in the memory of the people.

In 1813, a few years before Billy's birth, the Northwest Fur Company established a trading post on the Upper Columbia River where Fort Colville⁸ now stands and the Nez Perce Indians soon learned the trail that led to this place and took their pelts to exchange for wares from the "King George" people, as the Canadians are still called. The dealings of the Fur Company open an unpleasant but important chapter on the contact between the white and native races. As a means to increase business, the Company devised a plan which should act as an incentive to the hunters to acquire tribal position. The plan was to urge the men to take more wives, and so become a chief—the more wives, the more workers there would be to prepare the



Fig. 1. *Kew-kew'-lu-yah* or Billy Williams. Photograph by E. Jane Gay in 1891. Courtesy of the Idaho State Historical Society (ISHS 63.221.101).



Fig. 2. The Nez Perce Country as drawn by *Kew-kew'-lu-yah* or Billy Williams and recorded by Alice Fletcher in 1891.

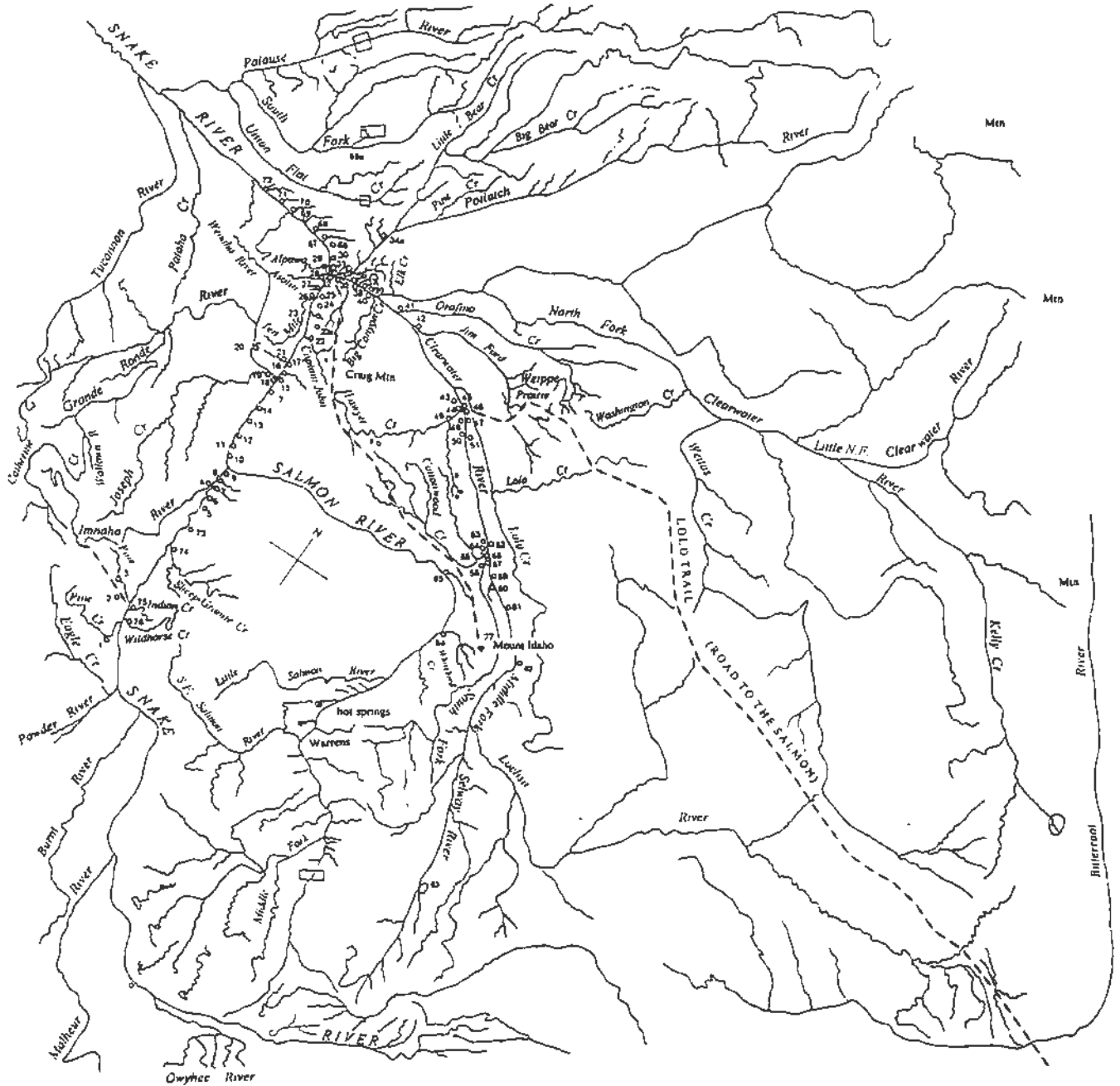


Fig 3. The Nez Perce Country as drawn by *Kew-kew'-lu-yah* or Billy Williams and recorded by Alice Fletcher in 1891. Modern landmarks have been added.

pelts, and the more business of buying and selling. It was on the occasion of a journey to Fort Colville [sic] that an event took place which had a lasting effect on Billy's life. After his father had disposed of his pelts at the trading post, the family party turned homeward, the three children securely tied to their ponies. As they journeyed Billy heard his father say to his mother that "King George had told him to take another wife, that he might become a chief." The mother rode on, and said nothing. Even when they camped she still kept silence. After a time they reached the village *Yak-toe-e-no* (No. 34 on the map). To quote Billy: "To this village came many words from King George down the trail. Here lived one of the chiefs he had created. This was how it happened: 'How many wives have you?,' asked King George. 'One.' 'I give you one and a half foot [sic] of tobacco; get another wife, and next year I will give you more,' said King George. The man obeyed, and the next year when he appeared at the trading post he received a larger gift of tobacco and King George put a wide tin band about his hat—a sign that he was a chief." This was the chief who, when the family came to the village *Yak-toe-e-no* said to Billy's father that it was his office, under King George, to furnish new wives. So Billy's father "put a red feather in his hat and went to the chief with gifts, and indicated the woman he would take as a new wife." Two men were sent to get the woman. If any woman thus approached dared to resist, she was flogged into obedience. While the men were gone, Billy's mother started with the three children across the country, taking the direct trail to *Te-sy'-yak*. Here she helped herself to her husband's horses and supplies, and departed, with Billy and his two sisters, for the buffalo country east of the Bitterroot Mountains. Billy was quite a man before he saw his father again. When the father with his new wife looked for his former wife and children, he found them gone. He returned to his village, lived there quietly, and did not try again to take more wives or become a chief. In his old age he was ministered to by the children of his first wife.

Billy's mother devoted herself to the care of her children. The burden of her counsel to them was, "Never listen to King George's teachings!" To her son she was always saying: "I pity the women! I pity the women! My son, never be like your father; never have more than one wife!" Billy heeded her advice, and all his long life lived with his first and only wife.

Billy witnessed the departure of the four men who went to St. Louis in 1832, and there met George Catlin,⁹ and became the means of drawing to the Pacific coast the American missionaries who were instrumental in saving Oregon to the United States. The names of the four Indians, whose journey has left a permanent trail in the history of our country were:

(1) *Tip-ye-lak-na-jek-nim* ('Speaking Eagle'). He was from the group of villages known as the *We-am'-mo*, and probably from either *Ho-li-e-po* (No. 43) or *Ny-ouse-so* (No. 44). He was a man well beyond middle life, a chief, and one who entertained Lewis and Clark on their return trip. This man was grandfather to *Kipka-palikan*, a former chief, and now a leading man in Kamiah. Old Speaking Eagle seems to have been of a philosophical turn of mind, and the question as to whether the sun was father and the earth mother of the human race was one that occupied his mind and he discussed it with his companions. The King George men told him that this was the case, but he doubted, and asked: How could the sun make a boy? Moreover, this teaching contradicted some things that Lewis and Clark had said. It was the discussion of such questions as these that led the four men, of whom Speaking Eagle was the leader, to determine to find the trail of Lewis and Clark, and ask them as to the fact concerning the sun and the earth. (Strange as these speculations may seem to us, they were not uncommon in Indian tribes. The story told by Billy, and repeated here was later confirmed by several old and trustworthy men and

women. It reveals the incentive of this memorable journey, and is probably as true as it seems strange.)¹⁰

(2) *Ka-ou-pu* ('man of the morning, or daylight'). This man was a Flathead [Indian] and lived in the village *Took-pa-mah* (No. 58). *Ka-ou-pu* was nearly as old as Speaking Eagle, yet he, too, determined to join in this quest for knowledge.¹¹

(3) *He-yonts-to-han* ('rabbit-skin leggings'). This young man was a nephew of Speaking Eagle. His mother was a Palouse [Palus Indian, a group located downstream on the Snake River and closely related to the Nez Perce], and he lived in *Lum-ta'-ma-pa* (No. 64).¹²

(4) *Ta-wis-sis-sim-nin* ('old or worn-down horns of the buffalo'). This young man was the son of Billy's father's eldest sister. He was therefore Billy's cousin. He came from *Te-sy-yak-poo* (No. 51).¹³

Billy's mother went with her children to bid these men good-bye as they were starting on their long journey. Billy remembered this circumstance well, and the interest that was aroused by the journey of the four men. Billy was about sixteen years old.

"The four men took the Lo-lo trail.¹⁴ It was early summer and the trail was only just open when they started. They reached the Salish (Flathead) country, where they were joined by two of that tribe. One of them remained with the party two days, and then decided he was too old for the journey, and returned to his tribe. The other, *Kam-kam-pose-ma*, kept on for three or four days; but he, too, was old, and by the advice of the others he turned back. The four then went on as fast as they could - they hardly stopped to hunt for sufficient food. They talked much of the teaching about the sun and the earth, and decided it must be a lie. They traveled for months. The leaves were falling when they reached St. Louis. Their faces looked strange to one another, for they had suffered from hunger and cold. They had no weapons—they had thrown them away. So as to avoid trouble with the strange tribes they met."

"Of course," said Billy, "none of us knew about the journey and what happened until afterward, but I remember what was told very clearly. My mother used to say, after the men were gone: 'You will never see them again.' At St. Louis the white people looked hard at them, as if to say, 'Who are these people?' The sign language was not known to them and they could not speak, nor could they understand. They knew the name St. Louis, and so they knew they were in that place. If they walked anywhere they became lost, so they stayed in one place, sitting down. They could not find Lewis and Clark. They were frightened, and afraid to search. They made a sign by putting their hands over their eyes as if blind, and pointed to the west, making slowly the movement of the sun to the west; then they tried to show, by drawing the hand, that they had come from the west."

"The white people circled about them, looking them over, and felt their heads. They found out that there were two languages, that three of the men spoke one language."

"The leader, Speaking Eagle, cried all the time, and sickened, and died. He said: 'I am not crying about my body, but about my people who must still sit in the darkness'." He died with his hands over his eyes. The Flathead never spoke after the death of Speaking Eagle, and died soon after.

"The two younger men began to pick up signs, and in a month or so they could talk a kind of sign language."

"After this the white people gathered to learn the cause of this visit, and someone wrote down the story told by the young men. They wanted it known that four had come and two had died, and that they did not know if they would ever get back to their own country. A man came

and took their pictures and said they would be known by these pictures. (This was George Catlin and was probably in 1838. For his account of these Indians see *Letters and Notes, etc., on the American Indians* by Geo. Catlin. Vol. II. p. 108-9 London. 1841). A promise was made that a man would be sent to them. The young men stayed in one place, and many came to see them. Those who came were not bad men. The white people called them Nez Perces. This was the first time they had heard that name."

"On the way back they ate berries. When over the mountains and near the headwaters of the Clearwater [River], *Ta-wis-sis-sim-nin* died, and was buried in the mountains in a hole gullied out by the snow. The survivor brought the riderless horse back, and was met by his kindred in the buffalo country; but he was unwilling to return to his people. He was afterwards known to be living with white trappers, to have cut his hair, and to have put on white men's clothes." His father and mother went to live in village No. 54, and were always on the lookout for white men. It was this group that met Mr. [Henry Harmon] Spalding,¹⁵ the missionary, when he and Dr. [Marcus] Whitman¹⁶ made their memorable journey across the Rocky Mountains [in 1835].

It will be remembered that this journey was the result of a missionary enterprise awakened by an impassioned address delivered by someone who had heard the story of the four men from an unknown country to the west who had come to get light, and who sat with shaded eyes. The speaker used this story to arouse missionary zeal. The address found its way to New England, and resulted in the departure of Dr. Whitman and Mr. Spalding. Their journey proved that the Rocky Mountains were not an impassable barrier, and that the region to the west could become a part of the United States. All this is well known history, and is also the setting up by Mr. Spalding, at the Nez Perce mission at Lapwai,¹⁷ of the first printing press west of the Rockies, the press having been shipped from the Hawaiian Islands by American missionaries, across the Pacific Ocean and up the Columbia and Snake rivers. On it was printed in the Nez Perce language texts and hymns, and rules for government among the people.

Billy's youthful days were spent in hunting and in sharing in warfare against intruding tribes. Mr. Spalding arrived about 1836, and opened a mission and school at Lapwai. Billy heard of this, and wished to respond to Mr. Spalding's call for scholars, but his mother objected. He said she wanted him to grow to be a strong man. He acceded to her request and lived a year or two longer engaged in hunting and fighting; but he continued to receive reports of Mr. Spalding's school, and at last started to Lapwai to look into the matter for himself. He found a large school, the boys studying and working with the men, the girls weaving. Here he tasted his first potatoes and wheat bread. He at once determined to have some seeds and start a garden at his home on the Clearwater River.

At Lapwai Billy saw a girl toward whom he was attracted. He was poor, he had nothing to offer her, and she refused to listen to him. He went home, started his garden, profiting by the instructions of the missionary, and soon had a fine garden. The fame of his industry traveled to Lapwai and reached the ears of the maiden he had spoken to. She, meanwhile, had refused other young men, not liking their conduct. She was told that he had no father, that his mother was a good woman, that he had horses, buffalo skins, and garden. "I do not know what I shall do," she cried to her mother. "I do not like these men who think they have a right to whip their wives. Billy has a good face," she admitted. At last she consented to go with Billy. As she was leaving, her mother asked her: "Are you going to Kamiah for a little time?" "No," she replied, "I go to be always with him until I die." And off they started on the long journey over Craig Mountain to

their home in the beautiful valley of Kamiah where they lived and brought up their ten children. Billy's garden furnished the best vegetables to the mining camps that came nearer and nearer to the Nez Perce Country as the years went on.

"After the murder [or justified killing (Sprague 1987)] of Dr. Whitman [by the Cayuse Indians in November 1847], a letter came from The Dalles to one of the chiefs, asking for fifty or a hundred men to act as scouts. A council was held at which a white soldier was present, who told them that the scouts would be paid \$30 per month; none need go unless they were willing, but if they did not go they must be friendly and not kill the United States soldiers. The man then called for volunteers." Billy was the first to rise. He asked: "How many months do you want me to be a soldier?" "Nine." "Do you want me to be a soldier in winter?" "Yes." "What shall I do with my wife and three children?" Before the white soldier could answer the chief told Billy to stop talking, but Billy went on: "Can I stop being a soldier whenever I like?" "No," said the white soldier. "Good!" said Billy. Then, turning to the assembled Indians, he said: "I am a soldier now—how many of you will follow me?" First one and then another volunteered, until forty-one declared they were ready to start. Nine of the men, including Billy, went to Boise City,¹⁸ whither the Cayuse had fled after killing Dr. Whitman. There they met four regiments of soldiers and one of cavalry. There was snow on the ground. The Cayuse and Snake Indians had fled. The volunteer Indians were told to go to The Dalles, but eight of the nine took their money and returned home. Billy said: "I will stay." He went to Walla Walla, [and] there he met "Colonel Steptoe"¹⁹ who told him of Christmas and the Fourth of July, and was a friend." He was also under General Isaac Stevens,²⁰ for whom Billy expressed much affection. During the wars with the Yakama, Palouse [Palus], and Spokane [Spokan] Indians, the Nez Perce remained quiet and friendly. Billy served as express carrier during hostilities. As he traveled under orders he "heard the guns of battle" and "saw grain fields on fire." He was present when the first treaty was made in 1854-55.²¹ A second treaty, in 1863,²² brought about many contentions, as the reservation it established did not cover all the Nez Perce Country, and involved the abandonment of villages and regions to which the people tenaciously clung, and finally led to the Joseph War of 1877.

After his service in the army Billy returned to his garden and farm in Kamiah valley. His eldest son became an ordained minister of the Presbyterian denomination, and was pastor over the church at Kamiah until his death at the close of the last century. Billy had been an elder in the church for more than twenty years. His children all became leading men and women in the tribe, and set an example of industry, frugality, and good morals. When, under the Severalty Act [of 1887], the tribal lands of the Nez Perce were divided into individual holdings, Billy was the first man in the tribe to take his allotment, and the prompt and efficient manner in which he marked his boundary lines showed him true to his character as "Business Billy."

More than two days [10 and 11 June 1891] were occupied in drawing the map. At times Billy would sit as if lost in thought, then he would suddenly resume his pencil and proceed rapidly to trace rivers and streams and to mark village sites. He grew very weary, but persevered in his work even when urged to stop, as I feared he would fall ill. The morning after the completion of his task he met me with his usual bright smile, and exclaimed: "I feel good—I sleep last night, not all time talk with old people!" Evidently his nights and days had been haunted by scenes and stories belonging to another age.

Although the map is not drawn to scale and was Billy's first attempt, yet the relative position of the rivers is fairly correct.

Billy had never been to school. He could neither read nor write, nor could he speak English. It is possible he may have been shown by the missionaries maps relating to Bible history; but, so far as I could learn, he had not studied a map of Idaho or of the adjacent states. This fact makes his map of unusual interest. It covers a territory roughly estimated at about 250 miles north and south, and 180 east and west. His knowledge of the country represented was gained by traveling over it, mostly by foot. On the map the rivers, trails, and canyons are all drawn alike, these to Billy were practically passage-ways in getting about the country.

Some errors would have been avoided if the paper when first handed him had been of its present size. The sheet was added to after the map was well started, as it was evident that Billy needed more space. The Nez Perce Indians had no difficulty in recognizing the streams and localities on the map.

During the four years that I was among the Nez Perce I found comparatively few who could orient themselves—a marked difference from the prairie tribes. The people traveled by topography, and this map proves they had the power of making a general picture from detached details, as there was no vantage point from which a bird's-eye view of the country could be obtained.

The Nez Perce call themselves *Nim-me-poo* (*nim-me* = our own; *poo* = people).²³ The Flatheads [in western Montana] call the Nez Perces *Sa-hap'-tin*, and the Nez Perce speak of the Flatheads as *Sa'-lish*. The custom of piercing the nose, so common among the Columbia River Indians, seems not to have obtained [occurred] during the past century, as the old people said they could not remember seeing any of the *Nim-me-poo* with pierced noses.

The country occupied by the *Nim-me-poo* at the beginning of the last century and for a considerable time prior, may be roughly described as a basin between a hundred and a hundred and fifty miles in diameter; hedged on the east by the Bitterroot Mountains, on the west by the Blue Mountains; on the north by the divide between the streams flowing to the Columbia and those finding their way to the Snake and Clearwater rivers, and on the south by the divide between the waters of the upper Snake River and the branches of the Salmon. The basin is broken by rivers and deep canyons, and traversed from the northeast to the southwest by a ridge some 3000 feet above sea level known as Craig Mountain. The rivers and streams were formerly well stocked with fish. The salmon ran far up into the mountains. Elk, deer, and bear were numerous. Upon the level uplands or prairies *cous* [*Lomatium cous*] and *camas* [*Camassia quamash*] grew plentifully. These roots after being differently treated were powdered into flour to make a species of bread. Maize, pumpkins, and melons were unknown, though these and also potatoes were later introduced by the missionaries.

The Shoshone, or Snake, Indians to the south lived in a less favored region, and were continually pressing upon the Nez Perce. Their inroads kept the people in constant dread. These southern Indians seem to have been their only incursive enemies.²⁴ Occasional feuds broke out between the Nez Perces and other tribes to the north and west, but in the main the relations were peaceable and friendly. On the east the buffalo herds beyond the mountains greatly attracted the people. The Blackfeet claimed the country where the buffalo ranged, and as the Nez Perce made frequent excursions after meat and pelts, there was constant warfare between them and the Blackfeet. Beyond the latter lived the Crow, who were friendly; and if the Nez Perce could escape the Blackfeet and pass on to the Crow country, they were able to hunt the buffalo in safety.

The Blue Mountains were called *Wall-wall-mah-sam*, and probably took their name from the Walla Walla [Wallawalla] Indians who came there from the west to hunt. The name *Wall-wall-mah-sam* was applied to the entire range.

The Bitterroot Mountains had no general name, but each peak had its special appellation. One of the highest was called *Tom-loo-yats mah-sam*.

See-sak-kae mah-sam was the general name of the Salmon River mountains, "because of the circling around the river"—a curious reversal of our idea of rivers and mountains! The buttes that rose here and there all had names. One shapely cone to the west of Camas Prairie was regarded as a weather gauge—a cloud cap was sure to foretell a storm. Its name was *Kits-yu-weep-pa*, the butte where the morning is seen.

The Snake River was called *Pe-ku-nin*. It had another name, *Na-ka-la-ka-kinneki*, meaning, coming from the muddy side—evidently in contrast to the Clearwater River, *Ky-ky'h kinneki*, coming from the clear or white side.

Each fork of the Clearwater had its name. The North Fork, *Ah-sok'-ka*, runs far up into the mountains. One of its upper branches was called *Yuke-sam*. A small lake from which one of the tributaries of the *Ah-sok'-ka* takes its rise was called *E-wa-tan*. The Middle Fork was called *Sol-wah*.²⁵ The South Fork was known as *Took-coop-a*, meaning straight, as the river here runs nearly due south. The creek running into the Salmon [River] called *La-wa-ta*, on which village No. 64 stood, is the Whitebird, where, in the Joseph war of 1877, the U.S. Army met with disaster.²⁶

The *Lok-ka-mah-sam* (*Lok-ka*, pine tree, *mah-sam*, mountain), or Craig Mountain, seems to have divided the people into two grand divisions. Those living west of the mountain were called *Pu-nim'-moo*, meaning people of the Snake River, from *Pe-ku-nin*, the name of that river. Those living east of the mountain were known as *Na-ki-ma*, from *nak-ki*, the other side. These divisions were subdivided into groups, each group composed of a number of villages, and each village being the home of a band or clan.

The map gives the names and locations of seventy-eight villages. All of these were either in existence or their sites known at the beginning of the last century.

The advent of Lewis and Clark marked a period in Nez Perce history, and whether a village or a custom existed before that event or afterward could generally be ascertained.

These seventy-eight villages were divided into twelve groups. Each group had its distinctive name, seven of which are known. Six of the groups belonged to the *Pu-nim-moo* division. Three groups, each with its own name, belonged to the *Nak-ki'-ma* division. Between these two divisions were three groups the distinctive names of which have been lost. These three groups were intermediate in many ways, being dependent upon the groups to the east and the west of them, and yet in a measure independent of both.

At the opening of the last century one group of seven villages had been totally destroyed through wars with the Shoshone Indians. Four other villages had also been depopulated from the same cause.

One or two new settlements have been made since the Treaty of 1855; but as they were due to white influence they are not mentioned, having had no place in the old order as shown on the map.

As a rule the villages were situated on the banks of a stream, and the inhabitants considered themselves as kindred. Marriage between the people of a village did not take place. Each village is said to have been governed by hereditary chiefs, and in every group of villages

one village was the acknowledged "leader," regulating the time for quest of food (hunting, fishing, and digging of roots). All the villages of a group hunted together, generally in a specific locality. They also fought together. If one village was attacked, the others of the group hastened to its defense. In aggressive warfare, also, they acted together. War leadership does not seem to have been an hereditary right, although chiefs sometimes led.

The villages were occupied only during the winter months. In April and May the kaus was ready to dig. The roots were brought to the villages for preparation. June was occupied in fishing. Camas was gathered in July, and hunting began in August and continued "until the snow flies." The storms drove the people to the shelter of their longhouses. In building these the earth was excavated two feet or more, and long lines of poles formed the framework, on which mats made of reeds and rushes were bound. The principal poles were in groups of three, and each group marked a family section, or apartment. The fires were in the center, and between every two fires an entrance-way projected from the lodge. A mat hung at each end of this hallway as protection from the cold. Outside each section was a sort of shed for the storage of wood and other belongings. From fifteen to twenty families lived in one of these houses, some of which were as much as two hundred feet in length. All the marriageable women dwelt together in a half-subterranean structure roofed over with heavy timbers. Through a narrow entrance in the dome-like roof one descended to the floor below by means of a sort of ladder made from a small tree, the lopped off branches forming steps. This ladder was never in position except when in use by the inmates. This house was called *Al-we'-tas*, meaning the abode of those without husbands. The young women and widows living in the *Al-we'-tas* went every morning to the long house and assisted their respective families in the preparation of the food; they helped to bring the wood and water, and when these tasks were done they took their own supplies and returned to the *Al-we'-tas*, where they wove mats, made garments, and were otherwise busily employed. Every village had its *Al-we'-tas*, which was always respected by all the men, old and young. The last of these structures disappeared a little after the middle of the last century.²⁷

The discipline of the children of a village was delegated to certain men appointed for the purpose by the chiefs. They were called "whippers." There was one or more to each long house.²⁸

Group 1

The name of this group has been lost. All of its villages were in the vicinity of the Snake River and became extinct prior to the beginning of the 19th century. Their names and locations, however, are given on the map. They are numbered 1, 2, 3, 73, 74, 75, [and] 76.

Their hunting grounds were to the westward toward the Blue Mountains, and overlapped those of the *Walla-walla-poo* or Cayuse Indians. The people were considered as mixed with other tribes and not of pure Nez Perce blood. They were the most southern group in the tribe [The Group 1 villages mark the southern frontier of Nez Perce winter settlement. Accurate location of these villages is important for understanding aboriginal land tenure, the timing and extent of Numic expansion in the lower Snake River basin, and other questions. However, quite variable accounts of the position of Group 1 have appeared in the literature during the past thirty years. For example, Schwede (1966:No. 280) places Village No. 1, *Kaus-pa-ah-loo*, in the lower reach of Hells Canyon near Somers Creek at river mile 210 on the west side of the Snake River. This location implies that the remainder of Group 1 and all of Group 2 occur downstream of Somers Creek. Thompson (1992) accepted Schwede's interpretation of *Kaus-pa-ah-loo* and

concluded the archaeological site on Tryon Creek (35-WA-288) marked the location of Village No. 2, *Tak-in-pa-loo*. Another interpretation proposed by Rice and others (1981) places villages 2, 3, and 76 of Group 1 about 25 miles upriver, between Rush Creek (river mile 231) and Bernard Creek (river mile 235)].

[However, all three accounts fail to accommodate Billy's statement that village No. 5 of Group 2 was located 50 miles above the mouth of the Salmon River. This would place the southernmost settlement in Group 2 somewhere in the reach between Saddle Creek and Granite Creek, at about river mile 238. All of the villages in Group 1 must therefore be located above this reach].

[Our interpretation of Group 1 places village Nos. 1, 2, and 3 in the basin of Pine Creek on the west side of the Snake River. Village No. 75 is at the mouth of Indian Creek and Village No. 76 is at the mouth of Wildhorse Creek so that both are on the east or Idaho side of the Snake. This places Group 1 about 44 river miles above the location favored by Rice and others, and about 70 miles upstream of Schwede's location].

[This interpretation has several advantages. Most importantly, it accommodates the location of Village No. 5 in Group 2 by placing all of Group 1 upstream of Granite Creek. Second, it accounts for apparent errors in cartography in the vicinity of the Imnaha River and Pine Creek, by placing a trail leading from the Imnaha south between North Pine and Pine creeks, and by recognizing that the internal drainage of lower Pine Creek was drawn incorrectly by Billy Williams. The branches of Pine Creek converge to form a single channel about six miles west of the Snake River. Third, Pine Creek was a significant salmon spawning stream as late as 1924, when cyanide spills from the Cornucopia Mine finally destroyed the fishery (Reid and Gallison 1993). However, none of the short, steep, first and second order streams mentioned by Schwede (1966) and Rice and others (1981) as locations for *Tak-in-pa-loo* and *How-pa-loo* had significant salmon runs. Finally, local historical accounts refer to Nez Perce and Umatilla villages and cemeteries on East Pine Creek near Langrell between the late 1870s and early 1900s (Pine Valley Community Museum 1978:32, 1979:31, 1984:27, 1991:24). The impression given by these accounts is one of resumption of a temporarily interrupted land use pattern.²⁹ In summary, our interpretation places the extinct villages of Group 1 along both sides of the Snake River between Pine Creek and Granite Creek].

1. *Kaus-pa-ah-loo*. This village was on the creek *Kaus-pa-al* [Pine Creek], which emptied into the Snake River from the west. It led up to a bench, or prairie, where cous grew plentifully (*Kaus*, an edible root). The village was said to have been large, but from continual battling with the Shoshone, who coveted the cous grounds, all the people had been killed and the place deserted before the beginning of the last century [Schwede said that the name of this village referred to any kind of dry root and she placed it in the area of Somers Creek (Schwede 1966:No. 280)].

2. *Tak-in-pal-loo*. Situated on the creek *Tak-in-pa-al* [also in the Pine Creek basin]. Where the village stood there was a deep, quiet place in the stream where the salmon came in abundance. *Tak-in* is the name of such a deep place—"almost like a harbor." Deer abounded on this creek, and because of the plentifulness of game and fish the village suffered from constant inroads from the Shoshone, and became extinct. It is said that at the opening of the last century there was living one old man who belonged to this village [Schwede stated that the name of this village referred to a meadow and placed it "somewhere on a line from Wolf Creek to (the) confluence of Horse Creek and Imnaha River" based on her understanding of Fletcher's work

(Schwede 1966:No. 276). Thompson (1992) correlated *Tak-in-pal-loo* with a site on Tryon Creek while Rice and others situated this village on Sluice Creek (1981:19-20)].

3. *How-pa-loo*. The name comes from the stream [Pine Creek] on which the village stood, *How-pa'-al*: *how*, from *hown*, a hole; *pa-al*, leading to. The stream was full of rapids and holes where fish hid. This was the "leader" village of this group. It is said to have been the largest and most important. It directed the time of hunting. It was entirely destroyed prior to the last century [Schwede stated that the name of this village referred to a swift stream and she placed it in the same general location as village No. 2 (Schwede 1966:No. 277) while Rice and others (1981:19-20) placed it on Rush Creek].

73. *Ky-yah-pos-poo*. From *ky-yah-pos*, a bush, the wood of which was used for making baskets. This village had been so long extinct that only its site was known at the time of the advent of Lewis and Clark [Schwede (1966:No. 274) thought this village may have been located between Birch and Wolf creeks; however, we place it below Pine Creek and probably above Granite Creek].

74. *Ko-sik'h'-poo*. Near this village [on Sheep Creek or Granite Creek?] a soft, workable, stone was available. The village has long been destroyed [Schwede also placed this village between Birch and Wolf creeks (1966:No. 275). We place it below Pine Creek and above Granite Creek].

75. *Ko-sik'h'-poo*. This village [on Indian Creek] bore the same name as the preceding, but both ceased to exist so long ago that it is not known whether or not they were inhabited by the same band or clan. Tradition says they were a very brave people [Schwede thought this village may have been in the vicinity of Wolf or Jones creeks (Schwede 1966:No. 278). We place it below Pine Creek but above Granite Creek].

76. *Ko-lat'-pa-loo*. Nothing is known of this village [on Wildhorse Creek] save the tradition of its site and that it belonged to the same group as the foregoing [Rice and others placed this village on Bernard Creek (1981:19-20)].

Group 2

The name of this group was *Pe-ku'-nin-moo*—literally, people of the Snake River. The people of this group were hunters rather than fishers. Their hunting grounds were to the southeast on the *See-sak'-kae-mah-sam*, the mountains about the Salmon River.¹⁰ After the destruction of Group 1 the *Pe-ku'-nin-moo* became the southern outpost of the tribe. They were warlike in character, and after the destruction of one of their villages (No. 5), they looked upon all strange men as enemies. They fought in large war parties, seldom less than a hundred warriors and often three or four hundred. When war was decided upon at the leading village (No. 9), two messengers were sent to the other villages to call for volunteers. These people were very excitable, and when Lewis and Clark arrived they were with great difficulty restrained from attacking them by the authority of the *Nak-ki-ma* division (dwelling east of Craig Mountain). All of the villages of this group except No. 4 lay on the east side of the Snake River. The Treaty of 1863, which established the [present boundaries of the] Nez Perce reservation, did not include any of the villages of this group. This group comprised Nos. 4, 5, 6, 7, 8, [and] 9 [Villages in Group 2 were located on the Snake River downstream of Granite Creek and above the mouth of the Salmon River. According to Tucker (1993:93), the Nez Perce of *Tu-hool-hool-sute's* band wintered in this reach as late as the 1870s. The main village was located at Pittsburg Landing;

others extended from Dug Bar up to Kirkwood Bar. Some groups wintered still further upstream at Salt, Temperance, Sluice, and Saddle creeks. Hearths excavated at Pittsburg Landing have radiocarbon ages dating to the eighteenth century in association with tubular copper beads and Desert series arrow points of southern sources (William 1991)].

4. *Im-na'-ma*. The creek, *Im-na-ha* [Imnaha River], upon which the village stood, ran in sharp bends like knees; *im* signifies knee. This was a large village even at the time of the Treaty of 1855, but it was abandoned after the Treaty of 1863 [Schwede placed this village at the mouth of the Imnaha River and confirmed its location with several ethnographic sources (Schwede 1966:No. 267)].

5. *Ky-ya-pus'k-poo*. From *ky-ya-pus'k*, a berry-bearing bush. This populous village was about fifty miles south of the mouth of the Salmon River, on the Snake. All the people were killed in wars, and the place was uninhabited at the beginning of the 19th century [Schwede stated that the name of this village referred to an early service berry. She placed two villages with the same name in the area between White Horse Rapids and Wolf Creek and attributed both locations to Fletcher (Schwede 1966:Nos. 273, 274)].

6. *Toe-e-ko'-poo*. From *toe-e-ko*, a reed. This village lay near a swampy place where the reeds used in making mats grew abundantly. Although it had suffered from wars, there remained a sufficient number of inhabitants to take part in the Treaty of 1855. The village was abandoned after the Treaty of 1863 [Schwede confirmed that the name of this village was associated with reeds or tules. She thought that it was located between Divide Creek and White Horse Rapids although her basis for this information is unknown (Schwede 1966:No. 272)].

7. *Till-tee-ta'-ma*. From *till-tee'-ta*, a bad-smelling bush, unfit for food, that grew along the banks of the small creek [Wolf or Getta creeks ?] which here entered the Snake River. This was a large village, but was abandoned after the Treaty of 1863 [Schwede provided confirmation of the name of this village by stating that it was based on a red leafed plant but was unable to confirm its location through ethnographic sources (Schwede 1966:No. 266)].

8. *Tu-na-ham'-mo*. A large village on a small creek [Divide Creek ?]; abandoned after the Treaty of 1863 [The name of this village may have referred to mountain sheep and it was reported to be located in the area of Mountain Sheep Rapids and Mountain Sheep Creek (Schwede 1966:No. 265)].

9. *Te-ka'k-pa-sam'-ma*. This village took its name from the deep, barren gullies that seam the high bluffs of the Snake River—a marked feature in the landscape of this region. These gullies were called by the Nez Perces *ta'k-pa-sam*. This was the "leader" village of its group [Schwede stated that the name of this village refers to a fishing net although she did not attribute this to any Nez Perce informants (Schwede 1966:No. 250)].

Group 3

The name of this group was *Sah-kon'-ma*, from *sah-kon'*, a canyon, or shady place. The Snake River here runs through deep canyons, and the bottom lands on which the village stood were limited in area. The fishing was good. The people were not given to the hunting owing to the difficulty of getting out of the canyons. This inaccessibility of the country left them in comparative peace. After the introduction of horses the people occasionally hunted, but they remained fishers until the abandonment of all the villages of this group after the Treaty of 1863 when they moved onto the reservation then established, and gradually took to farming. This

group comprised Nos. 10, 11, 12, 13, [and] 14. No. 10 was the "leader" village [all villages in Group 3 were located below the mouth of the Salmon River in Idaho and above the mouth of the Grande Ronde in Oregon].

10. *E-pa-lute'-poo*. *E-pa-lute* signifies throwing nets over great rocks which lie in the river, into holes where the water whirls, and scooping out the fish which hide there. There was excellent fishing at this place, and the village was a large one. It was the "leader" village [Schwede stated that the name referred to something sticking into the water although she did not state the basis for this translation (Schwede 1966:46). This is the same name as for the Palus village at the confluence of the Palouse and Snake rivers, meaning something sticking into or out of the water (Sprague 1968). This village may have been located at the mouth of Cherry Creek on the opposite site of the Snake from *Kew-kew'-lu-yah's* map (Schwede 1966:No. 249)].

11. *See-wy'-yah*. The name indicates a sudden turn or bend in the river around a promontory. This village had many inhabitants. The people were spoken of as *E-pa-lute'-poo*. Villages 10 and 11 were closely bound together, but the people were counted as distinct clans between whom marriage was permitted [Schwede provided a similar translation although she did not confirm it with any Nez Perce informants. She placed this village in the vicinity of Garden Creek (Schwede 1966:No. 248)].

12. *Sy-yo'h-po*. The word expresses the peculiar sound of the river at this point, where two currents meet and flow over the stones. Here stood a large village of over thirty long houses, the people subsisting almost wholly by fishing [The name of this village may refer to granite and it was reported to be located in the vicinity of Garden and Cache creeks on both sides of the Snake (Schwede 1966:No. 247). Test excavations at Cache Creek (on the Oregon side) found numerous fish remains and net weights associated with glass trade beads (Reid and Gallison 1994). The name Cache Creek is derived from storage pits where fish and meat were cached by Indians in 1876 (Horner 1940s:52-53)].

13. *E-wisp'-po*. This name is the only one in all the Nez Perce list which has a mythical origin. The story goes that the Coyote, a hero in Nez Perce folk-tales, who was always going up the river and never passing down-stream, came to this place where springs issued from some great rocks, and being thirsty he drank of the water, found it cold and good, and called the place *e-wisp'-po*, meaning a whirlpool. This was a small village, but many Nez Perce traced their descent from it [Schwede said that the name referred to urine and thought this village was located in the area of China Garden Creek on the east side of the Snake (Schwede 1966:No. 246). Paul confirmed the presence of the springs and the association with Coyote; he also thought the name meant "Coyote urinated" (Paul 1987:No. 208)].

14. *O-le'k-o-lee-poo*. The word *ole'k-olik* means twisting like a snake. At this point the river is very tortuous, the water whirling as it runs. The fishing here was good [A site with a different name but with a similar translation was thought to be located in the general vicinity of Birch and Shovel creeks on the west side of the Snake River (Schwede 1966:No. 245). The village may have been the fishing site visited by Sergeant Ordway's party in May 1806 (Moulton 1995:316-317). Stratton and Lindeman (1979:11) place the site of Ordway's visit at Wild Goose Rapids, but on the east side of the river, immediately downstream of Birch Creek].

Group 4

The name of this group was *Will-lu-wo*. Its villages were on the Snake [River] and [its] western tributaries. The people were hunters, and went west to the Blue Mountains for game. As warriors they were rivals of the *Pe-ku-nin-moo*. Several large streams traversed their country, and the prairies were rich grazing grounds after the acquisition of horses. The *Will-lu'-wo* group refused to enter into the treaties of 1855 and 1863. This region has become historically famous because of the brilliant fight Chief Joseph made in 1877 for the Willowa [Wallowa] country, the ancient home of his people. Group 4 comprised Nos. 15, 16, 17, 18, 19, 20, [and] 21. No. 18 was the "leader" village. [All villages in Group 4 were located along a narrow section of the Snake River from just above the mouth of Joseph Creek to just below the mouth of Couse Creek].

15. *Nuse-no'-pe-poo*. From *nuse-nu*, a nose. The promontory around which the river lay was like a nose. This was a good-sized village [A similar translation is that the name referred to snorting. This village was located opposite the mouth of the Grande Ronde River (Schwede 1966:No. 243)].

16. *E-mah-hy'poo*. From *e-mah-hy*, a root much liked by the old Indians. The young folks have forgotten its taste. It was plentiful along the [Captain John?] creek on which the village stood, and was gathered in the early spring [This name may have referred to wide bladed bunch grass growing in creeks (Schwede 1966:No. 189)].

17. *Sis-nim'-poo*. From *sis-nim*, the thorn bush. This was quite a large village [Schwede provided the same translation and confirmed it with several Nez Perce informants. This village was on Thorn Creek (Schwede 1966:No. 268)].

18. *Well-'eyou-wah we*. *Well* is an abbreviation of *Wa-lu-la*, the name of that part of the stream now known as the Grand Ronde between its branches and its debouchment into the Snake; *eyou-wah-we* means mouth. A branch of this stream, the Wallowa, gave its name to the country for the possession of which Chief Joseph fought in 1877. No. 18 was a large village and the "leader" of this group [This may be the same village placed on the north side of the mouth of the Grande Ronde by Schwede (1966:No. 195)].

19. *In-nan-toe-e-in*. The final *in* signifies that the location was surrounded by the river *In-nan-mah* [Grand Ronde River]. To this point a fish closely allied to the salmon came in great numbers [probably the sockeye or bluebacked salmon (*Onchorhynchus nerka*)]. This populous village was the home of Chief Joseph [This village was located at the mouth of Joseph Creek. Schwede states that the name referred to the north side and confirmed its existence with a number of Nez Perce informants (Schwede 1966:No. 199). Paul differed on the spelling and its meaning but he also placed a village in the vicinity of the mouth of Joseph Creek (Paul 1987:No. 134)].

20. *Well-wo'wah-ah-ly-ma*. *Well-wo*, derived from *Wal-lo-wa*, the name of a stream; *wah*, up the river; *ah-ly*, on the river bank; *ma*, people. The name thus signified that the people lived up the *Wal-lo-wa*, on its banks [Nez Perce informants confirmed that a village was located up the Grande Ronde but Schwede was unable to locate it (Schwede 1966:No. 209; Paul 1987:No. 112?)].

The term *Ah-ly-ma* is applied to any people living on the borders of a river. The fragments of tribes from the Columbia River are spoken of as *Ah-ly-ma*. The name has acquired another meaning, however. The French came down the rivers, and those who lived with Indian

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THE NEZ PERCE INDIANS

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BY HERBERT JOSEPH SPINDEN

AUTHOR'S NOTE. — In the summer of 1907 the Peabody Museum of Harvard University detailed the present writer, together with Mr R. R. Hellmann, a student of the Harvard Medical School, to study the archeology and ethnology of the Nez Percé region. The information gathered on that expedition, supplemented to some extent by further researches of the author in 1908 under the auspices of the American Museum of Natural History, has been embodied in the following paper.

The writer desires to express his thanks to Mr O. H. Lipps, Indian agent, and Dr J. N. Alley, physician, at Lapwai, Mr Henry Fair and Mr W. F. Smith of Spokane, Mr G. W. Bailey of Asotin, Mr A. E. Söffel of Lewiston, Mr John Owre of the Government dredging steamer *Wallerua*, and many others for courtesies in the field, and to Dr R. B. Dixon and Mr C. C. Willoughby for advice and help in the preparation of this paper. — H. J. S.

HABITAT AND HISTORY

NAME. — The large and important tribe commonly known as the Nez Percés call themselves Numipu, but this name seems never to have acquired a hold in the usage of outsiders. They apply this term to the tribe as a whole, having other names for the geographical divisions. The name, however, is in no sense a stock name and does not include the neighboring tribes which speak a related language. There is apparently no native term that embraces the whole stock. The word Shlahaptin, which now supplies this need, is of Salish origin and was used by the earliest fur-traders as the name for both the Nez Percé nation and Snake river. It is the name given the Nez Percés by the Spokane Indians. The word takes different forms, such as Saptin, Sapetens, Shawpatins, Chohoptins, Shawhaptins, etc. The word Chopunnish, much used by Lewis and Clark, may have been obtained from the eastern Salish or corrupted from the Indian word Tsupnitpelun. The word Chopunnish seems not to have been used after Lewis and Clark except on their

authority. The name Nez Percé is a translation into French of a Siouan (?) designation said to be Tsupnitpelun.¹ This referred to an early custom of wearing a dentalium shell through the septum of the nose. Lewis and Clark sometimes call the tribe Pierced Noses, and mention explicitly the occasional wearing of the shell. Ross² says the people are called Pierced Noses from the custom "of having their noses bored to hold a certain white shell like the fluke of an anchor."

Linguistically the Nez Percés are connected with several important tribes living west of them. The best known of these related tribes are the Palooos, Wallawalla, Yakima, Klíkitat, and Tenaino. The relationship is clear, and is seen in social intercourse and similarity in culture as well as in language. Linguistic relationship has been suspected between the Lutuamian stock and the Shahaptian.

AREA OCCUPIED. — The range of the Nez Percés extended from the Bitterroot mountains on the east to the Blue mountains on the west, between latitude 45° and 47°. Thus, while mostly in Idaho, they extended a considerable distance into Oregon and Washington.

¹The following list, taken from the synonymy in the *Handbook of American Indians*, gives the names of other Indian tribes for the Nez Percés:

Caddo,	Tchaxsúkuush.	Osage,	Pejasamse ("plaited hair over the forehead").
Crow,	Apúpé ("to paddle"; "paddles").		
Dakota,	Pógehdoke.	Paiute,	Saiduka.
Gros Ventre,	Apaopa.	Pawnee,	Tshárukals.
Kalapuya,	Ani'pórspi ; Asaháptin (?)	(Zuapaw, Shoshoni,	I'naepe. Thoigarikkah ("kouse-eaters"); Tsoigah ; Tsoohgabrah.
Kansa,	Pe'gázande.		
Kiowa,	Á'dalk'ato'igo ("people with hair cut across the forehead").	Siksika, Tenaino,	Konun'itup'io. Shi'wantsh ("strangers from up the river").
Kiowa Apache,	Mikadeshitchishí.		
Okinagan,	Saáptin.		

Other tribes have given the Nez Percés' own name, as follows:

Caddo,	Tchítpelít.
Pawnee,	Tsútpéli.

These terms evidently correspond with Tsupnitpelun, the Nez Percé version of the name given them by the Sioux. The word "Chopunnish" of Lewis and Clark may be a corruption of this term.

²Ross (*ib.*), 1, p. 185. See the Bibliography at the close of the paper.

The exact boundaries are in many places difficult to determine, since the area actually inhabited was only a small part of the territory under Nez Percé control. The permanent settlements were situated only along the rivers. In the south the villages extended a considerable distance up Salmon river, at least as far as Slate creek and in all probability as far as the western line of Lemhi county. On Snake river the mouth of the Innaha seems to have marked the southern limits. Above this point the Snake flows through a deep cañon between the Powder mountains and the Seven Devils. On the southwest the boundary line of the Nez Percé area circled the drainage basins of the Innaha and Willowa rivers, and crossing Grande Ronde river above the mouth of the Willowa, ran north along the crest of the Blue mountains to a point on Snake river near the mouth of Tukanon creek. On the north it followed the divide at the heads of the short streams flowing into Snake and Clearwater rivers till it reached the Bitterroot mountains. Thence southward these high ridges formed an effective barrier boundary on the east.

There seems to have been a considerable strip of neutral ground between the Nez Percés and their traditional enemies, the Shoshoni on the south and the Spokane and Coeur d'Alènes on the north. On the other hand, the tribes friendly to the Nez Percés lived in close conjunction with them. The Umatilla tribe of the Waiilatpuan stock divided with them the Grande Ronde valley. The Palooos shared with them the rich camas meadows near the present town of Moscow.

There are no traditions of migration, and, so far as can be determined, the tribe has dwelt within these boundaries from time beyond memory. The meanings of most of the place names have been forgotten.

Names for a number of the bands, or geographical divisions, of the Nez Percés have been obtained, but the list is incomplete, especially as regards the bands on the lower course of Snake river. These names are derived mostly from the names of streams. Each group contained at least one important permanent village and a number of temporary fishing camps. These

permanent villages seem to have been the real basis of tribal division, since each had at least one chief. The great chiefs were war chiefs and apparently had no real control outside of their own communities.

Following is a list of the most important divisions:¹

- Ésnime* — Slate Creek band, the upper Salmon River Indians.
Lamtáma — Whitebird band on Salmon river. Whitebird creek is called Lamata.
Tamanmu — Band at mouth of Salmon river, the name for Salmon river being Tamana.
Inmáma — Innaha River band.
Wakáma — Wallowa Valley band.
Wéwíme — Band at mouth of Grande Ronde, or Williwewix.
-Isáwísnemepu — Band near Zindels, on the Grande Ronde.
Inantóinu — Band at the mouth of Joseph creek.
Toiknimapu — Band above Joseph creek on the north side of the Grande Ronde.
Hínsepu — Band at Hansens Ferry on the Grande Ronde.
Sakánma — Band between the mouth of Salmon river and the mouth of Grande Ronde. The name comes from that of a cañon at Cruger Bar.
Saxsano — Band about four miles above Asotin City, Washington, on the east side of Snake river.
Hasotino — Band at Hasntin, opposite Asotin City, Washington. The name means literally "the great eel fishery."
Heswéiwéwípu — Band at the mouth of Asotin creek, which is called Hesi'we.
Sáiwépu — Band on the Middle fork of Clearwater river, about five miles above Kooskia, Idaho.
Tukpáme — Band on the lower portion of the South fork of Clearwater river, which is called Tukupe, *tukupt* meaning "burnt."
Saiksaikinpu — Band on the upper portion of the South fork of Clearwater river. *Saiksaik* is the word for "fireweed."
Kamiáxpu — Band at Kamiah, at the mouth of Lawyer's creek. This band is also called *Uyame*.
Tewepu — Band at mouth of Oro Fino creek.
Atskaítowáwíxpu — Band at the mouth of the North fork of Clearwater river.

¹ In the spelling of native terms in this paper, vowels have their continental sounds; x is equivalent to German *ch*.

- Pípá'inimu* — Band on Big Cañon creek, which is called Pípáinime.
Painima — Band near Peck, on Clearwater river.
Tuké'likhespu — Band at Big Eddy.
Takséhepu — Band at Agatha on Clearwater river.
Makapu — Band on Cottonwood or *Maka* creek.
Yatóinu — Pine Creek band.
Yakló'ínu — Band at mouth of Potlatch creek, which is called Yaka.
Tunchepu — Band at Juliaetta on Potlatch creek.
Iwatóinu — Band at Kendrick on Potlatch creek.
Lapwéme — Band on Lapwai and Sweetwater creeks.
Hatwéme — Band on Hatwch creek.
Simínekempu — Band at Lewiston, Idaho.
Tsokolaikinma — Band between Lewiston and Alpowa creek. The name comes from the high-cut banks of the river, *tsoko* meaning "high-cut bank."
Alpowé'ma — Band on Alpaha (Alpowa) creek.
Wíkispu — Band about three miles below Alpowa creek on the east side of Snake river. The name comes from *wéix*, "alders."

Other bands, extending about eighty miles down Snake river from Lewiston, were: *Nuksíwépu*, *Sahatpu*, *Wawáwípu*, *Almotípu*, *Pínwéwéwíxpu*, *Tokalatóinu*, etc.

The names of villages would make a still longer list. The estimate of Lewis and Clark that the Nez Percés numbered more than 6000 could not have been far wrong.

ENVIRONMENT. — The area occupied by the Nez Percés is one of great topographical relief. It consists of a plateau, built up of successive lava flows, and rising from 3000 to 6000 feet above the sea, through which Snake river and its tributaries have cut deep narrow valleys with characteristically terraced sides. The eastern rim of the plateau culminates in the sharp jagged ridges of the Bitterroot mountains, an effective barrier with few passes. In the southern part of the area long stretches of the Snake and Salmon rivers exhibit the most pronounced type of cañon dissection. The Blue mountains, in the west, have domical summits that run out toward Snake river into broad sandy benches. The most favorable parts of the area are the Willow and Clearwater valleys. The villages were situated usually upon the alluvial fans, or "bars," at the mouths of lateral streams, or

upon the occasional islands in the rivers themselves. Permanent villages were never established on the uplands. In a few cases the lateral streams have partly aggraded valley floors, thus furnishing a limited amount of level ground for village sites and large festival gatherings; Lapwai and Asotin creeks are cases in point.

Part of the region is forested and part is prairie. The forests on the western slope of the Bitterroot mountains extend down the northern side of Clearwater river till within forty miles of its confluence with the Snake. The valley of Potlatch creek, the principal tributary of the lower Clearwater, was heavily forested for most of its length, but lumbering operations have almost denuded it. Craig mountain and the Blue mountains are also forested. The timber consists mainly of pine, cedar, fir, and tamarack. The nonforested portion contains broad upland meadows which formerly furnished large supplies of camas, kouse, and other edible roots, but which are now given over to wheat farms. The ravines and valleys abound in shrubs such as syringa, haw, hackberry, serviceberry, etc. Willow and cottonwood grow near the larger streams.

The climate of the valleys is hot in summer, but mild and almost free from snow in winter. On the uplands the winters are much more severe, and in the mountains the snowfall is often heavy. The precipitation is largely limited to the winter months, with the result that the steep valley sides dry up and in the spring acquire a browned and almost desert aspect.

On the whole the region is one that offered little inducement to the development of primitive agriculture. There were natural gardens of edible roots, game was fairly abundant, and at certain seasons of the year fish were plentiful.

HISTORY. — The first white men to visit the Nez Percés were Lewis and Clark. They spent some time with these Indians, whom they praise very highly for honesty and hospitality. The explorers found them already in possession of horses which had been acquired from tribes to the south, and a few articles of European manufacture that had been obtained in trade. White men were known by report from both the Indians of the plains

and of the lower Columbia. Fur-traders early established posts at Wallawalla and on Cœur d'Alène lake. In 1837 a missionary named Spaulding founded a mission at the mouth of Lapwai creek. Here he set up the first printing press in the Northwest and printed the Gospel of Matthew in the Nez Percé language. Soon afterward Catholic missions were established. In 1869 came the discovery of gold-bearing gravels on Snake and Salmon rivers, and thousands of miners poured into the region. From this date the history of the Nez Percés, especially in regard to treaties, which, when broken by the Government, resulted in the famous Nez Percé war of 1877, forms too important a chapter to be adequately discussed here.

Little has been written respecting the customs and arts of these Indians. The journals of Lewis and Clark, and of the early fur-traders, notably Alexander Ross and Alexander Henry, furnish nearly all the reliable material. This purely literary material has been carefully worked over by Dr A. B. Lewis. The account presented in the present paper is made up largely of information drawn from the Indians themselves, but is supplemented by the old accounts when these give additional evidence. In the study of the archeology of this region the present writer depends on personal investigations made during the railroad activities of 1897 to 1900 and again in the summer of 1907, also to some extent on accounts drawn from private individuals. Several private collections were examined through the courtesy of the collectors, notably those of Mr John Owrie, of the Government dredging steamer *Wallawa*, Mr G. W. Bailey of Asotin City, and Mr W. F. Smith of Spokane.

ARCHEOLOGY

The archeological remains of the Nez Percé region may be considered under three heads: (1) village and house sites; (2) burials; (3) occasional finds on river bars, etc.

SHELL-HEAPS AND HEARTHES. — No shell-heaps, except of very small size, are in evidence. Occasionally heaps of a cubic foot or more in size are found in the loamy banks of the rivers. A few of these were noted near the junction of the South and

Middle forks of Clearwater river and also near the confluence of the North fork with the same stream. They seem to be the remains of a single meal that had been buried or cast into a hole.

Two types of old fireplaces are also often found in the wash banks. One type, near the surface, shows the remains of sweat-house fires. The sweat-houses were built usually along the banks of the streams; some of them were slightly sunken and covered with sod. Stones were heated over a fire near the sweat-house and carried into it. So these shallow platforms of burnt stones and charcoal may be remains either of the sweat-house itself or of the fireplace near by. The second type of fireplace remains is buried from two to four feet below the surface. It is commonly from six to ten feet in diameter and slightly sunken in the center. Such fireplace remains mark the old ovens in which camas and other roots were steamed. The process of steaming will be described when we consider the preparation of food.

Bits of charcoal and a sprinkling of animal bones, mostly broken, are often found several feet below the surface. These however can offer no trustworthy evidence of extreme age because of the impermanent and unstratified character of the soil in which they are found. This soil overlies river beaches of rounded boulders. It is light, and easily crumbles under the action of water. A large mass of such soil could be shifted or built up in a short time with the river in flood. Even deeply sunken hearths could be easily explained as the remains of the underground menstrual lodges of the women.

VILLAGE SITES. — Almost all traces of ancient village sites along Clearwater and Snake rivers have been destroyed by the tilling of the soil. Many are said to be still visible in the lower part of the Grand Ronde cañon. As remarked before, they were situated on the banks of streams or on islands in the streams. A favorite location was near a riffle where salmon could be caught. Some villages were occupied continuously, although the number of inhabitants might fluctuate. In the uplands the Nez Percés never built permanent villages, though

in a few places, where camas and kouse were abundant, they constructed temporary summer camps. It was at such a camp on Weippe prairie that Lewis and Clark first encountered members of this tribe. Some fishing camps were also impermanent.

Two village sites, the only ones that could be located by actual remains, were examined. The first of these, situated near the mouth of Tammany creek, on the east bank of Snake river a few miles above Lewiston, has been partly washed away by placer mining. This site may be identified with Hasutin. The name means "the great eel fishery." It was used as a camp until thirty years ago, especially during the season of lamprey eel fishing. Here there are still several house-rings in two or more groups. The rims of these circles are elevated a foot or more above the general level of the ground, and the central portions are from three to five feet below the rims. Their size is remarkable, since they measure from sixty to seventy-five feet in diameter. The caving away of the bank has in one place made a perfect cross-section of a house-ring. On brief examination a few bits of charcoal, some *Unio* shells, and flint chips were found. In several house-rings pits have been dug by relic-hunters. A digging-stick with a bone handle, and a cache of shell and glass beads are reported to have been plowed up in a house-ring in an adjacent field. Many fragments of flint and obsidian are strewn along the river beach, and three pestles, either broken or unfinished, were picked up near by. The only one of interest is shown in plate VIII, 5.

Another and much better preserved village site is situated on the south bank of the Middle fork of Clearwater river, just outside the limits of the town of Kooskia. It is on a gravel flat, unsuitable for agriculture, that is now partly covered with a growth of young pine trees. As may be seen by the plan (fig. 2), the house-rings are of two distinct but intermingled types. The circular house-ring is found here, as at Hasutin, but it is noticeably smaller, being seldom more than twenty-five feet in diameter. The second type is long and narrow. The width is usually about eighteen feet, while the length covers from sixty to eighty-five feet. These house-rings are all

sunken from one to three feet, and have well-marked, elevated rims. As a rule the circular rings are deeper and more clearly marked than the elongate ones. The latter invariably have the axis parallel with the river bank, but no orderly arrangement with courts or streets is evident.

This village site has not been occupied for many years. The ground is well sodded, while trees, some of which are eighteen

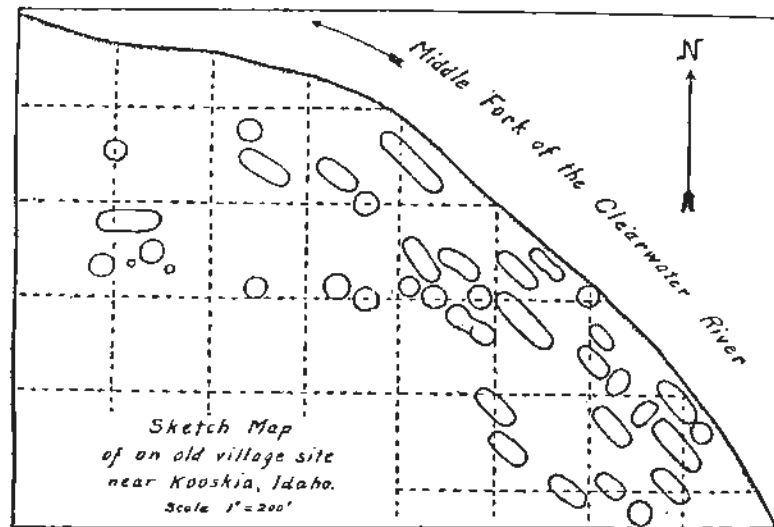


FIG. 2.

inches in diameter, grow around or directly out of the house-rings. In one ring a glass bead was found beneath the sod, showing that the site was probably occupied after the arrival of articles of European manufacture.

Permission for extended investigation could not be obtained. Brief examination and slight excavation revealed fireplaces about twelve feet apart along the central axes of the long house-rings. No implements were obtained here. Remains of sweat-houses and sweat-house fireplaces were seen along the river bank, but these were of much more recent origin than the house-rings.

Lewis and Clark¹ describe a circular house-ring at Kamiah

¹Lewis and Clark, *Original Journals*, vol. v, p. 33.

that bore signs of age when they saw it. They mention both the sunken center and the raised rim. This seems to show that the circular house had a considerable antiquity and that circular house-rings cannot be ascribed to the recent introduction of the tipi lodge.

It is clear, even from this scanty material, that the archeological remains furnish evidence of both of the main house types—the circular lodge and the long communal lodge. These types will be discussed in a later section.

CEMETERIES.—Cemeteries are found near the traditional village sites, usually on the first bench above the river bottom, where the ground was easy to dig and where the graves could be seen from the village. The rock-slides under basalt cliffs were also sometimes used. Cemeteries are readily located by the heaps of river-worn or rock-slide boulders piled over the graves. But so completely have most of the cemeteries been filled by relic-hunters that it is now difficult to find any undisturbed graves except in the regions at present occupied by the Indians.

At Kamiah an old cemetery occupied, in 1897, a rocky flat near the mouth of Lawyer's creek. This was partly destroyed by the railroad grade. The ground had the appearance of being "hilled" like an old hop field. There were few, if any, osseous remains in the graves, although along the river banks, where high water had washed out some of the graves, human teeth were to be found, and flint implements occurred in caches. In one case twenty finely finished and several crude spear-heads were found together. They are all triangular and without barbs, but they are made from a considerable variety of material. The present Indians claim that this stony field shows the remains of winter cache pits and not of graves.

Another group of graves was situated on the east bank of Snake river, nearly opposite the mouth of the Grande Ronde. These graves showed large piles of stone in which pieces of cedar were placed upright. At the mouth of Potlatch creek a group of graves in a rock-slide was uncovered in making a railroad cut. In one of them a Lewis-and-Clark medal was found.

Mr John Owre excavated some graves near Alnota, on Snake river, the majority of which had the skeleton of a horse over that of the man, while cedar stakes, often partly burned, were placed upright on the top. In some of the graves a large amount of property in the form of beads, knives, etc., was found. In a single grave were found five flint-lock guns, seven iron tomahawks, several long iron rods, and two long iron knives. In other graves a quart or more of shell beads (plate ix, 12-14) and several pounds of copper beads (plate ix, 16-18) were unearthed. In one grave a flint knife fourteen inches long was found. In this cemetery the bodies were buried both flexed and at length, about five feet below the surface.

A group of four graves on the second bench of Asotin creek, about a mile above Asotin City, was opened. In two of them a few children's bones were found, along with three or four crumbling dentalia beads (plate ix, 15), while in the third the badly decomposed skeleton of a young man was uncovered. The fourth was apparently empty. The skeleton of the young man rested in a flexed position upon the right side, facing the southwest. Nothing was found buried with it. A few pieces of charcoal and the brown remains of several small sticks that had been placed erect were also taken from the graves. The graves were shallow, measuring about three feet in depth by four feet in diameter. The bowlders that had been heaped over the grave were elevated about a foot above the surrounding surface and extended a like distance below it.

In general the burials are characterized by the invariable capping of bowlders, and by the presence of cedar stakes placed either upright around the body or horizontally over it. The position of the body itself varies widely. With the bodies are found ornaments and utensils, but no remains of food.

Most of the objects found in the graves and along the river bars are similar to those made or used until recently by the Nez Percés and so will be treated under Material Culture. A few are unusual. Plate ix, 1 and 2, show two narrow, polished celts of jadeite (?), one found at the mouth of Captain John creek and the other at the mouth of Kouse creek on Snake river above

Lewiston. These were evidently acquired in trade from the Indians of the Northwest coast. They have been cut by grooves, and the fractured portion between the grooves shows clearly in the illustration (side view). Neither this method nor this material was employed by the Nez Percés. These implements are said to have served as wedges, taking the place of the native elk-horn wedges.

Plate ix, 3, represents a flat stone found near Asotin, and now in the collection of Mr G. W. Bailey. It is probably a hunting record. In the same collection is a curious stone, shown in plate ix, 19. The body of this object is cylindrical, and at one end is a crudely sculptured head with wide open mouth. The object probably represents a rattlesnake, once the patron spirit of some shaman.

MATERIAL CULTURE

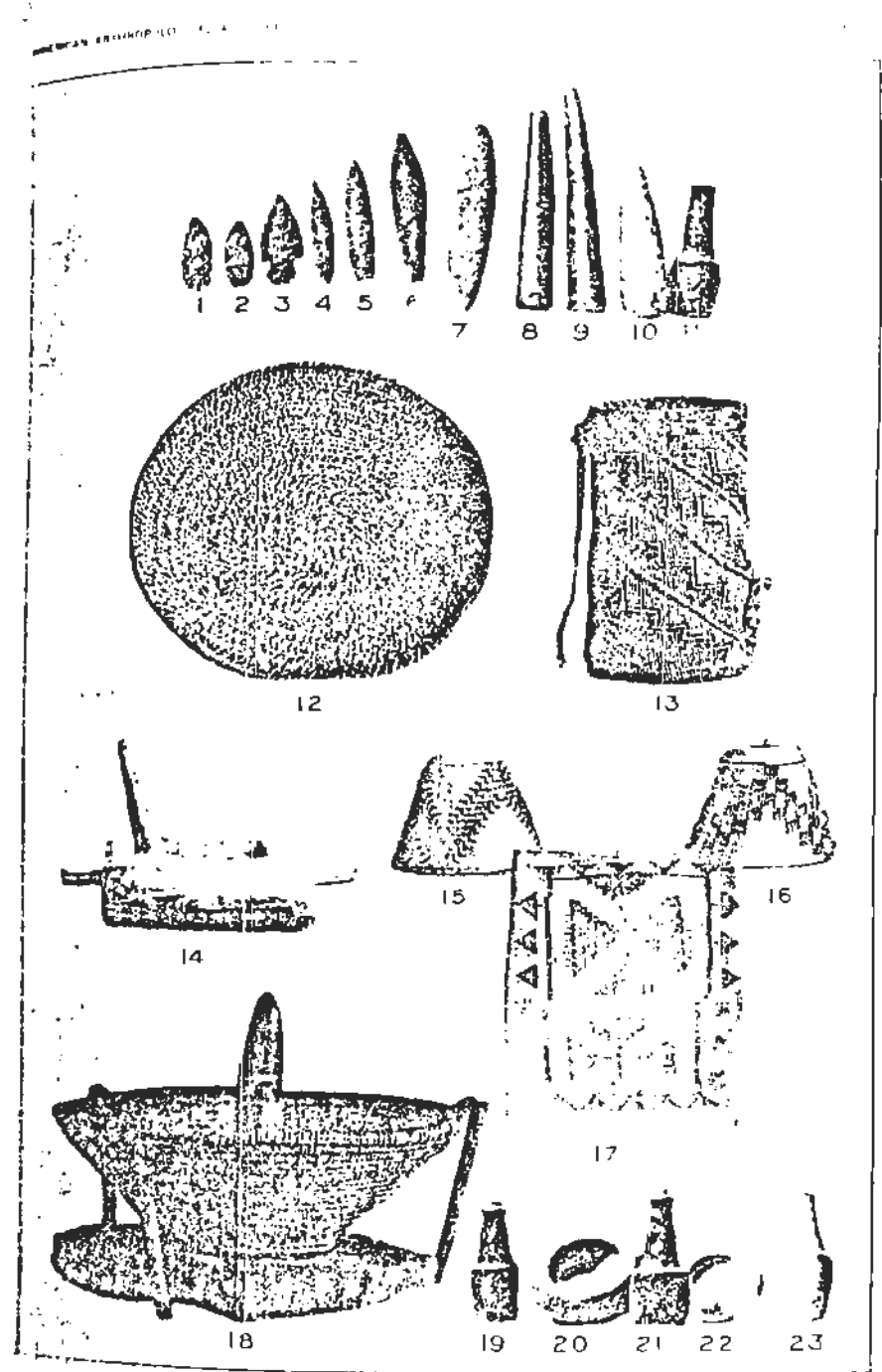
The culture of the Nez Percés will be taken up in the following pages, not in its present debased form, but as nearly as possible in its form at the time of the first contact of these Indians with the whites. The introduction of horses and of articles of Spanish manufacture occurred before this time and doubtless exerted considerable influence. Any attempt to go back too far, however, would involve the risk of misinterpretation. On the other hand the influence of the Plains has been very much on the ascendancy during the last seventy-five years, and it is well to lay as much stress as possible on features that are known to be old and that seem to be of autochthonous development. Unfortunately in the matter of art and design there is little old material, and much that is modern must be studied and analyzed in the hope of isolating the strictly native elements.

STONE

The Nez Percés worked skillfully in stone, shaping their implements by the two common methods, chipping and pecking. By the chipping method they made knives, arrow and spear heads, scrapers, and perforators. By the pecking process they fashioned pestles, mortars, mauls, and a few smaller objects.

MATERIALS. — The materials to be had were excellent and occurred in considerable variety. For chipped implements the material most prized was obsidian, which was obtained on John Day river, the name of this stream meaning "obsidian river," and in the mountains to the east, possibly in the vicinity of Yellowstone National Park. Parties were sent out to collect it, but no evidence that the implements were roughly shaped at the quarries could be obtained. Many kinds of flint, as well as jasper and basalt, were also used. The latter is the prevailing stone of the country. Pecked implements were made from river boulders of granite, diorite, and other hard stones. Boulders were generally chosen whose shape and size approximated that of the implement desired, so that labor could be minimized. Unfinished implements are found in considerable quantities. In rare cases these show rough preliminary chipping. The best implements present a refinement of shape and a smoothness of finish that are truly remarkable.

CHIPPED IMPLEMENTS. — Knives of several shapes are shown in plate vi, 1-6, and in plate vii, 1-6. The former group, from the fine collection of Mr W. F. Smith of Spokane, shows blades that vary from five and a half to eleven inches in length. The longest blades attain a length of fourteen or fifteen inches, but all exceeding four inches are rare. These blades were either simply wrapped at one end with deerskin or were set in short handles of wood. The end of the handle was notched and the blade set in with pitch, the gum of chokecherry, or sturgeon-blood glue. The hunting and scalping knife received a great deal of attention. It was carried in a deerskin bag or sheath which was suspended on the chest from a cord which passed around the neck. The flaking of knives and other flint implements was accomplished by pressing upon the stone with a bone point and then giving the latter a sudden sidewise twist. A flaker of bone with a notch in the end was also used. The stone to be chipped was held in the palm of the left hand. The flaking is usually very even, and the lines of the finished implement almost invariably symmetrical and pleasing. The secondary chipping of the best implements from this region is exceedingly minute and regular.



OBJECTS OF THE NEZ PERCÉS

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

Spear and lance heads are barbed and non-barbed. The largest measure about four inches in length, but the majority do not exceed two inches. It is difficult to discriminate between spearheads, knives, and arrowheads; the working rule of classification depends mainly on the size. Any point more than an inch and a quarter in length may safely be called a spearpoint if it is barbed; if not barbed the chances are that points exceeding three inches long were intended for use as knives, and those under that size for spearheads. The shapes of the spearheads vary, the principal ones being shown in plate vii, 1, and 5-11. These heads were used on war spears, but rarely on fishing spears.

Arrowheads are figured in plate vii, 10-22. Judging from the variety of the bases the arrowheads must have been attached to the shafts in several distinct ways. The extreme minuteness of some of these arrowheads is worthy of note. The arrowhead with serrated edges is an unusual type (plate vii, 16), while arrowheads with two or more sets of barbs have been found. The straight-topped arrowhead (14) is very common in the Nez Percé area, while the arrowhead with a shaft (21) predominates in the Yakima region.

Perforators are shown in plate vii, 23-25. The usual form has a wide top to serve as a finger-hold. Scrapers are usually irregular in shape; many are flat on one side and somewhat domed on the other, with a straight scraping edge. Such a scraper was used in the tool for graining skins, shown in fig. 5⁴. For another stage of skin-dressing a rough scraper was made by simply striking off a disk-shaped fragment from a river boulder.

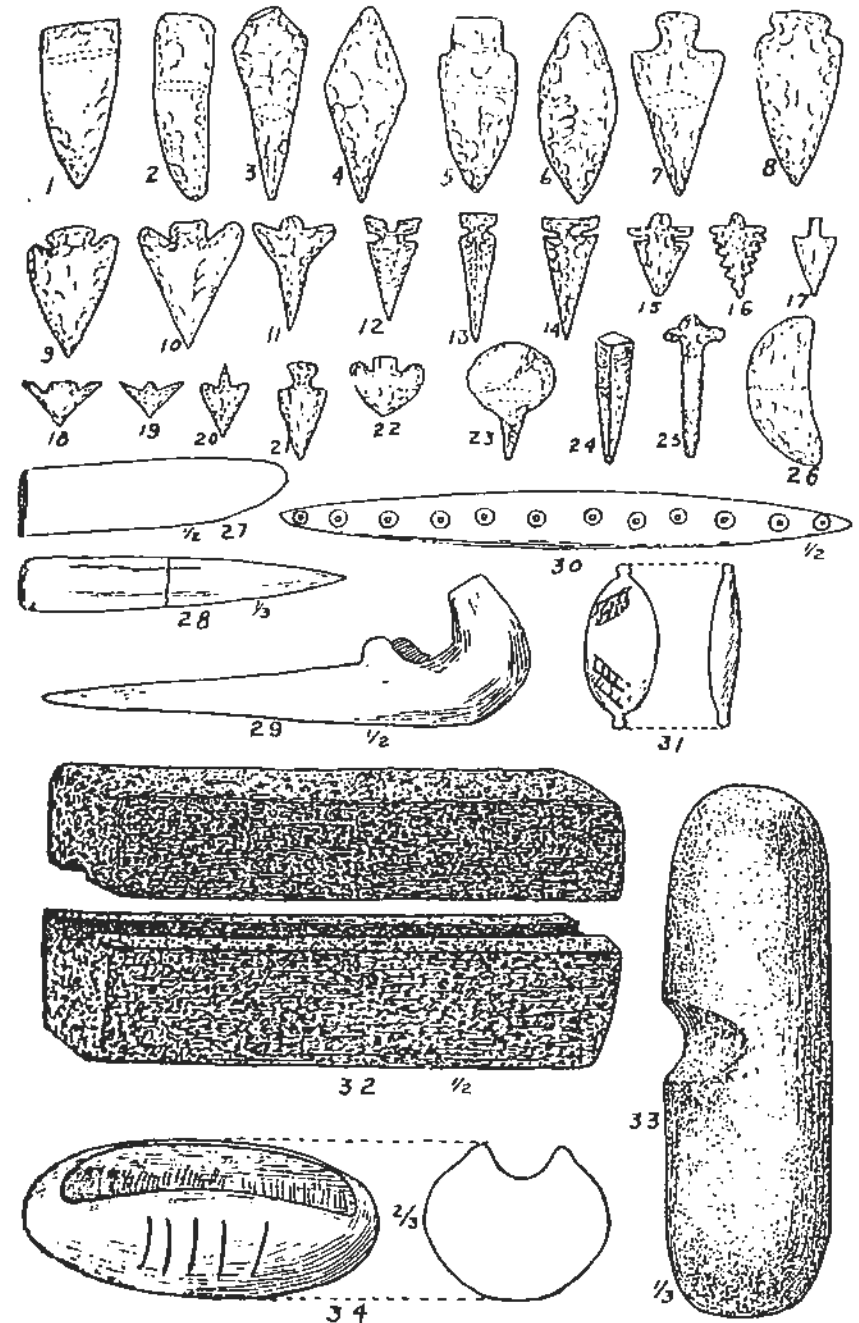
All the chipped implements described above were made by the men; pecked implements were made by the women.

PECKED IMPLEMENTS. — Pestles were made by laboriously pecking the surface of selected river boulders with the sharp edge of another stone. The time and labor required to make good pestles rendered them valuable family property, and they were handed down for generations. A number of pestles, some crude and some finely finished, are shown in plate viii. The process of manufacture is indicated pretty clearly by the specimens figured.

Fig. 1 of plate VIII shows a smooth, oblong river boulder that has been neatly broken by an encircling series of well-directed blows. It evidently did not give satisfaction, for it was thrown aside without further change, and was not used, even temporarily, as a pestle. Fig. 2 shows a pestle entirely natural except for the abrasion of its lower surface, caused by pounding. In fig. 3 a water-worn stone has had its rougher angles smoothed off by pecking and its base flattened to give a better pounding surface. Fig. 4 shows an old broken pestle made over into a new one. Fig. 5 pictures a remarkable specimen. At first glance it might seem that here is an old celt form remodeled into a new implement, so true are its surfaces. As a matter of fact these are entirely water-worn, and this object offers an example of the rare preliminary chipping in the manufacture of pestles. Chipped roughly from a disk-shaped boulder, it had already been somewhat smoothed by pecking before it was finally rejected.

Figs. 6 to 11 of the same plate illustrate the principal types of finished pestles. Perhaps the most common type is the long conical pestle with slightly flaring sides like the entasis of a column (figs. 6-8). These vary from six to eighteen inches in length, and from two inches to two and one-half inches in diameter. Fig. 7 represents a pestle of this sort which is slightly modified. A natural protuberance at the upper end is marked with a groove to give a phallic significance. Another pestle, recently presented by Mr Henry Fair to the American Museum of Natural History, shows a cord-like enlargement running lengthwise. No other decorative or symbolic modifications were observed.

The second main type of pestle has an enlarged pounding surface, with the upper two-thirds of the implement contracted to offer a more convenient hand-hold. Three varieties of this type are shown in figs. 9-11. In the first example (fig. 9) the handle is round and domed at the top, while the lower portion is somewhat angular and contracts toward the base. This kind of pestle has either three or four rounded corners to the base. Fig. 10 represents the "hat-shaped" top, while fig. 11 shows a simple rim enlargement at the top. These last two



STONE AND BONE IMPLEMENTS OF THE NEZ PERCÉS

1-4, Chipped Stone Implements; 27-31, Bone Objects; 32, Arrow-shaft Rasp; 33, Stone Handle for Digging-stick; 34, Polisher of Fine-grained Stone.

varieties were used both as pestles and as mauls. The enlargement at the tops of the handles prevented them from slipping from the hand when used for driving wedges.

The distribution of the types of stone pestles west of the Rocky mountains presents an interesting field of study. Close analogies to the types described above, if not identical forms, are found over a considerable area. The hat-shaped top is found on the long slender pestles of California. Combined with a base more like that of the Nez Percé pestles, it is found on the lower stretches of Fraser river, British Columbia. The simple conoid type prevails throughout southern Washington. East of the Nez Percé country the use of stone pestles disappears until the region of the Great Lakes is reached. Although thus on the frontier of the area of stone pestles, yet the workmanship shown by the Nez Percés in making these implements is perhaps the best seen anywhere. Plate vi, 8-11 and 19, 21, 23, illustrate some of the beautiful pestles in Mr W. F. Smith's collection.

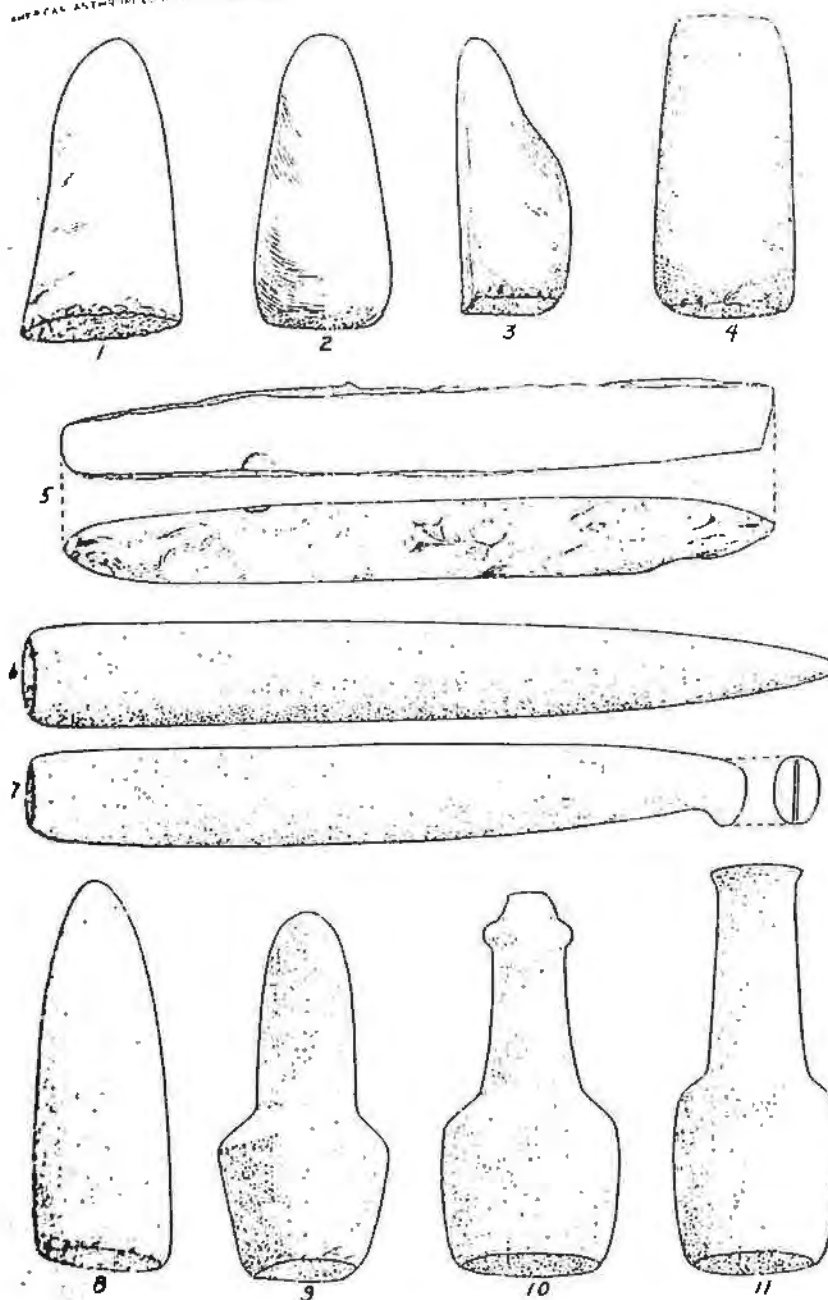
Stone mortars, hollowed out of thick, disk-shaped river boulders, are rarely found. They are rather shallow and may have been used as paint mortars or for some other specialized use. If they served as ordinary mortars they must have been furnished with basketwork sides. Wooden mortars and basket mortars placed over flat stones were more commonly used. Two beautiful stone mortars are shown in plate vi, 20, 22.

Cylindrical stones with a polished groove on one side, such as is illustrated in plate vii, 33, were used as handles for digging-sticks, the stone being lashed across the top of the stick. This custom presents an interesting analogy to the use of stone disks on the digging-sticks of California Indians. Such stones as these have been called arrowshaft straighteners, but there is no evidence of such use among the Nez Percés. Arrowshafts were polished with a pair of rasps such as are shown in plate vii, 32. The two oblong pieces of light tufa, each with a semicircular groove, were placed together with the shaft within the groove. This implement was as effective as sand-paper. Possibly a still higher polish was given by the grooved object of soapstone shown in plate vii, 34.

It has already been pointed out in discussing pestles that those having a protuberance at the top of the handle, to prevent the hand from slipping, were also used as mauls. When speaking of Indians near the Grande Ronde river, Irving¹ says: "They generally made use of a stone mallet wrought in the shape of a bottle, and wedges of elk-horn, in splitting their wood." The usual type of grooved maul with an attached handle was not used by the Nez Percés, although many specimens are found at no greater distance than Umatilla river in northeastern Oregon. River boulders of various sizes were, however, crudely grooved to serve as net-sinkers. Hammer-stones for fracturing, etc., seem to have been merely such unmodified stones as were conveniently at hand. The heads of war-clubs (fig. 5^b) were also made of unworked river boulders.

PIPES. — Pipes were made of soft stone, the two varieties most in use being a bluish or yellowish soapstone and a light spongy tufa. Catlinite seems occasionally to have been acquired from the Plains tribes. The earliest form of pipe was doubtless the straight tubular pipe that may once have prevailed over the western half of North America. Plate ix, 4 and 5, illustrate two pipes of this character, taken from old graves. The larger one, in the collection of Mr G. W. Bailey, has a small smoke-hole through the stem, and a disk-shaped mouth-piece. This disk is pierced by a hole near the rim, evidently to admit a cord by which the pipe might be suspended from the neck. The stem was formerly decorated with an incised design of which only few traces remain. The second pipe, belonging to Mr John Owre, is shorter, and the bore of the stem is greater. The bowl in both cases is conical. Possibly a wooden mouth-piece was used with the second pipe. Plate ix, 7, 8, show two examples of the right-angle pipe bowls. The material of the pipe shown in fig. 7 of the same plate is reddish tufa. The drawing of a tomahawk on the bottom of the pipe shows that it is fairly modern. On the sides of the bowl is a crisscross design, and on the front a crude drawing of an Indian head with feather

¹ Irving (*b*), p. 64.



TYPES OF STONE PESTLES

1-6, Unfinished Pestles; 7-11, Finished Pestles. (All about one-fourth natural size.)

head-dress. Fig. 8 shows a smaller, better made pipe of soapstone, decorated with lines and dots in a pleasing arrangement. Both of these pipes are in the collection of Mr Bailey. Fig. 6 presents a disk-shaped pipe bowl of yellow soapstone. The aperture is a right-angle one. The bowl has no decoration. This pipe, found near Asotin City, is now in the Peabody Museum at Cambridge. All of these pipes with right-angle bowls were provided with wooden stems. Many very minute pipes have been obtained in the Nez Percé region.

The smoking of the pipe formed an important part of the burial and other sacred ceremonies of the Nez Percés. The calumet, or peace-pipe, ceremony seems also to have been practised among them or to have been introduced at a very early date. Hines¹ describes a Nez Percé peace-pipe as having had a stem one inch in diameter and three feet long, and a bowl four inches long and two inches in diameter, made of a dark smooth-grained stone. When smoked it was passed in regular order as among the Plains tribes.

BONE AND HORN

Many small implements were made of bone and horn. Elk-horn wedges, which completely supplanted celts in this region, were of prime importance. An elk-horn wedge is illustrated in fig. 5⁷. Such wedges were used not only for splitting wood, but also for felling trees, hollowing out canoes, etc. They were held in position, and then pounded with the stone mallets already described. The horn bow is referred to later. Awls of various sizes and for various uses were made of bone (plate VII, 27-29). The last one shows an awl used in braiding rope. In weaving basketry a small awl was employed. Bone was also extensively used as material for arrow-flakers, for heads of fish-spears, gouges, and many other small implements. Whistles were made of the long-bones of the sand-hill crane, and beads of the bones of other birds. Dice and gaming pieces were commonly made of bone. Before being fashioned into the various objects, bones were usually boiled to remove the animal fats. Most of the objects here mentioned are described in later sections.

¹Hines, p. 184.

METAL

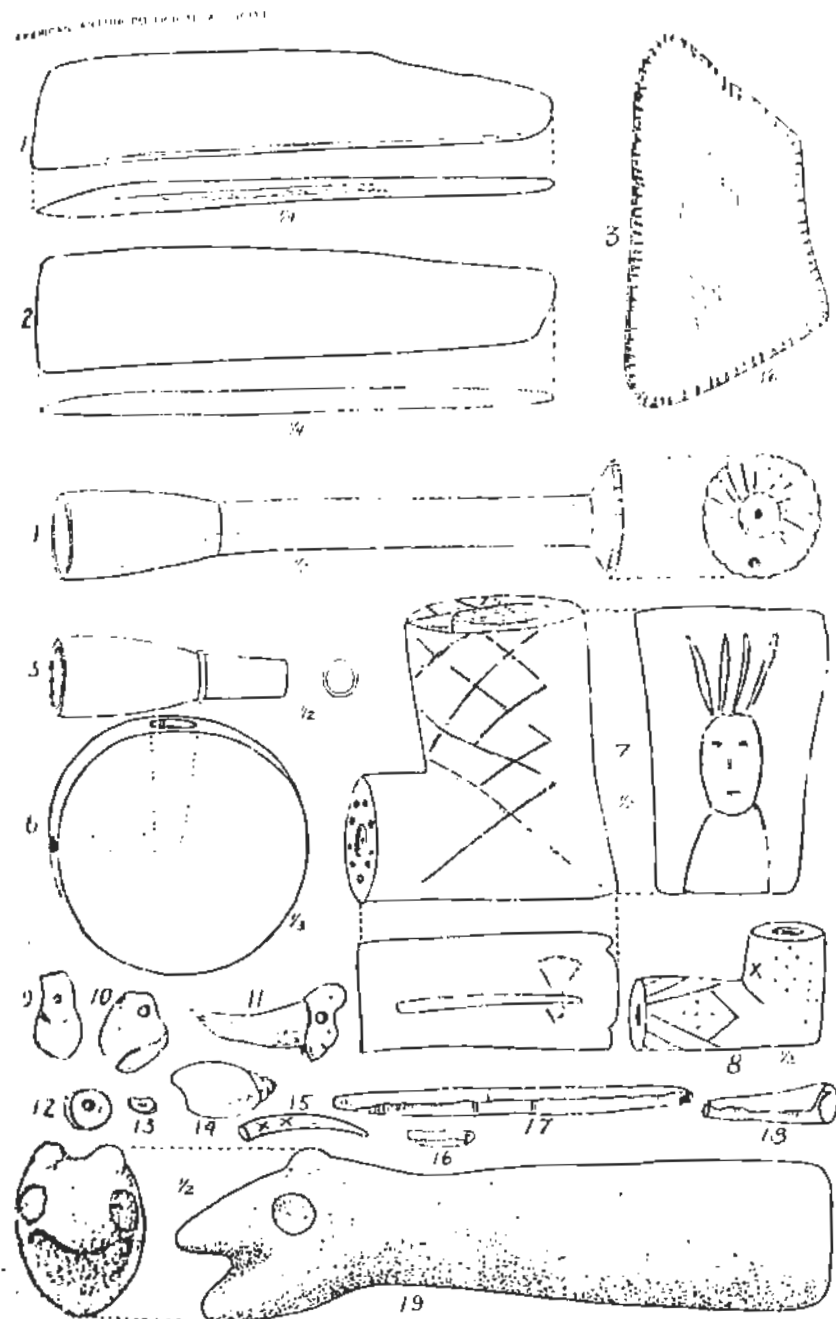
Copper was probably not known before the arrival of the whites, or at least until articles of civilization had reached this region. The Nez Percé language has no separate term for copper; it is simply called *moksmoks*, "yellow." Such large quantities of copper have been taken from graves, some of which appear to date from early times, that it seems reasonable that copper was acquired in trade from the Plains or the Northwest coast. An examination of the tubular beads, such as are figured in plate ix, 16-18, shows uneven, undulating edges, such as would be more apt to result from a pounded nugget than from a cut sheet.

Lewis and Clark found the Indians of this region, who had never seen whites, in possession of a number of Mexican silver dollars. Iron at an early date supplanted flint and obsidian for the manufacture of arrowheads and knives.

WEAVING

The art of weaving was practised to a considerable extent by the Nez Percés, in contrast to its very slight development in the Plains area. In this, as in the making of stone pestles, the Nez Percés occupy the frontier of a typically Pacific Coast art. The most conspicuous product was the flat wallet, or carrying bag, which indeed is still made and used by the Indians. Flexible cylindrical pack-baskets, water-tight cooking baskets, cups and food bowls, winnowing baskets, basket-work tops for mortars, fez-shaped women's hats, as well as mats for floor and house coverings were also made.

It seems fairly certain that these people never wove blankets. On inquiry, they denied all knowledge of such, and insisted that blankets of elk and buffalo hides were the only kinds used before the coming of the whites. The beautiful blankets brought back by Wilkes, several examples of which are in the National Museum, are more likely to belong to the Puget Sound area, where the weaving of blankets from the hair of the dog and the mountain goat, sometimes mixed with the down of wild geese, was a common practice. The designs on these blankets are



OBJECTS OF THE NEZ PERCÉS

1, 2, Stone Wedges; 3, Notched Stone; 4, Pipe; 5, 6, Beads; 7, Sculpture (Stone).

entirely geometrical and undoubtedly show certain general similarities with those found on the twined wallets of the Nez Percés. But the elements are so simple, consisting of triangles, squares, zigzags, etc., and the combinations so varied, that such similarities may, after all, have little significance. The blankets, moreover, show more colors than are found in early Nez Percé textiles. The colors in these blankets appear to be vegetal, while, except for a root which produced a brown dye, and rock slime which produced green, the Nez Percés depended upon minerals for paints. The Nez Percés are not known to have made even the simple blankets woven of strips of rabbit-skin; nor are they known to have used the hair of the dog or the mountain goat in any kind of textiles. They did not make woven tumplines, but used a strip of deerskin for this purpose.

The bast of Indian hemp (*Apocynum cannabinum* L.), called *kamo*, originally formed the foundation for all the lighter and more flexible baskets. The hemp was first made into cordage. Of late years this native material has been adulterated with cotton cordage. Grass, especially beargrass (*Xerophyllum tenax* Nutt.), was much used as a secondary material to carry the design. Beargrass was gathered in the mountains; it was plentiful along the Lolo trail. Corn-husk has largely replaced the native material in modern times, and worsted yarns in gay colors have also been substituted for the grass overlay.

WALLETS. — The flat wallet (plate vi, 17) shows a technique of simple twined weaving with the ornament applied by the process of false embroidery. When this process is used the designs do not appear on the inside, but only the loose ends of the colored elements. In these wallets the embroidery element takes only one twist around each loop of the foundation, and that toward the right. Fig. 3 shows a somewhat diagrammatic representation of this method of weave and ornamentation. Both the vertical and horizontal members of the textile proper are cords of hemp. The false embroidery element may be beargrass, corn-husk, or yarn. The margin shows a simple turning down of the wool, which is then bound down by the warp. Often the margin of the wallet was protected by a lining

of deerskin. The wallets were made in many sizes. Many were two or even three feet in length and fifteen or twenty inches in width, but smaller ones were more common. The wallets were carried by double handles made by passing a single thong twice through each side of the top. The handle thus

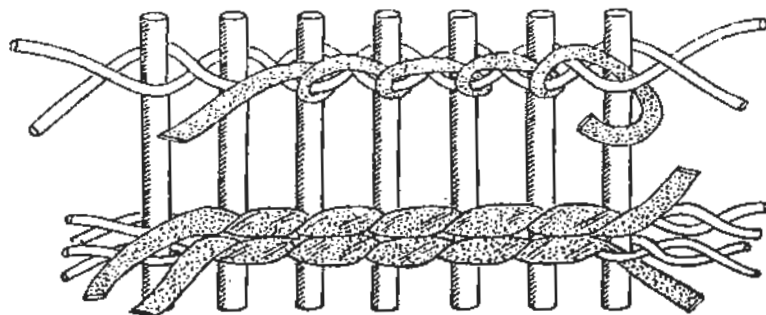


FIG. 3.—Technique of "false embroidery" of the flat wallets.

closed the bag. The wallets were gaily decorated. The designs will be considered later. A pattern was applied to each side of the bag; as a rule these two patterns were entirely different.

CARRYING BASKETS.—The cylindrical carrying baskets (plate vi, 13) and the basket hats (15 and 16) show a different kind

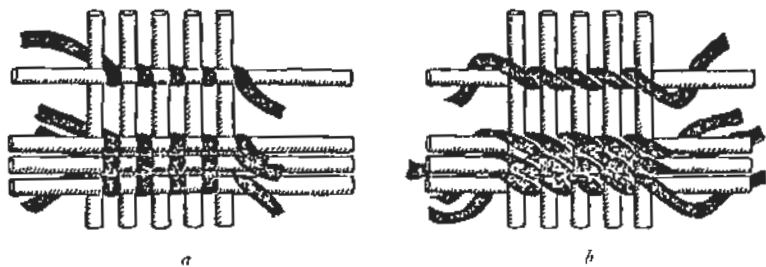


FIG. 4.—Technique of "lattice weave" of the cylindrical baskets and basket hats.

of weave, although at first glance it seems the same as that of the wallets. The materials are the same, but the cord of the carrying baskets is generally coarser than that used in the wallets and the women's hats. The technique of the weaving is shown in fig. 4, *a* representing the aspect of the inside of the

basket, while *b* exhibits that of the outside. It is seen from these diagrams that the foundation is simply a lattice-work of vertical and horizontal cords. The colored element which appears on the outside passes over and under the horizontal element of the foundation, and across the vertical one. The color shows as a solid mass on the outside of the basket, while on the inside it appears in vertical lines alternating with the hemp. This sort of weave seems to have been effected from the inside of the basket, because the twist on the outside runs toward the left and not toward the right as in the case of false embroidery.

The cylindrical baskets were sometimes a foot and a half in diameter and two feet deep. The bottom was flat. The rim was usually covered with a strip of deerskin. A handle or a tumpline of deerskin or elk-hide was fastened to one side of the basket near the top. Plate vi, 13, illustrates a good example of this type of basket.

BASKET HATS.—The basket hats of the women exhibit the same method of weaving, but with finer elements and more careful workmanship. Plate vi, 15, 16, show two examples of the women's hats. The material on the outside is beargrass, which was used either in its natural cream color or stained dark brown or yellow. Many modern basket hats show the use of yarns rather than grass. The top of the basket hat was made with a sort of radial weave similar to the bottom of the carrying baskets. The hats were all fez-shaped, with a double thong at the crown to which pendants were sometimes hung. In these hats the textile art of the Nez Percés reached its highest development. Almost identical hats were used by the Yakima, the Umatilla, and other neighboring tribes on the west. The designs were almost entirely arranged in zigzags, with three points at the top and three at the bottom.

COILED BASKETS.—Water-tight bowl-shaped baskets to serve as cooking vessels, food bowls, and cups were made of strips of willow after the coil method with imbricated decoration. The process of construction is identical with that of the Yakima and Klikitat baskets, after which it may have been patterned. Some close-coil baskets without imbrication were also made. Although

imbricated baskets have not been made for many years, some of the older natives remember women who could make them. The material used to carry the design in the imbrication was xerophyllum, commonly dyed black or orange. The four-cornered baskets so typical of the Salish and the northern portion of the Basin area, were not made by the Nez Percés. The coil seems to have been one of rods and splints. The sewing thread was quite uniformly split. A sharp awl was the only implement used in weaving. Coil baskets were regularly used as cooking vessels by the Indians of this section. The skin and paunch pails of the Plains area seem never to have been used.

Plate vi, 18, illustrates a mortar with basket-work sides. The bottom was a common flat stone. This funnel-shaped basket, with the opening at the bottom about six inches in diameter, was pegged down tightly upon the stone. The weave is a coiled one, rather crude and with no attempt at ornamentation; the number of rods in the coil varies; the margin is finished off with a braid. Old mortar baskets are said to have been decorated with diamond patterns applied not by imbrication but by simply using a colored sewing thread as in the southern Basin area. This sort of mortar strongly recalls the mortar of California. It was not, however, fastened to the stone with pitch as in the latter area.

Winnowing baskets were used in cleaning kouse and other roots. The material for such baskets was the shredded roots of birch (*Betula microphylla* Bunge) trees, that grow along water courses. The method was a loose double-rod coil, open enough to allow the dirt to be sifted out. In shape the baskets resembled a gold pan, having a flat bottom and flaring sides. They were not decorated and were rather crude in workmanship. Plate vi, 12, illustrates a Nez Percé winnowing basket in the Peabody Museum. The margin was finished off by dropping alternate stitches of the last coil and simply turning the sewing thread around the rod itself.

MATS. — Mats were used for house and floor coverings, and as sheets upon which berries could be spread and dried. They were made by two methods, according to whether the material

was cattail (*Typha latifolia* L.) or tule (*Scirpus lacustris* L.). Mats made of cattail were simpler in construction and less effective in keeping out rain than those made of tule. They were similar in color, size, and the complete absence of decoration. The width averaged about four feet and the length nine feet.

In the cattail mat the elements of the wool were bound together by the simple turning of two cords, over and under the doubled blades, at intervals of from three to six inches. These warp-cords were not severed, but were passed continuously back and forth, making loops now at one end of the mat, now at the other. The ends of the mat were left unprotected and the raw edges were simply trimmed down evenly or turned under the warp. The tule mat was sewn rather than woven. The sewing threads were about three inches apart. The wool element consisted of two stems of tule which were twisted lengthwise, and pierced by the sewing thread at every half turn when one stem was directly over the other. The sewing threads were continuous and formed loops at the ends of the mat, as did the warp-cords in the cattail mats, but they were reinforced along the ends of the mat with a two-strand rope, with which they were intertwined. This rope served to strengthen the end of the mat. The side edges, also, were strengthened with a twined cord.

HOUSES

The Nez Percés constructed at least four distinct types of houses: first, a long communal house; second, a circular tipi lodge; third, an underground menstrual lodge for the women; fourth, a sudatory for the unmarried men. A fifth type, hardly deserving mention, was a rude brush shelter thrown up when on hunting expeditions. There seems to have been some variety of construction in the first two types. The floors of the houses were all more or less depressed by excavation, the summer ones slightly and the winter ones to a depth of two or three feet. The earth removed was heaped about the sides, thus raising the wall of the house.

THE LONG HOUSE. — The long communal dwelling was the

most important, as a single structure housed many families. According to Indian informants this house was shaped like an A-tent. It had two ridge-poles which the upright supports separated by a few inches. The poles were tied with rope. The aperture between these ridge poles extended the whole length of the house and served as a smoke flue. Against these ridge poles side poles were laid, and to the latter long mats were tied, shingle-fashion. The mats were of two kinds; their technique has already been described. Poles were often laid up against the mats as a safeguard against wind. The earth thrown out of the excavation for the interior was piled up on the outside to bank the bottom of the mats. Dry grass was first laid against the mats to prevent decay.

Instead of mats a very coarse heavy grass, commonly called rye-grass (*Elymus* sp.), was sometimes laid over the side poles or rafters to the depth of several inches and then covered with earth.

The fires were arranged in a row down the middle of the house, about ten or twelve feet apart. There were two families for each fire. As a rule the house was open, but occasionally small partitions were put up which divided the house into a double row of stalls. There was always an open space down the center. There were two or more small entrances in one side of the house; in the winter these were closed with heavy skins which hung from the tops of the openings. Also in the winter time there was often an inner skin lining for the house, but this was probably true only of the smaller houses. The beds were laid nearest the walls upon built-up mattresses of dry grass and the inner bark of cottonwood trees.

Lewis and Clark make frequent mention of these long houses and for some of them give measurements. One of the longest was situated near Lawyer's creek, and is thus described:¹

"The village . . . consists of one house only which is 150 feet in length, built in the usual form of sticks, mats and dry grass. It contains 24 fires and about double that number of families."

Cox² thus describes the houses of the Nez Percés:

¹ Lewis and Clark, vol. V, p. 16.

² Ross Cox, p. 84.

"Their habitations are covered with large mats fixed on poles; some are square, others oblong, and some conical; they are of various sizes, from 20 to 70 feet long and 10 to 15 feet broad. There are no interior divisions, and an opening at the top serves the double purpose of a window and a chimney. These dwellings are pretty free from vermin and are easily changed when occasion requires."

The old village site at Kooskia (see fig. 2), already described, shows oblong house-rings that agree with these descriptions. The longest house-ring there is about eighty feet, and the average about fifty feet in length. The average width is about eighteen feet.

Long houses with flat roofs are mentioned by Lewis and Clark,¹ but no account of any such could be obtained from the Indians. It is possible that scaffolds for drying fish were mistaken for the frames of houses.

There were no strictly ceremonial structures.

TIPÍ LODGES.—The circular conical tipi, covered with either mats or skins, was also a native type. Lewis and Clark speak of a chief, residing near Kamiah, who had "a large conical lodge of leather." Certainly at a later date lodges of buffalo skin were very common. It is probable, however, that until horses were procured buffalo robes were too valuable as blankets to be used for house coverings. Plate x, 6, presents a tipi lodge covered with mats, the upper ones of cattail and the lower ones of tule. According to Townsend² the tipi lodge covered with buffalo skins was the usual form when traveling.

The tipi lodge was ordinarily formed of ten or twelve poles. Of these, three were first tied near the upper end and spread to form a tripod; then the other poles were laid against the three. This lodge was usually sunken about two feet, especially in winter. Lewis and Clark³ mention an ancient circular house-ring near Kamiah, which was about 30 feet in diameter, with the rim exceeding three feet in height and the center sunken four feet in the ground. Circular rings are also to be seen at the old village sites already described.

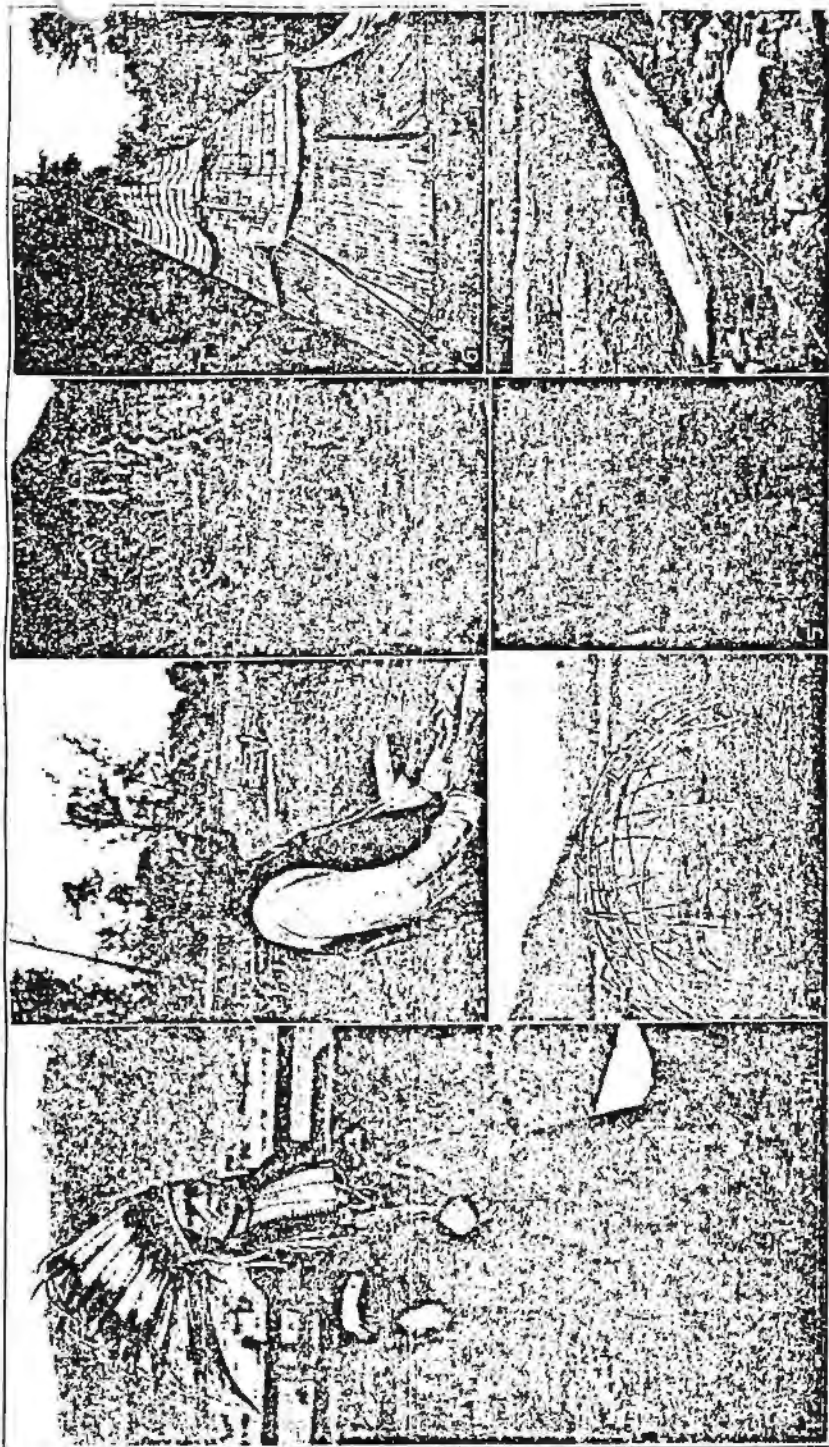
¹Op. cit., vol. v, p. 100, and Gass, p. 212.

²Townsend, Thwaites ed., p. 225.

³Vol. v, p. 33.

THE NEZ PERCÉ INDIANS

Fig. 1. Type of Nez Percé houses. 2. Framework of temporary sweat-house. 3. 4. 5. Pounding pits on Buffalo River. 6. Mat lodge. 7. Cabin.



MENSTRUAL LODGE.—The menstrual lodge was circular, about twenty feet in diameter and five or six feet deep. Poles were laid across the excavation on a level with the ground, and upon these grass and then earth were spread. A circular opening was left near one side, from which a ladder, made of a forked stick with rope steps, descended to the floor. The floor was covered with mats; there was a fire near the middle, and beds around the sides. This house was used by the women during the menstrual period, and before and after childbirth. Its use seems to have been limited to the winter months, for during the summer, and when on the trail, an old tipi set up at a distance from the main camp served the purpose. The men were not allowed to come near these lodges; the occupants had to cook their own food and were not allowed to touch anything that others used. There was one or more of these lodges to each village, and sometimes ten or more women occupied the lodge at one time. Lewis and Clark mention several times these lodges and the restriction of the women. They remark on the presence of this place of seclusion, even in the smallest communities, in the following words:

“Even at this small habitation there was the usual appendage of the solitary lodge, the retreat of the tawny damsels when nature causes them to be driven into coventry.”¹

SUDATORY LODGE.—During winter the boys above fourteen years of age and the unmarried men usually slept in a low subterranean sudatory lodge. A circular excavation, about three feet deep and ten or twelve feet in diameter, was covered with poles which were laid across on a level with the ground. These poles were covered with rye grass and then earth to the depth of several inches. The sudatory was entered by a sloping passage. The interior was thickly bedded with grass. A pile of stones was in the center. A fireplace outside served to heat stones in the morning, and these were brought into the lodge and water poured over them; thus all who wished could take a sweat-bath before getting up. These sudatory sleeping quarters were always on the bank of a stream, where the men could

¹ Vol. v, p. 11.

take a plunge bath after the sweat. Often as many as fifteen men and boys were crowded into these close quarters. Only a robe was necessary for covering.

Small sweat-houses were constructed on the banks of streams for the use of both men and women. Temporary ones were quickly constructed of a framework of willows forming a dome, covered with the blanket of the bather. More permanent ones were made on the same sort of framework, but covered with grass and sod. Plate x, 3, shows a willow framework for a temporary sweat-house.

FURNITURE AND UTENSILS

The furniture for the houses was very simple. There were no stools or benches, and the bed was used during the day for lounging. The beds were not built above the ground or covered, but consisted merely of a heap of dry grass or a sort of mattress made from the inner bark of cottonwood trees. Blankets were of elk-hides dressed without removing the hair. Pillows were folded deer or bear skins. In the long houses the beds were arranged against the walls with the feet toward the center. In the round tipi lodges the beds were arranged as sectors of the circular area, the fireplace being in the center. The floors were covered with mats. Storage baskets were piled at the heads of the beds. The more valuable articles of clothing were hung up.

A number of the common household utensils have already been described, especially the basketry and the pestles. All boiling was done in coiled willow baskets. Besides these cooking baskets there were no important cooking utensils, for all food not boiled was either steamed in pits or roasted in the ashes.

Baskets mortars were much used for pounding roots, but wooden mortars also were used. These latter were of several sorts. Sometimes a portion of log was hacked and burned into a hollow vessel without much regard to form. The form with a handle at each end (plate vi, 14) may have been recently acquired from the Plains tribes, but there is no doubt that wooden mortars of the more indeterminate shapes were made in the old times.

Food was eaten out of wooden bowls and bowl-shaped baskets. Spoons and ladles of buffalo and mountain-sheep horn were in common use. Some had short and some long handles. All showed careful workmanship and good finish, but almost nothing that could be called ornamentation.

The digging-stick was one of the most necessary and characteristic implements of the Nez Percés. It was about two and a half feet long, with a fire-hardened point bent slightly forward. The handle consisted of a piece of bone, horn, or stone, from five to eight inches in length. This handle was usually perforated in the middle and lashed firmly at right angles to the stick. The stick was operated with both hands, one being placed on each end of the handle. When the weight was applied to the handle, the point penetrated the ground to a depth of about six inches, and then the curved end was directed forward, thus breaking the sod. A stone handle is shown in plate VII, 33.

Pack-baskets and winnowing baskets have already been described. The latter were used in cleaning roots.

FIRE-MAKING. — Fire was made by means of the hand-turned fire-drill. The bow-drill was unknown. The hearth-stick was either of the root of the light-leaved willow (*Salix lasiandra* Benth.) or of the stem of "smoke-wood" (*Clematis ligusticifolia* Nutt.). A slight hollow was made in this hearth-stick and a groove was cut from one edge into the hollow. The whirling stick was made of the dead tips of red fir (*Pseudotsuga mucronata* Sudw.). Finely broken brush or dry grass was used for tinder. As in many other areas the upright piece was called "man" and the horizontal one "woman." This method of fire-making is said to have been introduced by Coyote, the culture-hero. Although fire could be made in a short time by this method, as a rule fires were not allowed to go out in the permanent camps.

FOOD AND ITS PREPARATION

In common with other tribes of the arid Basin area, the Nez Percés depended for food largely upon vegetal products. They were not, however, as restricted in this respect as the tribes to the south, since salmon was plentiful during certain

periods of the year and game was fairly abundant. Agriculture was entirely unknown.

CAMAS. — The most important of all vegetal foods was camas (*Camassia esculenta* Lindl.). This liliaceous bulb was gathered in enormous quantities in the wet upland meadows of Weippe prairie, Camas prairie, in the open country near the present town of Moscow, and in the Grande Ronde valley. It grows in the glades of pine woods, and in partly inundated prairie land. The bulbs lie very closely together, so that when the camas is in bloom, the flats from a short distance resemble lakes of fine, clear water.

Camas was dug to a slight extent early in the spring before the growth of the stem had exhausted the stored-up energy of the bulb. The great harvest came during June and July, after the plant had nearly finished blooming. At this time the soil dried rapidly and the bulbs matured. Another great harvest occurred in the fall. It will be remembered that Lewis and Clark first encountered the Nez Percés, September 20, 1805, on Weippe prairie, when the Indian women were laying in a winter food supply of this root. Camas, as well as the other food roots, was gathered entirely by the women, the men at this time being busied with fishing, hunting, and war-parties. A digging-stick with a fire-hardened point and a bone crosspiece at the top was the only implement used. Cylindrical pack-baskets were used in carrying the roots to camp, and goldpan-shaped sifting trays in cleaning them.

Agreeable to the taste, sweet and nutritious, camas was eaten either raw or cooked. When cooked, the usual preliminary process was as follows: A pit from six to ten feet in diameter and about three feet deep was lined with split dry wood to the depth of almost a foot. Upon this wood was placed a layer of smooth stones averaging about five inches in diameter. The wood was set on fire and the stones allowed to become red hot. When the fire had burned down the stones were leveled and some earth and a layer of coarse grass were spread over them. Then twenty or thirty bushels of camas bulbs, which had been previously cleaned and the black outer layers of the bulbs re-

moved with the fingers, were thrown into the pits and arranged in a conical heap. The white bulbs were then covered with a layer of grass, some two or three inches thick. After this, water was poured on till the steam began to rise, and then the entire heap was covered with several inches of dry earth. Sometimes a fire was kindled around the base of the heap. The bulbs were allowed to steam for from twelve hours to three days. If cooked for the shorter period the grass was removed and the roots permitted to steam themselves dry, like boiled potatoes, and were then commonly placed on scaffolds and further dried in the sun. After having been cooked, the roots were no longer white, but brown or black, and had a much sweeter taste than when in the natural state. They were fit for use immediately after being taken from the pit, but soon spoiled if not subjected to further treatment. This further treatment usually consisted in pounding up the soft roots into a sort of dough and forming them into loaves which were rolled in grass and again subjected to steaming. Fresh bulbs were placed in the pit along with these loaves to permit the free passage of the steam. When taken out a second time, the loaves were made over into smaller cakes and dried in the sun or over the camp fire. These cakes were irregular in shape and from one-half to three-quarters of an inch in thickness. When kept out of the moisture they remained fresh for a long time. They resembled plug-tobacco in color and pliancy. When the initial steaming extended over a period of two or three days, the roots when uncovered were found to be converted into a dark-brown glue-like mass. From this gruel was made for immediate consumption and sun-dried loaves for future use.

Camas was also sometimes simply boiled in water and in this condition resembled mealy potatoes. It was occasionally reduced by boiling to a sort of syrup or molasses.¹

KOUSE. — Kouse was another vegetal food, scarcely less important than camas. Under this name were grouped a number of closely related plants of the *Lomatium* family, the

¹The processes of cooking camas have been often described. See Lewis and Clark, III, pp. 78-79; V, pp. 124-127; Townsend, pp. 247-248; E. Palmer, pp. 408-409.

commonest being *Lomatium kaus* Wats. These plants, unlike the camas, flourish in dry rocky soil and were commonly gathered by the Indian women along the brows of steep hills. The harvest season was very early, most of the digging occurring during April and May. The roots, corn-like or tuberous in character, were eaten either raw or cooked. The usual preparation was to dry the roots, scrape off the brown outer skin, and then reduce them to powder in mortars. This meal was made into gruel for immediate use or into bricks for future consumption. The method of making the bricks was as follows: The meal was moistened with water and formed into flat, oblong, square-cornered cakes that were suspended on a swinging framework of flat sticks and partly baked over a slow fire. The bricks were pierced with one or more holes in order that they could be strung on a thong, like Chinese money, and hung from the saddle. They bore the imprint of the sticks upon which they had rested, and were sometimes embellished with scratched parallel or crossed lines. In size these bricks vary. Lewis and Clark¹ give the dimensions as an inch and a quarter thick, six inches wide, and eighteen inches long. Palmer² says the cakes were one foot wide, three feet long, and only from a quarter to half an inch thick. Several cakes in the Peabody Museum at Cambridge are three or four inches wide, about a foot long, and an inch thick. When fresh the flavor of kouse root is said to resemble that of parsnips, but after being dried it tastes more like stale biscuit, and in fact was often called "biscuit root" by the early explorers. Both the meal and the cakes remained edible a long time. The cakes were either eaten without further preparation or were broken up in water and made into a mucilaginous sort of soup. This root was especially valued as being the first vegetal food to be gathered in the spring.

OTHER ROOTS. — Bitterroot (*Lewisia rediviva* Pursh) was a favorite food root when it could be procured. It was gathered in the Bitterroot mountains and on the mountains near Imnaha.

¹Vol. V, p. 12.

²E. Palmer, p. 407.

It was prepared by merely drying, when it resembled dentalia shells in shape and size. According to Palmer,¹ this root contains so much concentrated nutriment that a single ounce in the dried state is sufficient for a meal.

Another favorite root was that of the *Carrum Gairdneri* Gray. This tuberous root, usually about the size of a man's finger, has, when cooked, a very agreeable taste, with a cream-like flavor. Piper calls it the finest food plant of the Northwest Indians.

Wild carrot (*Daucus pusillus* Michx.) was boiled, steamed, or eaten raw. Wild onions (*Alium Geyeri* and others) were steamed in a pit, like camas and kouse. Some species from this area have a very mild flavor. *Scorzonella nutans* Geyer is reported to have been eaten raw. It is a small root, almost transparent, and filled with a bitter milky juice. *Wapato* (*Sagittaria latifolia* Willd.), the great source of vegetal food for the Indians of the lower Columbia, was secured only in trade. Many less commonly known roots were also occasionally used as food; in particular, tobacco root (*Valeriana edulis* Nutt.), *Enanthe sarmentosa* Prestl., *Balsamorhiza Hookeri* Nutt., *B. sagittata* Nutt., *Claytonia megarrhiza* Parry, *C. lanceolata* Pursh, etc.

BERRIES. — Various berries and seeds were extensively used for food by the Nez Percés. Of the former, serviceberries (*Amelanchier* sp.) were the most important. During favorable years they were collected in large quantities and made into small disk-shaped cakes which were sun-dried upon mats and kept for winter use. When the harvest of serviceberries was light, their place was taken by the inferior hard-seeded berries of the hawthorn (*Crataegus* sp.). Blackberries (*Rubus macropetalus* Dougl.) were also dried. Chokecherries (*Prunus dimissa* Nutt.) and huckleberries (*Vaccinium membranaceum* Dougl.) were commonly boiled. Most other berries, including strawberries (*Fragaria* sp.), salmonberries (*Rubus spectabilis* Pursh), currants (*Ribes aureum* Pursh), gooseberries (*R. oxycanthoides saxosum* (Hook.) Coville) were eaten fresh. Roseberries (*Rosa* sp.) served as a valuable food in times of famine, since they remained

¹E. Palmer, p. 407.

upon the bushes throughout the winter. Serviceberries, chokecherries, hawthorn, currants, and gooseberries flourished along the water courses and near the villages. Huckleberries were commonly gathered in the highlands, especially on Craig mountain. Often the branches were broken off and the berries raked into a basket with a coarse comb.

Sunflower (*Helianthus* sp.) seeds were much used for food, being valuable on account of their oil. They were eaten either raw or pounded into meal and fried in small round cakes. The grinding of sunflower seeds is mentioned in one of the Nez Percé myths.¹ The seeds of *Chenopodium* sp. and probably some grass seeds were also eaten.

FAMINE FOODS. — During severe winters the Indians of this region often suffered from famine, during which they were glad to eat lichens and the inner bark of trees. Lewis and Clark² give instances of the use of a lichen (*Alectoria* sp.) that grows on pine trees and which was boiled and eaten, and mention that long-leaved pine trees (*Pinus ponderosa* Dougl.) were cut down in order that the natives could gather the nuts and strip off the bark. The nuts were boiled or roasted.

FISH. — It has already been stated that a considerable part of the food supply of the Nez Percés was derived from fishing and the chase. The most important food fishes of these Indians were as follow:

1. Red fish, or blue-backed salmon (*Oncorhynchus nerka* Walb.). This fish, varying from three to eight pounds in weight, was the favorite fish for drying. It was first caught about the first of July on Clearwater river, but was taken much earlier at Wallowa lake and at the headwaters of Salmon river. Only the last of the run spawned on the lower stretches of the rivers.
2. Quinnot, Chinook, or tyee salmon (*O. tshawytscha* Walb.). This salmon, averaging more than twenty pounds in weight, was caught somewhat later than the blue-backed salmon.
3. Steel-head salmon, "salmon trout" (*Salmo Gairdneri*

¹Spinden, p. 21.

²Vol. v, p. 4.

Richardson). This salmon was caught during fall and winter; it weighs usually about six pounds.

4. Cut-throat trout (*S. mykiss Gibbsii* Suckley).

5. Waha lake trout (*S. mykiss Bouvieri* Bendire). These trout occur only in Waha lake on Craig mountain.

6. Lamprey eel (*Entosphenus tridentatus* Gairdner, or *Lampreta cibaria* Girard). Eels ran about the same time as redfish or blue-backed salmon, but were caught on the lower stretches of the rivers.

7. Suckers (*Pantosteus Jordani* Evermann; *Catostomus macrochilus* Girard, etc.).

8. Sturgeon (*Acipenser transmontanus* Richardson).

Salmon formed by far the largest item. Fresh salmon were broiled, baked, or boiled. For broiling they were never cut crosswise but always lengthwise in three slabs, one slab from each side and a middle one containing the spine. They were baked in the ashes and boiled in water-tight baskets. No superstition seems to have been attached to the disposal of the bones. Salmon were also dried on scaffolds and smoked for winter use. The Nez Percés never made the dried salmon meal which formed so important an article of trade at the Dalles. Eels were eaten fresh or were dried. Smaller fish, such as trout, suckers, etc., were of lesser importance in the food supply. The Unio also played a minor part in furnishing food. It has already been mentioned that small quantities of Unio shells have been found on the old village sites. These shell-fish are rather rare on the Clearwater, but fairly common on the Snake. They were also obtained from the Cœur d'Alène region. They were steamed in a small pit and after this operation were often dried in the sun and kept for some time.

GAME. — Of game, elk (*Cervus Canadensis* Erxleben), deer *Odocoileus Americanus macrourus* Raf. and *O. hemionus* Raf.), and mountain sheep (*Ovis cervina* Desmarest) were fairly common, while buffalo (*Bison Americanus* Griff.) were hunted on the great plains by parties that crossed the mountains for that purpose. Practically all parts of the animals were eaten, the fat on the entrails being considered a delicacy. In the case of small

fawns Lewis and Clark mention that they were boiled entire.¹ Meat was either boiled in baskets or roasted; it was never partaken without some preparation. Lewis and Clark thus describe² a bear barbecue of the Indians:

"We gave the Indians, who were about fifteen in number, half the female bear, with the shoulder, head and neck of the other. This was a great treat to those poor wretches who scarcely taste meat once a month. They immediately prepared a brisk fire of dry wood on which they threw a parcel of smooth stones from the river, when the fire had burnt down and heated the stones they placed them level and laid on a parcel of pine boughs. On these they laid the flesh of the bear in slices, placing boughs between each course of meat, and then covering it thickly with pine boughs; after this they poured on a small quantity of water and covered the whole over with earth to the depth of four inches. In this situation they suffered it to remain about three hours when they took it out. I tasted of this meat and found it much more tender than that which we had roasted or boiled, but the strong flavor of the pine destroyed it for my palate."

This seems to have been the favorite method of cooking bear meat. The description given by Lewis and Clark corresponds exactly with that given by the old Indians of today.

Deer, elk, and buffalo meat were dried into "jerky" for winter use. Pemnican was made only of buffalo meat; marrow from the long-bones was the source of the oil used. Berries were not used in the pemnican. The amount of buffalo meat brought back from the plains must have been small, even after the introduction of horses. It seems that the large band of men, women, and children went for the express purpose of getting their fill of meat while there rather than with the intention of bringing back a supply. Most of the back-pack consisted of robes, horns, etc., which formed valuable articles of trade.

Otter and beaver were considered great delicacies; but dogs were never eaten, and horse meat was consumed only under stress of famine. The men under Lewis and Clark aroused great derision and contempt by eating the flesh of dogs and horses.

¹ Vol. v, p. 4.

² Ibid., p. 34.

FISHING AND HUNTING

Fish were speared, hooked, netted, or trapped. Fishing apparatus was fairly well developed and shows similarities with the technology of the Pacific coast.

FISH SPEARS.—There were two kinds of fish spears. One kind was the three-pointed gig and the other was a spear with detachable point. The gig had a long shaft of red fir which was jointed to the trident head by a wrapped joint that permitted the spear being taken down when carried. The side arms of the trident were of flexible wood, usually hackberry (*Celtis Douglasii* Planch), but had bone points driven in holes bored at the lower ends. These points projected inward and upward. The center arm was of wood tipped with bone and somewhat shorter than the side arms. The spread of the trident was about five inches and the length of the spear about eight feet. This spear was used at night in fishing from a canoe by the light of pitch torches. It was not thrown from the hand. The spear with detachable point was intended to be thrown; for this reason the spearhead was attached to the shaft, and the shaft held by a long braided cord. The shaft of the spear was about five feet long. It was not a plain shaft, like that of the gig-spear, but had its largest diameter near the middle, measuring about two inches, and from this point tapered toward both ends. The spearhead consisted of three pieces of bone and a socket of elderberry wood in which the end of the shaft was fitted. The three bone pieces were cut from the thickest portion of the leg-bone of an elk after this had been boiled. The center piece ended in the point. Against the straight flat edges of this center piece were fitted the side pieces which formed the barbs. The three pieces of bone and the short cylinder of elderberry wood were securely bound together with wrappings. A cord with one end buried in these wrappings was tied to the shaft about a foot from the head, with enough slack to allow the spearhead to be readily loosened from the shaft. Figure 5^{10, 11} illustrate the features of these two kinds of fish spears.

With this spear large numbers of salmon were caught from platforms built out over the water or from jutting ledges of

rock. The platforms were usually just above brush dams that almost closed the channel at the head of a riffle and which left only a small passage for the fish. Sometimes the fish were speared on riffles without the aid of the platform, and the brush dam. Suckers were speared from the bank as they nosed about the roots of willow and cottonwood trees that overhung the stream.

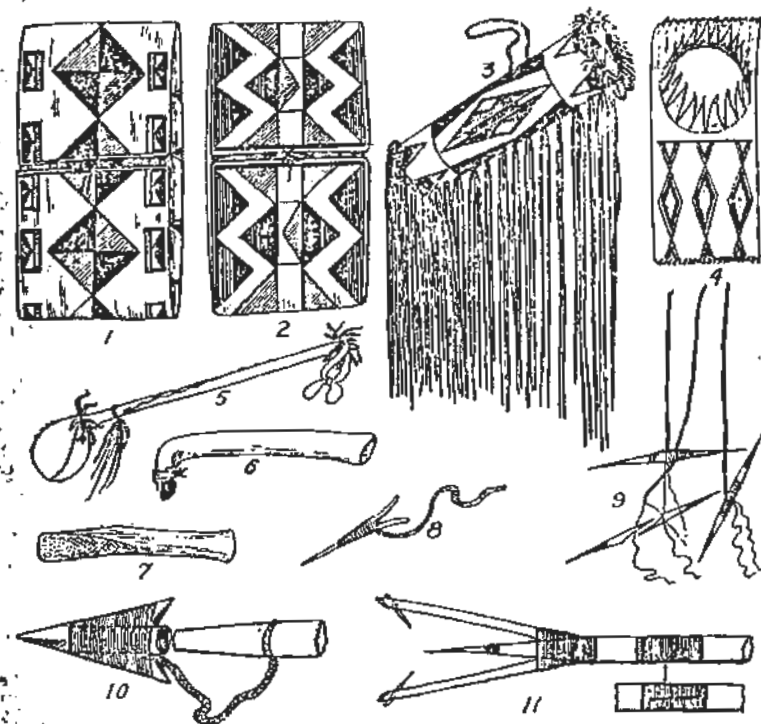


FIG. 5.—1-2, Parilèche bags. 3, "Medicine" bag. 4, Elk-hide hat. 5, War-club. 6, Grainer. 7, Elk-horn wedge. 8-11, Fishing tackle.

HOOKS.—The gaff-hook was entirely unknown before the coming of the whites, but was then promptly adopted. Even curved fish-hooks were unknown, the gorge-hook taking their place. Small gorge-hooks used in catching trout are shown in fig. 5⁹. The gorge-hooks were made of two hardened

thorns of the red or black haw, placed base to base and bound together. The line was of Indian hemp, and was fastened to the middle of the gorge-hook, while two smaller threads hung below to wrap round the bait. No floaters or sinkers were used. Large gorge-hooks, six or eight inches in length and made of two bone points bound in the same manner as the thorns, were used to catch the sturgeon of Snake river. A piece of lamprey eel was used as bait. Ross¹ mentions a still simpler method employed when fishing with a line: a bit of deerskin was tied as bait to the end of a horse-hair line. Small fish snapped at the skin and were jerked out of the water before they could let go.

— NETS. — Nets of several kinds, made from cord of Indian hemp, were manufactured by the Nez Percés and used in fishing for salmon and eel. The cord was wrapped on bobbins made from two bent sticks placed back to back and bound round the middle. The process of net-making was about the same for the different kinds of nets. The mesh was commenced along the string of a small bow placed over the feet of the net-maker. The size of the mesh was determined by a smooth flat stick over which the cord was turned and knotted.

Dip-nets were stretched upon a frame made of two branches of red fir tied together at the base and joined at the tips by a flexible piece of willow. A cross-piece, to hold the spread and serve as a handle in dipping, was securely tied to the two side-pieces near the base. A forked branch was never used as a frame. The length of the dip-net frame was about seven feet and its greatest width about two and a half feet. The net extended well back toward the handle. These dip-nets were used in catching both eel and salmon. The eel nets had a deeper pocket at the lower end than did the salmon nets. Lewis and Clark² give descriptions and small drawings of a somewhat different type of dip-net. According to these drawings the sack was deep and almost round at the opening, while the side-pieces did not meet at the handle but were held apart

¹ Ross (*a*), Thwaites ed., p. 142.

² Vol. v, pp. 22, 47.

by two cross-pieces, the handle being fastened to the middle of the latter. Dip-nets were manipulated from the platforms which have already been mentioned in connection with spearing. A long-handled dip-net with a small sack was sometimes used to catch salmon in the deep holes of small streams.

Seines were often used. They were about fifty feet long by fifteen feet deep. One or more small logs served as floaters and roughly grooved river bowlders were employed as sinkers.

TRAPS. — Fish weirs and traps were constructed of willow brush and stones. The weirs were used in connection with platforms to compel the fish to keep to a narrow passage. Fish traps were used in the smaller streams. A sort of screen trap is described by Clark substantially as follows:¹ A dam was formed with stones across a small stream so as to collect the water in a channel not exceeding three feet in width. The water was forced with great speed out across a mat or screen of willows closely tied with bark. This mat was about four feet wide by six feet long, and lay in a horizontal position with its extremities fastened. The water passed through, but fish running down stream were thrown out on the screen and lay there till removed. Several trout from three to seven inches in length were on the trap when Clark saw it. According to natives, the mat basket or screen of this trap was more or less boat-shaped. The withes were all gathered together at the lower end of the trap.

Another form of trap consisted of two vertical walls of willow built across the stream. In the lower wall was a trap-door of slanting sticks that could be opened only by fish ascending the stream.

Game was hunted with bow and arrow and with spears. Decoys, game drives, and traps were also used.

Bows. — The making of the bow reached a remarkable stage of development among the Nez Percés and the tribes along the middle course of Columbia river. There were three kinds of bows, one simple and two sinew-backed. The finest bows were made from a single piece of mountain-sheep horn. A large

¹ Lewis and Clark, vol. v, p. 8.

horn was split and a slip taken out. This strip of horn retained its spiral coil and had to be steamed, stretched, and straightened by a long tedious process. After the horn had been shaped, a backing of deer sinew was added. The glue used in attaching the sinew was obtained by scraping the skin of the winter steelhead salmon (*Salmo Gairdneri*) or from the blood of the rarely-caught sturgeon (*Acipenser transmontanus*). For this purpose the blood lying next to the backbone was thoroughly boiled, spread out on a rock and dried, and then cut up into blocks or strips, in which condition it kept for years. It was ready for use at any time after being moistened with saliva. The bow-string was made of fine twisted deer sinew. There were no wrappings on the bow. These bows were highly valued.

So far as the writer knows there are no examples of this type of bow extant. It seems to be quite distinct from the compound bow of horn which was common in the southern Basin area. The nearest approach to this bow is seen in an old specimen in the Peabody Museum at Cambridge, which shows a single-piece foundation, evidently of elk antler. This bow is accredited to the Mandan.

The above description is corroborated and amplified by the observant Alexander Henry,¹ who also describes the other types of bows used by the Indians west of the mountains, including the Nez Percés. He says:

"The bows . . . are neatly made, and of three kinds—the horn, the red cedar, and the plain wooden bow. The horn bow is made of a slip of ram's horn. The outside is left undressed, but overlaid with several successive layers of sinew glued to the thickness of one third of an inch, and then covered with rattlesnake skin. The inside is smoothly polished, and displays the several ridges of the horn. These neat bows are about three feet long, and throw an arrow an amazing distance. The red cedar bow is made of a slip of that wood, overlaid with sinew and glue like the horn bow, and also well polished inside; it is nearly four feet long, and throws an arrow a great distance. The plain wooden bow is of cedar, willow, or ash; the outside is untouched, except that the back is removed. It is well smoothed, but not so much esteemed by the natives as either kind of

¹Henry-Thompson, pp. 713-714.

sinew bows. These people make the handsomest bows I have ever seen—always preferred by other Indians. I have known a Piegan to give a gun or a horse for one of those made of sinew. Their preservation demands great care and attention, as in hot weather the sinew becomes too much braced, and in moist weather too much relaxed, being seldom so justly proportioned to the strength of the horn or wood as to prevent warping; but the simple bow requires no particular care, and is always ready for use."

ARROWS. — Arrow-shafts were made from branches of service-berry (*Amelanchier* sp.), straightened by hand after being heated and polished with rasps of tufa (plate VII, 32). The arrowheads of many shapes have already been described and figured (plate VII). They were usually of obsidian or flint, and were bound to the shaft with fine sinew threads. The arrow was fitted with three eagle or hawk feathers, likewise tied down with fine sinew wrappings. The shaft was frequently decorated with painted bands at the base of the feathering. Henry¹ thus describes the arrows:

"The arrows are much longer than those of our Indians E. of the mountains, being nearly three feet, very neatly made, slim-pointed, and well-feathered; they are usually tipped with flint, but of late years iron has been secured for that purpose."

In shooting, the bow and two or three extra arrows were held in the left hand. The arrow was held by the thumb and first finger of the right hand and shot over the top of the left hand.

QUIVERS. — In ancient times only the single quiver was made and used by the Nez Percés. The double quiver, with one compartment for the bow and another for the arrows, was acquired from the Crow Indians. This single quiver was about three feet long and was made from the entire skin of an otter, coyote, or cougar.

METHODS OF HUNTING. — The bow and arrow were used in hunting elk, deer, bear, ducks, brant, muskrats, etc.

The spear, which was used largely in hunting buffalo, had a barbed stone point and a long straight shaft of red fir. Buffalo were hunted on horseback, as were deer and elk when the sur-

¹Ibid., p. 714.

face of the country permitted. A favorite method was to run down deer in the open prairie. Game drives, for deer, were constructed in the hunting grounds. They had long converging wings, with a narrow opening near which hunters were concealed. More often such drives consisted of lines of hunters strung out about sixty yards apart. Decoys were used in hunting deer, wolves, and mountain sheep. The decoy consisted of the stuffed head of the animal and the cape. This head was put over the head of the hunter, who was partly hidden and who imitated the actions of the animal. Elk whistles were made of elderberry wood, while the calls of wolves were imitated directly.

Prairie chicken and other small game were snared with the simple running noose. Magpies were caught in a brush house with the noose at the doorway. Rabbits were rounded up in great drives, especially on the hills near Snake river. Lines of men and boys were stretched out in a long line leading to a net like a seine which was set up on poles and which ended in a corral. Horsemen or footmen beat up the rabbits, many of which were caught in the net and the remainder in the corral.

Coyotes and wolves were caught in deadfalls. A pit was dug and over this a tilted platform, laden with stones and with a heavy log at the end, was supported at the upper end by an unstable prop which was readily displaced when the bait was touched. The figure-4 trap was evidently introduced by the whites, but the T-trap was native. The bait was suspended from the inner arm of the T.

In the case of game, all the animal except the entrails was saved for food. Deer were unjointed, the legs removed, and the back cut into one or two pieces. The head was always left attached to the skin.

There seems to have been very little ceremony in hunting. Offerings were sometimes deposited in certain well-known shrines or in trees to ensure good luck. The horns of deer were sometimes hung upon a branch. When the guardian spirit of the hunter was one that brought skill in hunting, the song was sometimes sung on the hunt. Women who had such guar-

dian spirits would sing while their husbands were on the hunt. The wolf-faith was the one believed to be most beneficial to hunters.

Eagles were seldom shot. They were taken from the nest while young and raised in camp. The first set of feathers was plucked, and a part of the second set; then the birds were set free. Eagles were also caught by concealed hunters. A pit was dug in which the hunter crouched. Over this a false ground was prepared, with three or four small openings. A coyote or some other animal was used as bait. The feet of the eagle were seized by the concealed hunter, while another rushed out and killed the bird.

SKIN-DRESSING. — Deer and most other animals were skinned from a cut made down the belly and down the inside of each leg. The hides were dressed immediately, while green, if it was convenient; if not, they were cleaned, dried in the shade, and rolled up for future dressing. The first thing done to green hides was to remove the hair. A short smooth pole was leaned against a tree, the hide caught over the top, and stretched down over the pole with the knees. The hair was removed with a sort of draw-knife made from an elk-rib with little modification. After the outside had been grained the inner side was treated with the same instrument. The skin was then dried without stretching.

The brain of the animal was placed in a deerskin bag and allowed to dry in the sun; it was then kept till needed. When required for use the dried brain was mixed in water in a willow basket and the hide was soaked over night in the mixture. Next morning the hide was tied to a tree and twisted with a cross-stick until it was as nearly dry as possible. It was then scraped and worked with a disk-shaped spall struck from a boulder. During this operation the skin was held down with one foot at the edge and stretched toward the body. After two or three hours of scraping the skin was rendered soft and pliable. Finally it was smoked. A small hole was dug in the ground in which a fire was built of dry willow or pieces of rotten wood. The method of building the fire in a hole prevented too

great heat. Then the skin was hung over the fire and smoked for about an hour, when it was ready for use.

If the hide was dried before being worked it was soaked for about three days in the creek and the hair was removed with an elk-horn grainer such as is shown in fig. 5^b. The implement was fitted with a stone blade, and was not used in working green hides. Except for this preliminary stage the process of dressing dry hides was the same as for green ones. If the hair was to be left on, only the inner side was scraped, but in other respects there was no change. The dressing of skins was the work of the women.

CLOTHING AND ORNAMENTS

The dress of the Nez Percés was of the general Plains type. This type, indeed, prevailed among the Shahaptin, Salish, and Waiilatpu tribes inhabiting the middle course of the Columbia, and gave way to the Chinook type only at the Dalles.

The men's dress consisted of moccasins, leggings, breech-clout, shirt, and blanket. In warm weather the leggings and shirt were often discarded. The material was deer, elk, and buffalo skins, which were skilfully prepared. This leather clothing was kept very neat, being frequently cleaned with white clay. It was decorated in different ways, with fringes along the seams, with beads, porcupine quills, and paint.

The dress of the women consisted of moccasins, a long loose gown, and a fez-shaped cap. Occasionally the women wore leggings. In general the costume of the women was not so highly decorated as that of the men. The ornamentation consisted of fringes, bead- and quill-work, shells, elk-teeth, bits of copper, etc.

MOCCASINS.—The moccasins of both the men and the women were of deerskin, soft and close-fitting, and provided with flaps that were folded around the ankles and tied with a double thong. The flaps were made of a single piece, and the moccasin proper of another. The piece that formed the moccasin proper cut and sewn. The main seam extended around the outside of the sole, beginning at the inner side of the great toe and termi-

nating an inch or so beyond the center of the heel. At the base of the heel two small strips of additional material were allowed to project in order to facilitate pulling off the moccasin. This long main seam, together with a vertical seam at the back of the heel and a horizontal seam along the middle of the outer side to counteract fulness, were sufficient to make that single piece of deerskin assume exactly the shape of the foot. A tongue was left, which could be bound under the flaps. The moccasins were decorated with bead- and quill-work. The beadwork patterns were mostly floral and fanciful; some, however, were geometric. The quillwork was mostly of the wrapped type laid on in transverse stripes. The moccasins of the men were generally more highly decorated than those of the women.

LEGGINGS.—The deerskin leggings extended from the ankles well up the thighs and were supported by the belt. Leggings were commonly decorated with heavy fringes along the outer seam and by bead- and quill-work near the bottom. After cloth was introduced and heavy flannel replaced deerskin, the style of ornamentation was changed in that the former fringe was superseded by stiff side-flaps which bore the larger part of the beadwork. The beadwork patterns on leggings consisted usually of an oblong area cut up into triangles of contrasting colors. It is not known how the women's leggings differed from those of the men.

MEN'S SHIRTS.—The man's shirt was provided with long sleeves. It was loose, with a simple opening at the neck, and with an uneven lower edge bearing long fringes. Fringes also decorated the shoulders and the sleeves. Applied decoration consisted of woven quillwork geometric patterns across the shoulders and down the sleeves. The entire front of the shirt was often decorated with small punctuations, usually round and not arranged to bring out any design or figure. Over the shirt was often worn a collar consisting of an entire otter (*Lutra Canadensis* Schreber) skin, the tail hanging down in front. Elaborate breastplates made of beads were also worn over the shirt. The breastplate of large bone beads, illustrated in plate x, 1, was undoubtedly introduced from the Plains. The more common

type of breast ornament consisted of several strings of small disk-shaped beads. These strings were arranged one above the other, the top string being stretched fairly tight and each succeeding string being looser until the lowermost hung nearly to the waist. Often side-pieces of leather, decorated with an outer fringe of scalp-locks or with pieces of otter or mink (*Putorius vison* Schreber) fur, formed a sort of framework for the strings of beads.

BLANKETS.—The blanket was perhaps the most important and valued article of clothing for the men. It was in almost constant use, as a covering for the body, as a lounging robe, as a saddle cushion, etc. The blanket was prepared from an entire elk or buffalo hide, tanned with the hair on. It was elaborately ornamented with painted pictures, and with geometric patterns of bead- and quill-work. Strips of beadwork upon deerskin were often attached to the robes. The art of preparing buffalo robes was one in which the Nez Percés became very proficient. They obtained supplies of the hides during the yearly hunting trips to the Great Plains and traded the finished product with the tribes farther west.

The Nez Percés never wove blankets. Even the simple blanket made of strips of rabbit-skin woven in and out seems to have been unknown. The beautiful woven blankets in the National Museum, collected in early days by Captain Wilkes and George Catlin, are probably to be ascribed to the area at the lower end of Puget sound. The only basis for attributing them to the Nez Percés is the use of geometric designs similar to those on Nez Percé wallets; but this similarity is not striking enough to overcome the negative testimony of all the early explorers and the direct assertions of the Indians themselves.

HEAD-GEAR.—The man's hat of elk-hide seems to have been a sort of helmet, and is described under armor. A sort of hat, or eye-shade, was made of a strip of hide from the neck of the buffalo where the hair was long and thick. This strip was about an inch wide and was bent to form a circlet. The hair stuck straight out and shaded the eyes.

MEN'S ORNAMENTS.—Ceremonial and war regalia will be

considered in another place. Such simple ornaments as were used for everyday wear deserve mention at this place. Necklaces of bear-claws, wolf-teeth, deer-hoofs, etc., were very much worn by the men. Some of these may have been in the nature of fetishes and charms. Plate IX, 9, 10, show elk-teeth perforated for use as pendants, and 11 shows a bear-claw treated in the same way. Arm- and leg-bands were also worn.

WOMEN'S GOWNS.—A considerable number of specimens of the woman's gown of the Nez Percés are preserved in our museums. Two fine old specimens in the National Museum, one in the Peabody Museum, and several, perhaps not so old, in the Field Museum of Natural History agree exactly in the technique of construction. Judging from these, the ancient dress was a very simple affair, with cape sleeves. It hung straight from the shoulders to the ankles, and was made of two deer-skins, almost entire, from which the hair had been removed. One skin formed the front and the other the back of the dress. The side of the skins which had formerly carried the hair were worn next to the body. To form the upper portion of the dress, the tail part of the hide was folded over on the outside, thus making a straight line across the shoulders. When this extra fold was sewed down it gave the appearance of a yoke. The triangular tail-piece, which still retained the hair, was clipped in horizontal lines and kept as a sort of ornament. The sides of the garment were sewed down in a straight seam at each side. A fringe was made along these seams, either from the original material or from a sewed-on strip. The sleeves were capes rather than real sleeves in the greater number of instances. The side seam was continued upward until there was only enough room for the arm. Occasionally the lower part of the cape was really sewed into a short sleeve. The edge of the sleeve was irregular and cut into fringe. Four semicircular pieces were added at the bottom of the dress, in part to fill out the natural inequalities of the deerskins and in part to increase the flare of the skirt. There was no girdle attached to the gown, and no gathering at the waist.

The ornamentation consisted principally of fringes at the bot-

tom of the skirt, at the ends of the sleeves, and along the side seams. Below the waist there extended around the skirt three rows of a sort of supernumerary fringe made by passing narrow strips of deerskin through double slits and knotting them on the outside. These double ribbons did not form close fringes, but were two or three inches apart, resembling the reefing ribbons of a sail. In addition to the fringes, variously colored bands of beaded decoration extended along the undulating seam where the false yoke was sewed down upon the body of the dress. The patterns used in the beadwork were very simple, usually consisting merely of oblong areas alternating in color. Elk-teeth, dentalia, small pieces of copper, and various trinkets were also attached to the dresses according to the fancy of the wearer and with no studied designs.

This type of dress, made, perhaps, with less elegance, was worn by the Paiute women. It was also used by the tribes adjoining the Nez Percés on the west, according to the collections in the Field Museum. It differed but slightly from the women's dress of the Plains area. It was, however, quite distinct from the dress of the Chinook women on the lower Columbia.

WOMEN'S HATS. — The hat of the Nez Percé women was the gayest portion of their dress. It was fez-shaped and ornamented with woven designs which will be described later. Pendants and tassels were often fastened to the double deerskin ribbons on the crown. Curiously enough scant mention is made of this article of attire by early travelers. Several fine specimens are preserved in museums and show that the same form of hat was used by the Yakima, the Umatilla, and other neighbors of the Nez Percés.

The women wore fewer ornaments than the men. They sometimes wore ear pendants in the form of disks made from *haliotis* shell. Strings of dentalia were also hung from the ears or fastened to the braids of hair.

HAIR DRESSING. — The hair of both the men and the women was worn long, parted in the middle, and braided in two braids, one on each side of the head. The hair of the men was cut

across the forehead, forming bangs. The Kiowa name for the Nez Percés, *Adalk'atōigo*, means "the people with hair cut across the forehead." The women did not wear bangs, and the hair of the men was in general more elaborately dressed than that of the women. Shells, narrow strips of fur, especially otter and ermine, and other ornaments, were often woven into the side-braids of the men. The parting was very carefully made by a special instrument, a hair-parter, made of a smoothly-pointed stick, from six to ten inches long, with a flat handle usually ornamented with carved profiles.

Depilation was commonly practised. All the beard and mustaches of the men were carefully pulled out. Lewis and Clark¹ point out that depilation with the men extended no further than the beard and mustache, while with the women there was an eradication of the pubic hair.

COMBS. — Combs were fan-shaped and made of narrow strips of wood. Sometimes strips, about six inches in length, were simply laid side by side and tightly wrapped at a point about two inches from one end. The strips were then spread out fan-wise on both sides of the wrapping. The shorter portion served as the handle and was often wrapped with deerskin and decorated. The spread of the longer portion was maintained by lacing strips of deerskin. The points of the strips were rounded and smoothed. Sometimes strips, about twice the length of the upper ones, were bent double and wrapped below the bend. The points were then spread as in the simpler form, while the looped portion made a neat handle.

FACE AND BODY PAINTING. — The painting of the face was a common practice of both the men and the women. In general it had no particular significance. At certain times the face and body paintings had connection with the animal which was the guardian spirit of the man or woman concerned. Examples of this will be given later. Red paint was also used on the eyelids and cheeks to prevent snowblindness. Red and orange were the favorite colors. With these the forehead was painted brilliantly and in solid masses. The scalp exposed by the parting

¹ Vol. v, p. 29.

of the hair was painted red. Often the hair itself was painted red on the crown of the head, particularly in the case of women. Sometimes the colors were applied in lines and dots, but there were apparently no symbolic designs.

Tattoo was not practised. Scarification was of no particular significance, since the torture ceremonies of the Sun dance were entirely unknown.

PAINTS AND DYES. — White, red, blue, and yellow earth paints were obtained from the vicinity of the Grand Ronde valley. The colors occurred in masses of variegated clay and each one had to be carefully separated. It is perhaps significant that the names of these earth paints are quite distinct from the generic color terms. Green paint was made from a slime gathered from creek bottoms, and the name for this paint is the same as the generic name for green. Red and yellow were much used in face and body painting. Pieces of the white clay paint were mixed with saliva in the mouth and rubbed into the hair by warriors about to take the war-path. A white clay was also used in cleaning the deerskin clothing. Shields, parfleches, and other articles of dressed skin were often painted. The paints were mixed in water and applied with a brush made from green willow, or were boiled with a little glue and dried in disks and lumps which were used as colored pencils.

A dye used in staining squaw-grass for basket designs was obtained from Oregon grape-root (*Berberis nervosa* Pursh). The dye ranged in color from light yellow through orange to dark brown, the shades depending on the strength of the decoction. The same term was applied to all the different colors obtained from this root. No information regarding other vegetal dyes could be obtained.

TRAVEL AND TRANSPORTATION

Before the introduction of horses the life of the Nez Percés must have been very different from what it afterward became. According to old natives the custom of going to the Plains after buffalo each year was instituted only after the advent of horses. Before that time war parties only had made the trip. The Nez

Percés first procured horses about 1770, a decade or more before the Indians of the Plains. Since the later trade of the Nez Percés with the Indians of the lower Columbia was mostly in buffalo robes, mountain-sheep horns, and other articles secured in or near the Plains area, the early trade, before the use of horses, must have been light. The absence of horses necessarily made canoes, as well as snowshoes, carrying baskets, etc., more important.

CANOES. — Canoes were of the simple dug-out type (plate x, 7), made from a single log, usually of red fir (*Pseudotsuga mucronata* Sudw.). The bottom was flat, the sides vertical, and there was only a slight tapering toward the ends, which were of the common "shovel-nose" model. The width was about two feet and the length from fifteen feet to more than forty. They were made chiefly from drift-wood carried down the large rivers by spring freshets. Native informants claim that trees were not felled to make canoes. They were hollowed out by fire. For propelling these craft both poles and crude paddles were used. Travel by water must have been heavy before the introduction of horses, but at the time of Lewis and Clark canoes were rather scarce, some large villages being entirely without them. This scarcity may have applied only to the upper Clearwater, which has some very treacherous rapids. Snake river below the mouth of the Grande Ronde could have been readily navigated. According to Hayden the Crow name for the Nez Percés is *A-pu-pe'*, which means "to paddle." This nickname may indicate the former importance of water travel to the Nez Percés.

SNOWSHOES. — Snowshoes were oval in shape, with a framework of vine maple (*Acer circinatum* Pursh) or hackberry (*Celtis Douglasii* Planch), and meshes made with strips of raw elk-hide. They varied somewhat in size according to the nature of the snow, being commonly about eleven inches wide and eighteen inches long. The framework was bent when green and dried before being strung. The mesh was not a cross-woven mesh, such as is used in eastern and northern snowshoes, but was a loop mesh made somewhat after the manner of the sewing thread in coil basketry. A single strip was woven in

loops from the outside to the center. A second and a third strip followed till the mesh became small enough. The snowshoes were strapped tightly to the foot and were lifted bodily in walking, not dragged. This was more or less necessary owing to the mountainous nature of the country to be traversed. One strap passed over the toe, another vertically over the instep, a third from the heel over the instep, and a fourth over the upper part of the heel. The second and fourth straps were tied together. Snowshoes were commonly worn in hunting deer in winter.

HORSE ACCOUTERMENTS.—Saddles were of two kinds, the low ones for the men and the high pommeled ones for the women. Cox¹ says the man's saddle was of dressed deerskin stuffed with hair, and Franchère² says it was a cushion of stuffed deerskin, easy on horse and man. More modern specimens resemble the common pack-saddle, the arches at front and back, made from forked branches, and the boards on the side covered with rawhide. Over this a blanket was spread.

Stirrups were well made and resembled strikingly the European stirrup—the bottom was broad and flat and the upper part was covered with green skin which became very stiff.

The bridle consisted simply of a braided horsehair rope which was tied round the under jaw.

The women's saddle had high pommels of elk antler, each pommel ending in a horizontal disk several inches broad. The depth of the saddle ranged from twelve to fifteen inches. This saddle bore a superficial resemblance to the Spanish saddle, which may well have been the original model. The saddles were usually decorated with fringes, and the saddle skirts were often heavily beaded.

Dogs apparently were never used to carry packs, and the travois was unknown. For horses pack-bags of several kinds were used. The wallets and cylindrical carrying bags, already described, were likewise employed, also "medicine-bags" and *parflèches*.

¹ Cox, p. 84.

² Franchère, Thwaites ed., pp. 341-342.

BAGS.—Both medicine-bags and *parflèches* were doubtless introduced from the Plains Indians, but were found at an early date among the Nez Percés as well as among the Cayuse and the western Shalaptin tribes. Old *parflèches* are said to have been not decorated. Several old *parflèches* in the Field Museum have an incised decoration, chiefly in diamond patterns. The designs on Nez Percé *parflèches* show much similarity with those on Shoshonean specimens. This may indicate the route by which they were introduced, although it seems more probable that the Crows were the transmitters. Typical designs are shown in fig. 5^{1, 2}.

A cylindrical rawhide bag, commonly called the "medicine-bag," is represented in fig. 5³. It was not restricted in its uses, but was used mostly by the women. As a true medicine-bag it formed part of the outfit of the men when on the war-path. The bag illustrated is preserved in the Peabody Museum and is decorated with long elkskin fringes and a painted diamond-shaped design.

CRADLES.—The very young child spent a great part of the time in a cradle which could be carried upon the mother's back, fastened to the pommel of the saddle, suspended from a branch, or leaned against a support. Nothing can be added to Mason's technical description,¹ which follows:

"The basis of the cradle is a rough board, generally hewn out, 3 feet high, 15 inches wide at the top, and not more than an inch thick. It is shaped somewhat like a tailor's sleeveboard, but is more tapering. The board is covered with buckskin, drawn perfectly tight upon the back and across the broad part of the front as far down as the hood, or about one third of the length. Below that the two edges of the buckskin form flaps, which meet nearly over the child. Along the edges of these flaps strings are looped, into which loops a lashing cord passes backward and forward to enclose the child tightly in its capsule. On the top of the back a fringe of buckskin strings is formed, either by slitting the buckskin covering itself or by a separate strip sewed on at this point. A little above the center is sewed the head strap of buckskin, to enable the mother to transport her child or to suspend it when at rest. The hood of the cradle is based upon the

¹ Mason (α), pp. 186-187.

flaps of buckskin, but these are entirely concealed by the covering of flannel or other substance. The most ornamented portion of the cradle is the part above the hood; a piece of flannel or buckskin is covered with beadwork, solid, or has figures wrought upon it in various patterns. To the hood are attached medicine-bags, bits of shell, haliotis perhaps, and the whole artistic genius of the mother is in play to adorn her offspring. After the child is lashed in the cradle, a triangular flap of buckskin, also adorned with beadwork, is tied over the child to the buckskin flaps on either side."

The cradles of the Nez Percés exhibit striking similarities with those of the tribes to the north and west, especially the Spokane and Yakima. The cradles sometimes produced occipital flattening. Many old graves have furnished skeletons showing frontal deformation. Although the Nez Percés say they never followed the custom so common on the lower Columbia of binding a board across the forehead, it nevertheless may have been an ancient or an occasional practice.

WARFARE

War was a very important thing to the tribes of the Shahaptian stock. Of these tribes the Nez Percés were practically dictators in questions of war and peace. The valleys of the Clearwater and Wallowa rivers provided the most favorable conditions of life of any part of the Great Basin area, for they furnished game, fish, and vegetal foods in great abundance. War with the Shoshonean tribes to the south was an unceasing one in which the Nez Percés were aided by the Wallawalla, Yakima, and Cayuse. Hostility seems to have been more intermittent with the Flathead tribes to the north, and there were periods of peace and friendly intercourse. War parties from the Nez Percés invaded the Plains to contend with the Blackfeet and the Crows, but just how extensive were these operations before the acquisition of horses it is impossible to say. The Nez Percés procured horses before the more easterly tribes, and the latter made raiding and horse-stealing expeditions which by the time of the appearance of the early traders amounted to a continual state of war and rendered the lot of the Nez Percés anything but a

pleasant one. In this hostility against the eastern Indians the Flathead tribes, particularly the Spokane and Cœur d'Alènes, made common cause with the Nez Percés. In the annual excursions into the buffalo country, the Nez Percés and the Flatheads joined forces. These excursions started every spring and returned after one year, two parties, one going and one returning, usually meeting on the way. There were three trails: one, through the territory of the Cœur d'Alène Indians, passed the southern end of the lake of that name and crossed the mountains near the head of St Joseph river; a second trail was the famous Lolo trail, the crossing being made near the head of the North fork of Clearwater river; a third trail, less used, crossed the Bitterroot mountains at Nez Percé pass near the most northeasterly bend of Salmon river. These trails were marked by blazings made with elk-horn wedges. On these great excursions, men, women, and children went, and many fierce battles resulted.

WEAPONS. — Bows and arrows have already been described. The arrowheads used in warfare were frequently poisoned by being dipped in rattlesnake virus. The war-spear had a point either of bone or of stone, usually lance-shaped but sometimes barbed. The handles were about eight feet long. The war-club was of two kinds: One, having a worked stone head with a point at each end and a groove in the middle to which a handle was lashed with rawhide, is said to have been used exclusively in war. The other was constructed with a common unworked boulder about the size of the fist, which was sewed in skin and bound more or less loosely to a wrapped handle usually about eighteen inches in length, fig. 5⁵. It was employed not only in war but also for everyday uses, such as dispatching game.

ARMOR. — For armor, the shield, the helmet, and a sort of tunic were used.

The shield was circular, measuring about fourteen inches in diameter. The material was elk-hide which was stretched green over a hoop frame and dried. As in the Plains area, the shield was commonly mounted on a tripod when not in use. It is uncertain whether the ceremony of turning the shield toward the

suh was observed or not. The shields were ornamented with paintings, scalp-locks, bunches of feathers, etc. It seems probable that, as in the Plains area, the painted decorations were upon the shield-cover of softer hide.

A helmet, or hat, is said to have been made of stiff elk-hide. The character of this helmet is uncertain. A specimen in the Peabody Museum, shown in fig. 5¹, represents an article of headgear ascribed to the Nez Percés. Similar specimens are common among the Cheyenne, from whom this piece may, indeed, have been obtained in trade. An oblong piece of stiff hide, measuring about ten by eighteen inches and provided with a circular opening for the head, much resembles a paper crown. This opening was made by cutting the hide along several radii of a circle marked off near one end of the board-like piece of elk-hide. The points thus made were turned up, as was the front flap. The long flap at the back hung down as an admirable protection to the neck. The decoration consists of painted triangle and diamond patterns and stiff fringes.

The body armor was not much worn after the acquisition of horses, although it was probably important before that time. It consisted of a sleeveless tunic of elk-hide which hung almost to the knees. It was very stiff and clumsy, but an effectual protection against arrows. Slat armor was apparently unknown to the Nez Percés although it was commonly used by the tribes of the lower Columbia.

WAR DRESS.—The principal article of war regalia was the war-bonnet. Except for this the warriors wore often only the breech-cloth. Eagle feathers were the only kind used in the war-bonnet. There is no doubt that this article has been in use among the Nez Percés for a long time, although it may originally have been derived from the Plains Indians. Plate x, 1, shows a modern example of the war-bonnet without streamers; the streamers were also used, however. It is clear that the war-bonnet of early times differed much from that used to-day, but exact information on this point is difficult to obtain.

The full war dress is thus described by Ross:¹

¹ Ross (*ib.*), vol. 1, p. 306.

"It consists of the entire skin of a wolf's head, with the ears standing erect, fantastically adorned with bear's claws, bird's feathers, trinkets and bells. The next item is a wreath of curiously studded feathers, resembling a ruff or peacock's tail, which is entwined around the cranium, and hangs down the back to the ground like a banner; when the chief is on horseback, it floats six or seven feet in the air. The loss of this is the loss of honor. The price of a first-rate war head-dress is two horses.

"The body is clothed with a shirt, or garment of thin dressed leather, cut and chequered into small holes, and painted or tattooed with a variety of devices. A black leather girdle strapped tightly around the waist confines the garment, and holds the mystical medicine-bag and decorated calumet."

A head-dress based on the scalp of an animal was among the oldest forms in this region. At a later date the scalp of a young buffalo, the horns not removed, was made into a head-dress. This type, however, was very widely used by other tribes.

Little information could be elicited respecting the regulations in regard to war paint. The hair was painted white with a clay paint mixed with saliva and rubbed on with the hands. Red and orange seem to have been the favorite colors for face and body painting. The war-knife, and the bone-whistle which was blown only in battle, were hung about the neck.

WAR HORSE.—After commenting on their great value, Ross¹ gives a detailed description of the decorations of the war horse by the Nez Percés.

"Those entirely white are preferred; next to white, the speckled, or white and black, are most in demand. Generally all horses of these fancy colors are claimed by the chiefs, in preference to any other, and are, therefore, double or treble the value of others. As much pains is bestowed to adorn, paint, and caparison a war-horse as a warrior himself.

"On one occasion I am now describing, the horse was a pure white. After painting the animal's body all over, and drawing a variety of hieroglyphic devices, the head and neck were dappled with streaks of red and yellow; the mane dyed black, the tail red, clubbed up in a knot and tied short; to this knot was appended two long streamers

¹ Ross (*ib.*), 1, p. 307.

of feathers, sewed to a leather thong by means of sinews; the feathers, which reached the ground, forming as it were two artificial tails, which, in addition to ornament, served the rider to lay hold of while in the act of crossing rivers. A bunch of feathers as big as a broom, standing some twenty inches above the ears, ornamented the horse's head; and the rider as well as the horse was so besmeared with red, blue and yellow ochre, that no one could tell what the natural color of either was."

MUSICAL INSTRUMENTS

The musical instruments of this region were of the types common to most of North America.

Rattles, as usual, were an important part of the paraphernalia of the dancer and the shaman. A common form, represented by a specimen in the Field Museum, has a slender handle wrapped with deerskin, and at the end of the handle a tassel made of the tips of deer-hoofs. Another kind of rattle consisted of a bag of dried rawhide that contained a few small stones. This bag had a thong handle.

The drum is said to have been unknown before the nineteenth century, its place having been taken by a notched stick bound to an oblong piece of dried rawhide which served as a sounding board. One end of the instrument was placed on the ground and the other was held by the performer in a slanting position. The rasping sound was produced with a stick rubbed up and down over the notches.

The drum was common enough at the time of the first fur-traders. An old specimen in the Peabody Museum is apparently made of elk-hide over a cheesebox-like frame about four inches in height and twenty inches in diameter. The wooden frame is made of a single strip of wood lashed together at the ends. A row of burned holes extends down the center of the strip. The hide is stretched over the frame and fastened with thongs passing through the row of holes in the frame and a corresponding set of holes in the hide itself, and are looped over a thong that encircles the drum on the outside. To this outside cord are likewise attached two sets of cords that cross at right angles on the underside of the drum. On this particular drum

there is no decoration. Others, in the Field Museum, are ornamented with drawings of animals.

The drum-sticks, which were about fifteen inches long, were commonly painted red, and had the head wrapped with deerskin. Each drummer used only a single stick. From two to six drummers played on the drum at the dances.

Flageolets were made from elderberry wood. The hollow cylinders were from fifteen inches to two feet in length and about an inch in diameter. About six inches from one end was the wind passage—a slot about a quarter of an inch in length, with a wrapping of deerskin at each end. Just before this passage the tube was almost stopped with a lump of pitch. Six finger-holes were bored in the middle portion of the instrument, and another hole was near the lower end. This last hole is said to have rendered the tone much sweeter than otherwise. These flutes, as they are commonly called, were used only at night, the young men serenading the girls with them. They were not used in any of the dances.

Bone whistles, similar to the above except that there were no finger-holes, were made of the leg-bones of the sandhill crane (*Grus Canadensis* Temm.). They were about eight inches in length and were carried about the neck. They were used only in battle.

ART

PICTOGRAPHS. — Petroglyphs have been found at several points within the territory of the Nez Percés, and there is no reason to doubt that these Indians were the makers of them. The petroglyphs occur on cliffs and bowlders, especially where there is a granite outcrop. They were inscribed by several methods: (1) by painting with red and yellow ochre; (2) by pecking; (3) by a combination of these two processes in which a large surface was first painted over and then the figures brought out in tone relief by pecking away the paint.

Perhaps the most famous site of petroglyphs is Buffalo Rock, about eighteen miles above Lewiston, on the east bank of Snake river. This granite rock stands by itself on a small flat at the

mouth of a lateral cañon. A considerable village, named Hokotbatpi, was formerly situated around it. The rock takes its name from crude but unmistakable figures of buffalo painted with red paint, on the up-river side. Some of these figures have been removed and others destroyed by archeologically inclined vandals, so that only two are now in good condition. Near these buffalo figures are two signs, each with one vertical line and seven horizontal lines on the left side, like the teeth of a rake. These figures are painted in black and yellow paint.

The most interesting group of figures is on the down-river side of the rock. A considerable area of the rock is still covered with a varnish-like brown paint. This covering was removed by pecking and figures formed which stand out in gray against the brown background (plate x, 5). Most of these figures appear to represent men who in some cases have horns on the head, possibly meant for buffalo-horn head-dresses. The arms are long, with the elbows bent and the hands on a level with the broad shoulders. In one or two cases the hands carry wands or bows. The bodies, from the shoulder down, resemble the tail of a fish, the hips being very narrow and the legs short. A mountain goat with greatly elongated horns is represented above one of the man-like figures. In general style these petroglyphs closely resemble those found elsewhere in the Basin area.

On a weather-worn boulder close by the group just described occur other figures which appear to have been simply pecked (plate x, 4). The mountain goat, the snake (?), and various geometric signs or symbols occur here.

A mile or two above Kamiah, on Clearwater river, a small group of paintings existed until destroyed by railroad grading. The animals represented were men and deer or elk. Paintings and pecked figures are said to occur also at Almota, on Snake river below Lewiston, and on basalt cliffs near the mouth of Imnaha river, in northeastern Oregon.

Pictographs which served the double purpose of decoration and as an aid to memory were commonly painted in colors upon the buffalo and elk-hide blankets and upon the skin tipis. These pictographs show considerable similarity to those of the Sioux.

A painted blanket in the Field Museum of Natural History represents the retreat of Chief Joseph.

Realistic paintings of eagles, deer, etc., were used to embellish the shields and drums. These however were not applied with any order or design. Plate ix, 7, shows the use of realistic art, of a rather low order, to decorate a tufa pipe.

Little is known about wood-carving, but it is doubtful if it was much used. The carved wooden figure found at Tampico, Washington,¹ suggests that wood-carving may once have reached a fairly high development in the plains of the Columbia. Plate ix, 19, shows the curious carved stone figure already discussed.

DECORATIVE ART.—The decorative art of the Nez Percés offers the same complex of ideas of the Plains and Coast tribes that marks the other phases of their culture. The painted decoration on parfleches and medicine-bags partakes strongly of that of the Plains. The decoration came in when the article itself was introduced, or soon afterward. Quillwork and beadwork show some Plains features and some which may be indigenous. Basketry decoration shows strong affiliations with the designs prevalent on the Pacific coast and Columbia river.

Unfortunately the present study of the decorative art of the Nez Percés must be entirely objective. No interpretations of geometrical figures could be obtained. It seems fairly certain, however, that in early times the Nez Percés were very poor in decorative ideas, and that the richness and variety of modern times may be ascribed to absorbed ideas and not to the native culture.

The basket hats of the women were, according to existing specimens, all decorated in some zigzag design having three points at the top and three at the bottom. Plate vi, 15, 16, show two basket hats, one with a checkerwork zigzag and the other the motive shown in fig. 6³. This motive was common to the basketry of northern California and of Columbia river. No interpretation of this design could be procured. Variants of this design were used on cylindrical carrying baskets. Other basket hats were decorated with step-zigzag

¹ See H. I. Smith (6).

designs. In style of designs there seems to have been little difference between the women's hats of the Yakima, Umatilla, etc., and those of the Nez Percés.

While it is still somewhat uncertain whether the Nez Percés made imbricated basketry, a number of specimens of this art

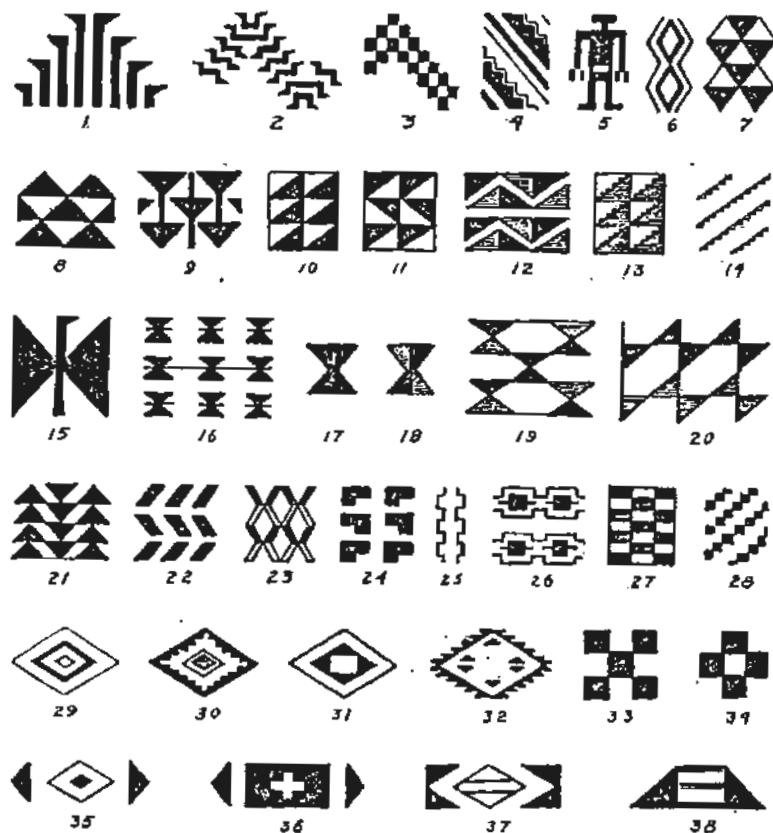


FIG. 6. — Decorative motives used in textiles.

have been obtained from them. One example shows the human figure, fig. 6⁵, and another a design with diamonds and triangles, fig. 6^{6,7}.

Cylindrical carrying baskets exhibit a variety of simple band decorations, some vertical, some horizontal, and some diagonal.

A stepped design, neatly worked out so that the uncolored background was the duplicate of the colored area, is illustrated in fig. 6⁴. The designs on these baskets are much the same as those of the Yakima, Wasco, and other tribes of the lower Columbia, except that they are more uniformly geometric among the Nez Percés. There seems to be a steady increase in the proportion of realistic motives in going toward the Chinook area, where birds, fish, and human faces were clearly though conventionally pictured.

In the designs of the woven wallets there was seemingly endless variety. Most of the designs are of the simple geometric figures similar to those shown in fig. 6⁸⁻²⁴. These were arranged in "all-over" patterns, in bands, and in combinations of various sorts. Both sides of the wallets were decorated, and there was no relation between the designs on the two sides. One was often simple and the other complex. It seems probable that these simple geometric elements were taken and deliberately worked out in all possible combinations until pleasing effects were produced. In no other way does it seem possible to explain the limitless variety.

Realistic figures are rare, and probably of recent origin. The double-triangle figure, shown in fig. 6¹⁵⁻²⁰, probably was derived from the common bird design of the lower Columbia. Arrowhead designs are met with. Even where it is possible to trace a realistic origin, the great development of the figure as an element of pure design renders such an explanation inadequate. In some of the more elaborate figures there are striking similarities to the beadwork and painted rawhide designs of the Plains. Fig. 6³⁵⁻³⁸ illustrate some figures possibly derived from the Plains tribes.

The decorative designs of Shahaptin parfleches (Yakima, Umatilla, and Nez Percé) have been described by Dr Kroeber¹ and compared with those of the Plains tribes. His description follows:

"In their rawhide painting the Sahaptin show a somewhat greater tendency to use designs of the square and triangular type than do the

¹Kroeber, pp. 175-176.

Kootenay, although such designs are neither very frequent nor very prominent among them. It is probable that the occurrence of this type of design among the Sahaptin is due to direct contact with the Shoshoneans, principally of Idaho. It is interesting to observe that the wide border-stripe consisting of triangles with squares at the ends, which is so typical of the Shoshone, is found among the Sahaptin as frequently in the form of a transverse end-stripe as it is as a longitudinal border. Central squares of no great size occur several times in combination with adjacent acute isosceles triangles. Wide stripes, sometimes longitudinal and sometimes transverse, are not uncommon. When longitudinal, they occur also in the middle of the decorative field. In this case the two resulting halves of the decorative area are usually occupied mainly by diamonds or hour-glass figures. There is very little tendency toward a distinct enclosing frame, as among the Sioux and Blackfeet. There are also very few cases of a repetition, along the longitudinal borders, of the designs in the middle, such as is so characteristic of the Arapaho; but there are cases even of this. Altogether there is hardly any characteristic tribal type which has not some representation among the Sahaptin. The figures are generally large. They are, however, so placed that the white background is comparatively prominent; and the close effect found, for instance, in most Bannock parfleches, where large design elements are also favorites, is wanting. The outlines of the figures are usually marked quite heavily in black or dark blue, much as among the Shoshone and Bannock. Almost half the parfleches have paintings on the side, similar to those of the Blackfeet and Kootenay. The typical form of these side-paintings seems to be a row of angles or V's with the apices directed upward; that is to say, more or less inward as the flattened parfleche is viewed from above. Usually each angle or V contains one or two smaller parallel ones. In a few cases among the Sahaptin, the V-shaped angles are replaced by square U-shaped figures or by diagonal stripes."

Two examples of parfleches are shown in fig. 5^{1,2}. The designs of these illustrate the simple geometric quality of most Nez Percé parfleches, and show the use of the square and zigzag.

Beadwork decorations on old deerskin garments usually take the form of bands of checkerwork flanking solid masses of color. Blue was evidently the favorite color; it was usually combined with white. The beadwork decoration of belts, quivers, etc.,

was largely geometric and composed of squares, triangles, and such simple figures. The beadwork decoration of moccasins was on the other hand predominantly floral, but the characteristics of no particular flowers were emphasized. Leaves branched from a stem, and at the end of the stem colored beads massed out what might be taken for petals. If this style of ornamentation was introduced, it would be interesting to know the origin. These floral designs of the moccasins existed in as great variety as the geometric designs of the wallets.

It seems evident that the Nez Percés derived their decorative ideas from a number of sources, but the nature of the original decorative art is very uncertain.

MISCELLANEOUS

CALENDAR. — According to the ancient calendar there were twelve months in the year. It is uncertain which of these months began the year, so they are here given from the starting point of our own calendar:

- 1st January. — *Witū'pup*, meaning uncertain, said to be, "the middle of cold weather."
- 2d February. — *Ālūtāmā'l*, "the month of swelling buds."
- 3d March. — *Lati'tal*, "the month of flowers," *latis* meaning "flowers."
- 4th April. — *Kakital'*, "the month of *kakit*"; *kakit* was a favorite food root much like kouse.
- 5th May. — *Āpāāl'*, "the month of kouse bread"; kouse bread was made from the fresh roots gathered at this time.
- 6th June. — *Ili'lal*, "the month of the first run of the salmon."
- 7th July. — *Hasoal'*, "the month of eels," or *Qoiktal*, "the month of blue-backed salmon."
- 8th August. — *Taiyaal*, meaning uncertain, possibly "the month of hot weather"; *taiyam* means "summer."
- 9th September. — *Waurwama aiakal*, "the month of salmon spawning at the heads of creeks."
- 10th October. — *Aiakal Pikūn'me*, "the month of spawning salmon on Snake river."
- 11th November. — *Iloplal*, "the month when tamarack (larch) trees lose their needles."

12th December. — *Saxliwãh*, "the beginning of cold weather," or "time of the fall deer hunt."

The four seasons of the year were named as follows:

Spring, *etaiyam*.
 Summer, *taiyam*.
 Fall, *saxnim'*.
 Winter, *enim*.

In the Field Museum of Natural History a calendar tally accredited to the Nez Percés is exhibited. It consists of a group of five small sticks, each with a square cross-section. Upon the sides are lines and dots. Usually six parallel lines are followed by a dot, suggesting the week count. A tally similar to this is said to have been used to register the births, deaths, etc. On one side of a stick the days were shown, on another the years, while the important events were marked in the proper places by circles, etc. The whole idea seems to have been fairly modern. There were no "winter counts" such as are found among the Sioux. Important battles were often depicted on blankets, but there was no orderly graphic record of historical events.

Distance was measured by "bends" of the river or by the number of days required to travel from one point to another.

SIGN LANGUAGE. — The sign language of the Plains was used by the Nez Percés, but was probably acquired after the introduction of horses. The Chinook jargon was similarly introduced by the early fur-traders, most of whom were from posts on the lower Columbia.

PHYSICAL AND MENTAL CHARACTERISTICS. — Little information has been gathered concerning the physical type of the Nez Percés. Boas¹ gives head-measurements of 267 individuals of the Shahaptian stock and finds the cephalic index to average 84.7. Fourteen skulls from the same stock show an average index of 83.2. This puts the Nez Percés in the brachycephalic Basin type, which embraces also the Navaho, Comanche, the Indians of southern Oregon, etc. With the round head goes tall stature. The Nez Percés were not so tall as some of the west-

¹ Boas, p. 391.

ernmost Plains tribes, but they were well above the average height. The average height of 71 men of Shahaptian stock was, according to Boas,¹ 169.7 cm.

Their features are clean-cut and of the finest Indian type. Plate x, 1, 2, pictures two Nez Percé Indians.

In temperament, they were brave, hospitable, and trustworthy. Lewis and Clark and many after them praise their hospitality. The tortures which were inflicted upon prisoners by the Plains Indians were not employed by the Nez Percés. They were more inclined to missionary teaching than most Indian tribes, and at an early date many became devout Christians.

POPULATION

Lewis and Clark's estimate of the population of the Nez Percé nation, excluding the "Yeletpo" which clearly did not belong in the list of bands, was substantially as follows:²

1. All those residing along the Clearwater river below the confluence of the North fork, and on Potlatch creek.....	2,000
2. The Pelloatpallah band residing on the upper Clearwater river and its tributaries.....	1,600
3. The Kimooenim band on Snake river from the mouth of the Clearwater to the mouth of the Salmon.....	800
4. The Willewah band on Grand Ronde river and its tributaries.....	500
5. The Soyenow band on the north side of Salmon river from its mouth to the Rocky mountains and on "Iamaltar" (Whitebird) creek.....	400
6. The Chopunnish of Snake river from the mouth of the Clearwater to the Columbia.....	2,300
Total.....	7,600

The second, or "Pelloatpallah," band could not possibly have been the Paloos Indians, because the habitat is clearly stated as the upper Clearwater, where Lewis and Clark spent several weeks. They speak³ of this band as "the band with which we

¹ Ibid., p. 371.

² Lewis and Clark, vi, pp. 114-115.

³ Ibid., v, p. 117.

have been most conversant." Only the last band in their list can be divided. The Nez Percés did not extend as far down Snake river as the junction with the Columbia, but only to the mouth of Tukanon creek, somewhat more than half the distance. This latter band may, then, have included the Paloos tribe which inhabited the valley of Palouse river and controlled the lower portion of Snake river. Deducting 1,000 for this possible inclusion of the Paloos tribe there is left a total of 6,600. It is to be noted that Lewis and Clark based by far the larger portion of their estimate on the bands which they actually visited. They allowed only 400 for a long stretch of the Salmon river.

While this estimate corresponds with the traditions of the Indians and seems conservative enough when we consider the large number of geographical bands, it exceeds the rough estimates made after the coming of settlers. Wilkes in 1841 placed the number at 2000. Governor Stevens reported 1880 (adults?) in 1851, and Gibbs more than 1700 in 1853. The Indian agent in 1862 mentioned that 2,800 persons were eligible to draw supplies from the Government. The first real census was not compiled until 1893, on the occasion of making land allotments. The number on the Nez Percé reservation was ascertained to be 1895, while about 140 more were reported from the Colville reservation. The latter were the remnant of Joseph's band, which, when captured, had numbered 450. Thus the total in 1893 exceeded 2,000. In the last fifteen years this total has decreased one fourth, and the Indians now number about 1,500.

The fact that the reservation embraced a large extent of territory, many parts of which were difficult of access, may account for the prevailing low estimates of the population. Moreover, it must be remembered that the agents were concerned only with the Indians living on the reservation. Until thirty or forty years ago many bands roamed at will. Father Cataldo, who as a missionary has dwelt among these Indians for the last fifty years, estimates that in 1860 the population was about 5,000.

The causes of a falling population are not far to seek. Ross and other fur-traders comment often upon the fierce wars between the Nez Percés and the horse-stealing raiders of the Blackfoot,

Crow, and Shoshoni tribes. Firearms made these wars more than ordinarily deadly. Diseases, new to the Indians, claimed many victims. Just before the Whitman massacre, in fact the prime cause of it, a smallpox pestilence swept over the Nez Percé and Wallawalla area, resulting in great loss of life. A second pestilence, less severe, occurred in the late '60's. Since 1870 the death-rate from tuberculosis, owing to the substitution of unclean and ill-ventilated wooden houses for the native mat lodges, has been steadily increasing. Dr J. N. Alley, the physician in charge at Lapwai, reports that fully ninety per cent. of the deaths result from tuberculosis and that any disease of an eruptive nature so weakens their power of resistance that the natives are carried off by tuberculosis within two months of their recovery from the primary ailment. Hardly one person in ten at the present time is free from tuberculosis or does not bear witness of its ravages in scars on the neck or jaw. Unless something can be done to stop the progress of this ever-present plague one of the finest tribes of American aborigines will soon be only a name.

SOCIOLOGY

THE TRIBE. — The social organization of the Shahaptian stock seems to offer an excellent field in which to study the simple development of the tribe. The stock was geographically a unit. Intertribal festivals and ceremonials were common. Offensive and defensive alliances were made against the Salish tribes on the north, the Crows and Blackfeet on the east, and the Shoshoni Indians on the south. Linguistic unlikeness between neighboring bands was slight, although the extremes of east and west showed marked differences. It seems, then, that the tribes arose from the natural division of the stock according to the geographical areas. This view is supported by the lack of anything like a gens grouping, by the absence of all evidence of migration or conquest, and by a study of the internal structure of the Nez Percé tribe, itself divided into geographic bands.

The Nez Percé tribe was the largest and strongest member of the Shahaptian stock, and was the leader and dictator in affairs of peace and war. It occupied the most important position,

since it had to guard the frontier against the Shoshoni, the Crows, and the Blackfeet. Much of its later dominance may have been due to the early possession of horses, and its consequent superiority in war and advantage in trade. Before this, however, the Snake and Columbia rivers formed a highway through the length of the Shahaptian territory, and their natural advantage at the head of navigation must have been marked.

The Nez Percé tribe was divided into bands upon the village or geographical basis. Each village had its chief, its fishing place, and its strip of territory along the river. Several village groups often came together to make up a war-party, but there is little evidence of close relationship in village groups in time of peace.

CHIEFS. — The position of chief was obtained by election. Although fathers were often succeeded by their sons, this was only because the latter had a strong following and not because the chiefship was regarded as hereditary. There were peace chiefs and war chiefs. Each village had at least one peace chief who held the position as long as he was able to please and control his people. The war chiefs were elected in council and controlled a much greater number of men than did the ordinary village chiefs. There were no female chiefs, nor did women take part in the election of chiefs. Rarely a chief rose to the position of war chief for the whole tribe, and then only after he had saved the tribe in some important war.

The strength of a chief depended on the size of his following. All who desired to reach the position of chief had to be able to gain the favor of the mass. Frequently a young brave would give feasts to accomplish this purpose. After he had thus enlisted a following he would organize a small war-party and have himself chosen as leader. If successful in this initial undertaking his rise might be rapid, according to his skill in diplomacy and debate, his bravery, and his deeds.

The power of the peace chief was considerable in his own village, or over his own people on the march, but he had no power when in the territory of another chief. He was, however, treated with honor. The power of the war chief was supreme on the war-path, but it was only honorary in time of peace.

The council consisted of the chiefs and the old men. There was a village council which helped the chief in administering justice, and a tribal council which met to discuss intervillage matters and affairs of peace and war. These tribal councils might be large or small, comprising a group of villages or the whole tribe. There were also intertribal councils. At these the chiefs met and argued while the pipe was passed around and the listeners sat in a circle. Such intertribal councils were common between the Nez Percés and the Cayuse, Wallawalla, and Yakima, formed to discuss war against the common enemies. Treaties between enemies were also ratified at such councils. Whenever two or more large bands met, such councils might be formed to discuss affairs of moment. The rule for a decision was perfect agreement, so the councils were often long drawn out.

ORATORY. — Oratory was a highly developed art among the Nez Percés, for on this depended much of the power and prestige of the chiefs. The rule of the council was unanimity, and this could be effected only by calm reasoning where facts were to be considered, and by impassioned appeal when the decision depended on sentiment. There was considerable use of gesticulation and a great display of dignity. Statements were concise and concrete. Often a public speaker, or herald, repeated word for word the orations of the chiefs in order that the assembled multitude might hear.

Even when translated out of the soft and pleasing Nez Percé language the surrender speech of Chief Joseph has a great deal of power and pathos:

"I am tired of fighting. Our chiefs are killed. Looking Glass is dead. Toohulhulsote is dead. The old men are all dead. It is the young men who say yes or no. He who led the young men is dead. It is cold and we have no blankets. The little children are freezing to death. My people, some of them, have run away to the hills and have no blankets, no food. No one knows where they are — perhaps freezing to death. I want to have time to look for my children and see how many of them I can find. Maybe I shall find them among the dead. Hear me, my chiefs, I am tired. My heart is sick and sad. From where the sun now stands I will fight no more forever."

DISCIPLINE.—Whatever power there was for discipline was vested in the heads of families, in the chiefs, and in the council. There was no regular police force either in camp or on the hunt. The matters of the household were in the hands of the husband and father. Chiefs had considerable influence, each in his own village, but not outside of it except over his own people. On the war-path a single chief was elected to supreme control, and he could appoint subordinates as he saw fit. Disputes between two villages or important questions of punishment were decided in the council. The council consisted of the old men and the chiefs. It varied in size according to the importance of the matters under discussion and the breadth of the territory affected.

There was, in general, a great deal of freedom of action. The power of the chiefs did not extend to dictation in purely personal matters. Such orders as were given were seldom combated. In sham battles and in dances, the leaders were able to enforce the most perfect order.

In regard to crimes, the procedure and punishment were pretty well established. Murder of a member of the tribe usually entailed blood revenge by the family of the murdered man. The payment of blood-money was sometimes sufficient, especially if the dead man was of a quarrelsome and unruly disposition. Murder of a man not of the tribe was not a crime, except where it was a breach of hospitality. Theft from a tribal member or from a guest was seriously frowned upon, and punishment for the offense consisted of compelling the surrender of the article, or others of equal value, and the infliction of public disgrace, which seems to have been keenly felt by the culprit. For adultery a death penalty was sometimes inflicted upon the man and the woman by the husband, and sometimes the matter was adjusted by the payment of horses, etc. Rape was punishable by death or by enforced marriage. Lying was regarded as almost the worst infringement of ethics, and the epithet "liar" the last insult that could be offered. Public contempt was the punishment meted out to one caught in a lie.

Throughout the Basin area each tribe was held responsible

for outrages committed in its own territory, even if by members of another tribe. A war-party in the territory of an enemy would often offer violence to strangers simply as a back-hand blow at their enemies, when the strangers would have been perfectly safe if they had been encountered in the territory of the aggressors.

PROPERTY.—Property was both individual and communal. To the individual belonged all the implements he had made and used in his work. The men made and owned the nets, spears, hunting apparatus, and weapons of war. The women made and owned the pestles, baskets, etc. Each sex could trade away its belongings, but in case husband and wife separated, all the property belonged to the husband. The horses usually belonged to the men.

In early times the Nez Percés owned a few slaves. They did not buy slaves, merely using as such the male prisoners of war. The women taken in war became the wives of their masters. In any case the children of slaves were free, and the slaves themselves were frequently taken into the tribe. Slaves were the personal property of their captors and could be traded or even killed at will. As a matter of fact they were treated with kindness. It is said that women could gamble away their freedom, but that men were not allowed to do this.

The food supply was a family matter, although there was usually a pooling of supplies to make common store for winter use. Except in the case of large hunts all fresh meat belonged to the hunter who had killed the game. It was considered part of the duty of the chief of a village to see that all the families under his control provided themselves with an ample food supply, since otherwise they might become a public burden.

The long-house was constructed by communal labor and was considered the communal possession of all who lived in it. There was no private ownership in land. Each village owned its special fishing place, and disputes and fights frequently arose when one village infringed the rights of another. There were, however, a number of important fishing places that were considered the common property of the whole tribe. Wallowa lake

and the headwaters of Little Salmon river were perhaps the most important. The large camas meadows near Moscow, Grangeville, and in the Wallowa valley, were also tribal property; indeed these may even be called intertribal property, since the former was frequently visited by the Palooos and the latter by the Cayuse Indians.

PATRILINEAL
 X Inheritance was through the male line. Much property was given away after the funeral feast, and the remainder was usually distributed according to the previously expressed wishes of the owner. In addition to material property, songs and names were also inherited in the male line.

DIVISION OF LABOR.—A great deal of the ordinary routine work was relegated to the women. They had to dig roots, gather berries, make clothing, baskets, mats, pestles, etc., dress skins, and attend to the culinary affairs—in short, all the domestic work was theirs. The men did the hunting and fishing, herded and took care of the horses, and made nets, weapons, knives, etc. Undoubtedly the necessities of war consumed a large part of their time. The men helped in all the heavy work, such as setting up house-poles, cutting wood, etc.

THE LIFE OF THE INDIVIDUAL

BIRTH.—For two or three months before the birth of a child and for about two weeks after, the woman was confined to the subterranean menstrual lodge, or to its summer substitute. She was not allowed to speak to men or to receive anything from them. All women who were secluded during either pregnancy or the menstrual periods dwelt together and cooked their own meals. They were not allowed to eat food that others had touched. No diet restrictions were placed upon them.

Old women acted as midwives at the birth of children, and were well paid for their services. There seems to have been no birth ceremony, and only the simplest of medical practices. Twins were considered as lucky both to the family and to themselves. The grandmothers of the children devoted much time to their care. The cradle in which the children spent a great portion of their time for the first two years has already been described.

Children were trained to be quiet and obedient, but were kindly treated and seldom had to be punished. After they had reached a sufficient age to understand, stories, myths, and didactic accounts of arts and technology were told them on winter evenings by the men.

NAMES.—Names were obtained in several ways. The child was named from a stock of names which had long run in the family and which were held in reserve. These were probably mostly vigil names of ancestors and deceased relatives. The same name could be applied only to one living person. Occasionally the right to use a name not belonging to the family could be purchased from the family owning it. Such names with marketable value were those that had belonged to some famous chief or warrior, and the right to use the name was usually purchased soon after the former owner had died and before the luster of his renown had faded.

Nicknames were frequent, and, as usual, reflected some physical or mental peculiarity. Some nicknames had a more dignified origin in a feat in battle or skill in hunting, etc. Such names were sometimes made permanent by public notice and a gift to the tribe. The gift was sold and the proceeds used to defray a portion of the expense of a public ceremony.

The most important name was that secured at the Sacred Vigil. Only those who succeeded in obtaining a guardian spirit had one of these names. At about ten years of age the child, whether boy or girl, was sent out on the mountains to fast and keep vigil. If, as a result of this vigil an animal or some other thing appeared to him in a dream, the name or description of this visionary object was taken as the sacred name. Sometimes the dream animal was seen bearing some trophy of the hunt, and in that case the sacred name signalized this. Such a name was *Siltwehakt*, which means "Eyes-around-the-neck." The warrior with this name was commonly called "Eye Necktie." Another name, *Wisaskesit*, means "The-clouds-shade-the-sun." Other names were more simple, as *Himn-ilpilp*, "Red Wolf."

ACQUISITION OF GUARDIAN SPIRITS.—The sacred vigil was important in more ways than in the securing of a name. The

VISION QUEST.

animal or object which appeared in the dream became the guardian spirit of the child and was intimately associated with the future life. It was supposed to protect the man or woman from danger, often conferring a restricted invulnerability. It was also supposed to endow him with certain physical or mental qualities and pronounced skill in certain things. These extraordinary faculties were such as were especially developed in the animal or object itself. A deer, for instance, would imbue its protégé with swiftness of foot; a coyote or a wolf with skill in hunting; the sun in wisdom and mystical insight. In the case of women, some of the powers conferred on her by the guardian spirit could be delegated to her husband. For instance, if a woman had the Wolf Faith, she would sing her sacred song when her husband was hunting and thus augment his chances of success. Those who were unsuccessful in obtaining a guardian spirit were regarded as unfortunate, and seldom rose to posts of honor and influence.

The method of keeping the sacred vigil was as follows: The child (boy or girl) went up into the mountains, usually ascending to one of the highest peaks. Here he built up a heap of stones and then sat down beside it with his mind steadfastly fixed on the purpose of his vigil. He took no food or drink, and kept awake as long as possible. After three or four days of fasting and vigil he fell into a troubled sleep, during which the animal or object appeared, gave him a name, and taught him a sacred song. There was no way of determining beforehand what the guardian spirit would be, although it seems probable that if the watcher was very desirous of having a certain one he could induce that spirit to enter his dream by keeping his mind fixed upon it. Suggestion and hypnotism evidently played an important part.

Many watchers failed in obtaining a guardian spirit; this was because they allowed their minds to wander, because they became homesick, or tried to while the time away by noticing unimportant objects. It was considered very sacrilegious for a child to deliberately make up a sacred song or pretend that a certain animal was his guardian spirit. Such a proceeding

would arouse the enmity rather than the protection of the animal concerned. One of the myths describes the Beaver and the Muskrat killing a boy who used their names in his song without their permission.

The child kept up the vigil till the animal appeared in the dream or, at most, until five days had elapsed. He then went home, but told no person of the result of his mission. The first occasion that the public had to guess the nature of the guardian spirit was when the boy sang a new song at the Guardian Spirit dance. There was no regular time for the occurrence of this dance, however. There was a close feeling of friendship and intimacy between those who had the same guardian spirit, and a certain amount of coöperation in the Guardian Spirit dance; but there was no organization that partook of the nature of a secret society.

There were restrictions about killing the animal that served as guardian spirit. Sometimes it could be killed only in a certain way and sometimes only at a certain time. Killing was done only when necessary. For example, a boy who had dreamed of the deer could kill deer only during the fall hunt.

The names and the sacred songs obtained by vigil descended through the family. Some had a right to sing ten or fifteen songs in the Guardian Spirit dance, having inherited them from previous owners. There seems to have been a certain amount of protection and aid derived from this second-hand interest.

In the case of shamans, men and women, the guardian spirits were regarded as of a somewhat higher order, and were drawn from the heavens. The Sun, the Moon, the Clouds, the Eagle, and the Fishhawk seem to have been the protectors necessary before shamanistic power could be inherited, and the Crane before it could be entered into by a person not in the line of such inheritance. Although of *one* faith, the shaman was allied as closely as possible with all the powers of nature.

This ceremony of the sacred vigil was the most important event in the life of the individual. For the boys there were no puberty or other initiatory ceremonies. In the case of the girls, the period of puberty was passed in the menstrual lodge, and

during this time they received instruction and advice from the older women and were not allowed to see men or to touch any object that men had touched. There were sweat-baths for cleansing during this period.

MARRIAGE.—Marriage by purchase seems to have been the prevailing form among the Nez Percés. In this case the marriage was arranged by the parents and a price paid in blankets or horses to the father of the girl. Sometimes the purchase-money was not demanded when the boy was capable and of great promise. In this case the consent of the girl and the approval of the parents had to be gained by the boy without the help of his relatives. Such a marriage was considered more honorable and more to be desired, aside from all financial considerations, than the ordinary marriage by purchase.

Boys sometimes married at the age of fourteen and girls at an even earlier age. There were no restrictions in marriage except in the case of relatives. Even second or third cousins were not allowed to marry. Marriage was usually, but not necessarily, outside the village group. Even marriages outside of the tribe were fairly common, and women captured in war became the regular wives of their captors. The number of wives ranged from one to four, with polygamy far more prevalent than monogamy. The chiefs, however, far from using their position to increase the number of their wives, usually limited themselves to one or two. The number of wives a man might have depended on his wealth, his attractiveness, and his deeds.

Very little ceremony was observed in making the marriage contract, and this little was practically limited to the acquisition of the first wife. As a rule some old man of the boy's family was sent as mediator to the girl's family to arrange the details of time and price. When these points had been discussed and settled, and the appointed time had drawn near, the women of the bridegroom's family went to the home of the bride. The girl was dressed in her gayest attire and escorted by her people to the home of the bridegroom. There was usually a feast, at which presents were given to everybody. About a month after

the marriage the bride's family gave a feast in return, at which presents were given to the guests. To the bride was commonly given the horn-spoons used at the feast. The presents given on one side about equaled those given on the other, although the feast provided by the girl's family after the marriage was of greater importance than that given by the bridegroom. The husband usually took his wife to live with his family, but occasionally lived with hers. There was no trace of payment of the marriage price by personal service rendered by the bridegroom to his father-in-law.

What wooing there was, was conducted in the evening. The maiden was serenaded by her lover, who played softly upon a wooden flageolet outside the tent where she slept. A pretty close watch was kept on the girls, and they seldom made imprudent attachments.

There was no formal divorce, and in case of separation all the property went to the husband. Separation was not very common, however. Instead of divorce or simple separation, the usual method was elopement. In this case the aggrieved husband would sometimes kill both the offending parties, without redress for the family of either. Elopement was common only when the husband was a weakling, unable to assert his rights, or upon the buffalo hunts, when it was easy for the runaway couple to put a considerable distance between themselves and the deluded husband. In case of adultery, death could be inflicted upon both the man and the woman. Taken all in all, the standard of morality, both before and after marriage, seems to have been conspicuously high. The crime of rape was not, however, unknown. Sometimes a delinquent girl of whom her accepted lover tired was turned over by him to a party of his friends. Abortion was uncommon. A child born out of marriage was considered a disgrace to the girl's family, and if the offending man was known it was considered to constitute marriage.

BURIAL.—Soon after death the body of the dead person was dressed in fine clothing, and the favorite necklaces and ornaments were used for adornment. The face was painted. In

this condition the body was kept in state, sometimes for two or three days. The body was finally sewed up in a sheet of deer-skin. The opening down the front, where the two flaps of the sheet came together, was closed with a lashing cord sewed back and forth.

The grave was a circular excavation, from three to five feet deep, dug with digging sticks and with the hands. It was usually within sight of the village. If, however, a person died away from home the body was buried there and not transported. In the grave the body was placed in a variety of positions, either flexed or at length. Poles were laid across the grave, and upon these stones were piled to protect the body from wolves and coyotes. Often a considerable amount of property was buried with the dead, including the favorite implements and ornaments of the deceased. Necklaces of dentalia, elk-teeth and bears' claws, pieces of copper, fine scalping knives, and even pestles, have been found in old graves. In later graves quantities of goods derived from the whites, such as guns, medals, hatchets, etc., are common. The killing of horses over the graves of their owners became the usual practice after horses became plentiful. Sometimes the horses were buried over the body, sometimes they were merely killed over the grave, and on other occasions they were skinned, stuffed, and set up as grave monuments. Although the ghost of the dead man was regarded as wearing the ornaments and riding the horses sacrificed at his grave, food was never placed in the grave. Plain cedar stakes were often set upright in the stone heaps over the graves. In time of war the dead were buried under the corral at night, and the horses driven over the graves to obliterate them, so as to prevent mutilation of the bodies by the enemy.

The funeral ceremonies were simple, and are but little known. At the side of the grave the shaman made a brief speech, commenting on the achievements of the deceased and expressing the general grief. There were no chants or funeral songs. The chief duty of the shaman, who was remunerated for the service, was to "lay the ghost." A large part of this ceremony had to be conducted at the new house. Some slight ceremony

at the grave side was probably connected with the cedar sticks that were set up in the stone heap.

The house in which the dead person had lived was torn down. Sometimes it was destroyed entirely, but more often it was merely moved to another spot. Even in winter time the long communal houses were taken down and moved after a death. The expedient of blocking up the part of the house where the person had died was not taken advantage of. The final act of pacifying and laying the ghost was carried out at the new house before it was occupied. The shaman, with much formality, blew smoke from a pipe into all the corners. This ceremony was called *Pasapukitse*, "his blowing the ghost away." The object of the ceremony was to prevent the ghost from moving into the new house when the other people took possession, and if it were not carried out the Indians believed that all who lived in the house would become crazy. Madness was always caused by the ghosts of the dead.

Ghosts were held responsible also for the death of children. It was believed that the ghost would hold his hand over the child's face and thus smother it to death. In order to resuscitate the child it was necessary for two or more medicine-men to determine which ghost was responsible, and then go to the grave of that ghost and try to recover the child's breath. They would blow this breath again into the child and it would recover. Often, however, the shamans could not determine which ghost was responsible, in which event the child remained lifeless. Adults were supposed to die from "bad blood," not from ghostly influence.

All who had touched the body of the dead person had to go through a prescribed sweat-bath cleansing, lasting about a week. This treatment applied to both men and women.

MOURNING.—The mourning practices consisted in wailing, in cutting the hair short, and in wearing poor, soiled clothes. Widows cut the hair off on a line with the neck, and could not marry till it had grown again to the bottom of the shoulder-blades. Men also cut off their hair and wore poor clothes after the death of a wife. The hair thus clipped was burned in a fire.

The tails of the horses belonging to the dead man were docked, and the animals were not ridden for two or three years. There seem to have been no food prohibitions. After the death of children the mourning was much less severe, the wailing of the mother being the most noteworthy demonstration of grief.

A month or two after death the family of the deceased gave a feast to which all the friends were invited. Much of the property of the dead person was distributed among the guests at the close of the feast.

GAMES

Accounts of a number of games and amusements have been obtained. In these the Nez Percés do not differ materially from their western neighbors. Wyeth¹ describes a number of games that he witnessed while traveling with a band of Nez Percé and Cœur d'Alène Indians, especially archery, hoop-and-pole, and the hand game. Other early explorers comment on the horse-racing and sham battles that furnished much excitement.

The hand game (*lopmix*) was played in much the same manner by all the tribes of the Northwest. It was the most popular gambling game. The players were seated in two rows, facing each other, with a fire between when the game was played at night. A log was placed before each row, and each player had a stick with which he kept time to the song by striking the log. There were usually two sets of pieces, each set consisting of two cylindrical sections of the leg-bone of a deer, one being plain and the other having about the center a black ring of deer-skin. Each side was provided with ten counting sticks. As a prelude the leader on one side manipulated the bone pieces—now hiding them beneath his blanket, now passing them from one hand to the other—the other men on that side beating the log and singing a mocking song. Then the leader passed out the two sets of bones to two of his fellow players. These further manipulated the pieces and then held out their closed hands for the leader on the other side to guess which hands held the plain bones. The side that was guessing silently watched the

¹ N. J. Wyeth, pp. 191-192.

dealers. When both sets of bones had been properly guessed the deal changed sides. Losses were paid out of the ten original counters until these were exhausted.

Dice (*tséxstem*) was another popular gambling game, especially among the women. For this game there were four pieces, two of which were marked with circles and two with zigzag lines. Plate VII, 30, shows one of the pieces used in this game, made from the outside portion of an elk bone. The pieces marked with circles were called *hama*, "men"; and those marked with zigzags, *aiat*, "women"—similar to our "kings" and "queens." A blanket was spread, and two or more players took places at each side. All four dice were thrown at the same time by each player in turn. The number of points in the game was decided before the game was commenced. The scoring was: All four up or down, two points; one pair up and one down, one point. Sometimes the best throw of the four counted one if none of these combinations was made. Culin¹ describes this game among the Yakima and other Columbia River tribes.

Another game consisted in rolling a hoop along a prepared piece of ground and casting shafts so that they would stop where the ring did. No details of this game could be obtained, but it was evidently the common hoop-and-pole game.

A game of ball with bats having curved ends like hockey sticks was very popular. It was played on a large piece of level ground. Goals were formed with two heaps of stones about fifteen feet apart. The ball was stuffed with deer hair. Men played on one side and women on the other. The ball could be advanced in any way but by carrying or throwing.

Another game was played between the men from two neighboring villages, from fifty to a hundred on the side. The contestants formed in two lines and made fun of each other. Then the lines came together with a rush. The feet and shoulders, but not the hands, could be used. The game consisted in kicking, and the line which gave way first, lost. This game was supposed to breed hardiness and courage. It was abandoned soon after the introduction of shoes.

¹ Culin, p. 158.

Coasting down steep snow or grass slopes was accomplished on a deerskin with the hair side next the ground and the front part held up, thus forming a flexible toboggan.

The popularity of horse-racing has been already mentioned. Sport on horseback often took the form of sham battles. Sometimes a famous battle with another tribe would be reenacted with a great deal of realism.

Children had many games, but little information has been collected about them. Tops were spun by the children either with the hands or with a string. The common form of top was a disk of bark through the middle of which was inserted a peg pointed at the lower end and extending about four inches above the disk.

Cat's-cradles and other string games were also common. These were made by the old people to amuse the children, and with each figure went a story.

MEDICINE AND MEDICINE-MEN

SHAMANS.—The position of the shaman was one of much influence, as is always the case when the governmental organization is weak. There were both men and women shamans, and there was no difference in their functions.

The position of shaman seems to have been partly a matter of heredity and partly of guardian spirit. The guardian spirits of shamans were such as lived in the heavens. The Sun, the Cloud, the Eagle, and the Fish-hawk were the patrons of shamans. Not everyone who secured one of these for a guardian spirit became a shaman, although he was pretty surely marked for great success. A vacancy was necessary, through the death of some close relative, before a boy or a girl, already favored by one of these powerful spirit guardians, could become a full-fledged shaman. As a rule the old shaman chose his successor from the candidates, and taught him the songs and formulæ of his faith. It is not clear whether it was necessary for the boy to have the same guardian spirit as his predecessor.

In addition to his (or her) own song obtained at the sacred vigil the shaman inherited songs that had miraculous power to

bring good weather or to cure disease. He also "dreamed" new songs from time to time. Many of the shamans seem to have had genuine hypnotic power over dancers in the Guardian Spirit dance, while others fell into trances of their own accord.

The duties of shamans were the "laying" and exorcizing of ghosts, curing of the sick, the bringing of warm weather, etc. They also had power to spread "bad medicine" or to inflict disease and misfortune upon those who fell into their disfavor. The shamans also took a leading part in many of the ceremonies, although there was no organization of the shamans.

The manner of "laying the ghost" has already been described. It was largely a smoking ceremony. The cure of the sick was accomplished by singing a sacred song when the cause of the illness was hard to find. Certain herb medicines were also prescribed at times. The efficacy of the shaman's song was largely in the mind of the patient.

MEDICINES.—The most common treatment for almost all ailments was the vapor bath. Kip¹ says: "Their prescriptions, however, are always the same, whatever may be the disease, whether ague or fever or small-pox. The patient is shut up in a small close lodge called a 'sweating house,' where he is subjected, until almost stifled, to a vapor bath produced by water slowly poured on red hot stones." To this description it may be added that the sweat-bath was usually followed by a cold plunge. Sometimes warm-water baths were taken, the water being heated with hot stones thrown into a bathing pit. The latter was the common treatment for itch or for other skin diseases. Serious cases of rheumatism or loss of use of the limbs was treated by a sort of sweating roast, similar to the process of cooking camas. The part affected was placed over the roasting pit, packed in rye grass and earth, and thus subjected to almost unbearable heat for as long as possible.

Herb medicines were also much used. A poultice of a certain root, pounded fine, was used on bad cuts or sprains. Bleeding from a wound is said to have been stopped by the application of spider-web. Fractured bones were held in splints made

¹ Kip (a), p. 307

of a number of rods tied together at the ends and covered on both sides with deerskin. Sore eyes were treated with a wash consisting of an infusion of a certain root. Various herb remedies, some having real medicinal value, were resorted to in cases of fever, diarrhea, and other common ailments. Unfortunately most of their materia medica has not yet been identified.

RELIGION AND CEREMONIES

RELIGION

The religious ideas of the Nez Percés were marked by simplicity, rationality, and freedom from ceremonial restraint. They seemed to realize the paucity of their religious traditions and from the first eagerly seconded the efforts of the missionaries to instruct them in the Christian faith. Other native religions with which they came in contact must also have profoundly affected their ideas. The ascendant influence of the Plains culture over the Nez Percés during the last century may be explained largely by the superior ceremonial organization of the Plains tribes.

There were no cosmogonic myths. They took the creation of the world for granted, and considered the mountains, valleys, and such geographical features as having always existed. They had no notions of the shape of the earth. Their conception of the world was animistic, according to which there were spirits in trees, in hills, in rivers, and in other natural objects. These spirits had no special names, and were intimately associated with the objects in which they dwelt. When named they took the names of those objects. The spirits were both good and evil. Those residing in trees and streams were benevolent. There were a few trees that rose almost to the dignity of shrines and which were said to hold conversation sometimes with shamans and chiefs, giving them advice on important questions.

One very famous tree on the main trail to the buffalo country received many offerings from hunters who desired good fortune. This tree is mentioned in the mythology of the Cœur d'Alêne Indians as well as by several early travelers. Ross gives a detailed account of this tree, which was situated near Darby, Montana:

"Out of one of the pines I have just mentioned, and about five feet from the ground, is growing up with the tree a ram's head, with the horns still attached to it; and so fixed and imbedded is it in the tree, that it must have grown up with it; almost the whole of one of the horns, and more than half of the head, is buried in the tree; but most of the other horn, and part of the head protrudes out at least a foot. We examined both, and found the tree scarcely two feet in diameter."¹

After relating the Flathead myth, which explained the origin of the horns in the tree, Ross adds.

"All Indians reverence the celebrated tree, which they say by the circumstances related, conferred on them the power of mastering and killing all animals; hundreds, therefore, in passing this way sacrifice something as a tribute to the ram's head."²

There seems to have been a vague sun worship. The sun was regarded as the seat of wisdom and the benefactor of shamans and chiefs. The sun as guardian spirit was familiar in the case of shamans. It was believed sometimes to actually address the shaman. In one case the sun is reported to have said to a famous shaman: "Your knowledge will be exactly like my light." There was, however, no important influence of this sun worship upon art, as the customary sun symbols were seldom, if ever, employed.

Monsters, giants, dwarfs, etc., are mentioned in the mythology but were not regarded as exercising their malevolent influence in the territory occupied by the Nez Percés. Tales of cannibal giants were brought back by buffalo hunters. Such monsters as had formerly lived in the region of the Nez Percés were believed to have been exterminated by Coyote, the culture-hero. Sometimes in the mountains there were little men, not more than two feet high, who answered when any one became lost and called for help. They used to keep their victims traveling round and round for no purpose, but they did no real harm. They were few in number and seldom seen.

Various minor superstitions prevailed. Lewis and Clark

¹ Ross (*ib.*), vol. II, p. 19.

² For a version of this myth, see McDermott, p. 245.

mention the setting fire to trees to bring good weather, and the belief that the moaning of doves presaged the coming of the salmon. A sweat-bath was taken before going on the hunt in order to bring good luck, and sometimes deer horns and hoofs were hung up in trees for the same purpose. There seems to have been no petty ceremonies, however, in the cutting of fish, in the disposal of bones, and similar culinary operations. Ghosts were never called upon for help of any kind. They were feared to some extent, and many people were afraid to go around graveyards after dark. There was no special fear of the ghosts of drowned people or of suicides.

Fetishes were much worn; they were frequently small stones with some freak of shape or color. Stones with holes in them were especially powerful in bringing good luck. Often a boy picked up a curious stone and carried it all his life. Rarely these fetish stones were carved or modified. Shamans often had a fetish which was sometimes carved, as is the curious stone head shown in plate IX, 19. Bear claws, wolf teeth, etc., were also often worn about the neck with the idea of bringing good luck. A spear-head made of gypsum and suspended about the neck is known to have been worn as a charm by one of the older Indians.

All the deeper qualities of the Nez Percé religion seem to have been based on the dream, which was a means of communication between the material world and the spiritual world. It was not, however, the common dream of ordinary slumber. To be sure such dreams, if vivid, might mean much in the way of prophesy or omen, but the greater importance lay in the dream superinduced by reverie, fasting, and vigil. In such ecstatic conditions their songs were composed and often sung. In addition to the subjection of the will by the individual himself, there is hardly a shadow of doubt that hypnotism was exercised by the shamans and others, especially in their most sacred and mystical ceremony, the Guardian Spirit dance.

The "Dreamer Religion," which was built up by the great preacher Smohalla, was a natural outgrowth of the primitive religious ideas of the Indians of the Shahaptian stock. Although

his doctrines contributed to the Ghost-dance religion¹ which spread like a conflagration among the Indians to the south and east, yet the Ghost dance itself was not found at all among the Nez Percés. The factors of Smohalla's doctrine which go back to the primitive faith are as follows: First, the animistic conception of the world especially developed into the Earth Mother aspect. Second, the importance of dreams as a method of holding communication with these forces or "wills" in nature. The entire absence of agriculture before the coming of the whites, the presence of great natural supplies of camas and other roots, gave a practical basis for declaring against the operations of civilization. Smohalla said:

"My young men shall never work. Men who work cannot dream, and wisdom comes in dreams. . . . You ask me to plow the ground. Shall I take a knife and tear my mother's bosom? You ask me to dig for stone. Shall I dig under her skin for her bones? You ask me to cut grass and make hay and sell it and be rich like white men. But how dare I cut off my mother's hair?"

This doctrine shows a primitive philosophical scheme of an impressive character. While it was developed after contact with the whites, its purpose was to maintain the ancient ideas and the ancient form of culture.

Several ceremonies having an important bearing on the religion will be described presently.

CEREMONIES

The dances and public ceremonies were largely intertribal. The Nez Percés, Yakima, Wallawalla, Umatilla, and other friendly tribes usually held dances whenever two or more large bands came together, on which haphazard occasions the dancing was varied with horse-racing and gambling. There was, however, a regular round of intertribal dances, now in the territory of one tribe, now in that of another. Certain localities were the traditional dancing places. Early explorers, especially Ross,² mention the junction of the Snake and Columbia rivers as a

¹See Mooney, pp. 708-715.

²Ross (σ), Thwaites ed., pp. 19-20.

favorite rendezvous where thousands gathered to hold their councils and settle the affairs of peace for the year. Such a meeting he describes as "a vast concourse of mixed tribes" where there were "councils, root-gathering, hunting, horse-racing, gambling, singing, dancing, drumming, and yelling." Another communal camp was in the Yakima valley. In the Nez Percé territory there were often intertribal ceremonies held at the mouth of Asotin creek, at the mouth and at the forks of Lapwai creek, and at Kamiah. The dances were usually held in the open, on level ground such as might be found at the mouth of a small stream. Occasionally they were held under cover. A tent, much like the ordinary long-house but partly open around the bottom, was then set up. This dance tent was about fifteen feet wide by sixty or seventy feet long; it was higher than the ordinary house, to permit the open sides, measuring as much as thirty feet at the ridge-pole. In winter two or three fires were kept up. The spectators were arranged around the outside, the women and children being seated in front and the men squatting or standing behind them.

GUARDIAN SPIRIT DANCE.—Perhaps the most important ceremony was the *Wz' kwetset*, or Guardian Spirit dance. The name means "Dance of the Dream Faith." Although commonly called "Ghost dance" by the Indians of to-day, this dance must not be confused with the modern Ghost-dance religion, which never acquired a hold on the Nez Percés. The dance seems to have been to a slight degree intertribal, but it did not attract such vast multitudes as the Scalp dance, because it was held during the winter, and in many places. The dance was the most essentially religious of any performed by these Indians. It was a concrete expression of their deepest religious ideas.

Both men and women participated. The songs sung were those obtained during the sacred vigil or those inherited. Each man or woman was leader when his or her song was sung. The singer started the song and the dance alone, and the other dancers then took up the words and joined in the singing. There was very decided mimicry of the animal mentioned in the

song, both in contortions of the body and in yelps and cries. There were also some stage devices, such as bladders filled with blood which were broken so as to suggest wounds. Many of the dancers cooperated to make the presentation of the particular animal more striking. Wolves and coyotes would hunt in bands, for instance. The fervor of the dancer who led was often such that he would fall into a stupor and to all appearances be dead. No musical instruments were employed in this dance.

Those persons who had not been successful in obtaining a guardian spirit and a vigil name could not sing an individual song, but they could join in the chorus.

The songs were more or less cryptic, and often only the owner of the song knew what it was about. The animals were not referred to by their everyday names, but by special names. Sometimes there were several such names for a single animal. Following is a song to a wolf, which repeats, in slightly varying ways, "the wolf comes":

Waila yawixne (three times)

Wine nisu

Wax metu wwinche

Awitsnatsaka

Hila yawixne

Waila yawixne

Ēha yawixne

Waila yawixne.

Body painting and some modifications in the dress were employed to heighten the likeness of the dancer to the sacred animal represented. A dancer representing Coyote, for example, painted his forehead red, and his hair white and red in streaks running from his forehead backward. The sides of his body were also painted red, and the back of a coyote hide was worn as a belt. Another dancer, representing a mad coyote, painted his forehead red, his hair white, and his underjaw and his hands red. The red on the jaw meant the blood of the mad coyote, while that on the hands was supposed to represent the blood of game killed. In most cases, however, only the forehead of the dancers was painted, and this usually in red.

The purposes of this dance were many. Some songs, sung by shamans, were supposed to bring warm weather; other songs were supposed to make game more plentiful or the hunts more successful. Animal calls, such as were used in this dance, were employed in the hunt to entice the animals to come nearer. Many hunters sang their sacred song when they were on the hunt. In fact the dance was supposed to bring the people and the animals and other natural objects into close friendly relations.

A dance called *Isxep'it* seems to have been somewhat like the Guardian Spirit dance, but was more restricted. It was danced in summer and winter by both men and women. Apparently this dance was owned by a company of persons, and admission was by inheritance or by obtaining a certain dream faith called *Isxep*. This *Isxep* was thought to have been a man, and he may have originated the dance. All those who belonged are said to have been much opposed to any form of disorder or quarreling, but there is no evidence that they had any restraining influence over others or that they were a police force in any sense of the word. The dances were not secret. The songs were of the same cryptic mystical nature as those in the Guardian Spirit dance, and were obtained by dreaming. Each dancer had an individual song. From one to three dancers danced with the owner of the song and joined in the singing. This ceremony terminated in a great feast.

WAR DANCE.—In the *Paxam*, or War dance, only the men performed. This ceremony was often an intertribal affair and was held before going to war. It was performed also just before the buffalo hunters left for the plains, usually in the camas grounds of Weippe prairie or near Moscow. Little could be learned about the ancient War dance of the Nez Percés. In the early part of the eighteenth century it was abandoned and the War dance of the Crow Indians substituted. The warriors of the Nez Percé tribe crawled up to the Crow camps under cover of darkness and learned the songs of their War dance. The first War dance obtained from the Crows was later replaced by another. In this later dance, syllables, not words, were used.

In the ancient War dance there were two lines of dancers and

a leader. Time was kept by rubbing a round stick up and down over a notched stick sewed to a stiff piece of hide. The songs were individual, as were those of the Scalp dance and the Guardian Spirit dance, and apparently were much like them. Two of the songs recorded were those sung by some member of the Bear Faith. It is evident that the warriors sang songs according to the nature of their guardian spirits.

An example of one of these Bear songs of the War dance, which has no meaning, is as follows:

A-we-ya-ha-a wel-e-ye-hi.

These syllables were repeated seven times three, or twenty-one times.

A portion of the ancient War dance which was not discarded was the Farewell song of the warriors before every lodge on the night before going on the war-path. The men went from lodge to lodge and paused before each, singing a song and beating time on a buffalo-hide blanket. There were many different songs employed. The women followed behind and joined in the chorus.

Before the War dance there was often a display of trophies and the narration of the history of their capture. There seems to have been no regular ceremony of the "coups," however.

SCALP DANCE.—The *Jwel'wetset* dance was the most important intertribal ceremony among the tribes of the plains of the Columbia. Its English names, the Meeting dance and the Scalp dance, suggest both its intertribal and its vengeful nature. In reality this dance was a triumphal celebration over trophies of war taken from the common enemies of the several associated tribes. Scalps of Blackfeet and Shoshoni Indians were especially desired, and at all times; those of the interior Salish only during the intermittent wars. Efforts were made to get a new supply of war prisoners, scalps, and other trophies for each dance. Hence these dances were usually preceded by war expeditions of greater or lesser degree; some under the leadership of renowned war chiefs with a backing of several hundred warriors, others under the initiative of a young brave eager for personal glory and able to command only a handful of comrades.

Scalp dances were held about four times a year at recognized

rendezvous, now in the territory of one tribe, now in that of another. The most important dance places were at the forks of Lapwai creek, at the junction of the Columbia and Snake rivers, and at a spot on the north bank of the Columbia just above the Dalles.

This *Iwell'wetset*, or Scalp dance, was performed to the accompaniment of songs with words that referred usually to female captives who were to become the wives of the captors, or to the taking of scalps. When there was a pause in the singing some one would interpolate a prose speech, keeping time to the dance. The step seems to have been a simple jumping up and down.

In one of the myths a Scalp-dance song is given which has no special words but only syllables. The song runs as follows :

Hi-yē-ye-a-hē, hi-yē-ye-a-hē.

In this myth Coyote has lost his eyes and the people dance over them. Coyote, disguised as an old woman, is given his own eyes to dance with, and escapes through the crowd.

The general ceremony of the Scalp dance occupied five or six days, the dancing proper beginning at about four o'clock and continuing till sunset. The rest of the time was devoted to the usual feasting, gambling, and horse-racing. The dancing was held in the open, and both men and women took part. The trophies were usually fastened to poles in order that they could be raised in plain sight of the assembled crowd. If any prisoners of war had recently been taken, they were forced to take part in the dance, keep time to the music, and echo the shouts of their captors. Although cruelly tortured during the progress of the dance, these prisoners at all other times were kindly treated and properly cared for. Their wounds were washed after each dance. When the five or six days of the ceremony had elapsed, the prisoners became each the personal property of his captor, and henceforth were well treated. It is important to note that prisoners were never killed at the end of the torturing.

An intertribal Scalp dance of the early years of the last century, which took place at the junction of the Snake and Columbia rivers, is thus graphically described by Alexander Ross :¹

¹ Ross (6), vol. 1, pp. 310-311.

"For this dance, two rows of men, a hundred yards long or more, arrange themselves face to face, and about fifteen feet apart. Inside these, are likewise two rows of women, facing each other, leaving a space of about five feet broad in the middle for the slaves; who arranged in a line, occupy the center in a row by themselves. Here the unfortunate victims, male and female, are stationed with long poles in their hands and naked above the waist, while on the ends of these poles are exhibited the scalps of their murdered relations. The dancing and chorus then commence; the whole assemblage keeping time to the beat of a loud and discordant sort of a drum. The parties all move sideways to the right and left alternately, according to the Indian fashion; the slaves, at the same time, moving and keeping time with the others. Every now and then a general halt takes place, when the air resounds with loud shouts of joy, and yell upon yell proclaim afar their triumph.

"All this is but a prelude to the scenes that follow. The women, placed in the order we have stated, on each side of the slaves, and armed with instruments of torture, continue jeering them with the most distorted grimaces, cutting them with knives, piercing them with awls, pulling them by the hair, and thumping them with fist, stick, or stone, in every possible way that can torment without killing them. . . . The men, however, take no part in these cruelties, but are mere silent spectators; they never interfere, nor does one of them during the dancing menace or touch a slave; all the barbarities are perpetrated by the women."

A night-time variety of the Scalp dance was invented by a man named Tukliks and was called *Tsu'huikt*. He was the only dancer, but others formed a circle about him and served as chorus. One of the songs was ---

Hiyōwinime hiotsasamka wak twix'neme wak ewi'neme axawiyai,
which means: "The scalps of people came to my mountains long ago."

Several other dances have been introduced during the last century. The "Squaw" dance of the Crow Indians, called by the Nez Percés *Kopipt*, has been performed during only about twenty years. The Sun dance and the Ghost dance were never in vogue among the Nez Percés; nor were there any torture dances except the *Isx'pit*, already described.

MYTHOLOGY

Only a few myths of the Nez Percés have been published. These, however, are enough to give a general idea of the mythology and to furnish some evidence on the question of its affiliations with the mythologies of other tribes. Unfortunately little has been published concerning the myths of the Shoshoni, the interior Salish, and the tribes of eastern Oregon and Washington, where affiliations would be most likely to occur. Consequently no definite conclusions can be attempted.

Coyote is by far the most important figure in the myths, for he is principal in fully half of them. He plays the unequal rôle of culture-hero, trickster, and dupe. His cunning, his magical powers, and his supernatural helpers enable him now to deliver the people from monsters, now to deceive or play even with other animals, but they do not prevent him from occasionally overreaching himself, and falling a victim to his own or to others' wiles.

In the mythology there is no real creation of the world. The world is regarded as having always existed. Coyote is chief of the animals, to whom he announces that the tribes of men are coming up from the underworld, and what he says becomes true. The general scheme of an age of animals preceding the age of human beings prevails here, as among most American Indian mythologies, but is not strictly observed.

One of the deeds of Coyote as culture-hero is the killing of the Kamiah monster, *Iltswevitsix*. This favorite myth shows close similarities with one of the Crow Indian myths, but, if borrowed, is at least given a "local habitation and a name." This monster sucked everything into himself with his breath. Coyote comes across from the Umatilla country and engages in a test of strength with the monster, after concealing himself under a grass bonnet and tying himself down with "Coyote rope" (*Clematis ligusticifolia* Nutt.). He nevertheless is drawn into the monster whom he kills by cutting off the heart. The parts of this monster are still identified with certain peculiar

¹ See Grinnell, McBeth, Packard, and Spinden.

topographical features. Another culture-hero myth tells how Coyote broke the dam across the Columbia at the Great Falls in order that salmon could ascend. In several of its details the myth is identical with the salmon myth of the Thompson River Indians as given by Teit. Coyote also had a contest of endurance with Winter. He built a large house, supplied himself with plenty of food, and then challenged Winter. Winter could hold out only for four or five months. Coyote also killed Log-worm, Grizzly Bear, and others who waylaid and killed travelers by special devices; he schemed to have animals who were winning too many races, where life was the stake, defeated by strategem.

No animal other than Coyote appears as culture-hero except possibly Beaver, who, in the Fire myth given by Packard,¹ plays the principal part in stealing the fire. This myth shows the common device of the relay of animals to escape the wrath of the Pines and the Cedars who had previously owned all the fire. Fox appears in many myths as the close companion of Coyote. He has to bear the brunt of Coyote's jests, and usually gets the worst of trade and division of spoils. Occasionally the cupidity of Coyote overreaches itself and Fox comes out ahead as the result of an apparently bad bargain. When Coyote is killed for interfering, he is resuscitated by Fox who merely straddles the body. A similar device is common in the myths of the Cœur d'Alènes. Coyote is helped in his predicaments by supernatural creatures of his own making. He also has the power of changing himself into some other form.

As a mere trickster Coyote wins wives by disguising himself. He steals food for himself and Fox. When Coyote has fallen victim to the wiles of some other animal he frequently wins out and turns the tables upon the other one.

As a dupe he frequently tries to imitate the tricks of others. In the "eye juggling" trick he loses his eyes but finally regains them. He visits his sons-in-law and they obtain food in a variety of magical ways which Coyote tries in vain to imitate, nearly killing himself in the process.

¹ Packard, pp. 327-329.

Other animal tales, in which Coyote does not appear, are of the same trivial sort as these trickster myths.

Tales in which human beings appear are not very common. One Boy-Hero myth has been obtained which shows a pursuit with obstacles thrown in front of the pursuer, which become mountain ranges, etc. One myth tells how a boy ran away with one of Cloud's wives and then frightened off his pursuer with an arm dressed up into a warclub.

Although many incidents common to the mythology of the Plains area occur also in the mythology of the Nez Percés, there is strong probability of their recent introduction, whereas in some of its more fundamental features the mythology shows strong similarities with that of the Pacific coast. For instance, five is in all cases the sacred number, and the youngest of the five is always able to recognize Coyote under any disguise. It seems fairly clear that there is no type of mythology peculiar to the Great Basin area, although the point of origin is much in doubt.

CONCLUSION

From the foregoing account, incomplete as it is, one important fact stands out clearly. The culture of the Basin area, as shown by one of its representative tribes, was purely a transitional culture. Its elements were drawn in nearly equal proportion from the Plains and from the Pacific coast. Only a small residuum of autochthonous ideas are found when the borrowed ones are excluded. Moreover this division into the matter of the east and the matter of the west was a balanced distribution in almost all phases of the culture. The material culture, the decorative art, the social organization, and the mythology all show a complex of Plains and Pacific Coast types.

Thus, in the dress, the deerskin garments of both men and women were of the Plains type. The basket hats of the women came from the Pacific coast. Among the objects of the material culture, the war regalia and the parfleche and medicine bags came from the Plains, while the stone pestles, the technical processes of basketry, and the fishing gear were derived from the coast tribes. In the matter of houses, the round lodge suggests

the common tipi of the nomadic Sioux, and the long-house the great plank village-houses of the tribes about the mouth of Columbia river. Among the Nez Percés, owing to the demands of environment, the houses of both these types were made usually of mats instead of skins and planks. The social structure of the tribe was marked by the simple geographical or village type, without totemic clans, and with a village chief who divided with the shaman whatever autocratic power there was. This type prevailed along the Pacific coast from California to the Straits of Juan de Fuca. Overlying this village-community form of social organization among the Nez Percés was the tremendous importance of war and the nationalizing office of the war-chief. The necessity of united defence against invading war-parties from the Plains probably brought about the tribal integrity of the sixty or more independent villages. Similarly, the motives used in decorative art may be traced now to the Plains, now to the coast, but in each case apparently suffering a loss in meaning and symbolism. The incidents in mythology show affiliations both with the Plains and Coast types and fail to show a large amount of purely native ideas.

That the Nez Percés were quick at adopting new ideas is shown by their present progress in the arts of civilization. It is a famous story how they even sent a delegation of chiefs to hasten the coming of the wonderful Book of the white man. Their admission that they deliberately abandoned their ancient War dance to take up that of the Crows, after they had surreptitiously learned the music and step of the latter at the risk of their lives, strongly emphasizes the receptiveness of their character.

As to the nature of the native culture before the acquisition of horses, it is necessary to fall back on mere conjecture. It would seem that this early culture must have been more in accord with that of northern California and southern Oregon than with the Plains. The Rocky mountains must have formed a pretty effective barrier against extended expeditions. The entire absence of migration myths seems to argue against the Nez Percés ever having been a Plains people.

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HARVARD UNIVERSITY,
CAMBRIDGE, MASSACHUSETTS.

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Nez Perce Tribe

Attorney Name & Address:

K. Heidi Gudgell
Dave Cummings
Nez Perce Tribal Executive Committee
Office of Legal Counsel
P.O. Box 305
Lapwai, ID 83540-0305
(208) 843-7355

Steven C. Moore
Don B. Miller
Native American Rights Fund
1506 Broadway
Boulder, CO 80302-6926
(303) 440-9801

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF THE
STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re SRBA)
)
)
)
Case No. 39576)

Subcase Nos. 03-10022 (Consolidated)
(Nez Perce Tribe Instream Flow Claims)

AFFIDAVIT OF DENNIS C. COLSON

STATE OF IDAHO)
)ss.
County of Latah)

DENNIS C. COLSON, BEING first duly sworn upon oath hereby
states as follows:

1. My name is Dennis C. Colson, and I have prepared the
report attached hereto titled THE LEGAL HISTORY OF NEZ PERCE
TREATY FISHING. See Exhibit 1.

2. I am presently employed as a Professor of Law at the
University Of Idaho College of Law. I was appointed Associate
Professor in 1975 and promoted to Professor in 1978. Before the

appointment at the University of Idaho I was awarded the Juris Doctorate (*summa cum laude*) from the University of Denver College of Law, admitted to the bar and practiced in California and Colorado and a member of the University of Toledo School of Law Faculty. See Exhibit 2.

3. Since arriving at the University of Idaho my teaching and scholarship have concentrated upon the legal history of the region. Oliver Wendell Holmes, Jr. noted in *The Common Law* that "The life of the law has not been logic: it has been experience. . . . The law embodies the story of a nation's development through many centuries, and it cannot be dealt with as if it contained only the axioms and corollaries of a book of mathematics." My work has taken a cue from Holmes' wisdom and emphasizes the experience or history of the law. This has meant researching and interpreting legal subjects using materials and methods that are often ignored in the discussion about the logic of the law. The legal history of the Nez Perce Tribe and the Nez Perce Treaties are subjects that I have worked on frequently and extensively for over twenty years. See Exhibit 2.

4. I am presently completing a book titled *The Nez Perce Treaties* which is to be published by Confluence Press of Lewis-Clark State College. "A Secure Right to Fish and Hunt" is one section of the manuscript. Steven Moore from The Native American Rights Fund and Heidi Gudgell from the Office of Legal Counsel for the Nez Perce Tribal Executive Committee requested me to prepare a report on the legal history of Nez Perce treaty

fishing, using work done to date on the manuscript and doing any additional research that was necessary. Exhibit 1 is a draft of that report.

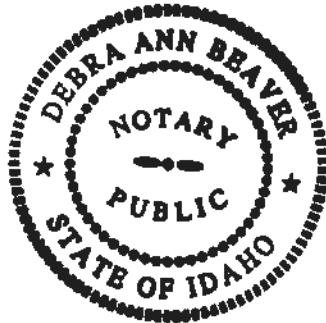
5. I have testified as an expert on the legal history of the Nez Perce Treaties on one prior instance, at the request of the United States in *United States v. Scott*, Case No. CR98-01-N-EJL, at a hearing on June 11, 1998.

Dennis C. Colson
Dennis C. Colson

August 9, 1998
August 9, 1998

SUBSCRIBED AND SWORN TO before me, the undersigned Notary Public for the State of Idaho, the day and year last above written.

SEAL



Debra Ann Beaver
Notary Public, State of Idaho
COMMISSION EXPIRES 7/15/2003

THE LEGAL HISTORY
OF
NEZ PERCE TREATY FISHING

A REPORT PREPARED BY
DENNIS C. COLSON

INTERIM DRAFT
SEPTEMBER 8, 1998

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§ 1. THE TREATY CLAUSES

ARTICLE III, 1855 WALLA WALLA TREATY

12 Stat. 957

¶ 1. And provided that, if necessary for the public convenience, roads may be run through the said reservation, and, on the other hand, the right of way, with free access from the same to the nearest public highway, is secured to them, as also the right, in common with citizens of the United States, to travel upon all public highways. The use of the Clear Water and other streams flowing through the reservation is also secured to citizens of the United States for rafting purposes, and as public highways.

¶ 2. *The exclusive right of taking fish in all streams where running through or bordering said reservation is further secured to said Indians; as also the right of taking fish at all usual and accustomed places in common with citizens of the Territory; and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed lands.*

ARTICLE VIII, 1863 LAPWAI TREATY

14 Stat. 647

~~¶ 3.~~ It is also understood that the aforesaid tribe do hereby renew their acknowledgments of dependence upon the Government of the United States, their promises of friendship, and other pledges, as set forth in the eighth article of the treaty of June 11, 1855; and further, that all the provisions of said treaty which are not abrogated or specifically changed by any article herein contained, shall remain the same to all intents and purposes as formerly, - the same obligations resting upon the United States, the same privileges continued to the Indian outside of the reservation, and the same rights secured to citizens of the U.S. as to right of way upon the streams and over the roads which may run through said reservation, as are therein set forth.

ARTICLE XI, 1893 AGREEMENT

28 Stat. 327

¶ 4. *The existing provisions of all former treaties with said Nez Perce Indian not inconsistent with the provisions of this agreement are hereby continued in full force and effect.*

§ 2. SUMMARY OF REPORT

¶ 5. Article III of the 1855 Walla Walla Treaty is not a giving or granting of fishing rights, it is a securing or guaranteeing of the Nez Perce aboriginal title. In the years between 1787 and 1855 Indian title to their homelands had become firmly recognized in the jurisprudence of the United States.¹ The most well-known statement of this recognition was written by Chief Justice John Marshall in *Johnson v. McIntosh* (1823):

[The original inhabitants] were admitted to be the rightful occupants of the soil, with a legal as well as just claim to retain possession of it, and to use it according to their own discretion . . .

This right of occupancy included the right to fish.

¶ 6. From the earliest days of the Union treaties were used as the principal legal instrument by which the United States could purchase or acquire from Indian tribes their right to possess and use their lands. Pursuant to the United States Constitution these treaties were negotiated by the President with the advice and consent of the Senate, provided that two-thirds of the senators concurred. These treaties were the supreme law of the land, and binding upon the judges of every state notwithstanding anything in the Constitution or laws of any state to the contrary.

¶ 7. Congress first exercised jurisdiction over the Nez Perce homelands when it created Oregon Territory in 1848. At the same time it created Oregon Territory, Congress recognized the legal and just claim of the Nez Perce to occupy their lands. This was accomplished by extending the Northwest Ordinance to Oregon Territory and by expressly providing that

[N]othing in this act contained shall be construed to impair the rights of person or property now pertaining to the Indians in said Territory, so long as such rights shall remain unextinguished by treaty between the United States and such Indians.

The Washington Territory Organic Act passed in 1853 and other statutes also recognized Nez Perce title.

¶ 8. The first treaties in Oregon Territory were negotiated in 1851 and 1852.² The United States proposed to purchase the property of those tribes in western Oregon (especially the

¹ See NEZ PERCE TITLE below at pp. 4-9.

² See THE OREGON TREATIES below at pp. 9-14.

Willamette Valley) and to remove the tribes to lands east of the Cascades. Those sent to negotiate the treaties discovered that the tribes would not remove from their homelands, and would not sign treaties unless their fisheries were guaranteed to them. Soon after creation of Washington Territory in 1853, Governor Isaac I. Stevens proposed to purchase by treaty lands from all the tribes in the Territory. Stevens and the Commissioners appointed to negotiate drafted a programme of treaty to be used in the various negotiations.³ This model or template included a provision to protect tribal fisheries.

¶ 9. Governor Stevens and Governor Joel Palmer of Oregon Territory called for a council with many tribes to be held in the Walla Walla Valley in the spring of 1855.⁴ Stevens proposed at the council that reservations be created in Nez Perce and Yakima country, and that the Cayuse, Walla Walla, Umatilla and other tribes remove from their homelands to those reservations. The Yakima had little enthusiasm for the proposal and the Cayuse and other tribes opposed it. Because the Nez Perce were the largest and most powerful tribe present, the outcome of the Council depended upon whether they would treaty with the United States or ally with their traditional allies. After Stevens proposed a third reservation for the Cayuse, Walla Walla and Umatilla and the Nez Perce declared in favor of the treaty, the various tribes agreed.

¶ 10. Fishing was one of the principal ways in which the Nez Perce used their lands and the waters that flowed through them.⁵ Fish were an important source of food for the Nez Perce, and in addition had important religious, cultural and social significance. Just as with the other tribes in the Territory, Stevens had concluded that there would be no agreement without protection of the fisheries. As a result Stevens included the fishing clause in the treaty from the outset. Stevens and Palmer argued often during the Council that because protection for their fisheries was secured the tribes should be willing to cede lands.

¶ 11. Even though the Walla Walla Treaty was not ratified until 1859, the Nez Perce were faithful from the outset to their promise to remain friendly to the United States. When fighting between the Yakima and their allies and the United States flared in 1856, the Nez Perce provided essential protection and support to the United States. However, when gold was discovered on the Reservation in 1860 the United States reneged on its promise to protect the exclusive use of the Nez Perce. Instead it proposed to amend the Walla Walla Treaty by purchasing ninety percent of

³ See THE STEVENS PROGRAMME below at pp. 14-23.

⁴ See WALLA WALLA COUNCIL below at pp. 23-39.

⁵ See THE FISHING CLAUSE below at pp. 39-44.

the Reservation.⁶ The Nez Perce refused to sell but were told if they persisted they would be declared enemies of the United States. In the face of this threat most of the Nez Perce leaders who lived within the reduced Reservation being proposed signed. Most of those who lived outside refused to sign, but were driven onto the Reservation anyway by the Nez Perce War of 1877. Even though the coercive policy of the United States prevented detailed bargaining with respect to the many provisions of the 1855 Treaty, the 1863 Treaty stated that all earlier provisions "not abrogated or specifically changed . . . shall remain the same to all intents and purposes as formerly."

¶ 12. Pursuant to the 1855 Treaty, the 1863 Treaty and the General Allotment Act, the Nez Perce Reservation was allotted between 1889 and 1893. A Commission was sent to purchase from the Nez Perce the unallotted lands within the Reservation.⁷ Many tribal members were forced to sign the agreement in order to keep their homes. Many signed because they thought that if they refused the United States would open the Reservation and pay nothing. While reluctantly signing the Agreement, the Nez Perce insisted that the rights guaranteed by former treaties be retained.⁸ As a result of this demand, Article 11 was added:

The existing provisions of all former treaties with said Nez Perce Indians not inconsistent with the provisions of this agreement are hereby continued in full force and effect.

When the Nez Perce proposed a specific clause to protect their fishing and hunting, the United States Commissioners stated that pursuant to Article 11,

[T]he right to hunt and fish will be just the same after this agreement is signed and ratified by Congress as it is now.

§ 3. NEZ PERCE TITLE

¶ 13. As viewed by the representatives of the United States and the Nez Perce Tribe who negotiated it, the 1855 Nez Perce Treaty was first and foremost a deed or settlement of property interests between the two. The ten substantive articles of the Treaty reflect this fact.⁹ Eight of the ten are devoted to property matters: I is a cession by the Nez Perce; II is a reservation from the cession; III secures easements to the United States and fishing and other rights to the Nez Perce; VI provides

⁶ See THE 1863 TREATY below at pp. 44-59.

⁷ See COUNCILS below at pp. 59-64.

⁸ See SAVING THE FISHING CLAUSE below at pp. 64-66.

⁹ The last Article, 11, establishes the effective date of the Treaty.

for individual allotments; X secures property to William Craig; and IV, V and VII govern payments to the Nez Perce to compensate for their cessions. Only two articles relate to other subjects. Article VIII establishes friendly relations between the Nez Perce and the United States and other tribes; Article IX excludes from the Reservation ardent spirits.

¶ 14. The Treaty was written in this manner because by 1855 Nez Perce title to their aboriginal lands was recognized under the discovery principle which was deeply embedded in the jurisprudence of the United States.¹⁰ From 1787 forward Congress¹¹ and the President pursued a course of recognizing Indian title and acquiring it by treaty. Chief Justice John Marshall stated the discovery principle in *Johnson v. McIntosh* (1824),¹² the first Indian law case decided by the United States Supreme Court. Marshall wrote:

[T]he rights of the original inhabitants were, in no instance, entirely disregarded; but were necessarily, to a considerable extent, impaired. They were admitted to be the rightful occupants of the soil, with a legal as well as just claim to retain possession of it, and to use it according to their own discretion; but their rights to complete sovereignty, as independent nations, were necessarily diminished, and their power to dispose of the soil at their own will, to whomsoever they pleased, was denied by the original fundamental principle that discovery gave exclusive title to those who made it.

While the different nations of Europe respected the right of the natives, as occupants, they asserted the ultimate dominion to be in themselves; and claimed and exercised, as a consequence of this ultimate dominion, a power to grant the soil, while yet in possession of the natives. These grants have been understood by all to convey a title to the grantees, subject only to the Indian right of occupancy.¹³

¶ 15. Chief Justice Marshall relied upon the same principle

¹⁰ The landmark essay on Indian title is Felix S. Cohen, *Original Indian Title*, 32 Minn L Rev 28 (1947).

¹¹ Congress established national policy in its first great act, the Northwest Ordinance of July 13, 1787:

Art. 3. . . . The utmost good faith shall always be observed towards the Indians; their land and property shall never be taken from them without their consent; and in their property, rights and liberty, they never shall be invaded or disturbed, unless in just and lawful wars authorized by Congress; but laws founded in justice and humanity shall from time to time be made, for preventing wrongs being done to them, and for preserving peace and friendship with them.

¹² 21 U.S. (Wheat.) 542.

¹³ *Id.* at 574.

1832 (corrected in 7/15)

again in *Worcester v. Georgia* (1932).¹⁴ In the course of holding that the state of Georgia had to respect Cherokee title as secured by treaties with the United States, Marshall wrote:

This principle, acknowledged by all Europeans, because it was the interest of all to acknowledge it, gave to the nation making the discovery, as its inevitable consequence, the sole right of acquiring the soil and of making settlements on it. It was an exclusive principle which shut out the right of competition among those [Europeans] who had agreed to it; not one which could annul the previous rights of those who had not agreed to it. It regulated the right given by discovery among the European discoverers; but could not affect the rights of those already in possession, either as aboriginal occupants, or as occupants by virtue of a discovery made before the memory of man. It gave the exclusive right to purchase, but did not found that right on a denial of the right of the possessor to sell.¹⁵

¶ 16. The Supreme Court wrote this summary of the principles recognizing Indian title in *Mitchel v. United States* (1835)¹⁶:

One uniform rule seems to have prevailed from their first settlement, as appears by their laws; that friendly Indians were protected in the possession of the lands they occupied, and were considered as owning them by a perpetual right of possession in the tribe or nation inhabiting them as their common property from generation to generation, not as the right of the individuals located on particular spots.

Subject to this right of possession, the ultimate fee was in the crown and its grantees, which could be granted by the crown or colonial legislatures while the lands remained in possession of the Indians, though possession could not be taken without their consent.

Individuals could not purchase Indian lands without permission or license from the crown, colonial governors, or according to the rules prescribed by colonial laws; but such purchases were valid with such license, or in conformity with the local laws; and by this union of the perpetual right of occupancy with the ultimate fee, which passed from the crown by the license, the title of the purchaser became complete.

Indian possession or occupation was considered with

¹⁴ 31 U.S. (6 Pet.) 515.

¹⁵ *Id.* at 544.

¹⁶ 34 U.S. (9 Pet.) 711.

reference to their habits and modes of life; their hunting grounds were as much in their actual possession as the cleared fields of the whites; and their rights to its exclusive enjoyment in their own way and for their own purposes were as much respected, until they abandoned them, made a cession to the government, or an authorized sale to individuals. In either case their right became extinct, the lands could be granted disencumbered of the right of occupancy, or enjoyed in full domain by the purchasers from the Indians. Such was the tenure of Indian lands by the laws . . .¹⁷

The question of Indian title was before the Supreme Court again on the eve of the 1855 Nez Perce Treaty in *Choteau v. Molony* (1855).¹⁸

¶ 17. Pursuant to the principle of discovery, the United States acquired legal title to Nez Perce Country in 1792 when Captain Robert Gray "discovered" the mouth of the Columbia River. Great Britain immediately tried to establish a claim of discovery, and the contest for legal title began. Both nations tried to secure their claim by exploration and occupation with the help of explorers and fur trading. The region was governed jointly pursuant to treaty from 1824-1846. A provisional government operated for several years until Congress created Oregon Territory.¹⁹

¶ 18. The recognition of Indian (Nez Perce) title was written into the Oregon Territorial Organic Act passed August 14, 1848, in the second clause of the first section:

Provided, that nothing in this act contained shall be construed to impair the rights of person or property now pertaining to the Indians in said Territory, so long as such rights shall remain unextinguished by treaty between the United States and such Indians, or to affect the authority of the government of the United States to make any regulation respecting such Indians, their lands, property, or other rights, by treaty, law, or otherwise, which it would have been competent to the government to make if this act had never passed . . .²⁰

Section 14 of the Act extended the 1787 Northwest Ordinance to the Territory. While all laws of the provisional government which were not inconsistent were made valid and operative, all laws respecting title to land were voided:

¹⁷ *Id.* at 746.

¹⁸ 57 U.S. (16 How.) 203.

¹⁹ Gordon B. Dodds, *Oregon* (Norton & Co., 1977) pp. 91-98.

²⁰ 9 Stat. 323.

. . . but all laws heretofore passed in said Territory making grants of land, or otherwise affecting or incumbering the title to lands, shall be, and are hereby declared to be, null and void . . .²¹

¶ 19. In addition to recognizing and protecting Indian title, the Oregon Territorial Act protected salmon in Oregon streams. Section 12 of the Act stated:

*And be it further enacted, That the rivers and streams of water in said Territory of Oregon in which salmon are found, or to which they resort, shall not be obstructed by dams or otherwise, unless such dams or obstructions are so constructed as to allow salmon to pass freely up and down such rivers and streams.*²²

¶ 20. Two years later, on September 27, 1850, Congress passed the Oregon Donation Act²³ which granted to each white settler (American half-breed Indians included) 320 acres if that person had "resided upon and cultivated the same for four consecutive years" prior to December 1, 1850. If married the settler was to receive 640 acres. According to the principles of *Mitchel v. United States*,²⁴ these grants could not become effective until Indian title was extinguished.

¶ 21. On March 2, 1853 Congress passed the Washington Territory Organic Act. Just as the Oregon Act had done, the Washington Act protected Indian title and the power of the federal government to extinguish it:

*Provided, That nothing in this act contained shall be construed to affect the authority of the government of the United States to make any regulation respecting the Indians of said Territory, their lands, property, or other rights, by treaty, law, or otherwise, which it would have been competent to the government to make if this act had never been passed.*²⁵

Section 6 denied to the territorial legislature any power to pass a law "interfering with the primary disposal of the soil."²⁶ Section 12 extended the federal and Oregon territorial laws to Washington Territory.

¶ 22. By the time Governors Stevens and Palmer wrote the

²¹ *Id.* at 329.

²² *Id.* at 328.

²³ 9 Stat. 496.

²⁴ 34 U.S. (9 Pet.) 711 (1835).

²⁵ 10 Stat. 173.

²⁶ *Id.* at 175.

first draft of the 1855 Nez Perce Treaty, the United States had 65 years of experience dealing with Indian tribes. Recognition of Indian title was a fundamental principle in the executive, legislative and judicial branches of government. The following statements reflect this recognition. Palmer wrote to Commissioner Manypenny on October 8, 1853:

Experience moreover has taught us that settlement of a country, prior to the extinction of the native title to the soil is, in most cases attended with serious difficulties .

. . .²⁷

Stevens wrote to Commissioner Manypenny on December 29, 1853:

The Indian title to lands east of the Cascade mountains should at once be extinguished . . . two measures I regard as of paramount importance -- the appointment of a surveyor-general . . . and the extinguishment of the Indian title.²⁸

Commissioner Manypenny explained the need for the treaties to Congress:

With many of the tribes in Oregon and Washington Territories, it appears to be absolutely necessary to speedily conclude treaties for the extinguishment of their claim to the lands now or recently occupied by them.²⁹

Acting Commissioner of Indian Affairs Charles E. Mix informed Isaac Stevens on August 30, 1854, that he had been delegated "to conduct the treaties of amity and acquisition."³⁰

§ 4. THE ORIGIN OF THE 1855 FISHING CLAUSE

THE OREGON TREATIES

¶ 23. The origins of the fishing and hunting clause of the 1855 Nez Perce Treaty can be traced back to a series of 19 treaties negotiated in western Oregon in 1851. John Lane, the first Oregon Territorial Governor, and Samuel Thurston, the first Oregon Territorial delegate to Congress, recommended that these treaties be negotiated for the purpose of removing those tribes west of the Cascades from their homelands to the eastern portion of the Territory. John Gaines, Chairman of the Treaty

²⁷ Joel Palmer to George W. Manypenny, October 8, 1853.

²⁸ Isaac I. Stevens to George W. Manypenny, December 29, 1853.

²⁹ Communications from the Secretary of the Interior and the Commissioner of Indian Affairs to the Chairman of the Committee on Indian Affairs of the Senate, February 21, 1854.

³⁰ Charles E. Mix to Isaac I. Stevens, August 30, 1854.

Commission, and Anson Dart, the territorial Superintendent of Indian Affairs, attempted to negotiate the treaties but found that the tribes refused to cede any of their title unless they were able to remain in their homeland with protection for their fishing and hunting. Even though the Gaines-Dart treaties were never ratified by the United States, their negotiation created the framework and conditions for the Nez Perce Treaty negotiated at Walla Walla in 1855.

¶ 24. When the Oregon Territorial government was organized in March of 1849, John Lane was appointed Governor and ex-officio Superintendent of Indian Affairs. During his brief term Lane reported the complaints of those tribes living in the Willamette Valley, stating that in his view the tribes should be removed from the valley.³¹ In July Lane recommended that the legislative assembly in Oregon memorialize Congress to removed the tribes from the Willamette Valley.³² The assembly promptly passed the memorial.³³

¶ 25. In 1849 Oregon Territory also elected Samuel R. Thurston to be the first territorial delegate to Congress.³⁴ Thurston was anxious to extinguish Indian title in the Territory. On February 1, 1850, Congress approved Thurston's resolution calling for the "extinguishment of the Indian title to all that part of Oregon Territory lying west of the summit of the Cascade Mountains."³⁵ These resolutions became statutes on June 5 when Congress authorized the appointment of treaty commissioners and made other changes in Oregon Indian matters.³⁶

¶ 26. Anson Dart was appointed superintendent of Indian Affairs for Oregon and issued instructions by Commissioner of Indian Affairs Luke Lea.³⁷ John P. Gaines (the Territorial Governor), Alonso A. Skinner and Beverly S. Allen were appointed as Treaty Commissioners on October 25.³⁸ The Commissioners were instructed to extinguish Indian title west of the Cascades at a price of less than ten cents per acre and to remove the tribes east of the Cascades if possible. Treaties with the eastern tribes were authorized if necessary for the removal.

³¹ John Lane to the Secretary of War, April 9, 1849.

³² Message of Governor Lane, July 17, 1849.

³³ *Memorial of the legislature of Oregon praying for the extinguishment of the Indian title* . . . July 20, 1849.

³⁴ For a description of the first round of Oregon Territory treaties see Alan W. Hoopes, *INDIAN AFFAIRS AND THEIR ADMINISTRATION (with reference to the Far West) 1849-1860 (University of Pennsylvania Press 1932) pp. 75-86 and C.F. Coan, "The First Stage of Federal Indian Policy in the Pacific Northwest, 1849-1852," Oregon Historical Society Quarterly, Vol. XXII, pp. 46-65.*

³⁵ *Congressional Globe*, 31 Cong. 1 sess., 272.

³⁶ 9 Stat. 437.

³⁷ 33 Cong. 2 sess. vol. 1, (ser. 595), *H. Ex. Doc. 1*, 148-151.

³⁸ Instructions to the commissioners is printed in full at 31 Cong. 2 sess. vol. 1, (ser. 595), *H. Ex. Doc. 1*, 145-147.

¶ 27. The Commissioners began their work in February, 1851, writing to Commissioner Lea on February 8 stating that removal of the tribes was neither possible nor wise. The Commissioners wrote:

that it will be impossible to remove the Indians of Willamette and lower Columbia valleys, without a resort to force, nor do we think it very desirable to do so. As before stated they are friendly and well disposed, they live almost entirely by fishing, and the wages they receive from the whites for their labor. They possess little or no skill as hunters or warriors. And to remove them from their fisheries and means of procuring labor from the whites would in our opinion insure their annihilation in a short time wither from want or by the hands of their more warlike neighbors. General satisfaction we believe would be felt by the Indians and the citizens to allow them small reservations of a few sections and a portion of their fishing grounds.³⁹

¶ 28. The Commissioners adopted the policy recommended in their February 8 letter and entered into treaties with the Santiam and Tualatin bands of the Calapooya Tribe on April 16.⁴⁰ Four additional treaties were negotiated in May, two with the Yamhill and Luckamiute bands of the Calapooyas and one each with the Upper and Lower Molallas.⁴¹ Instead of removal, each of these treaties created a small reservation for the tribes in their homelands.⁴² Congress abruptly ended the work of the Commissioners by statute on February 27, 1851.⁴³ None of these treaties were ratified.

¶ 29. After dismissal of the Treaty Commissioners, Superintendent Anson Dart took up the task of negotiating treaties. During the summer ten treaties were negotiated with different bands of the Chinook Tribe. During September two treaties were made with the tribes between the Coquille River and the southern Oregon border and another with the Clackama Tribe. Even though Dart carried these treaties to Congress in November, none were ratified.

¶ 30. Many of these early Oregon treaties have been lost. Following are the fishing clauses from those treaties which can be found:

³⁹ Commissioners to Luke Lea, Oregon City, February 8, 1851.

⁴⁰ Commissioners to Luke Lea, Champoeg, April 19, 1851.

⁴¹ Commissioners to Luke Lea, May 14, 1851.

⁴² The text of these six treaties has disappeared. While some information about their content can be extracted from the reports of the Commissioners, it is not possible to reconstruct the treaty fishing language.

⁴³ 9 Stat. 586.

Treaty at Tansey Point - Lower Band of the Chinook Indians -
August 9, 1851:

The said Lower Band of Chinook Indians, reserve the privilege of occupying the grounds they now occupy for the purpose of building, fishing and grazing their stock, with the right to cut timber for their own building purposes and for fuel. Also the right to pick Cranberries on the marshes, and the right to cultivate as much land as they wish for their own purposes. No white man shall be allowed to interfere with their rights, and it is hereby agreed, that a white man by the name of Washington Hall, shall be removed from the land above ceded. The reservations in this article, shall continue during the lives of the Indians who sign the treaty.⁴⁴

Treaty at Tansey Point - Waukikum Band of the Chinook Indians -
August 8, 1851:

The said Waukikum Band reserve to themselves the privilege of occupying their present place of residence, and also of fishing upon the Columbia river, and the two other streams mentioned in Article 1st., also the privilege of cutting timber for their own building purposes and for fuel, on the above described land, and of hunting on said lands where they are not enclosed.⁴⁵

Treaty at Tansey Point - Kon-naack Band of the Chinook Tribe -
August 8, 1851:

The said Konnaack Band reserve the privilege of occupying their present place of residence on Oak Point, and the privilege of hunting on the lands described above.⁴⁶

¶ 31. Anson Dart sent the treaties to the Commissioner of Indian Affairs accompanied by a Report describing their negotiation. The following excerpts from his Report show the unwillingness of the tribes to remove to east of the Cascades and the importance of preserving their fishing rights:

The Clatsops, who were the first treated with; interposed many objections to parting with their country upon any terms; they made many long and loud complaints, at the injustice done them by the Government; who they said had taken possession of their lands without paying them . . .

⁴⁴ C.F. Coan, "The First Stage of Federal Indian Policy in the Pacific Northwest, 1849-1852", *Oregon Historical Society Quarterly*, Vol. XXII, p. 76.

⁴⁵ *Id.* at 82.

⁴⁶ *Id.* at 85.

As this tract had three claimants or settlers upon it, large offers were made the Indians to place the title to all in the United States, this they steadily declined; leaving no alternative, but to allow this Reservation or not treat with them for the balance of their lands, being about five hundred thousand acres.

In relation to the Conditions of the Treaties made, it is necessary to inform you, that the habits and customs of these fishing Indians are unlike those of any other part of our domain.

Let me here remark that the Treaty Commissioners, appointed under this act, used their best exertions to persuade all, or either of the bands in the Valley of the Willamette; to remove east of the Mountains; but without success.

They are fully sensible of the power of the government, admit that they can be killed and exterminated, but say that they cannot be driven far from the homes and graves of their Fathers.

Believing as I do, that the food used by these Indians (being almost entirely fish) tends much towards shortening their lives, I cannot but admit that there is great probability that only a few years will pass e're they will all lie side by side with their Fathers and Braves,--the tribe or tribes extinct. When an Indian is sick, his only food is Salmon, which he must eat, or nothing, and I have observed that few--very few, ever recover from Sickness.

But in my opinion, there is not the least prospect that a single band will leave their present homes . . .⁴⁷

¶ 32. Dart resigned his post on December 14, 1852, to become effective on June 30, 1853.⁴⁸ Joel Palmer was appointed to replace Dart on March 18,⁴⁹ and accepted on May 4.⁵⁰

THE STEVENS PROGRAMME

¶ 33. On March 2, 1853, President Millard Fillmore signed the act creating Washington Territory. Two days later Democrat Franklin Pierce gave his inaugural speech, and within two weeks appointed Isaac I. Stevens as Territorial Governor, which also

⁴⁷ Anson Dart to Commissioner of Indian Affairs, November 7, 1851.

⁴⁸ Anson Dart to Lea, December 14, 1852.

⁴⁹ Lea to Palmer, March 18, 1853.

⁵⁰ Palmer to Lea, May 4.

made him the Superintendent of Indian Affairs for the Territory.⁵¹ Stevens' appointment was the political prize he had earned by vigorously campaigning for Pierce during the election, in particular defending Pierce's reputation as a commander in the Mexican War. Stevens also was soon able to secure appointment as leader of a transcontinental railway survey to be made between the 47th and 49th parallels.

¶ 34. Superintendent Stevens' first instructions from Commissioner of Indian Affairs G. W. Manypenny are dated May 9, 1853. The Commissioner explained that the information within his office about Indian affairs within Stevens' jurisdiction was of a "very unsatisfactory and vague character."⁵² He promised to send to Stevens the Annual Reports from his office, and copies of four treaties which had been negotiated with Washington Territory Indians, even though these treaties had been rejected by the Senate. The Commissioner gave Stevens two directions. First, to "devote your earliest attention and efforts to the collection of information" about a list of fourteen questions concerning the tribes and the relations between them and the white inhabitants. Second, to prevent the Hudson Bay Company from operating within the Territory and "to embrace every opportunity to impress on the Indians that it is the American government, and not the British, that confers upon them these benefits."

¶ 35. By November of 1853, Commissioner Manypenny had learned enough about Indian affairs in Oregon Territory to fear that war was imminent. His Annual Report described the situation, and advised that treaties would be a more economical solution than war:

[O]ur relations with the Indians in Utah and Oregon remain in a very unsettled and precarious condition, arising out of the constant and unaboidable encroachments upon their territories by the whites, and no provision being made for indemnifying and placing them beyond the reach of the injuries thus inflicted. Already have difficulties of a serious character, resulting in bloodshed and loss of the lives of valuable citizens, taken place. Indeed, hostilities with the Indians in all these sections of country may be said to be constantly impending, and occurence of which in either would, in all probablility, involve an amount of expense far exceeding the cost of arrangements that would secure peace and tranquility with the various tribes, and at the same time tend to promote

⁵¹ For a description of Stevens' appointment see Kent D. Richards, *Isaac I. Stevens: Young Man in a Hurry* (Washington State University Press, 1993) pp. 94-98. [Hereinafter cited as *Isaac I. Stevens.*]

⁵² G.W. Manypenny to Isaac I. Stevens, May 9, 1853.

their domestication and permanent welfare.⁵³

¶ 36. Stevens conducted the railroad survey on the way to his new post as Territorial Governor.⁵⁴ He arrived in Olympia on November 25, 1853, and immediately tackled the three problems facing him: completion of the survey, treaties with the various Indian tribes, and settlement of border disputes between the United States and Canada.⁵⁵ Within a month of his arrival in Olympia, Governor Stevens was recommending to Commissioner Manypenny that treaties with the tribes west of the Cascades be negotiated. On December 26 Stevens stated the need for treaties, and sought the necessary budget:

There is urgent necessity existing for treaties being immediately made with the Indian west of the cascade mountains, in this Territory. For years they have been promised payment for their lands by the whites; and they have waited with an abiding faith that the whites would redeem their many promises. For the last two years, however, the great numbers of settlers, who have located in this Territory, has made them suspicious and uneasy; and they upbraid the whites for the want of faith. . . . These things make it imperative upon government to act in this matter, and apply the proper remedy for these fast growing evils. . . . I cannot urge this matter too strongly in your attention.⁵⁶

¶ 37. Stevens had learned that the tribes expected to sell some of their land, and to live on smaller plots within their homelands:

They have all, however, singled out a few spots in their domains, which they wish to reserve, and contemplate the sale of the rest of their lands to the whites. These spots are not only permanent places of residence, but are hereditary. Near them are the graves of their relatives and friends, and they cherish an affection for them which I have scarcely ever seen equalled. These are their homes, and from them they roam about the sound in every direction, going where the fish, roots and berries abound most at the different seasons of the year.⁵⁷

¶ 38. Just as the Oregon Commissioners and Anson Dart had done in earlier years, Stevens considered a policy of removing the tribes from their homelands and fisheries, and rejected it:

⁵³ Report of The Commissioner of Indian Affairs, November 26, 1853.
⁵⁴ *Isaac I. Stevens* described the survey at 99-152.
⁵⁵ *Id.* at 162.
⁵⁶ *Isaac I. Stevens* to George W. Manypenny, December 26, 1853.
⁵⁷ *Id.*

What had better be done with these Indians, when treaties are made with them, has much occupied my mind since my arrival in the Territory. The only two locations they could be removed to is the country east of the Cascade or west of the Olympic range, on the coast of the Pacific. It is my opinion, as well as the opinion of all with whom I have conversed upon the subject, many of them the oldest settlers in the country and best acquainted with the Indians, that it would not only be injudicious, but almost impossible, to make the Indians remove east of the Cascade mountains. Injudicious for the reason that there is not a sufficiency of the food they have been accustomed to for their subsistence, and the consequent expense to government in having to support them until they could be taught to cultivate the soil, and depend upon its products for food. Almost impossible for reason of their strong attachment to their present locations in preference; and the difficulty of keeping them in a place from which to their old haunts there would be easy access.⁵⁸

¶ 39. Stevens cautiously recommended reservations instead of removal:

[T]he measure of making reservations for the different tribes, in their own territory, joining as many of the tribes as possible under one head, ought to be thoroughly considered. Indeed, I am not prepared to say that this would not be the best thing that could be done with them; it would be the least expensive, and, with the Indians, by far the most satisfactory.⁵⁹

¶ 40. Three days later, on December 29, 1853,⁶⁰ Stevens wrote Commissioner Manypenny to urgently recommend that his recommendations for west of the Cascades be extended to the east as well:

The Indian title to lands east of the Cascade mountains should at once be extinguished. . . . The tribes east of the Cascade mountains have much better organization than the tribes west of the mountains. All of these have chiefs who are well disposed towards the whites, and some of whom have great authority, not only with their own people, but with the surrounding tribes. All the tribes have made some progress in agriculture, and own horses and cattle.

⁵⁸ *Id.* at 7.

⁵⁹ *Id.* at 7-8.

⁶⁰ Stevens wrote a separate letter this same date requesting a budget to carry out his recommendations. He sought "an appropriation of \$15,000 west of the Cascade mountains, and the same amount east of these mountains, for extinguishing the Indian title." Isaac Stevens to G. W. Manypenny, December 29, 1853.

¶ 41. Stevens considered speedy settlement east of the Cascades so important that every impediment should be removed:

To the end, two measures I regard as of paramount importance -- the appointment of a surveyor-general for the Territory of Washington, and the extension of the surveys over the whole territory wherever, by the settlement of portions of it, it is required; and the extinguishment of the Indian title.

¶ 42. Stevens was anxious to proceed with his recommendations and announced that he was of the opinion that the 1850 Donation Act applied both west and east of the Cascades. Pursuant to that statute he would direct his "exertions to establishing friendly relations between the white settlers and the Indians."⁶¹ Stevens also intended to send his first agent to talk with the Nez Perce:

It is my intention soon to send Lieutenant Arnold into the Nez Perces country, to continue our geographical and railroad explorations, and shall direct him to collect information in relation to that interesting tribe, and the arrangements as to reservations which can finally be made with them.⁶²

¶ 43. Shortly before Stevens made his recommendations, Oregon Superintendent Joel Palmer had made similar proposals to Commissioner Manypenny regarding the Oregon tribes. Palmer, like Stevens, thought the problem stemmed from the conflict between Indian title and the Oregon Donation Act:

Experience moreover has taught us that the settlement of a country, prior to the extinction of the native title to the soil is, in most cases attended with serious difficulties and embarrassments to the Government, with annoyance and danger to the settler; and proves fatal to the best interests, and the improvement and civilization, of the natives.⁶³

¶ 44. Also like Stevens, Palmer thought war would be the price to be paid for a failure to act:

The importance of entering, at an early period, into

⁶¹ *Id.* at 14.

⁶² *Id.*

⁶³ Joel Palmer to G. W. Manypenny, Oct. 8, 1853. Reprinted at C.F. Coan, "The Adoption of the Reservation Policy in Pacific Northwest, 1853-1855, THE QUARTERLY OF THE OREGON HISTORICAL SOCIETY, Vol. XXIII, pp. 28-38; 30. Coan considers the Palmer report to be the seminal document creating the reservation system in the Northwest: "The importance of the document is, that the recommendations made in it became the basis for the reservation Indian policy for the Pacific Northwest." *Id.* at 5.

treaties to extinguish the indian title to the lands belonging to the tribes residing along the Columbia River and the Northern Oregon road, or so much of said country as is within the Territory of Oregon, has been repeatedly presented to the attention of the Department. My convictions of the propriety and necessity of this course are daily deepened, and I am satisfied that unless early steps be taken to effect such treaties, serious difficulties, if not a general indian war with some of thee tribes will be the consequence.⁶⁴

¶ 45. Superintendent Palmer offered extensive opinions about the manner in which the treaties should be negotiated. He specifically recommended that tribal fisheries receive separate attention:

In the selection of a district of country for the colonization of the various bands and tribes of Indians who inhabit the country contiguous to the coast attention is required to their mode of subsistence. They may properly be termed fisheaters, and to assign them a country destitute of this is to them indispensable article of food, would be disastrous to their existence as a people.⁶⁵

¶ 46. On February 6, 1854, Commissioner Manypenny endorsed the recommendations of Stevens and Palmer and sent a request for appropriations to the Secretary of the Interior, who immediately sent it to Congress. Manypenny explained the need for the appropriation:

With many of the tribes in Oregon and Washington Territories, it appears to be absolutely necessary to speedily conclude treaties for the extinguishment of their claim to the lands now or recently occupied by them.

The policy of the government has favored emigration to, and settlement within those territories, by citizens of the States; and, in consequence, they have been and are rapidly filling up with white settlers; yet the Indian tribes still claim title to the lands on which the whites have located, and which they are now cultivating. The jealousy which has resulted from this state of things has naturally led to repeated hostilities, resulting in the severe suffering, and, in some instances, the murder of the white settlers, and in hindering the general growth and prosperity of the civil communities of these Territories.

Unless something more effectual and definite be done

⁶⁴ *Id.* at 29.

⁶⁵ *Id.* at 32.

speedily, it is probable that hostilities will be resumed by the Indians in Oregon on a more extended scale, and engaging a larger and better organized body of Indians than the settlers there have ever heretofore contended with.⁶⁶

¶ 47. Stevens gave his first address to the Territorial Legislature on February 28 of 1854.⁶⁷ He analyzed problems Congress created by passing the Oregon Donation Act without having extinguished Indian title to the lands and proposed treaties with the tribes as the solution. The Legislature accepted the suggestion of Stevens and memorialized Congress urging that treaties be negotiated.⁶⁸

¶ 48. Convinced that he needed both money and authority, Stevens departed Olympia for Washington D.C. in March of 1854.⁶⁹ During the summer of 1854 Stevens worked a great deal on the survey report and lobbied Congress for money and other needs in Washington Territory. Stevens and Manypenny found support in Congress for their proposed treaties and an appropriation was approved.⁷⁰

¶ 49. On August 30, 1854, Acting Commissioner of Indian Affairs Charles E. Mix issued treaty instructions to Governor Stevens. Mix informed Stevens: "You have been designated by the President as the Officer of the Indian Department to conduct the negotiations and conclude the treaties of amity and acquisition that are thus provided for."⁷¹ Stevens was to "endeavor to unite the numerous bands and fragments of tribes into tribes and provide for the concentration of one or more of such tribes upon the reservations which may be set apart for their future homes."⁷² The reservations were to be "apart from the settlements of the whites."⁷³ Mix instructed Stevens that if all the tribes in the Territory could not be organized into six or eight tribes, he should turn his attention to those districts where "animosities prevail, or disturbances of the peace are reasonably apprehended."⁷⁴

¶ 50. Acting Commissioner Mix did not deem it necessary to

⁶⁶ Communications from the Secretary of the Interior and The Commissioner of Indian Affairs to the Chairman of the Committee on Indian Affairs of the Senate, February 21, 1854.

⁶⁷ Gates, *Messages of the Governors*, pp. 3-9.

⁶⁸ "Memorial of the Legislature of Washington Territory relative to the extinction of Indian titles to lands in the Territory of Washington," April 12, 1854.

⁶⁹ *Isaac I. Stevens* at 172-179.

⁷⁰ Manypenny to Secretary of the Interior Robert McClelland, February 6, 1854; *Isaac I. Stevens* at 196-197.

⁷¹ Charles E. Mix to Isaac I. Stevens, August 30, 1854.

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.*

give "specific instructions as to the details of the treaties." However, Mix did include copies of the Treaty with the Rogue River,⁷⁵ the Treaty with the Umpqua - Cow Creek Band,⁷⁶ the Treaty with the Oto and Missouri,⁷⁷ and the Treaty with the Omaha.⁷⁸ None of these treaties contained a fishing clause. Mix thought the Rogue River and Cow Creek treaties would provide valuable suggestions because they exhibited "provisions proper on the part of the Government and advantageous to the Indians." The Oto and Omaha treaties indicated "the policy of the Government in regard to the ultimate civilization of the Indian tribes."⁷⁹

¶ 51. Mix closed the instructions by emphasizing the discretion and authority Stevens had regarding the treaty negotiations:

With these general views, you will nevertheless exercise a sound discretion where the circumstances are such as to require a departure from them. And you will take care in all treaties made to leave no question open out of which difficulties may hereafter arise or by means of which the Treasury of the United State may be approached.⁸⁰

¶ 52. Governor Stevens filed a written report with the Commissioner of Indian Affairs on September 16, 1854, describing the Indians "on my route of exploration from the head of navigation of the Mississippi river to the Pacific ocean."⁸¹ In a brief section at the end of the Report Stevens discussed the pending treaties. The reservations were "especially required in consequence of the operation of the donation act, in which, contrary to usage and natural right, the United States assumed to grant, absolutely, the lands of the Indian without previous purchase from them."⁸² "The location and extent of these reservations should be adapted to the peculiar wants and habits of the different tribes."⁸³

¶ 53. Stevens specifically commented upon the importance of tribal fisheries within Washington Territory, and the need to make legal provisions to protect them:

The subject of the right of fisheries is one upon which legislation is demanded. It never could have been the intention of Congress that Indians should be excluded from

⁷⁵ II Kappler 603-605.

⁷⁶ *Id.* at 606-607.

⁷⁷ *Id.* at 608-611.

⁷⁸ *Id.* at 611-614.

⁷⁹ Charles E. Mix to Isaac I. Stevens, August 30, 1854.

⁸⁰ *Id.*

⁸¹ Isaac I. Stevens to George W. Manypenny, September 16, 1854.

⁸² *Id.* at 456.

⁸³ *Id.* at 455.

their ancient fisheries; but, as no condition to this effect was inserted in the donation act, the question has been raised whether persons taking claims, including such fisheries, do not possess the right of monopolizing. It is therefore desirable that this question should be set at rest by law.⁸⁴

¶ 54. Stevens had returned to Olympia to open the second territorial legislative session on December 4, 1854, stating that the Indian treaties were his highest priority.⁸⁵ Within days he selected the Commissioners who were to assist him during the treaty negotiations. These included Michael Simmons, who had been appointed Indian Agent for the Puget Sound region; James Doty as secretary, Benjamin F. Shaw⁸⁶ as interpreter, George Gibbs⁸⁷ as surveyor and Hugh A. Goldsborough as commissary. The Commissioners met on December 7 and 10, 1854, to prepare a model treaty to be used at the various councils.⁸⁸ It was during these meetings that George Gibbs wrote the section which became Article III of the Walla Walla Treaty.⁸⁹

¶ 55. In the years before 1855 George Gibbs had served on the commissions negotiating treaties in Western Oregon and Northern California.⁹⁰ Gibbs had also worked on Stevens' railroad survey, and at the request of Stevens wrote a report on the Indian tribes of Washington Territory.⁹¹ In the Report Gibbs stated that Indians in the eastern region of the Territory "require the liberty of motion for the purpose of seeking, in their proper season, roots berries, and fish, where those articles can be found, and of grazing their horses and cattle at large, but they do not need the exclusive use of any considerable districts . . . the use of customary fisheries, and free pasturage for their stock on unenclosed lands, should be

⁸⁴ *Id.*

⁸⁵ Journal of the Council of the Territory of Washington, 2d sess. (Olympia, 1855), pp. 149-55.

⁸⁶ Shaw later argued that the Indians did not have the land and that it was a mistake to treat with them. Colonel B.F. Shaw, "Medicine Creek Treaty," *Proceedings of the Oregon Historical Society, 1903* (Salem, 1906), pp. 27-29.

⁸⁷ Stephen Dow Beckham, *George Gibbs, 1815-1873, Historian and Ethnologist* (Ph.D.diss., University of California, Los Angeles, 1969); Kent D. Richards, "Historical Antecedents to the Boldt Decision," *4 Western Legal History* pp. 76-79. [Hereinafter cited as "Historical Antecedents."]

⁸⁸ Records of the Proceedings of the Commission to Hold Treaties with the Indian Tribes in Washington territory and the Blackfoot Country, December 7, 10, 1854.

⁸⁹ *Isaac I. Stevens* at 198-199. Richards reports that the commissioners adopted a nine-point program, one point of which was to "allow the Indians to hunt, fish, and gather berries until the civilizing process was complete."

⁹⁰ "Historical Antecedents" at 69.

⁹¹ George Gibbs, Report of Mr. George Gibbs to Captain McClellan on the Indian Tribes of the Territory of Washington, March 4, 1854, reprinted as *Indian Tribes of Washington Territory* (Ye Galleon Press, 1978).

secured."⁹²

¶ 56. At the December 7 meeting of the Treaty Commissioners the Oto-Missouri and Omaha treaties were first read⁹³ and discussed. "[A]fter considerable discussion upon Reservations, Fishing Stations, Farms, Schools, etc., the Commissioners directed Mr. Geo. Gibbs to prepare a programme of a Treaty in accordance with the views of the Commission." Article II of the draft presented by Gibbs to the Commissioners on December 10 contained the fishing clause.⁹⁴ With very little revision the draft was adopted for use in negotiating the Puget Sound treaties.

¶ 57. A number of authors have described the importance of the fishing and hunting clauses in the Stevens Treaties:

During a number of negotiating sessions the tribes made clear that protection of their fishing rights was a prerequisite to signing the treaties.⁹⁵

The right provided for in the Pacific Northwest treaties whereby the Indians were to be permitted to resort to their ancient tribal fishing grounds or stations for the purpose of taking fish and erecting temporary curing houses, was at the time of the treaties probably the most important consideration in the minds of the Indian chiefs and head men.⁹⁶

The importance of the fish to the Indians seems to have impressed Stevens. He did not intentionally reserve to the Indians any more rights than he thought necessary, but he understood that the one indispensable requirement for securing agreement of any kind from Pacific Northwest Indians was to assure their continued right to fish. That

⁹² *Id.* at 29.

⁹³ The specific mention of these treaties suggests that the Rogue River and Cow Creek Band treaties were not read.

⁹⁴ [T]he right of taking fish at all usual and accustomed grounds and stations, is further secured to said Indians, in common with all citizens of the territory and of erecting temporary houses for the purpose of curing, together with the privilege of hunting, gathering roots and berries and pasturing their horses upon open and unclaimed lands. Provided however that they shall not take shellfish from any beds stacked or cultivated by citizens.

⁹⁵ Michael C. Blumm and Brett M. Swift, "The Indian Treaty Piscary Profit and Habitat Protection in the Pacific Northwest: A Property Rights Approach," 69 U. Colo. L. Rev. 407, 429 (1998).

⁹⁶ Edward G. Swindell, Jr., *Report on Source, Nature and Extent of the Fishing, Hunting and Miscellaneous Related Rights of Certain Indian Tribes in Washington and Oregon* (United States Department of Interior, 1942) p. 58. [Hereinafter cited as *Swindell Report*.]

right was as valuable to them as their lives . . .⁹⁷

§ 5. THE 1855 TREATY

WALLA WALLA COUNCIL

¶ 58. Stevens convened the first treaty council on Christmas eve, 1854, and in two days had negotiated the Medicine Creek Treaty. The Point Elliot Treaty was negotiated January 22 and the Point No Point Treaty between January 25 and 28. Troubles were encountered in negotiating the treaties in southwestern Washington, but Stevens was anxious to move east of the Cascades.

¶ 59. In January, 1855, Governor Stevens dispatched James Doty to organize a treaty council with the tribes living between the Cascades and the Bitterroots. In consultation with the tribes, it was decided that a treaty council would convene on May 20 and be held in Walla Walla country, on Mill Creek within six miles the Whitman Mission site. Because some of these tribes occupied lands in Oregon as well as Washington Territory, Joel Palmer, the Indian Agent for Oregon, and Stevens met in April to plan the council.⁹⁸

¶ 60. Because of rain and other delays, Stevens and Palmer did not arrive at the council grounds until May 21. The Nez Perce arrived on May 23, the Cayuse on the 25th and the Yakimas on the 27th. The Nez Perce arrived with a great show of force,

⁹⁷ American Friends Service Committee, *Uncommon Controversy* (University of Washington, 1970) p. 21.

⁹⁸ A True Copy of the record of the Official Proceedings at the Council in the Walla Walla Valley. These minutes were kept by James Doty and W.m McKay, secretaries for Washington and Oregon Territories. The original handwritten minutes have been transcribed into a typed format by Swindell. *Swindell Report*. Page references are to the Swindell transcription.

The Nez Perce kept two records of the council proceedings. The official minutes were kept by Timothy: "Timothy, a Nez Perces Chief acted as crier for his nation and he will also record in their language the full proceedings each day of the council and this will be preserved among the archives of the nation and handed down to future generations" *Id.* at 18. Lawyer revealed that he too had kept an account: "I have got your talk here (pointing to his notebook) and although a poor man I can look at it from time to time." *Id.* at 54. No trace of these two records can be found today.

Other contemporary accounts of the council are: George Gibbs' journal, found in Record Group 76, "Records of Boundary and Claims Commissions and Arbitrations (T 606), Records Relating to the Northwest Boundary, 1853-1901"; James Swan, *The Northwest Coast* (Ye Galleon Press 1966); Benjamin F. Shaw Papers, Oregon Historical Society, Portland; George B. McClellan Papers, Library of Congress; F.G. Young, ed., "The Indian Council at Walla Walla, May and June, 1855, by Col. Lawrence Kip, U.S.A., A Journal," *Sources of the History of Oregon*, vol. 1, pt 2 (University of Oregon 1897); and Richard Lansdale, *Personal Diary*, Bieneke Library, Yale University.

but with a friendly attitude. The other tribes, however, arrived in more somber moods and refused tobacco and provisions offered by Stevens as a gesture of friendship. The Salmon River band of the Nez Perce also joined in refusing the gifts. Immediately upon arriving, Stevens and Palmer began consulting informally with their agents, about 50 settlers who had gathered, and the various tribes.⁹⁹

¶ 61. Finally, on Tuesday, May 29, the council convened.¹⁰⁰ Introductions were made and tobacco was smoked. Many Nez Perce leaders were present¹⁰¹, but few from the other tribes. In addition to the Nez Perce the other principal tribes at the council which each signed a treaty were the Cayuses (The Young Chief, Steachus, Camapilo, and others), the Walla Walla (Pee-o-pee-mox-a-mox), and the Yakamas (Cam-i-ah-kun, Ow-hi, Kloom, Kow-was-say-ic, Si-ry-was, Skin-pah). The Palouses (Kah-lat-toose), Spokanes (Gerry), Pisuose, Metows, and Oak-kin-a-kanes were listed as present on the first day even though no separate treaty was negotiated with them during the council. The Umatillas were not listed as present even though they eventually signed.¹⁰²

¶ 62. At this first meeting, interpreters were selected and sworn for the Nez Perce: William Craig, McDauphin and Delaware Jim. The council then adjourned, hoping for clear skies and dry ground the next day.¹⁰³ During the two weeks which followed, the council re-convened for deliberation ten times. For most days, Stevens would set 9:00 a.m. as the time to begin. However, the various tribes would not gather until noon or after. Discussions would then last about four hours.

¶ 63. Stevens and Palmer approached the negotiations by first trying to sell the tribes on the general concept of reservation policy. The reservation concept meant selling to the United States lands outside the reservation, prohibiting whites from coming onto the reservation, and allotting tracts within the reservation to individuals in the tribe who were to create farms. In their opinion, the history of United States Indian relations showed reservations were a wise policy.¹⁰⁴

¶ 64. Stevens said, "Let us go back to old times across the mountains and see what was there done." He divided the old time into two parts: the earlier days when red and white lived

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ "Lawyer, Joseph, U-u-sune-mal-e-can, James, Timothy, Red Wolfe, Spotted Eagle, Three Feathers, Jason, Jacob, Cow-pook, Is-coh-tim, Kay-kay-map, Tu-per-lan-its-a-kum, Billy, Toh-ton-mol-e-wot, The Snipe, Bold Eagle, and others." *Id.* at 15.

¹⁰² *Id.* at 15.

¹⁰³ *Id.* at 16.

¹⁰⁴ *Id.* at 18.

together and the recent days when they lived apart. First, "the red man received the white man gladly; but after a while difficulties arose."¹⁰⁵ To solve these difficulties, "Wm Penn and the Indians came together . . . they made a Treaty: there was peace." While this treaty "worked well when there were few whites, it did not work well when there were many." "When the white man and the red man lived together on the same ground, the white man got the advantages and the red man passed away."¹⁰⁶

¶ 65. In order to help the red man, the Great Father Andrew Jackson decided the Cherokee and their leader John Ross should live on land separate from the whites. Jackson said, "I will take the red man across a great river into a fine country where I can take care of them." The United States, "gave John Ross and his people a tract of land into which no white man could go without their consent; they sent them an agent, they had schools, they had mills, they had shops, they had teachers, they had farmers, they had doctors."¹⁰⁷

¶ 66. Stevens began the Thursday, May 31st, Council by summarizing what he was after: "[W]e want you to agree to live on tracts of land, which shall be your own and your childrens; and we want you to sell the land you do not need to your Great Father."¹⁰⁸ He then spent a couple of hours generally describing what the Great Father was willing to pay for the land. Clothing, tools, mills, houses, farms, teachers, craftsmen. Rights to hunt, fish, gather and pasture would to be protected as before. Peace would be negotiated with the Blackfeet in Buffalo Country. And, an agent would be appointed to carry out the treaty.¹⁰⁹

¶ 67. It was then Joel Palmer's turn to sell the reservation plan. He began, "over Three hundred and sixty years ago . . . came a chief with several of his brethren in three ships."¹¹⁰ Like Stevens, Palmer thought whites and Indians could not live together. "There were many causes for this; a portion of the Indians whose hearts were not good, stole the property belonging to these people; the whites retaliated by whipping and ill treating them. That was the first offense on the part of the Indians; the whites had long been without women and they often took forcibly the women of the Indians; this induces them on their part to retaliate; these difficulties continued from bad to worse until finally there was war."¹¹¹

¶ 68. In what the tribes assembled could have easily

¹⁰⁵ *Id.* at 20.

¹⁰⁶ *Id.* at 21.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* at 24.

¹⁰⁹ *Id.* at 24-27.

¹¹⁰ *Id.* at 27.

¹¹¹ *Id.* at 28.

interpreted as a threat, Palmer described the outcome of the war, "a few white men were killed and many Indians were killed; there were more Indians killed than white men because we had better arms and know how to make them."¹¹²

¶ 69. To prevent these wars, the President "proposed to have a district of country set aside for the Indians to live in that no white man should live there."¹¹³ Those Indians which agreed to the proposition "have since been learning and continued to learn and prosper, and are now a great happy and good people."¹¹⁴ Those who refused to agree suffered a terrible fate: "What is the condition of that people? Those who thought themselves very wise and refused to take the advice of the white people those who continued to make war upon our people? Their game was all killed, they had nothing to eat, they fled to the mountains then they continued to live but a few years of miserable existence, until they were finally overtaken by more powerful tribes and all killed."¹¹⁵

¶ 70. Palmer summarized his message: "all experience we have had with Indians these three hundred and sixty years shows us that the white man and the red man cannot live happily together; although we may live near together there should be a line of distinction drawn so that the Indians may know where their land is and the white man where his land is."¹¹⁶

¶ 71. At the request of Young Chief (Cayuse) the council adjourned for a day of feasting. When the parties reconvened on Saturday, June 2, Palmer picked up from where he left off. He wanted to make certain the tribes knew whites would overrun them, and that they had no choice. "You may ask, why do they come? Can you stop the waters of the Columbia river from flowing on its course? Can you prevent the wind from blowing? Can you prevent the rain from falling? . . . Like the grasshoppers on the plains: some years there will be more come than others, you cannot stop them."¹¹⁷

¶ 72. Palmer argued it was urgent to act, "[I]f we enter into a treaty now we can select a good country for you; but if we wait till the country is filled up with whites, where will we find such a place?"¹¹⁸ He advised, "My heart is that it is better for you to enter into a treaty now with us."¹¹⁹

¹¹² *Id.*
¹¹³ *Id.* at 29.
¹¹⁴ *Id.* at 30.
¹¹⁵ *Id.* at 30.
¹¹⁶ *Id.*
¹¹⁷ *Id.* at 33.
¹¹⁸ *Id.* at 34.
¹¹⁹ *Id.*

¶ 73. After Palmer's speech, Stevens called upon the tribal leaders to speak. None were anxious. Five Crows was tired, but did question, "Do you speak true that you call me brother?"¹²⁰ He reminded Palmer and Stevens that the commandments said "you shall not take any thing without payment" and that the thief would be sent to hell.¹²¹

¶ 74. Pee-o-pee-mox-a-mox demanded that "you should listen when any Indians speak" and complained that "the whole has been prearranged in the hearts of the Indians" by Stevens.¹²² He said he knew the value of treaties from his experience in California. But most of all, he complained Stevens and Palmer had been dishonest and insincere. "We have not seen in a true light the object of your speeches; as if there was a post set between us." "You have spoken in a round about way; speak straight." "You have spoken in a manner partly tending to Evil. Speak plain to us."¹²³

¶ 75. Stevens announced, "our Great Chief does not want us to do business" on Sunday, and the council was adjourned until Monday. Upon reconvening, Stevens invited the Indians "to open your hearts and speak freely." After a long pause, Lawyer advised Stevens, "If you will designate some one to speak first he will speak. If you do not they will sit here all day without speaking."¹²⁴

¶ 76. Lawyer then asked specifically whether Stevens spoke on behalf of God or the President: "Is it from the man that made us, My Chief, or is it from your own people?" He thought he knew the answer. "I think it is from the white people; from where the white people is they have been dying and dying, and are yet dying . . . and here you see these many of us yet and still living."¹²⁵

¶ 77. Nevertheless, Lawyer then made a dramatic announcement to the council. He and the Nez Perce were willing to sign a treaty, willing to make a law and create a reservation. Lawyer explained: "It was not for nothing I have been listening to you. My country is poor it is a trifling country. You see the map the marks of our country, one stream runs one way and another runs another way, it is all rock. My Chief, but the big Chief from the light (the East) said to you go and talk to these people and you have done it, he says go there to take care of your white people and your red people and you have done it. As long as the Earth stands take care of the people; he said to the

¹²⁰ *Id.* at 35.

¹²¹ *Id.*

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *Id.* at 37.

¹²⁵ *Id.*

white people and the red people all as one let us listen to the laws, and when the earth is done away with there is the end of the law, and that is the reason you see us good and we see you good."¹²⁶

¶ 78. Pe-at-tan-at-tee-miner then said his mind was the same as Lawyer, and added, "[M]y land it is for you and for me. I shall do you no wrong and you do me none, both our rights shall be protected forever; it is not for ourselves here that we are talking, it is for those that come that we are speaking."¹²⁷ U-u-Sin-mull-e-cun (Nez Perce) agreed, "What the Lawyer has said is my heart."¹²⁸ Fah-hah-tsil-pilp, or the Red Bear, said "I like your talk very much as I have heard it."¹²⁹

¶ 79. Tip-pee-il-lan-ah-cow-pook, or the Eagle from the Light (Nez Perce), taking a cue from Stevens and Palmer, reviewed the history from the Nez Perce point of view. It was the story of a Nez Perce quest for truth ending in death. "I like the President's talk; I am glad of it when I hear it here and for that reason I am going to tell you a tale. The time the first white men ever passed through this country, although the people of this country were blind, it was their heart to be friendly to them. . . A long time ago they hung my brother for no offence, and this I say to my brother here that he may think of it. Afterwards came Spalding and Whitman. They advised us well and taught us well, very well. . . And Spalding sent my Father to the East . . . His body was never returned."¹³⁰

¶ 80. After explaining that his people had been friendly to the Whites, and helped them at the time of the Whitman killings, Eagle from the Light continued, "At the time the Indians held a grand Council at Fort Laramie. I was with the Flatheads and I heard there would be a council this side, next year. We were asked to go and find counsel, friendship and good advice. Many of my people started and died in the country. Died hunting what was right. There was a good many started there on Green River, the small-pox killed all but one. They were going to find good counsel in the East; and here I am looking still for counsel, and to be taught what is best to be done."¹³¹

¶ 81. Eagle from the Light concluded, "And now look at my peoples' bodies scattered everywhere hunting for knowledge, hunting for someone to teach them to go straight. . . Look at that, it is the tale I had to tell you, and now I am going to

¹²⁶ *Id.* at 38.
¹²⁷ *Id.*
¹²⁸ *Id.* at 39.
¹²⁹ *Id.* at 40.
¹³⁰ *Id.* at 41.
¹³¹ *Id.*

hunt friendship and good advice."¹³²

¶ 82. Leaders from other tribes were not so anxious to agree, and challenged Stevens and Palmer. Staachas (Cayuse) demanded, "Who is it that is going to speak straight for all of us. Now I want the whites and the Indians to show all their hearts."¹³³ Pee-o-pee-mox-a-mox (Walla Walla) said he was very uncertain, "My heart was heavy, my heart has to separate so, that was my heart. . . I like you Americans; and I like the Hudson Bay Co. people by which means I am lead this way and that way."¹³⁴ He could not decide because there had been no mention of the particular lands which were to make up the reservation. "If they had mentioned the lands they had spoken of then I should have understood them . . . when they mention the lands then I shall know."¹³⁵

¶ 83. Stevens drew his own conclusions from the comments of the various leaders. "We think we know your hearts. You are willing to make a bargain. You want to know exactly the terms."¹³⁶

¶ 84. Of course the most important term to everybody at the council was the lands to be designated for the tribes. Stevens and Palmer had been speaking of reservations abstractly to avoid this very question, to avoid angering the various tribes. Finally, Stevens faced the problem. He proposed two reservations. One would be in the Nez Perce Country for the Nez Perce, Cayuses, Walla Wallas, Umatillas and Spokanes. The other would be in Yakama Country for the Yakamas, Colvilles, O-kin-a-kunes, Palouse, Pesquouse, Klit-a-tats, and other bands lower on the river.¹³⁷

¶ 85. Stevens spoke quickly to explain his proposal, "I will give briefly the reason for selecting these two Reservations. We think they are large enough to furnish each man and each family with a farm, and grazing for all your animals. There is especially in winter grazing on each Reservation. There is plenty of Salmon on these Reservations, there are roots and berries. There is also some game. You will be near the Great Road and can take your horses and your cattle down the river and to the Sound to market. . . . We can better protect you from bad white men there. We can better prevent the trader and the preacher all in one man going there."¹³⁸

¹³² *Id.* at 41-42.
¹³³ *Id.* at 39.
¹³⁴ *Id.* at 39-40.
¹³⁵ *Id.* at 40.
¹³⁶ *Id.* at 42.
¹³⁷ *Id.* at 43-44.
¹³⁸ *Id.* at 43.

¶ 86. Stevens invited the tribes to make their own proposal. "We want you to think about this and see if you like it. You may think the Reservations are not good. If not you will say so. The Cayuses, the Walla Walla, the Umatillas, may prefer the Yakama to the Nes Perce Reservations, and they may not like either."¹³⁹ Palmer then adjourned for the day, assuring the tribes, "[W]e want you to hear the whole, and when you hear all I think you will say it is good."¹⁴⁰

¶ 87. When the council convened the next day, Tuesday, June 5, Stevens began by explaining the boundaries of the Nes Perce Reservation using a large scale map. Each tribe on the reservation was to be on equal footing and have its own district, with a blacksmith, a school and a farmer. Each would have its own Head Chief who would be provided a salary and farm. There would be an agent, an agricultural and industrial school and a tin shop located centrally and available to all the tribes. There would also be a right to pasture, hunt, fish and gather outside the reservation. In addition, the tribes would be paid for their lands. One hundred thousand would be spent in the first year in settling the tribes on the reservation. An additional \$250,000 would be paid to the tribes over the following 20 years.¹⁴¹

¶ 88. After Stevens gave a similar explanation of the Yakama Reservation, Palmer rose to endorse the proposal and to encourage the tribes to agree. He said, "You may not understand all the advantages of the propositions that have been made to you; but they are for your benefit and those who come after you; as a chief desiring to promote your interest, I say it is good; that I would not deceive you; the Great Spirit who knows the heart of all men knows that I desire to promote your good."¹⁴²

¶ 89. Stevens and Palmer spent all day describing in detail their proposal. Palmer adjourned the council by pressing the Indians for a decision, "If any of you wish to speak now we will listen to you. Or if you can make up your minds so as to give us an answer this evening come and do so and we will be ready to receive it."¹⁴³

¶ 90. Stachas (Cayuse) accepted the invitation to speak and stated his refusal to agree, "If your mothers were here in this country who gave you birth, and suckled you, and while you were sucking some person came and took away your mother and left you

¹³⁹ *Id.*

¹⁴⁰ *Id.* at 44.

¹⁴¹ *Id.* at 44-49.

¹⁴² *Id.* at 49.

¹⁴³ *Id.* at 51.

alone and sold your mother, how would you feel then?"¹⁴⁴ Stevens had proposed the Cayuse surrender all their land. Stachas made his counter-proposal, "I name three places for myself, the Grande Ronde, the Touchet towards the mountains and the Tucannon."¹⁴⁵

¶ 91. The long silence which followed expressed the unwillingness to agree of all tribes except the Nez Perce. Still, Stevens pushed for a decision the next day and closed by saying, "We will tomorrow after you have spoken state what we think. Come early in the morning and let us see if we cannot agree before night."¹⁴⁶

¶ 92. Not only was no decision reached the next day, for reasons that are not explained in the *Official Proceedings* no council was held. When deliberations resumed on Thursday, June 7th, Stevens invited, "My brothers, we expect to have your hearts today, let us have your heart straight out."¹⁴⁷

¶ 93. Lawyer (Nez Perce) spoke a second time for his people. He started with the arrival of whites by ship, "We also know the white people pass about on the waters as they wish to. I do not know what they find in travelling about on these waters or what they are hunting, whether it is timber, leaves, grass or what."¹⁴⁸ From this beginning the Nez Perce had always been friendly with the whites, and sought knowledge of their laws. "From the time of Columbus and from the time of Lewis & Clark we have known our friends: we poor people have known you as brothers . . . some [Nez Perce] started in that direction (east) . . . and returned after they could see a little and told us about the Great Spirit; they told us the laws for the poor people." The Nez Perce were willing to agree. "My Chief [Ellis] said our old laws are poor, the new laws we are getting are good laws, are straight."¹⁴⁹

¶ 94. Stevens then called upon others, hoping they would agree. But Young Chief (Cayuse) explained that he remained blind, even though "Lawyer sees and he takes hold."¹⁵⁰ He said, "I do not see the offer you have made us yet. If I had the money in my hand then I would see."¹⁵¹

¶ 95. Young Chief went on to explain other reasons why he could not agree, "I wonder if this ground has anything to say . . . The Earth says, that God tells me to take care of the Indians

¹⁴⁴ *Id.*

¹⁴⁵ *Id.*

¹⁴⁶ *Id.* at 52.

¹⁴⁷ *Id.*

¹⁴⁸ *Id.* at 52-53.

¹⁴⁹ *Id.* at 54.

¹⁵⁰ *Id.* at 55.

¹⁵¹ *Id.*

on this earth: the Earth says to the Indians that stop on the Earth feed them right. . . . God has given our names and we are told those names: neither the Indians or the Whites have a right to change those names. . . . You Indians who take care of a certain portion of the country should not trade it off unless you get a fair price."¹⁵²

¶ 96. Five Crows (Cayuse) agreed with Young Chief. So did Pe-pe-mux-mux (Walla Walla) who said, "I do not see the offer you have made to the Indians. I never saw these things with my father. My heart cried very hard when you first spoke to me, the same as if I was a feather."¹⁵³ He was only willing to agree to a right to pass through his country, "The whites may travel in all directions through my country we shall have nothing to say to them providing they do not build house on our land."¹⁵⁴

¶ 97. Owhi (Yakama) explained that he, like Young Chief, could not agree because he feared punishment from God: "God named this land to us that is the reason I am afraid to say anything about this land. I am afraid of the laws of the Almighty . . . Shall I steal this land and sell it? . . . Shall I give the lands that are a part of my body and leave myself poor and destitute? . . . I love my life is the reason why I do not give my lands away. I am afraid I would be sent to hell."¹⁵⁵

¶ 98. The Cayuse, Walla Walla and Yakama leaders criticized Lawyer and the Nez Perce for not joining with them in the council. Pe-pe-mux-mux said, "I thought these Indians were all the same as one, all alike . . . Now I will speak about Lawyer. I think my friend has given his lands, that is what I think from his words."¹⁵⁶ Five Crows said, "We have been as one people with the Nez Perces heretofore; this day we are divided."¹⁵⁷ Eagle from the Light explained his position, "These people have been talking among themselves as though there was two and when I heard what they had to say I said very well; let us go as two."¹⁵⁸

¶ 99. The decision of the Nez Perce to chart their own course had apparently been made even before the council began. On the day before the first session, Stevens visited Lawyer at his lodge. An old wound suffered at the battle of Pierres Hole made it difficult for Lawyer to get about. While at the lodge, several Nez Perce chiefs came to tell Lawyer that the Cayuse and Walla Walla wanted to hold a council. Lawyer adamantly refused, "What have we to say to the Cayuses or Pee-pee-mox-a-mox? What

¹⁵² *Id.*
¹⁵³ *Id.* at 56.
¹⁵⁴ *Id.*
¹⁵⁵ *Id.* at 57-58.
¹⁵⁶ *Id.* at 56.
¹⁵⁷ *Id.* at 63.
¹⁵⁸ *Id.* at 75.

are their hearts to us? Did we propose to hold a council with them or ask them for advise? Our hearts are Nes Perses hearts and we know them. We came here to hold a great council with the Great Chief of the Americans, we know the straight forward truth to pursue and are alone responsible for our actions. . . . We have our own people to take care of, they give us enough trouble, and we will not have the Cayuse troubles on our hands."¹⁵⁹

¶ 100. To explain the Nez Perce decision, Lawyer took out a book in the Nez Perce language which contained the advice of Chief Ellis, a former leader. Ellis had given this advice, "Whenever the Great Chief of the Americans shall come into your country to give you laws, accept them!"¹⁶⁰

¶ 101. Joel Palmer responded to the Cayuse, Walla Walla and Yakama with a haughty series of rhetorical questions, "The Young Chief says he does not see what we propose to give them. . . . Can we bring these saw mills and these grist mills here on our backs to show these people? Can we bring the blacksmith shops, the wagons & tools on our backs to show them at this time? . . . How long will these people remain blind. We came to try to open their eyes they refuse the light."¹⁶¹

¶ 102. Palmer explained their lands were "partched up plain" and worth not one half of what he had offered to pay for it. Palmer also warned, "Gold has been found in the country above yours. Our people are very fond of it. When our people hear this they will come here by hundreds, among these who come there will be some bad people, those bad people will steal your horses and cattle. There are but few of you, you cannot prevent it when you are scattered over a great extent of country, you cannot prevent it."¹⁶²

¶ 103. Palmer closed by pleading his sincerity, "We do not come among you as traders we come bearing the words of our Great Chief. If you refuse to receive it our hearts will be sad. Our hearts will be sorry for these chiefs for we like them. Our hearts will be sorry and bleed for all these old men. Our hearts will be sorry and bleed for these young men. Our hearts will be sorry and bleed for these women and children."¹⁶³

¶ 104. Despite Palmer's exhortations, tribal leaders were unwilling to agree. Cam an pellow (Cayuse) said "How do you show your pity by sending me and my children to a land where there is nothing to eat but wood? . . . The laws of God are not alone for

¹⁵⁹ *Id.* at 11-12.
¹⁶⁰ *Id.* at 12.
¹⁶¹ *Id.* at 58.
¹⁶² *Id.* at 59.
¹⁶³ *Id.* at 60.

you, they are for me as well."¹⁶⁴ Woa-lish-wam-pum said, "Your words since you came here have been crooked. That is all I have to say."¹⁶⁵

¶ 105. In the face of these refusals, Stevens adjourned until the next day while still trying to bring the council to a close. He said, "we have to get through the business of the Nez Perces so that they may get home, they have a long journey before them. . . . We want every person to come early."¹⁶⁶

¶ 106. Young Chief opened the council on Friday, June 8, by explaining why he was unable to agree to the proposal made. "We have so many horses and cattle in this country is the reason we were troubled. Your marking out the country is the reason it troubles me so and has made me sit here without saying anything. You Americans, your forefathers are dying in your own country, as many of your people are wealthy in stock it requires a large tract to keep them. . . . I cannot take the whole country and throw it to you. . . . You embraced all my country, where was I to go, was I to be a wanderer like a wolf. Without a home, without a house I would be compelled to steal, consequently I would die."¹⁶⁷

¶ 107. Stevens and Palmer finally came to realize they would not get agreement on their proposal for two reservations. So, Palmer proposed a third reservation for the Walla Walla, Umatillas and Cayuse. Palmer described the mills and schools and shops that would be built there, and the money that would be paid to these tribes.

¶ 108. It is clear from the minutes that this proposal had been discussed before the session began, and that the Walla Walla, Cayuse and Umatilla leaders had agreed. Pee--Pee-Mox-Mox (Walla Walla) confirmed the agreement he had reached with Palmer, and said that he would now accept the gifts and provisions that had been earlier offered. Joseph (Nez Perce) and Red Wolf (Nez Perce) spoke briefly to signify their agreement.

¶ 109. Only the Yakamas continued to refuse to agree. Kam-i-ah-kan said, "I wish the Americans to settle on the wagon route; we do not confine them to the road; they may settle about the road so that the Indians may go and see them."¹⁶⁸ Scloom said, "[W]hen you give me what is just for my land you shall have it."¹⁶⁹

¹⁶⁴ *Id.* at 61.

¹⁶⁵ *Id.*

¹⁶⁶ *Id.* at 63.

¹⁶⁷ *Id.* at 64.

¹⁶⁸ *Id.* at 69.

¹⁶⁹ *Id.*

¶ 110. Then, while the parties were on the verge of reaching an agreement, a powerful and disruptive force rode into the council from the east. It was announced that the influential Nez Perce leader Looking Glass had arrived from Buffalo Country. Stevens tried to make the best of the announcement, "I am glad Looking Glass one of your chiefs is coming, he is a friend of Kamiakun . . . let his first glance be upon you sitting here."¹⁷⁰

¶ 111. Just as Stevens hoped, Looking Glass rode onto the council grounds to see the negotiations under way. But, he was outraged. Looking Glass said, "My people what have you done? While I was gone you sold my country."¹⁷¹ The council adjourned.

¶ 112. The parties did not reconvene until 2 o'clock the next day, Saturday, June 9th. But in the interim, in private talks Stevens and Palmer had managed to gain the agreement of all the principal leaders present. Stevens opened by saying, "My friends, Today we are all I trust of one mind. Today we shall finish the business which brought us together."¹⁷² The three treaties had been drafted, and Stevens briefly reviewed the provisions of each of them.

¶ 113. Stevens then invited Looking Glass to speak, and must have been surprised to learn the agreement was not as secure as he had thought. Looking Glass insisted that the Nez Perce and United States should leave each other alone. He said, "A long time ago the Great Spirit spoke to my children. I am from the body of my parents and I set on a good place. . . . Why do you want to separate my children and scatter them all over the country? I do not go into your country and scatter your children in every direction."¹⁷³

¶ 114. Looking Glass wanted assurance that if he agreed, whites would be kept out of his country. Three times he asked, and three times Stevens and Palmer promised:

I want to know if an Agent will stay up in my country?
Stevens promised, As long as there are people.

Will the Agent be there that long to keep the whites from pushing into our country?
Palmer promised, "Certainly."

Will you mark the piece of country that I have marked and say the Agent shall keep the whites out?

¹⁷⁰ *Id.* at 67-68.

¹⁷¹ *Isaac I. Stevens* at 220-221.

¹⁷² *A True Copy of the record of the Official Proceedings at the Council in the Walla Walla Valley* at 70.

¹⁷³ *Id.* at 71-73.

Palmer promised, None will be permitted to go there but the agent and the persons employed, without your consent.¹⁷⁴

Looking Glass indicated the line he wanted, and explained, "The reason why that shall be the line is that they want more room for their horses and cattle."¹⁷⁵

¶ 115. Cayuse leaders were encouraged by the strong talk of Looking Glass. Young Chief said, "That is the reason I told the Governor to let it be till another time . . . I heard that Looking Glass was coming."¹⁷⁶ A short while later he said, "The President is your Chief and you do what he tells you. That is the reason the Looking Glass marked out the line he wanted: he is the head Chief."¹⁷⁷ Three Feathers said, "Looking Glass is speaking, we look upon him as a Chief."¹⁷⁸

¶ 116. Looking Glass claimed a broad authority to speak, "You see my body it is not divided, it is one body as these are all my children (pointing about)."¹⁷⁹ "It was my children that spoke yesterday and now I come and hear them speak. I asked my children what was their hurry? They knew that I was coming. Why did they run and speak till I came: that is the reason I marked it bigger. I wanted to talk with you and have you talk with me."¹⁸⁰

¶ 117. Stevens argued that the Nez Perce, the Walla Walla and the Cayuse had all already agreed, and that should be the end of it. Palmer added, "Do you wish to throw all we have said to you behind you. Shall we like boys say yes today and no tomorrow?"¹⁸¹

¶ 118. Billy from the Nez Perce complained about Looking Glass, "This is just putting it off further and making us more tired. You have no pity on us. . . . I thought we had appointed Lawyer our head Chief and he was to do our talking, that is the reason why I have spoken."¹⁸²

¶ 119. Not only did Looking Glass propose a different reservation line, he proposed to change the treaty process: "You said you would send this talk to the President and if he says yes . . . then we will talk."¹⁸³ Stevens demanded that the tribes

¹⁷⁴ *Id.* at 73.
¹⁷⁵ *Id.* at 74.
¹⁷⁶ *Id.*
¹⁷⁷ *Id.* at 77.
¹⁷⁸ *Id.* at 74.
¹⁷⁹ *Id.* at 76.
¹⁸⁰ *Id.* at 77-78.
¹⁸¹ *Id.* at 77.
¹⁸² *Id.* at 74.
¹⁸³ *Id.*

agree first, "The Prest. has sent me and my brother to make this very agreement. We must agree upon something then it goes to the President and if he thinks it is good then he approves it."¹⁸⁴

¶ 120. Seeing that Looking Glass was not going to agree, Stevens decided to adjourn until Monday. Palmer pressured the tribes, "If the Looking Glass is a Chief I hope he will act as a Chief acts for the good of his people. If we were to say yes to his line our Chief would say No! but if we shall say the line we have marked we believe our Chief will say Yes. Which will you do, take that line or have it all thrown away? Let us act like wise men and not part without doing good for each other."¹⁸⁵

¶ 121. The Council convened for its last session on Monday, June 11. Somehow, over the Sabbath Stevens and Palmer had overcome the opposition of Looking Glass. Stevens' opened the session by declaring, "My children, we have met today for the last time. Every man here present has agreed to a treaty in council."¹⁸⁶ Before presenting the treaties to be signed, Stevens emphasized to the tribal leaders the importance of keeping the promises embodied in the treaties: "We all expect that you all will do what you promised to do. We don't believe you will break your word and make us ashamed of you. I don't believe we shall have to say to the President, 'you have promised, and then broke your promise.' No! We know that you will keep your word."¹⁸⁷ There was far less emphasis upon the obligation of the United States to keep the promises being made.¹⁸⁸ The treaties were then signed.

¶ 122. After the signing, various delegates to the Council made closing speeches. Stevens confined himself to rather immediate concerns. The treaties would be submitted to the President. Presents would be distributed as people left the Council grounds. The various tribes were encouraged to travel to Buffalo Country to treaty with the Blackfeet. Rather arrogantly, Stevens concluded: "Thenceforth you will have me for your Great Chief."¹⁸⁹

¶ 123. Joel Palmer addressed these matters also, but spoke more generally about the treaties. He began: "We have shown you our hearts and you have shown us yours. We commenced a long way apart but now we are together. We are one. I hope we shall

¹⁸⁴ *Id.* at 75.

¹⁸⁵ *Id.* at 78.

¹⁸⁶ *Id.* at 79.

¹⁸⁷ *Id.*

¹⁸⁸ Joel Palmer commented later in passing: "We have not got a great many goods but when this paper goes to the President and he says it is good then we will supply you with other goods, and we shall do all things that we have agreed upon." *Id.* at 82.

¹⁸⁹ *Id.* at 80.

always remain as one and have but one heart."¹⁹⁰ Palmer exhorted all present to live in peace, and emphasized the importance of living according to the treaties:

If your people are foolish and do wrong it is your duty as chiefs to punish them for it. We shall try and prevent the whites from doing wrong to the Indians, and you must prevent your people from doing wrong to the whites. The Treaty provides that if an Indian steals the property of the whites it may be paid for from the annuities. It also provides that if your people steal from other tribes it will be paid for in the same way. We also provide that if the whites take the property of an Indian it must be paid for. The Agent who is the proper person to apply to in case an injury is done you.¹⁹¹

¶ 124. After Stevens and Palmer finished several tribal leaders made their own closing speeches. They too emphasized the importance of abiding by the treaties. However, in contrast with Stevens and Palmer, the tribal leaders emphasized the importance of the whites living up to the treaty. Tin-tin-meet-see said:

We are never the beginners in doing wrong to the whites. All Indians here understood well what has been said. When your white children come into this country they do things at random. (to the Indians) You have heard all that has been said and now let us go home and do right.¹⁹²

¶ 125. Eagle of the Light agreed: "I do not want our hearts to come together wrong, but right, and remain so as long as we are a people, and we will stop the bad people on both sides."¹⁹³ Red Grizzly expressed his concern: "[W]hen Red Owl said your chief wished to say that he wanted you to stop the whites from taking their horses or cattle and if my horses go across the line of the reservation which is a small one I do not want these horses and cattle to be taken off because they are over the line."¹⁹⁴

¶ 126. In the very last words spoken at the Council, Looking Glass was inviting Governor Stevens to another Council: "As so many are now working, some other time you and I will have a heart. I have a good head and a good heart, by and by we will

¹⁹⁰ *Id.* at 81.

¹⁹¹ *Id.*

¹⁹² *Id.* at 83.

¹⁹³ *Id.*

¹⁹⁴ *Id.*

have a talk."¹⁹⁵

THE FISHING CLAUSE

¶ 127. Just as with the treaties west of the Cascades, Governor Stevens knew that a fishing clause was a pre-requisite to any agreement of the Nez Perce. Accordingly he included Article III paragraph 2 in the first draft of the treaty. Stevens and Palmer¹⁹⁶ tried to turn the concession to their advantage by using the clause during the Walla Walla Council as a rhetorical device to persuade the tribes to agree. Stevens explained why the Nez Perce and Yakima Reservations originally proposed were selected:

I will give briefly the reason for selecting these two Reservations. We think they are large enough to furnish each man and each family with a farm, and grazing for all your animals. There is especially in winter grazing on each Reservation. There is plenty of Salmon on these reservations, there are roots and berries. There is also some game. You will be near the Great Road and can take your horses and your cattle down the river and to the Sound to market.¹⁹⁷

¶ 128. On June 5, Stevens pointed out the rivers and the fisheries being secured to the Nez Perce:

Here (showing a draft on a large scale) is a map of the reservation. There is the Snake River. There is the Clear Water river, Here is the Salmon River. Here is the Grande Ronde river. There is the Palouse river. There is the El-po-wow-wee.¹⁹⁸

This is a large Reservation. The best fisheries on the Snake River are on it; there are the fisheries on the Grande Ronde river. There are fisheries on the Os-ker-ma-wee, and the other streams. There are cumash grounds here at this place (pointing to the large cumash grounds of the Nez Perses). We feel if we put you on this Reservation our agent can visit you all and take care of you all.¹⁹⁹

¹⁹⁵ *Id.* at 84.

¹⁹⁶ Palmer was not as inclined to use the clause as Stevens, but he did argue: "You will be allowed to go and catch fish and dig roots the same as the whites; and if any of our people do wrong to you you are not to shoot them, but to go to the Agent." *Id.* at 38. Palmer also took a cue from Stevens and included a fishing clause in a treaty with the Confederated Tribes of Middle Oregon negotiated shortly after the Walla Walla Council. 12 Stat. 963.

¹⁹⁷ *Id.* at 23.

¹⁹⁸ *Id.* at 24.

¹⁹⁹ *Id.*

You will be allowed to pasture your animals on land not claimed or occupied by settlers, white men. You will be allowed to go on the roads, to take your things to market, your horses and cattle. You will be allowed to go to the usual fishing places and fish in common with the whites, and to get roots and berries and to kill game on land not occupied by the whites; all this outside the Reservation.²⁰⁰

¶ 129. Later, at the critical moment when Governor Stevens was trying to persuade the reluctant Looking Glass, he said:

Looking Glass knows that in this reservation settlers cannot go, that he can graze his cattle outside of the reservation on lands not claimed by settlers, that he can catch fish at any of the fishing stations, that he can kill game and can go to buffalo when he pleases, that he can get roots and berries on any of the lands not occupied by settlers.²⁰¹

¶ 130. Governor Stevens reported to the Commissioner of Indian Affairs that the Walla Walla Treaties had reserved to the tribes a "nearly inexhaustible Salmon"²⁰² fishery.

¶ 131. The legal history of the fishing clause has been rendered thus far entirely from the written accounts recorded by United States officials and citizens. There are important Nez Perce accounts of the Nez Perce Treaties. These accounts make the essential role of the fishing clause in the Nez Perce Walla Walla Treaty even more apparent than those previously cited.

¶ 132. Henry E-nah-la-lamkt recounted the importance of fishing and hunting rights in the Walla Walla Treaty to the Nez Perce:

While the treaty did not provide to pay us for the game or fish lost by reason of the large cession made, it did provide that we should still have access to the same . . . [The treaty of 1863 provided] that we still have the right to hunt and fish on any of the lands formerly owned by the Nez Perces. . . . *The thing of the greatest interest to us at that time was the right and possession of the game and fish, and the fact that these were reserved to our people was considered as the greatest compensation for the cessions.*²⁰³ (Emphasis added.)

¶ 133. Yellow Bull was present at the Walla Walla Council

²⁰⁰ Id. at 25.

²⁰¹ Id. at 43.

²⁰² Isaac Stevens to CIA Manypenny, June 14, 1855.

²⁰³ MEMORIAL OF THE NEZ PERCE INDIANS, 62d Congress, 1st Session, Sen. Doc. No. 97. [Hereinafter cited as MEMORIAL OF THE NEZ PERCE INDIANS.]

but not the 1863 Lapwai Council, and played a prominent part in the Joseph War.

In 1855 our people were scattered over vast areas of country, some of them lived in Montana, a great many in Idaho, some in Washington, some of them lived in Oregon and Wyoming, but they claimed all the territory as far as the villages extend and all the territory in between. The treaty of 1855 was through the efforts of Gov. Stevens and the officials of the United States using their influence on lawyer and the counselors from Idaho Territory. Many of the leading men from the remote parts of the Territory, such as those in Montana and Wyoming, and especially those of Wallowa. We were not consulted as to this treaty, and this is principally the cause of much of the dissatisfaction.²⁰⁴

*We also contended that we had the right to the game and fish in this vast territory, whether it was included in the ceded portion or the part that was reserved to ourselves. We were often molested and interrupted in our hunting trips by white people and our rights disputed by white settlers. This, too, brought about trouble and dissatisfaction. Many of our people were killed in the Joseph War and many more died from the hardships they suffered from the removal to the Indian Territory and their return to the north.*²⁰⁵ (Emphasis added.)

¶ 134. John Reubens witnessed the 1855 and 1863 Treaties and the 1893 Agreement, and recounted:

*At the making of the treaty of 1855 the officers of the Government flattered our people very much, telling them they were glad to meet a treaty-making people; that a treaty was more as a proof of friendship than a sale of land; that they made presents to the Indians of rations. Gov. Stevens told us that even though we made a sale of our land to them we still would have the right to go from place to place and hunt and fish any place on the territory the same as we always did. This same assurance was given us in the treaty of 1863. Now we are denied those privileges. We believe that we should be paid a much larger sum of money for our rights--the fish and game, the streams and springs, roads and highways across this country. We believe that if the Government had protected us in these rights that we would not have had the trouble known as the Joseph War.*²⁰⁶ (Emphasis added.)

²⁰⁴ *Id.* at 44.

²⁰⁵ *Id.*

²⁰⁶ *Id.* at 58-59.

¶ 135. Philip McFarland, who was 19 years old at the time the 63 Treaty was negotiated, stated:

After the treaty of 1863 and when our reservation was reduced to a small area we did for many years have access to the game and fish on the ceded lands and the right to roam over the ceded lands at will. Some time about a year after, we received our first per capita payment in 1895. I remember of James Reubens telling our people that we would soon lose our hunting and fishing privileges as the State would pass laws or had passed laws to protect the game. I do not remember, however, of any of our people having been arrested for hunting and fishing until about 11 years ago. Our people always contend and every one understood that we had reserved the fish and game in the treaty of 1855, the treaty of 1863, and even in the agreement of 1893. We have never been paid anything to relinquish these rights and we never did relinquish these rights; on the contrary, we were always assured that we had them until the last few years.²⁰⁷

¶ 136. George Amos gives this account of the Walla Walla Treaty:

In 1855 I was in Montana, and I returned to my people, signed the treaty with the United States. When I returned I learned that the Nez Perces residing in the vicinity of Kamiah had invited all the tribe from all over the country, mountains, streams, and gulches to come to Kamiah for the purpose of electing a head chief. After everyone had collected at Kamiah and they had held council for about one month they selected Lawyer as the head chief of the tribe. After the election the head chief, Lawyer, he told his people that they were requested to come to Walla Walla to meet some officers of the United States Government, but that he did not know for what purpose, so most of the people that were camped at Kamiah went there. When I arrived there I saw the officer of the United States Government and Gov. Stevens, of Oregon, and heard him and others address the people, and he told the people he was going to establish their boundary lines so that they would know where their lands laid. They counceled for many days without coming to an agreement, until some one of the people told the head chief that they would leave the matter to him to determine and they would agree to whatever he did. They could not come to an understanding as to the boundary lines. Gov. Stevens told them that he did not want to take their good lands from them but only the rocky places, the mountains. Chief Lawyer told the people that while we were giving up the rocky mountain lands we were retaining the good lands.

²⁰⁷ *Id.* at 47.

They would put up sawmills for us, cut lumber for us, put up blacksmith shops and supplies, and furnish us with farmers, schools, give us cows, domestic animals, and help us to live a more healthful life. Gov. Stevens told the people that even though they ceded to the Government the hills, mountains surrounding them, they would still have access to hunt and fish on the ceded land and the right to the streams, springs, and fountains, the use of the roads, highways, and passes, and the use of the timber for camping purposes. These privileges would belong to them no matter what conditions came over the country or what laws were passed.²⁰⁸ (Emphasis added.)

¶ 137. While he was not there to witness the execution of the treaties, tribal member Owen Gould offered this interpretation of the "in common with" language:

"In common with the citizens of the territory," was a phrase wisely inserted mainly to protect the few whites who at times had to take fish for sustenance so that their actions would not rile the Indians.²⁰⁹

¶ 138. It is clear from the historical record that the fisheries clause was of paramount importance to both the Nez Perce and the United States at the Walla Walla Council. The thing of greatest interest to the Nez Perce at the Council was the right and possession of the game and fish.²¹⁰ The thing that finally reconciled the Nez Perce and made them inclined to sign the treaty was the reservation of the game and fish rights.²¹¹ Anson Dart had learned as early as 1851 that the Indians of Oregon Territory refused to cede their homelands without reservations of the fisheries.²¹² Joel Palmer, who replaced Dart, understood that without protection of the fisheries there would be no treaties.²¹³ Isaac Stevens was told the same thing when he arrived in Washington Territory in December, 1853, by the oldest settlers in the country and those best acquainted with the Indians.²¹⁴ The fishing clause was as important to the interests of the United States as it was to the interests of the Nez Perce. In his Annual Report for 1853 Commissioner Manypenny pointed out that hostilities with the tribes would involve an amount of expense far exceeding that of purchasing the lands.²¹⁵ As Governor

²⁰⁰ *Id.* at 48-49.

²⁰⁹ Gould, MEMORANDUM OF HUNTING AND FISHING RIGHTS, attached to letter from Fort Lapwai Indian Agent E.W. Jenmark to Commissioner of Indian Affairs, January 13, 1933.

²¹⁰ Affidavit of Henry E-nah-la-lamkt, MEMORIAL OF THE NEZ PERCE INDIANS.

²¹¹ Affidavit of Kol-Kol-Chaw-hin, *Id.*

²¹² Dart to Commissioner of Indian Affairs, November 7, 1851.

²¹³ Joel Palmer to G.W. Manypenny, October 8, 1855.

²¹⁴ Isaac I. Stevens to George W. Manypenny, December 26, 1863.

²¹⁵ Report of the Commissioner of Indian Affairs, November 26, 1853.

Stevens recognized, any other policy would be injudicious, almost impossible and contrary to customary use and natural right.²¹⁶

§ 6. THE 1863 TREATY

¶ 139. Within a year the terms of the Walla Walla Nez Perce Treaty were tested when hostilities between the United States and the Yakamas and their allies broke out. True to their pledge of amity, the Nez Perce refused to join the Yakama and rendered aid to the United States. Colonel George Wright negotiated a treaty of "peace and friendship" with the Nez Perce on July 4, 1858. There was to be "perpetual peace between the United States and the Nez-Perces tribe."²¹⁷ In the event of war, the Nez Perce agreed to aid the United States with men to the extent of their ability, with arms and provisions to be provided by the United States. The United States promised to aid the Nez-Perces with troops, expenses to be paid by the United States. Any disagreements were to be "settled by their respective chiefs in friendly council."²¹⁸

¶ 140. In 1864, Chief Lawyer recounted the aid rendered by the Nez Perce:

We have always been with the whites. We fought with Major Haller, with Col. Wright and Col. Steptoe, and with the latter our blood was mingled with yours, and when defeated, had not Timothy and Levi conducted them out of the country, they would have all be killed.²¹⁹

¶ 141. The Lapwai Treaty Council was precipitated by E.D. Pierce and the Clearwater gold rush which followed him. The policy of breaching that clause of the 1855 Treaty which guaranteed to the Nez Perce "exclusive use" of their Reservation, and pursuing a council to amend the treaty, was apparently created in Pierce's camp on the Clearwater in the Fall of 1860. It was Pierce's third clandestine visit to the Reservation. Agent Cain who was responsible for the Nez Perce Reservation traveled to the camp from his post in Walla Walla, ostensibly to order Pierce and his comrades off the Reservation. In a report filed after this meeting, Cain recommended that a council be called to amend the treaty, and that the military be used in the

²¹⁶ Isaac I. Stevens to George W. Manypenny, December 26, 1853. S.Doc. 34, pp. 6-7.

²¹⁷ H. Clay Wood, *The Status of Young Joseph and His Band of Nez Perce Indians under the Treaties between the United States and the Nez-Perce Tribe of Indians and the Indian Title to Land* (Assistant Adjutant General's Office, 1876) p. 23.

²¹⁸ *Id.* at 24.

²¹⁹ "Lawyer's Comments," attached to a letter from Caleb Lyon of Lyonsdale to Commissiomer of Indian Affairs Wm. Dole, August 22, 1864.

meantime to intimidate and appease the Nez Perce, thereby avoiding war.

¶ 142. Cain's recommendation went to Superintendent of Indian Affairs for Washington Territory Geary, and then to the Commissioner of Indian Affairs, and in the spring of 1861 the Senate considered the idea but failed to act. Geary and Cain were not to be deterred by a lack of Congressional authority; in April of 1861 they called a council and negotiated the "articles of agreement" they wanted. There were four articles. One granted permission to whites to mine that portion of the Reservation north of the Clearwater River. Two promised the Nez Perce that no whites would be allowed in that portion of the Reservation south of the Clearwater. Three promised that U.S. laws regulating trade with Indians would be enforced. And, four promised that the United States would maintain a military force sufficient to protect the Indians in the rights secured to them. Cain, of course, had no authority to make his promises, and no power to perform them.

¶ 143. Having bought a little time, Geary and Cain, through the Commissioner, continued to seek Congressional approval and budget for a treaty council. The Indian Appropriation Act passed in June of 1862 provided \$40,000 and authorized a new council. The Commissioners appointed to conduct the council found it convenient to postpone the meeting until the Spring of 1863. The council was scheduled to open on May 10.

¶ 144. The Commissioners were delayed at The Dalles for a couple of days waiting for a steamship to take them on up the Columbia, and didn't arrive in Lapwai until May 11. They immediately convened the Council to discover that only Head Chief Lawyer, who resided near the Agency, was present. The Commissioners were told that the other tribal leaders had been delayed by the wet weather, which had prevented them from putting in their crops as early as usual.

¶ 145. Superintendent Hale reported to the Commissioner that "evil disposed persons" had been telling the Nez Perce that the soldiers were stationed at Ft. Lapwai for the purpose of driving them from their homeland by force. Hale at once assured the Nez Perce that the troops were not there to drive them away, and that the purpose of the Council was to "council with them as to what was best to be done under the peculiar circumstance in which they found themselves by reason of the discovery of gold in their country."²²⁰ Hale also reported that "Many of them had heavy hearts in looking forward to the Council, knowing that its

²²⁰ Report of C.H. Hale, Superintendent of Indian Affairs, W.T., to Wm. P. Dole, Commissioner of Indian Affairs, June 30, 1863. [Hereafter cited as *Hale Report*.]

object was to induce them to consent to relinquishing a part of their lands to which the great body of the tribe were manifestly very averse."²²¹

¶ 146. At Chief Lawyer's request, the Council was reconvened on Wednesday, May 13. Lawyer requested that Perrin Whitman be brought to the Council to interpret for the Nez Perce. They considered Whitman more familiar with their language than the other interpreters present. Further, they thought that both parties might have "some hard things to say," and wanted the discussions to be "plainly or sharply interpreted." They particularly did not want Rev. Spaulding to have to do this job because "he was their Teacher, and they did not wish to put harsh words on his lips." In addition, they thought the disaffected or disloyal bands would object if the interpreters were chosen from amongst those who lived there. The Commissioners immediately assented, and sent Agent Anderson to Salem for Whitman.²²²

¶ 147. Superintendent Hale requested that Lawyer send messengers to the various bands urging them to come to the Council, and decided to explore the interior of the Reservation, particularly, the Clearwater River and the Nez Perce village at Kamiah. He was impressed by what he saw. At all the spots adaptable for agriculture, which were numerous but not very extensive, he found villages with wheat, corn, peas and potatoes growing luxuriantly. The largest village was at Kamiah, "situated on the bank of the South Fork of the Clearwater and "extending along the stream for a distance of about ten miles." With Lawyer's Creek the Nez Perce were "able to irrigate the entire plain, which [was] dotted with numerous Indian farms, exhibiting encouraging signs of thrift." Numerous and extensive bands of horses and quite a number of fine cattle were grazing on the border of the plain, on the lofty hills. The party returned to Lapwai over a rolling upland, "clothed with a most luxuriant growth of bunch grass, exactly suited for purposes of grazing."²²³

¶ 148. The weather continued wet and rainy, and the Nez Perce continued to be delayed. However, by the 19th, a thousand had gathered at the Council ground. An influenza epidemic raced through the Nez Perce camp; "scarcely a lodge was free from it, and in some of the lodges there were as many as four and five down at once." Three or four persons suddenly died. Finally, on the 22d, Dr. Baker from Lewiston was brought to the Council Ground to attend to those stricken. While several more died, the

²²¹ *Id.*

²²² *Synopsis of the preliminary and official proceedings of a council held in the valley of the Lapwai, Washinton Territory* p. 19. [Hereinafter cited as *Synopsis of Proceedings.*]

²²³ *Hale Report* at 12-13.

epidemic eventually abated.²²⁴

¶ 149. Then, on May 25th, while the epidemic still raged and before Perrin Whitman arrived to interpret, Superintendent Hale became impatient and opened the Council. He began by trying to dispel Nez Perce anxiety about the presence of so many troops:

We intend to act with perfect justice towards you in the sight of God. The Govt. of the U.S. desires to act justly towards you, and to preserve you against the injustice of men who would harm you and do you harm. It is for this that your Great Father the President of the United States has placed troops here. They will protect you, to see that justice is done to you, and not to drive you away from your homes as some bad men have told you.²²⁵

¶ 150. Apparently this assurance was disingenuous. Hale used the troops to have the Palouse Indians driven away from the Council.²²⁶ They were also important as a threat to the Nez Perce. Hale reported to the Commissioner: "[I]f it had not been for the force, which General Alvord had very considerately placed at Fort Lapwai with orders to remain until the Council should be dissolved, it is highly probable that we should have had serious difficulty before the close."²²⁷

¶ 151. Hale then moved right to the point of what he wanted:

We do not propose that you should leave your own country, we do not wish it, we only desire that you would relinquish such portions of your reservation as you do not really need.²²⁸

¶ 152. Despite what he said, Hale did in fact want the Nez Perce removed entirely from their homeland. From the time Agent Cain visited E.D. Pierce's gold camp in the fall of 1860, the United States sought to remove the Nez Perce entirely if possible. That was the Commissioner's proposal to Congress. However, the Nez Perce refused to move, and apparently Superintendent Hale did not think the United States could forcibly remove them. During the winter prior to the Council, Hale had instructed the local agent to ascertain the views of the Nez Perce:

²²⁴ *Id.* at 13.

²²⁵ *Synopsis of Report* at 21.

²²⁶ *Hale Report* at 14.

²²⁷ *Id.* at 15.

²²⁸ *Synopsis of Proceedings* at 21.

It was soon ascertained that it would be impossible to find outside of their own reservation a region of country suited to this people, upon which there could be any reliance for a permanent abode. Besides, if there were, it would have been of no avail, for they would have refused to enter into any arrangement whatever that would have required them to leave their own country.²²⁹

¶ 153. Hale then described the boundaries of the smaller reservation he was proposing. Why should the Nez Perce consent to sell the remainder? Hale offered them protection from the whites: "[W]e wish to bring you nearer together, so that your rights, your lives, and your property can be better protected."²³⁰ And, Hale offered them an allotment, a farm forever:

This land in the valley shall also be surveyed into lots, so that each of you can have a farm in his own right, and have it secured to him by a paper just as the whites do, then nobody can disturb you. The land thus given by the paper will be yours while you live, then your childrens, and when they die, it will belong to their children.²³¹

Hale closed the session by stating that more about the proposal would be discussed the next day, and urging the Nez Perce: "Think about what has been said, and see if it is not best for you to settle down as we propose, and become a farming people."²³²

¶ 154. Commissioner Hutchins spent the Council session on May 26 explaining the payments and other advantages the Nez Perce would receive under the amended treaty. The payments promised under the Stevens Treaty would be made. Each family would have an allotment, fenced and ploughed. The reduced Reservation would belong entirely to the Nez Perce. The United States would pay debts owing to the Nez Perce which arose out of the war of 1856. In addition to all these things, Commissioner Hutchins promised that \$81,200 would be spent during the first year after the treaty to provide mills and blacksmith shops to Kamiah, and to provide hospitals, schools and other services.²³³

¶ 155. At the completion of Hutchins' speech, the Nez Perce were ready to speak. Ute se mil e cum understood the proposal, but challenged its authority:

²²⁹ Hale Report at 12.
²³⁰ Synopsis of Proceedings at 21.
²³¹ Id. at 22.
²³² Id.
²³³ Id. at 22-23.

When did the order for this proposition you have made come from your government. I feel responsible to the Government and wish to know, if this comes from it, when it came, whether in the fall, in the winter or this spring? State it distinctly for we wish to know.²³⁴

¶ 156. Hale answered by explaining the events leading up to the Council. Then Head Chief Lawyer declared the allegiance of the Nez Perce to law and the Stevens Treaty, and questioned why the United States had not performed its promises:

As for me and my Chiefs, we are governed by law, we are here today to adhere to the treaty that has been made, and which we on our side have kept. . . . "[M]y people believe the law of God is binding on us and on you, for the law is sacred. . . . You have broken the treaty, not we. . . . We have been looking and we have been waiting, many articles in that treaty have not been fulfilled by the Government."²³⁵

Hale answered by saying that the Stevens treaty would be read tomorrow, for "perhaps we do not understand it."²³⁶

¶ 157. The Wednesday, May 27th session began with a reading of the Stevens Treaty, and ended with Superintendent Hale trying to explain away the many breaches by the United States: "We do not claim that in all respects the treaty has been carried out, but we claim that the President, the Government of the United States have endeavored to fulfill it."²³⁷ Hale claimed money had been appropriated by Congress, but acknowledged the mills, schools, houses and other things were not completed. He pleaded that he could not be held responsible for things that happened before he became Superintendent, and finished with more promises: "We are not here to break it, but to uphold it, to make it firm."²³⁸

¶ 158. Because Perrin Whitman and various Nez Perce still had not arrived at the Council, no meeting was scheduled for Thursday, May 28. However, when word that whites had seized and taken possession of Nez Perce homes near Lewiston reached the Council, the Nez Perce wanted an emergency session. Hale sent Col. Steinberger and a detachment early in the morning to remove the trespassers. When the session convened, Hale asked any Nez Perce who wanted to speak.

²³⁴ *Id.* at 23.
²³⁵ *Id.* at 24.
²³⁶ *Id.* at 25.
²³⁷ *Id.*
²³⁸ *Id.* at 26.

¶ 159. Head Chief Lawyer took the opportunity to respond to Hale's proposal. He began humbly, "[W]e do not profess to know it all. We understand much of it but no doubt come short of a perfect knowledge."²³⁹ Then Lawyer gave a long speech recounting the history of Nez Perce-white relations as "proofs of our adherence to the Law and our attachment to the whites."²⁴⁰ In contrast to the Nez Perce, Lawyer then listed the violations of the treaty by the whites. He finished by giving the Nez Perce answer to Hale's proposal: "I will now give you the great answers. Dig the gold, and look at the country, but we cannot give you the country you ask for."²⁴¹

¶ 160. Other Nez Perce leaders supported Lawyer. Ute-si-mil-a-kin said, "We cannot give up our country. You but trifle with us, we cannot give you the country, we cannot sell it to you."²⁴² La-haich-tuisla (Billy) said, "Yet you profess to speak according to law. It does not look good. It looks crooked. My people say, it is not good. . . . We have answered you, we cannot sell our country."²⁴³ Es-cot-nur agreed, "It is eight years since the treaty was made, and we have been waiting and listening since."²⁴⁴ And, so did Timothy: "The country is still ours and our children's. What Lawyer has said is the heart of all of the people."²⁴⁵

¶ 161. Hale's first response was to argue that the Stevens Treaty was not permanent. He argued that Article 6 of the Treaty which provided for allotments to be made by the President contemplated an amended treaty:

[The government] did expect, however, in virtue of your agreement, that, if the time should come, when that which you could not use might be needed, and the President should believe it more for your advantage to settle upon lots after the manner of the whites, and would send word to you, that such was his opinion, and that it was his wish to purchase from you, you would be willing to sell.²⁴⁶

¶ 162. Hale's second response was to rebuff the Nez Perce:

But if you have made up your minds, that is the end. We are sorry that you have so hastily decided this matter. All that we say to you, and that you say to us

²³⁹ *Id.* at 27.
²⁴⁰ *Id.* at 29.
²⁴¹ *Id.* at 30.
²⁴² *Id.*
²⁴³ *Id.* at 31.
²⁴⁴ *Id.* at 32.
²⁴⁵ *Id.*
²⁴⁶ *Id.* at 31.

will be reported to the President. . . . As I said before, we were sent here to benefit this people, but if you do not recognize our authority, it is useless for us to talk any further to you."²⁴⁷

¶ 163. In his Report to the Commissioner, Superintendent Hale attributed the refusal of the Nez Perce to sell to the occupation of their homes while they were at the Council:

The movement of certain parties in going on to the lands of some of the Indians, at one of their villages near Lewiston, it being understood to be outside of the proposed new reservation, had much to do in inducing the first refusal to be made, so early and so decidedly.²⁴⁸

If he had not ordered Col. Steinberger to remove them, "the Council would have been speedily broken up and the Indians have returned in haste to their respective homes."²⁴⁹ The Colonel saved the Council:

The promptness with which the Col. acted in ordering the necessary force to execute the request, and their execution of the same, gave satisfaction to the Indians, quieted their fears, and soon restored their confidence.²⁵⁰

¶ 164. A week passed while everybody at the Council waited for the arrival of Whitman and the remaining, or disaffected, Nez Perce. When the Council re-convened on Wednesday, June 3, Commissioner Howe took his turn at trying to persuade the Nez Perce. The grievances complained of by Lawyer were not committed by the government. The problem was that the reservation was so large it could not be protected:

We are well satisfied that it is impossible to protect you properly in any other way than by reducing the size of your reservation, and each one taking his own farm and receiving a paper for it. This is the way the whites do it. It will then be secured to you and be your childrens, so that neither white men or Indians can take it from you.²⁵¹

¶ 165. Commissioner Howe concluded by renewing the offer that had been made the previous week. The Nez Perce retired from

²⁴⁷ *Id.* at 32.

²⁴⁸ *Hale Report* at 15.

²⁴⁹ *Id.*

²⁵⁰ *Id.*

²⁵¹ *Synopsis of Proceedings* at 33.

the Council and deliberated amongst themselves. They returned with a counter-offer. They were willing to sell the land where the gold had been discovered, and the place where Lewiston was situated along with the country around it for ten or twelve miles. The Commissioners summarily rejected the counter-offer:

The commissioners at once informed them that they could not entertain such a proposition. They did not believe that such an arrangement would be satisfactory to the government, and were well satisfied that it would be an injury, instead of a benefit, to the Indians themselves.²⁵²

The council was adjourned.

¶ 166. In the face of the continued refusals by the Nez Perce, the Commissioners decided to try a different approach. They began meeting in private with individual Nez Perce leaders. Hale explained his decision to pursue private meetings in his report to the Commissioner:

I became satisfied that the Chiefs were, to some extent at least, copying after the style of a certain class of politicians, they were making speeches in the Council for buncombe, out of which nothing would be likely to result. Instead of declaring their own views and opinions, as to what would conduce most to the interests and welfare of the tribe, they were doing no more than stating the opinions of the greater part of their people, who did not consider their future, or that of their children, and who, Indian like, were averse to any change that looked to the circumscribing of their boundaries. I therefore concluded to try private conferences with the Chiefs, where, by direct questions and answers, there would be better opportunity of ascertaining their true feelings, meeting their objections, removing their doubts, and explaining to them such matters as they were liable to misunderstand.²⁵³

¶ 167. When the Council re-convened the next morning, Thursday, June 4, Commissioner Hutchins took another turn at attempting to persuade the Nez Perce "with arguments similar to those already employed."²⁵⁴ For the first time, Big Thunder and Eagle of the Light, leaders of the disaffected bands, spoke. The Commissioners were not receptive as evidenced by this entry in the minutes:

²⁵² *Id.*

²⁵³ *Hale Report* at 15.

²⁵⁴ *Synopsis of Proceedings* at 33.

Two or three of the disaffected chiefs said a few words, but in such a haughty and incoherent manner as to be unable to understand the half of what was said.²⁵⁵

The private meetings continued after the public council session.

¶ 168. The Friday, June 5 council session was spent sending a sharp and threatening message to those Nez Perce unwilling to agree. Commissioner Hutchins was the messenger:

What you said convinces us, that you are not good men to the law and that you are bad counselors to your young men. . . But you shall not poison the hearts of the other Nes Perces. The Government will protect them against your bad designs, and will assist them as its good children, and it will punish you terribly if you persist in your evil counsel . . . Do you think that because you have refused the annuities, the beef and the flour, that the treaty was less binding on you? We tell you that the Treaty is binding on you, whether you accept these things or not. Your refusal makes no difference. You must obey the Law, and if you break it, you will be punished. . . . Now is the time for you to decide, for your future welfare. If you want to be honest, wise and true men, we will take you by the hand, and be your friends, but if you persist in your disloyalty, we shall not regard you as Nes Perces . . . Shall we regard you as friends, or enemies?²⁵⁶

¶ 169. The Council adjourned for several days while the private conversations had their effect, and then met again. Commissioners Hale and Hutchins repeated their proposal. Big Thunder protested:

I am not ashamed or afraid to talk to you. . . . I have never thought of living onto smaller piece of land as these you have worked out for me, I can hardly get about on it. . . . let us have time to think about it. Mind! I don't say, No! to your proposition, I want to think about it slowly.²⁵⁷

Moments later, Big Thunder left the Council: "I am very sick and spitting blood, excuse me."²⁵⁸

¶ 170. Cool-Cool-selma also left the Council, but not before saying:

²⁵⁵ *Id.* at 34.
²⁵⁶ *Id.* at 35-36.
²⁵⁷ *Id.* at 36.
²⁵⁸ *Id.* at 37.

The maker of the Universe caused both men and women to be placed on this earth. Ever since then Christianity has been looked on rightfully both by the whites and Indians. For that reason I do not wish to override the laws or disobey them.²⁵⁹

¶ 171. Then Lawyer and his supporters declared their support for the treaty, and pleaded for justice and a little larger reservation. Lawyer said:

You who have brought this order for this treaty. . . . Our Father in Heaven caused it, because for fear that we Indians would be blinded to our own interests. . . . The Indians did not do right in former times. When the Indians did not do right, it caused them to be scattered off in all directions. It was for the good of the Indians that the law was sent to us. . . . I am poor, the Lawyer is poor. The Government, and the President all hear to what I say, you see me here. You see the whites all around me, and those at Lewiston too. You see the many travelers that are going to the mines and those that are there already. . . . You speak of causing my people and children to settle down permanently; you know the size of the proposed reservation; please add a little more to it and make it a little larger. . . . As long as these mountains exist, so long you must have pity on my children, till the end of the earth. Year after year when I am dead and gone, you will remember what I have said. I talk now of things that are to remain from now till the last day.²⁶⁰

¶ 172. Uute-semeli-can said:

I did not talk right when we first commenced this Council. What I said first, I now abandon. From the first time that I heard of the white man's law, I came under its protection. I came under the protective care of the Government. I have always heard that was the right way to do, and for that reason I tell you, that as I did not exactly understand you at first, I did not talk right. . . . I am poor, weak and feeble, both in body and mind. I throw myself on the protection of the law and the Government.²⁶¹

¶ 173. Spotted Eagle said:

²⁵⁹ *Id.*

²⁶⁰ *Id.* at 37-38.

²⁶¹ *Id.* at 38.

The whites are our friends as of from the same family, and therefore let's not do anything that would harm each other. I was always friendly with the whites. . . . I will not deviate from what Lawyer has said.²⁶²

¶ 174. Billy said:

It is not for us to turn from what you have told us, but for us to follow your advise and your counsel. We will settle down permanently Our hearts are truly glad at what you say. My Chiefs have already spoken, I have shown you my heart.²⁶³

¶ 175. Jason spoke briefly, "I hope you will make the boundaries of the reservation a little larger, that's all I have to say."²⁶⁴ And, Timothy agreed:

It is a small place to raise all our children on that you propose; talk to us plainly, show us the right way. Chiefs! we have no houses to live in. As the Lawyer says, be merciful to our children and see that they are attended to as long as the mountains stand. It will be well for us to receive goods from year to year. We hunger and thirst after the right way to do good. Attend to us rightly and do justice to us, and it will be like meat and drink to our children.²⁶⁵

¶ 176. After Levi and Spotted Eagle spoke briefly, Superintendent Hale declared his proposal accepted: "Then I understand you accept our propositions. I am satisfied you will never regret it."²⁶⁶

¶ 177. Hale quickly proposed that Chiefs who understood the proposal should be chosen by the Nez Perce to help draft the treaty. The Council convened for one last time on June 9 for the purpose of signing the new treaty.

¶ 178. Hale was happy with the deal struck with the Nez Perce. He reported to the Commissioner, "The amount relinquished is very nearly six millions of acres, and is obtained at a cost not exceeding eight cents per acre, when all the expenses present and prospective on the satisfaction of the treaty, shall have been met."²⁶⁷ Not only were the lands acquired cheaply, they were valuable: "In the tract of country relinquished is much that is

²⁶² *Id.*
²⁶³ *Id.* at 39.
²⁶⁴ *Id.*
²⁶⁵ *Id.*
²⁶⁶ *Id.* at 40.
²⁶⁷ *Hale Report* at 18.

exceedingly valuable, by reason of its gold and silver mines, whilst many of its valleys and much of its uplands will be found desirable and necessary for agricultural and grazing purposes."²⁶⁸

¶ 179. Hale reported to the Commissioner that the friendly faction of the Nez Perce agreed to accept the proposition made "with some slight alterations, as to boundary, and a few changes in the way of further consideration." By agreeing, "they said they would cast themselves upon the generosity and justice of the U.S. Government."²⁶⁹

¶ 180. Hale also reported that the unfriendly or disaffected bands of the Nez Perce also agreed to the proposal:

On the part of the disaffected bands, their chiefs gave an unequivocal assent to the main features of the Treaty, so far as they were concerned, only that their pride would not permit them to come in with the Lawyer party and sign the Treaty.²⁷⁰

¶ 181. Hale named three chiefs, Quil-quil-se-ne-na, Eagle of the Light and Hin-ma-lute-ka-kike or Big Thunder, who came to explain why they did not sign. They first explained that their refusal was not out of disrespect for the United States Government:

[E]ach came of their own accord, in private conference, and asked that it might be reported to their great Father at Washington, that they did not refuse to sign the Treaty, out of any disrespect or want of friendly feeling towards him, to the Commissioners, or the people of the United States, but that their refusal was solely on account of difficulties amongst themselves.²⁷¹

¶ 182. The Nez Perce leaders were of the opinion that it was not necessary for them to sign:

Besides, they alleged that it was not necessary for them to sign it, as they were not called upon by conditions of the treaty to surrender anything to the Government, as their lands were almost entirely included in the proposed new Reservation.²⁷²

Finally, they explained that they did not sign because they did not need what the United States was offering: "They did not need

²⁶⁸ *Id.*
²⁶⁹ *Id.* at 16.
²⁷⁰ *Id.*
²⁷¹ *Id.*
²⁷² *Id.*

provisions or presents, they were not poor, they were rich."²⁷³

¶ 183. Superintendent Hale lamented the division between the friendly and disaffected factions in the Nez Perce Nation. He did not acknowledge that the Lapwai Council had greatly deepened the division. However, he did recognize that the Lapwai Treaty was at the heart of the division, and that experience under the Treaty would determine the future of the Nez Perce:

Their future depends much, very much, upon the faithfulness with which the United States Government shall fulfil the treaty made, if the same be ratified. Should its provisions be fully and promptly carried out, as intended, it will doubtless operate more efficiently than anything else, to heal their divisions, and make them a united and prosperous people. Failing to do this will widen the breach, and, in the end, be productive of more serious consequences.²⁷⁴

¶ 184. Despite the forceful insistence by the United States that the Nez Perce consent, the 1863 Treaty was not an abrogation of the 1855 Treaty. It was an amendment to the the treaty which already existed. The 1863 Preamble stated that the various articles were "supplementary and amendatory to the treaty made between the United States and said tribe on the 11th day of June, 1855."²⁷⁵ In addition, Article VIII re-affirmed the 1855 Treaty provisions not specifically changed:

[A]ll provisions of said treaty which are not abrogated or specifically changed by any article herein contained, shall remain the same to all intents and purposes as formerly, - the same obligations resting upon the United States, the same privileges continued to the Indians outside of the reservation, and the same rights secured to citizens of the U.S. as to right of way upon the streams and over the roads which may run through said reservation, as are therein set forth.²⁷⁶

¶ 185. There was, in the years following the Lapwai Council, great dispute about whether the dissenting Nez Perce leaders had signed the treaty and whether the treaty extinguished their title. In 1876 Assistant Adjutant General H. Clay Wood investigated these questions and reported to Brigadier-General O.O. Howard, Commanding Officer, Department of the Columbia. After an extensive analysis, Wood stated his conclusions of fact.

²⁷³ *Id.*

²⁷⁴ *Id.*

²⁷⁵ 12 Stat. 647.

²⁷⁶ *Id.* at 651.

The first confirmed Nez Perce title:

Originally the Nez-Perce Indians occupied a large extent of territory west of the Bitter Roots Mountains, in Idaho, Washington Territory, and Oregon, their title to which, running back before the memory of man, is undisputed and clear.²⁷⁷

¶ 186. Wood concluded that the dissident chiefs were not parties to the treaty:

Joseph, Eagle-from-the-Light, Big-Thunder and several less prominent chiefs, and headmen, -- with their followers, -- were not parties to the treaty of '63; have never acknowledged its binding force, or accepted any of its privileges or benefits. To the treaty they have objected the want of authority in the Indian who spoke for the tribe. They have uniformly haughtily and utterly repudiated it.²⁷⁸

¶ 187. Wood went on to state his conclusions of law, which were that the 1863 Treaty had not lawfully extinguished Joseph's title:

Thirteenth - It is from the fundamental laws (the laws and customs, Indian) of each state (tribe) that we must learn where resides the authority that is capable of contracting with validity in the name of the state (tribe.)

Fourteenth - In the formation of every treaty, the contracting parties must be vested with sufficient powers for the purpose.

Fifteenth - The non-treaty Nez-Perces cannot in law be regarded as bound by the treaty of 1863; and in so far as it attempts to deprive them of a right in occupancy of an land its provisions are null and void. The extinguishment of their title of occupancy contemplated by the treaty is imperfect and incomplete.²⁷⁹

¶ 188. Notwithstanding this opinion, General Howard ordered the non-treaty bands to remove from their homelands to the 1863 Reservation. When Toohoolhoolzote defied the order, General Howard threatened: "If you do not mind me, I will take my

²⁷⁷ H. Clay Wood, *The Status of Young Joseph and His Band of Nez-Perce Indians under the Treaties between the United States and the Nez-Perce Tribe of Indians, and the Indian Title to Land* (Assistant Adjutant General's Office, 1876) p. 42.

²⁷⁸ *Id.* at 42-43.

²⁷⁹ *Id.* at 45.

soldiers and drive you on the reservation."²⁸⁰ Band members understood the order to be a "show of the rifle," and the 1877 Nez Perce War was the result.²⁸¹

§ 7. THE 1893 AGREEMENT

COUNCILS

¶ 189. When the General Allotment Act was passed in 1887,²⁸² the Nez Perce Reservation was placed high on the list to be allotted and opened. Alice Fletcher was appointed the Allotting Agent for the Nez Perce and spent the summers from 1889 through 1892 on the Reservation making the allotments.²⁸³

¶ 190. As soon as Special Agent Fletcher had departed from the Reservation, but before any patents had been issued for the allotments, negotiations for cession of the unallotted lands were set in motion. On October 31, 1892, President Benjamin Harrison issued an executive order creating the Nez Perce Surplus Lands Commission and authorizing negotiations for purchase of the surplus lands. Robert Schleicher from Lewiston, Idaho, was appointed Chairman of the Commission. James F. Allen, Washington, D.C, and Cyrus Beede, Oskaloosa, Iowa, were appointed to serve as the other commissioners. On November 17, Indian Commissioner T.J. Morgan issued instructions and a sample agreement to the Commission.²⁸⁴

¶ 191. The Commissioners assembled in Lewiston, Idaho, on December 1 and on the following day made their first trip to Lapwai to meet with the Nez Perce. Upon their arrival on the Reservation, they found that the Nez Perce had already assembled for the Council, and that they had chosen delegates to represent them during the Council. Rev. A.B. Lawyer from Kamiah was the Chief Councillor and Chairman. The Assistant Councillors had been chosen to represent various regions of the Reservation and included from Kamiah: James Lawyer, Harrison Kip Kop pa lih kin and U tsin ma lih kin; from Lapwai: George Moses, Jonah Hays and James Reuben; from North Fork: Rev. William Wheeler and Rev. James Hines; Bartholomew from Meadow Creek; Eddie Conner from

²⁸⁰ L.V. McWhorter, *Yellow Wolf: His Own Story* (Caxton Printers, 1986) p. 41.

²⁸¹ Much has been written about the 1877 War. See Alvin Josephy, *The Nez Perce and the Opening of the Northwest* (Yale Univeristy Press, 1965) pp. 445-634.

²⁸² 28 Stat. 326. D. Otis, *The Dawes Act and the Allotment of Indian Lands* (1973).

²⁸³ See E. Jane Gay, *With the Nez Perces: Alice Fletcher in the Field, 1889-1892* (University of Nebraska Press, 1981) for an informative and interesting account of the Nez Perce allotment.

²⁸⁴ Commissioner John Morgan to Robert Schleicher, November 17, 1892.

Cottonwood Creek; Peo peo Mox Mox from Potlatch Creek; and Thomas Es ka win from Mission Creek.²⁸⁵

¶ 192. A first round of negotiations convened in the Lapwai Presbyterian Church on December 5 and lasted until December 15.²⁸⁶ The Commissioners at first insisted that the Nez Perce decide whether they would sell the unallotted lands, putting off the discussion of price and other terms until later. The various Nez Perce Counsellors respectfully explained that they had decided they did not want to sell. They favored the existing treaties and were fond of their country and thought it should be saved for their children. They complained about trespassers on the Reservation and about the manner in which Special Agent Fletcher had allotted the Reservation and that they had not yet received their patents.

¶ 193. By the fourth day of Council on December 8 the Commissioners decided to pursue a different strategy. They offered to pay \$2.50 per acre for all 59,734 acres of unallotted lands - a total of \$1,474,785. The Nez Perce leaders held steadfast (except for James Reuben and Eddie Conner), refusing to cede. The Commissioners intensified the pressure, first by threatening that the Reservation would be opened whether they agreed or not,²⁸⁷ leaving the question of compensation undecided.

²⁸⁵ Sen. Exec. Doc. No. 31, p. 26. The Nez Perce Agreement was referred by the Secretary of the Interior to the Senate on January 27, 1894. The referral is Ex. Doc. No. 31 of the second session of the fifty-third Congress. Ex. Doc. No. 31 includes the following documents:

1) Secretary of Interior referral letter.	1
2) General Land Office letter.	1
3) Commissioner of Indian Affairs referral letter.	4
4) Nez Perce Commission Report of May 1.	10
5) Nez Perce Commission Report of February 13.	12
6) Nez Perce Commission Report of November 25.	16
7) Idaho Land Board letter.	18
8) 1893 Agreement.	19
9) Council Minutes.	26
10) A Bill to Ratify the Agreement.	61

[Hereafter cited as *Sen. Exec. Doc. No. 31.*]

²⁸⁶ *Id.* at 26-60.

²⁸⁷ Apparently the Commissioners told the Nez Perce they could sell for the amount offered or the Reservation would be opened without any payment. Commissioner Cyrus Beede had made the statement to the local newspapers and tried to explain it away when asked by Assistant Counselor George Moses during the Council. *Id.* at 38-39. Later, during the fraud and undue influence investigation by Special Agent John Lane, Counselor Moses asked Nez Perce Agent Warren D. Robbins:

Is it a fact that you said that if you don't accept it this time, that Congress will take it in its hands and decide what would be done.

Agent Robbins did not deny the statement, but rather said:

I told George Moses and James Grant that I believed that they were getting a better price for their land than perhaps they would ever get again, and I feared if they didn't sell now that it would be detrimental to them. . . . Report of Agent John Lane in Case No. 147, *In re Charges vs. W.D. Robbins*, November 25, 1893. [Hereinafter cited as *Lane*

The Commissioners reminded the Nez Perce of the horrors of war.²⁸⁸ The Nez Perce wanted to adjourn; the Commissioners insisted the negotiations continue until some agreement was reached.

¶ 194. The Commissioners continued to press for an agreement. They added clauses to the Agreement that addressed particular Nez Perce concerns. One clause protected the homes of thirty families along Lapwai Creek, on lands formerly claimed by Reverend Spaulding. One clause promised the reservation would not be opened until the allotments were received and another that a surveyor would be provided for several years to help determine the allotment boundaries. A clause re-affirming the provisions of prior treaties was promised as well as payment to Nez Perce scouts who had served General Howard during the 1877 Nez Perce War.

¶ 195. The Commissioners also proposed that a committee with three Nez Perce representatives be convened to draft a final version of the agreement. The Nez Perce declined to join the committee, so the Commissioners prepared a final draft and presented it for Nez Perce signatures. Assistant Councillor James Reuben responded with a long list of proposed clauses. The Commissioners rejected Reuben's proposals, and to a person the Nez Perce rejected the Commissioner's proposed Agreement. The Council adjourned on December 15, the Commissioners having failed to gain the signature of a single Nez Perce.

¶ 196. A second phase of negotiations was held between December 29 and January 21.²⁸⁹ The Commissioners were joined by Inspector Junkin. The negotiations were convened in Lapwai, but few were in attendance. Meetings were held with small groups and individuals for several days, and the payment terms of the treaty were discussed. The Commissioners report that on January 4, Eddie Connor and others gave them their first signatures. While the Commissioners traveled around the western region of the Reservation slowly gathering signatures, there was still strong opposition in Kamiah.

¶ 197. The Commissioners traveled to Kamiah for public and

Report.]

²⁹⁰ "You have seen other changes among you. Ten years ago the Government kept soldiers at Lapwai. Soldiers are an emblem of war. War brings suffering - it brings hunger, thirst, and it brings poverty to women and children . . . It is the hope of this commission, as it is the hope of the President of the United States, that this Nation of Nez Percés, who were always among the first in the Arts of War, should, now that the time has come, be one of the first in the Arts of Peace." *Id.* at 44.

²⁹¹ There is far less information in the public record about this phase of the negotiations. No typewritten summary was made. The official record consists of: (1) very brief descriptions made by Chairman Schleicher after each session; (2) the February 13 Report; and (3) the May 1 Report. *Id.* at 10-16; 60-61.

private meetings during the middle of January. Even though they were able to secure the signature of Chief Counsellor Archie Lawyer, other Kamiah leaders and their followers refused to sign. The Commissioners departed Kamiah for Lewiston on January 22, far short of the number of signatures needed. They had been instructed they needed the signatures of a majority of the male members of the Tribe, which the Nez Perce Agent certified totalled 407 persons. At this point the Commissioners had only 117 signatures, 17 of them represented by a Power of Attorney.

¶ 198. In his February 13 Report to the Secretary of the Interior, Chairman Schliecher offered his analysis of why the negotiations had not yet succeeded. The first reason was that the Nez Perce had a better offer. A group of capitalists and railroad men had offered to rent 250,000 acres for a ten year period for a sum that would far exceed the amount offered for the United States for an outright purchase.²⁹⁰

¶ 199. The second reason given by Chairman Schleicher was that while a majority of the tribal men favored the agreement, they were being prevented from signing it by the leaders. In the Chairman's estimation a dozen men owned 90 per cent of the stock owned by the Tribe. Many of these men had been elected Councilors and were opposed to the sale because they would lose the benefit of half a million acres of land while the sale proceeds would be divided amongst all the members.

¶ 200. A third and final phase of negotiations was held between March 15 and May 1, 1893. No record of these proceedings was kept,²⁹¹ so it is not possible to determine why so many of the Nez Perce who were opposed to the Agreement were suddenly willing to sign it. Chairman Schleicher reports only that "quite a number of those who had formerly most strenuously opposed the agreement most anxious for its speedy completion."²⁹² Forty signatures were obtained in two days (March 15 and 16), and by May 1, 236 had signed.

¶ 201. Chairman Schleicher submitted the proposed Agreement to the Secretary of the Interior on May 1, 1893, and recommended its approval.²⁹³ Several problems had to be taken care of before the Secretary could recommend to the Senate that the Agreement be ratified. Perhaps the most serious of these was a delegation of Nez Perce who traveled to Washington to protest to the Department that the Agreement had been gained by the use of undue influence

²⁹⁰ *Id.* at 15.

²⁹¹ Chairman Schleicher did not bother to keep even the brief summaries that he had kept during phase 2 of the negotiations. The only official record of phase 3 of the proceedings is the May 1 Report from Chairman Schleicher to the Secretary of the Interior. *Id.* at 10-12.

²⁹² *Id.* at 10.

²⁹³ Chairman Schleicher to Commissioner, May 1, 1893.

and pressure.

¶ 202. On September 21, the Commissioner of Indian Affairs instructed Special Agent John Lane to make an investigation. Agent Lane conducted hearings in Lapwai on October 22 and 23. Testimony was taken from fifteen witnesses who were alleging undue influence and from numerous witnesses who supported the Agreement, including Chairman Schleicher. Agent Lane was persuaded by those who favored the Agreement, and reported to the Commissioner on November 25 that "there was no fraud, undue pressure or improper methods used in procuring the signatures to said agreement."²⁹⁴

¶ 203. Secretary Smith forwarded the proposed Agreement to the Senate on January 27. He showed little enthusiasm for it, making no recommendation with respect to its ratification. Four days later, the Agreement was referred to the Committee on Indian Affairs and ordered to be printed.²⁹⁵ The Committee on Indian Affairs reported the proposed Agreement to the House on June 8, 1894. Soon thereafter the House approved an Indian Appropriations Bill and sent it to the Senate. The Senate amended the Appropriations Bill by approving the Nez Perce Agreement. The Agreement was vigorously debated when the Bill returned to the House, but was eventually approved on August 7, 1894.

¶ 204. The terms of the Agreement required that the Nez Perce patents be issued before the government opened the Reservation.²⁹⁶ As soon as this was completed President Grover

²⁹⁴ Lane Report at 21.

²⁹⁵ The history before Congress involves three separate bills. See the Index Volume to Volume 26 of the Congressional Record: subject matter Index pp. 226-229; House Bills Index pp. 130, 151 and 166. H.R. 6253 proposing to ratify the Nez Perce Agreement was introduced by Willis Sweet. 26 Cong. Rec. 2926. H.R. 7387 was introduced by the House Indian Affairs Committee as a substitute for H.R. 6253. See House Report No. 1050. *Id.* at 5994. Neither of these bills was discussed on the floor of Congress. H.R. 6913 was the Indian Appropriations Bill. This bill was debated extensively the first time through the House, but the debates are not particularly relevant to Nez Perce diminishment because the Nez Perce Agreement was not at this point a part of the bill. *Id.* at 4275, 4786, 5892-5893, 5925-5947, 5997-6013, 6064-6082, 6181-6193, 6233-6253, 6292-6315, 6356-6361, 6363-6374, 6419-6435. H.R. 6913 was sent to the Senate, where the Appropriations Committee recommended 120 amendments, including ratification of the Nez Perce Agreement. See Senate Report No. 510. *Id.* at 6439 and 7230. The Senate debated the various amendments and passed the bill. *Id.* at 7592, 7616-7641, 7678-7708. The Nez Perce Agreement was approved without debate. *Id.* at 7629-7630. The House and Senate then appointed a Conference Committee to work on the differences. *Id.* at 783-7784, 7800, 8015, 8056-8058, 8135-813. The House Conferrees persisted in their opposition to the Nez Perce Agreement and the issue is debated on the floor and eventually passed. *Id.* at 8251-8271, 8280, 8286-8287, 8296, 8360, 8362, 8592. That part of the debate most relevant to the Nez Perce Agreement can be found at pp. 8255-8258 and 8263-8271.

²⁹⁶ Article V.

Cleveland issued a Proclamation setting November 18, 1895 as the date the Reservation would be opened.²⁹⁷

SAVING THE FISHING CLAUSE

¶ 205. Article 11 of the 1893 Agreement is a general savings clause:

The existing provisions of all former treaties with said Nez Perce Indians not inconsistent with the provisions of this agreement are hereby continued in full force and effect.²⁹⁸

¶ 206. This clause was not included in the model agreement provided to the Nez Perce Commission by the Commissioner, but was added during the council at the insistence of the Nez Perce. Throughout the council the Nez Perce insisted upon affirming their earlier treaties. In his opening address to the Council, Chief Counsellor and Chairman of the Nez Perce Archie Lawyer said:

Here we are visible from head to foot. I show to you that we have lived up to that treaty of 1855. We favor that treaty and the treaty laws of the United States. What ever is done is to be done in accordance with that treaty and treaty principles and in accordance with law . . . We hold fast to law and treaty stipulations and think not that we propose to abandon the treaty or treaty stipulations.²⁹⁹

In another of the many examples Jonah Hayes said:

We have great respect for the law of our Seniors (meaning the Government). We do not wish to do or say anything that will impair what has been said in this book (meaning the Treaty). . . . I came on when I was quite a young man and I do not feel like breaking the treaty by making another.³⁰⁰

¶ 207. During the early part of the negotiations the Commissioners tried to convince the Nez Perce they should sell without stating the price to be paid or the terms of the treaty. When this tactic proved unsuccessful, the Commissioners proposed a price and a draft agreement. Assistant Counsellor James Reuben wanted to know the affect of the proposed agreement on the existing treaties:

In case this treaty made now is signed and becomes law does

²⁹⁷ Proclamation of November 8, 1895, 29 Stat. 873.

²⁹⁸ *Id.* at 22.

²⁹⁹ *Sen. Exec. Doc. No. 31* at 28.

³⁰⁰ *Id.* at 34-35.

it do away with or annul all previous treaties? I do not wish any deception used, but wish to know if you succeed in making this treaty does it or not annul all previous treaties that have been made.³⁰¹

¶ 208. Commissioner James Allen assured Assistant Counsellor Reuben that the proposed agreement would not change any term of the previous treaties unless "modified" or "directly changed." To further assure Reuben, Allen promised to add Article 11 to the Agreement:

The effect of this agreement would not be to alter or change any of the provisions of former treaties except so far as they are modified by the new agreement. All other provisions will stand as they are now, and we will add a clause to that effect in this agreement that is being made. I believe it as well to state in this agreement, that we are now trying to obtain your signature to, shall not alter or change any provisions of existing treaties except so far as directly changed by this treaty.³⁰²

¶ 209. The broad effect intended by the savings clause is indicated by a later discussion at the council of Nez Perce fishing and hunting rights. Assistant Counsellor James Reuben gave to the Commission a written proposal to add a number of clauses to the draft, including a clause which stated that the Nez Perce "shall enjoy the same rights and privileges as to hunting and fishing as they now enjoy according to Government treaties."³⁰³ Reuben was referring to Article 3 of the 1855 Treaty which guaranteed:

The exclusive right of taking fish in all the streams where running through or bordering said reservation is further secured to said Indians; as also the right of taking fish at all usual and accustomed places in common with citizens of the Territory; and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land.³⁰⁴

³⁰¹ *Id.* at 52-53.

³⁰² *Id.* at 53. Commissioner Allen again emphasized that the treaty provisions would be preserved: "I do not want any misunderstanding, but that everything should be fully understood now. Everything that your treaties provide for will be continued just the same as if this agreement never was made." *Id.* However, Commissioner Allen noted that the Nez Perce were not entitled to any remaining payments under the existing treaties, and that the \$6,000 which had been annually appropriated for the benefit of the Nez Perce in recent years were gratuities and would not be protected by the clause.

³⁰³ *Id.* at 57.

³⁰⁴ 12 Stat. 957.

¶ 210. Commissioner Allen told Reuben that his proposed clause was unnecessary, in part because:

[W]e have already provided in the agreement that the provisions in former treaties now in force and not modified by the provisions of this agreement shall be continued in full force and effect; so that the right to hunt and fish will be just the same after this agreement is signed and ratified by Congress as it is now.³⁰⁵

³⁰⁵ Sen. Exec. Doc. No. 31 at 57.

DENNIS C. COLSON

Professor of Law
College of Law
University of Idaho
Moscow, Idaho 83872
(208) 885-7056

EMPLOYMENT

1978-present: Professor of Law, College of Law, University of Idaho.

Current Courses: Indian Law; Idaho Constitutional Law, Contracts I, Contracts II, and assist with the Indian Law Clinic and Appellate Clinic.

1982-1983: Visiting Professor of Law, School of Law, University of San Diego.

1975-1978: Associate Professor of Law, College of Law, University of Idaho.

1972-1975: Assistant Professor of Law, College of Law, University of Toledo.

1971-1972: Partner, Jordan, Colson, Goss & Gelt, Denver, Colorado.

1970-1971: Associate, Lillick, McHose, Wheat, Adams & Charles, Los Angeles, California.

EDUCATION

December, 1970, Juris Doctorate, summa cum laude, University of Denver College of Law, Denver, Colorado.

June, 1968: Bachelor of Science (Education: Mathematics, Physical Education, Psychology), honors, University of Northern Colorado, Greeley, Colorado.

Grades 1-12: Elsie Consolidated Public Schools, Elsie, Nebraska.

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BOOKS AND ARTICLES

The Nez Perce Treaties (Confluence Press, forthcoming).

"Court Rules and Divided Powers in the Idaho Constitution," 31 Idaho L. Rev. 461 (1995).

Idaho's Constitution: The Tie That Binds (University of Idaho Press, 1991).

"Idaho Debates the United States Constitution," in A. Minskoff, ed, The Constitution at Two Hundred: an Idaho Perspective (Boise State University Press, 1988).

"Guarantees Idaho Farmers and Ranchers Get on the Goods They Buy," 18 Idaho L. Rev. 177 (1982).

"A Tax View of the Price Clause in Contracts for Sale of Farm Property," 14 Idaho L. Rev. 297 (1979).

"Would a Lay Justice be Just?," 13 Idaho L. Rev. 351 (1977).

SELECTED INDIAN LAW PRESENTATIONS

"History of Federal-Tribal Relations," given on the following dates: September, 1993, FmHA and Intertribal Agriculture Council Conference, Billings; June, 1993, Soil Conservation Workshop, Uintah and Ouray Indian Reservation; June, 1992, Soil Conservation Workshop, Sun Valley.

"The Rehnquist Indian Vision," a slide-lecture, University of Idaho Roundtable Series, October, 1993.

"The Nez Perce Treaties," a slide lecture given on the following dates: October, 1993, Public Teacher Workshop, Nez Perce National Park; April, 1992, Public Teacher Workshop, Nez Perce National Park.

"Law and How It Works On The Reservation" and "Government to Government In Indian Policy," University of Idaho Northwest Indian Summer Symposia, June, 1992.

"Indian Law Clinics," Mid-Continent Law Schools Association, Sun Valley, July, 1992.

"Taxation of Indian Property In Idaho," Idaho Association of Counties, Moscow, September, 1992.

"Idaho Indian Treaties In The Courts," All Idaho Indian Expo, Boise, July, 1990.

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"Indian Law in the 1990's," given on the following dates: January, 1990, Idaho Prosecutor's Association, Boise; December, 1990, Nez Perce Tribal Executive Committee, Moscow.

"Brendale vs. Yakima Nation: County Jurisdiction in Indian Country," July, 1989, Idaho Association of Counties, Moscow.

"Tribal Sovereignty and Jurisdiction in Indian Country," Understanding Columbia River Treaty Rights Conference, Nez Perce Tribal Executive Committee, Clarkston, April, 1989.

"The Lacey Act In Indian Country," Washington State University Wildlife Management Class, Pullman, February, 1989.

"Cooperation in Idaho Indian Country," Idaho Trial Lawyers Association, Lewiston, October, 1988.

"Indian Citizenship in 1890," American Association of Law Libraries Western Legal History Conference, Couer d'Alene, November, 1988.

"The Burger Court Indian Vision," Pacific Northwest Sociological Association, Albuquerque, November, 1985.

SELECTED IDAHO CONSTITUTIONAL LAW PROJECTS

"The Idaho Constitutional Symposium Edition, 31 Idaho Law Review 387 (1995).

"Idaho Statehood," Idaho State Historical Society Workshop, Boise, July, 1993.

"Sagebrush Statesmen: The Lawyers Who Drafted Idaho's Constitution," Idaho State Bar Association, Idaho Falls, January, 1990.

"Idaho's Founders and Their Legislature," given on the following dates: February, 1990, Know Your Government Conference, 4-H of Idaho, Boise; November, 1992 the Idaho Legislature, Moscow.

"Idaho's Founders and Their University, given frequently for University of Idaho audiences.

"Mormons and the Idaho Constitution," Special Convocations Program, Ricks College, Rexburg, October, 1990, and several other occasions.

"Bible Reading In The Public Schools," Boise State University Teaching Religion in the Schools Workshop, August, 1989.

Principal Humanist, "Two Constitutions In Idaho," an exemplary

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grant from the National Endowment for the Humanities to the Idaho Humanities Council to conduct public programming during Idaho's Centennial, 1989-1990.

"William H. Clagett: the Silver-Tongued Orator of the West," American Association of Law Libraries Western Legal History Conference, Coeur d'Alene, November, 1988.

Principal Humanist, "Old Alturas County," Idaho Humanities Council, Hailey, 1988.

TEACHING MATERIALS

The Rehnquist Indian Vision, University of Idaho College of Law, Indian Law Course, 1991 and later editions.

Idaho Indian Law, University of Idaho College of Law, Indian Law Course, 1986-1991.

Public Lands Litigation: A Case Study of Challis, Idaho, University of Idaho College of Law, Natural Resource Litigation Course, 1983.

The Idaho Constitution, University of Idaho College of Law, Idaho Constitutional Law Course, 1987 and later editions.

Bible Reading in the Public Schools and Water in the Idaho Constitution, The Old Alturas Project, Idaho Humanities Council, 1988 (workbooks and classroom units for Idaho secondary students).

Agricultural Law, University of Idaho College of Law, Agricultural Law Course, 1978 and later editions.

CONSULTING

Consultant to the Nez Perce Tribe, Office of General Counsel, on litigation that to this date is confidential, 1995-96.

Consultant to the Idaho Department of Water Resources in In Re Snake River Basin Adjudication, Basin-Wide Issue No. 3., 1995.

Consultant to the Idaho State Court/Tribal Court Forum, 1994-1995.

Consultant to the Quinault Indian Nation, Tribal Court and Law Enforcement Assessment, 1994.

Consultant to the Nez Perce Tribe, Tribal Court Assessment, 1992-1993.

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Consultant to Kootenai County, Tribal Regulation Assessment, 1990.

Consultant to Counsel in Nez Perce Tribe v. Cenarrusa, 1993 W.L. 390410; Sweeney v. Otter, 119 Idaho 135, 804 P.2d 308 (1990); United States v. Williams, 898 F.2d 727 (9th Cir. 1990); State of Idaho v. McCormack, 117 Idaho 1009, 793 P.2d 682 (1990); and other cases.

SERVICE AND HONORS

Idaho Humanities Council, 1996 Award for Outstanding Achievement in the Humanities.

Peter E. Heiser Teaching Award, Class of 1995.

University of Idaho "Burlington Northern Faculty Achievement Award," 1992.

Delta Theta Phi "Outstanding Professor Award," 1991.

Idaho State Bar "Outstanding Service Award," 1990.

Idaho Centennial Commission "Take Pride in Idaho Award," 1988.

University of Idaho College of Law Class of 1986 "Outstanding Teacher" Award.

Idaho Humanities Council, 1984-1988; Executive Committee, 1986-1988.

Summer Research Stipend, National Endowment for the Humanities, 1987.

Law-Related Education Committee of the Idaho Bar Foundation, 1982-1988; Chairman, 1984-1985.

BEFORE THE INDIAN CLAIMS COMMISSION

THE NEZ PERCE TRIBE OF INDIANS,)	
)	
Petitioner,)	
)	
v.	)	Docket No. 175
)	
THE UNITED STATES OF AMERICA,)	
)	
Defendant.)	

Decided: March 21, 1967

Appearances:

John W. Cragun of the law firm
of Wilkinson, Cragun and Barker,
Attorney for Petitioner

Richard A. Baenen
Angelo A. Iadarola
Of Counsel

John D. Sullivan, with whom was
Mr. Assistant Attorney General
Edwin L. Weisl, Jr.,
Attorneys for Defendant

OPINION OF THE COMMISSION

Scott, Associate Commissioner, delivered the opinion of the
Commission.

The Nez Perce Tribe of Indians is a recognized tribe of American
Indians and is authorized to bring this claim which was timely filed
on July 30, 1951. In this and in Docket 180 the Nez Perce Indians
filed claims which resulted in the trial of several claims (Dockets
175, 175-A, 175-B, and 180-A).

We have set out in some detail the pertinent details of the
related claims in a statement preliminary to our Findings of Fact.

In summary, the present status is as follows: Two of the claims
have been finally determined. These involved a claim (Docket 175-A)

for unconscionable consideration for lands ceded under the Treaty of June 9, 1863 (4 Stat. 647) from the reservation which was retained by the Nez Perce under the Treaty of 1855 which was ratified on March 8, 1859 (12 Stat. 957). Judgment in the amount of \$4,157,605.06 was awarded the Nez Perce (8 Ind. Cl. Comm. 220). Therein we established important facts concerning the inside boundaries of the cession involved herein. In the second claim (Docket 180-A) judgment was awarded in the amount of \$3,000,000 for gold removed from the original reservation and for trespass by white settlers (8 Ind. Cl. Comm. 300). In a third claim (Docket 175-B) the Nez Perce alleged unconscionable consideration in their cession of the reduced reservation as of May 1, 1893 (28 Stat. 326). We dismissed this claim. An appeal was taken to the Court of Claims. That Court reversed our decision and the matter is now pending before the U. S. Supreme Court on the petition filed by the Nez Perce on February 8, 1967 for Certiorari.

The petition herein was severed and amended from the original, but carries the parent docket number, and, as such, was filed on March 1, 1963.

The claim herein is principally for payment of unconscionable consideration of lands ceded by the treaty which was confirmed on March 8, 1859 (12 Stat. 957; 2 Kapp. 702). It is also alleged that the defendant dealt unfairly and dishonorably as to the value of the said lands by withholding information; that the cession was procured by duress; that there was unilateral mistake by petitioner as to the value of said lands; and that there was mutual mistake as to the extent of the lands.

The area involved lies in the present States of Oregon, Washington and Idaho, and generally between the Blue Mountains on the west and the Bitter Root Mountains on the east. The United States acquired undisputed sovereignty over the area in 1846. Thereafter until the establishment of Statehood it lay in part in the Territory of Oregon and in part in the Territory of Washington.

This claim is based upon the cession by the Nez Perce of their lands to the defendant by the aforesaid treaty which was ratified in 1859. The treaty had been negotiated and signed by the parties in 1855.

The evidence in the matter was the subject of research, investigation and testimony by the experts for the parties. These experts are anthropologists.

Dr. Verne F. Ray, who testified for the petitioners, has appeared before the Commission in a number of other cases involving claims of other Indian tribes in the States of Oregon, Washington and Idaho. This is also true of Mr. Stuart Chalfant, who appeared for the defendant. We have fully set out their respective qualifications in our Findings numbered 5 and 11.

Both of the experts studied and gathered related documentary sources which consisted of reports of explorers, government officials, historians, etc., maps, official government correspondence, and other papers. The great preponderance of these sources were gathered by Dr. Ray.

Dr. Ray had made his studies a number of years prior to the passage of our organic act in 1946. Mr. Chalfant did his work after he was engaged as an expert by the defendant.

Both of these experts relied on information which is familiarly characterized in these cases as "family tradition". This is information which they gained from aged Nez Perce Indians.

We have set out the details of their methods, sources, and their testimony in our Findings numbered 6-10 and 12-14.

To supplement the evidence gathered by the parties the Commission has entered Commission's Exhibit No. 2, which is a map of Governor Stevens' routes through this general area. The petitioner, at the request of the Commission, submitted six Transverse Mercator Projection Maps which have been marked Commission's Exhibit No. 1. These have marked on them the outline of petitioner's claim. They depict the topography of the area in miniature duplication of contour topography. Thus, the Commission has had for consideration a more than usual realistic reproduction of the relative height of mountains, depth of valleys, location of streams, lakes, valleys and open country, all so important in relationship to the determination of the probable location of villages, hunting trails, fishing and gathering areas, etc., of these Indians.

A review of the testimony of the two experts (see Findings 10 for Ray and 14 for Chalfant) discloses their agreement as to many of the details of use and occupancy.

We have chosen to include evidentiary findings which are numbered 2 through 60 rather than to include in this opinion the details of background for the necessary basic findings which we have made as our numbers 61 through 94.

The statements and findings from many of the sources in the record relied upon by these experts have been condensed and are the subject of our evidentiary findings numbered 15 through 60. These include those of Lewis and Clark, Alexander Ross, Captain Bonneville, Rev. Samuel Parker, Gallatin, Wilkes, Father deSmet, Gibbs, William Haller, Warren, Stevens, Mooney, Ogden, Curtis, Spinden, Splawn, Swanton, Howard, Meek, Stuart, Fremont, government officials, the treaty council journal, census reports, etc.

Although many wrote of these Indians, very few actually traveled through their country prior to the critical date herein. Lewis and Clark were the first known whites to meet the Nez Perces. Their journals and maps are of great assistance in this matter. Captain Bonneville was the only known white explorer to traverse the western area.

Many of the sources, however, are contemporary or within a relatively short time after the date of the treaty and based on information given by the Indians. Hence many of these documents are worthy of weight in our consideration of this case.

In The Sac and Fox Tribe of Indians of Oklahoma v. The United States, 161 C. Cls. 189 at page 201, the Court of Claims stated:

***Post-treaty materials can often shed light on the state of affairs prior to the treaty. Their weight may depend upon their closeness in time to the critical date or upon the nearness of the events they describe, but there is and can be no general rule warranting the fact-finder in disregarding en masse all such evidence. They must be considered and cannot be discarded out of hand. We know that in other cases the Commission has correctly taken post-treaty evidence into account in

deciding a treaty or a pre-treaty issue. See, e.g., The Sac and Fox Tribe v. United States, 159 Ct. Cl. 247, 252-53 (1962) involving another Sac and Fox claim.)***

The Nez Perce Indians were the most prominent, powerful and influential of any of the Indians in the area between the Cascades and the Bitter Root Mountains.

Originally these Indians were principally confined to the valleys and the stream areas with use of mountains adjacent to their permanent villages. Even so they covered a wide range. With their acquisition of the horse in 1730 they expanded their area substantially and traveled into the lands of other Indian nations.

The Nez Perce Indian Nation was made up of a number of bands known by and named in part for their geographical location. However, in the later years prior to the treaty council of 1855 they had achieved a relatively close-knit cohesion among the bands on general matters of government. As compared to modern forms of government as we know and practice, we would today term the Nez Perce as a loosely-knit confederation of bands of the same people (culture, identity, etc.). As they dealt with the government of this country and in their warfare with other Indians they presented a united front.

They had a well-established annual cycle of subsistence activity (Finding No. 73). In this they had developed an expert knowledge of the best times of the year to catch salmon, to hunt the deer, to gather the berries, to dig the roots, etc.

As a supplement to this well-established annual cycle, the Nez Perce traveled every year to the east of the Bitter Root Mountains into the Flathead and Blackfoot country to hunt the buffalo.

Their area for the hunt, for fishing, gathering and digging are well established in the record and set out in our Findings numbered 74-79.

The Nez Perce had many horses. The 1860 census estimates the number to have been 10,000. This enabled them to travel great distances from their permanent villages in quest for subsistence and to defend their country.

Their permanent villages were principally found along the rivers and in the valleys. The hunting sites and the less substantial shelters were well established. To these they returned at certain times of each year according to the annual cycle (Findings 83-85).

The Nez Perce trails honeycombed the area. There were a number of well-known and named trails, such as the famous Lolo Trail which Lewis and Clark used in entering their country. From these, supplemental trails fanned out throughout this area (Finding No. 82).

The clothing of these Indians was made up of the skins of the various animals of the hunt -- the deer, mountain sheep, etc. The bows and arrows, etc., were also made in part from the same general sources. The horses of these Indians had to be fed through grazing in the open prairies, upland plateaus, and mountain meadows.

The game was relatively scarce in the area between the Snake River and the Bitter Root Mountains. Thus it is seen, with 5000

Nez Perce with 10,000 horses, it was necessary that they travel great distances in carrying out these subsistence activities.

This tribe of Indians was friendly with its neighbors to the west and the north. They were friendly with the Flatheads to the east. They were traditional enemies of the Blackfoot to the east and of the Snake, Paiute, Shoshone and Bannock Indians to the south.

One of the principal differences in the testimony of the experts and the contentions of the parties herein relates to the southern portion of the claim. Both agree that up until the time range 1825-1830 there was bitter warfare between the Nez Perce and the aforesaid southern tribes, and that after this there were relatively peaceful relations insofar as the area under study here is concerned.

Ray and Chalfant differ, however, as to the situation which prevailed in the period between this time lag and the treaty date. Ray, for the petitioner, contends the southern tribes did not re-enter and the Nez Perce continued to use and occupy the area, but that in this period the use and occupancy was exclusively with the Nez Perce. Chalfant contends the evidence is that these southern tribes continued to use the area in peace with the Nez Perce.

We have found that the Nez Perce knew the area of their country and that, at the request of Governor Stevens at the 1855 treaty council, they drew a map upon which the treaty calls in the treaty of cession were based (Findings 51(a)-(e), 93).

Based on this map Stevens prepared another map for a proposed reservation within the bounds of the treaty calls. Looking Glass,

one of the Nez Perce chiefs, came into the council late. He, at first, protested the proposed boundary and drew his conception of the boundary for a reservation. The government then replied that if the Nez Perce gave the area depicted by Looking Glass it would receive none of the Nez Perce country outside of the reservation. Looking Glass then agreed.

A comparison of the boundary of the reservation set up in the treaty here under consideration and of the cession calls therein reveals a substantial area south of the reservation area.

Therefore, if we agree with petitioner's proposed Finding Number 54 that the Nez Perce had a definite sense of territorial ownership of the lands used and occupied by them, by reference to the care taken by Stevens at the said treaty council in securing maps from the Nez Perce, we can reasonably assume that the treaty call to the south is a reasonable interpretation of their boundary. Concept of ownership, however, alone is not sufficient. We have used this evidence only in confirmation of record proof of exclusive use and occupancy for subsistence purposes. It is, of course, impossible because of the passage of so many years to define these boundary limits with complete accuracy. The sovereignty of this country over the area was established in 1846. After sovereignty, white emigration into the great Pacific northwest ensued. One of the great concerns of the government officials in this period prior to the treaty was the safety of the emigrating whites whose main passageway was through this southern area and to the southwest and the west of the area. In this connection the maintenance of peaceful relations between the Nez Perce and these tribes to the south was of great concern (Finding

No. 46). The traditional differences and the natural enmity was referred to (Pet. Ex. 45).

A portion of the disputed area in the south was the subject of our decision in Northern Paiute v. United States, 7 Ind. Cl. Comm. 322, 367 (1959). We excluded a portion of the area here involved on the ground of joint use.

Other areas of the claim in the east, northeast, northwestern, and western portions of the claim have been challenged by the defendant as areas of joint use. Therefore, defendant has contended the lands were not exclusively used and occupied by the Nez Perce.

Since this is a claim based on aboriginal title, several elements must be present. To be accepted under the Indian Claims Commission Act, aboriginal title must rest on actual exclusive and continuous use and occupancy "for a long time" prior to the cession, transfer, or loss of the property. (See The Snake or Piute Indians v. United States, 125 C. Cls. 241, 254; 112 F. Supp. 543 (1953); The Quapaw Tribe of Indians v. United States, 128 C. Cls. 45, 49; 120 F. Supp. 283, 285 (1954); Alcea Band of Tillamooks v. United States, 103 C. Cls. 494, 557; 59 F. Supp. 934, 965 (1945), affirmed 329 U. S. 40 (1946); The Sac and Fox Tribe of Indians of Oklahoma, et al v. The United States, 161 C. Cls. 189, 201, 202).

The areas under contention include the "Chamberlain Meadows" in the northeast; the camas prairie south of present-day Moscow, Idaho, and areas in the western portion of the claim. We have carefully examined the evidence respecting the Indians' land use in these areas.

We have found that the evidence clearly establishes the Nez Perce use and occupation of these areas. We have found that petitioner has documented its use of these areas and established that the areas were within the ancestral homelands of the Nez Perce Tribe. Accordingly, we find these areas to have been exclusively used and occupied for a long time prior to the Treaty of March 8, 1859, and the areas are included in the lands to which we have concluded the Nez Perce held aboriginal Indian title.

We are, of course, aware that there is evidence relating to the presence of other Indians within the areas under consideration from time to time. Such presence was infrequent, temporary, and for such limited purposes as trading, ceremonial games, dances, and other social gatherings. The Commission does not believe that the presence of visiting Indians for the purpose of attending such ceremonies acted to in any way lessen the validity of the Nez Perce claim of Indian title to the areas. The visits under such circumstances would not diminish the exclusive use and occupation which the Nez Perce maintained over these areas.

The defendant contends the area in and around the Lolo Trail was jointly used by the Nez Perce and the Flathead Indians. We cannot agree.

Defendant's contention is based upon statements made by members of the Lewis and Clark party. The evidence is that as this party entered the Nez Perce country through the Lolo Pass from the Flathead country and proceeded along the Lolo Trail they came upon fishing and hunting

sites which they referred to as Flathead sites. No Indians were seen by the party at these sites. As we have found the reference by the party to these sites as being Flathead was in error (see Finding No. 92). The evidence also is that there was confusion by others as between the Flatheads and the Nez Perce. (Ibid)

In at least two locations Chalfant's proposed boundary lines are more generous than those representing the petitioner's claims (compare Pet. Maps Ex. 2-G and Def. Map Ex. 24-A). It is, of course, impossible to draw these lines with complete accuracy. We have found in these areas of difference, one south of the Lower Snake and the second in the northern area, to be areas of joint usage (see Findings 88 and 90).

The defendant's proposed boundary on Defendant's Ex. 24-A approximates the area of the original Nez Perce Reservation. Thus, in addition to the exclusion of the southern area described in the treaty calls, Chalfant excludes the eastern area to and along the crest of the Bitter Root Mountains. We have found that the Nez Perce used this area for subsistence; and we have included it within the bounds of their aboriginal country (see Findings 73-80, 92, 94). The Bitter Root Mountains were natural barriers along the east of their country. This finding is also strengthened by the facts we have heretofore set out from the exchange between Looking Glass and the government officials at the 1855 treaty council (see Findings 51(e) and 92).

In our determination of the southern and eastern areas described in the Nez Perce aboriginal country (Finding No. 94) outside the

Chalfant line, we have indicated the importance of the 1855 treaty considerations and the methods used in arriving at the treaty calls. We have not, however, used these facts as more than confirmation of other materials in the record from which it is clear that the Nez Perce actually used these areas in quest of their subsistence. The concept by the Indians of ownership alone is insufficient to establish Indian title. (Shoshone Tribe, et al v. United States, 11 Ind. Cl. Comm. 387, 442)

In view of all of the evidence of record we have found that the Nez Perce Tribe of Indians aboriginally owned the area of land described in our Finding No. 94.

This matter will now proceed to a determination of the acreage of land found to have been exclusively used and occupied by the Nez Perce Tribe of Indians as of March 8, 1859 (Finding No. 94); the market value thereof as of March 8, 1859, the effective date of the treaty; the amount of consideration paid where applicable; the amount of offsets, if any, which may be allowable under the provisions of the Indian Claims Commission Act; and other relevant issues raised by the pleadings.

T. Harold Scott
Associate Commissioner

We concur:

Arthur V. Watkins
Chief Commissioner

Wm. M. Holt
Associate Commissioner