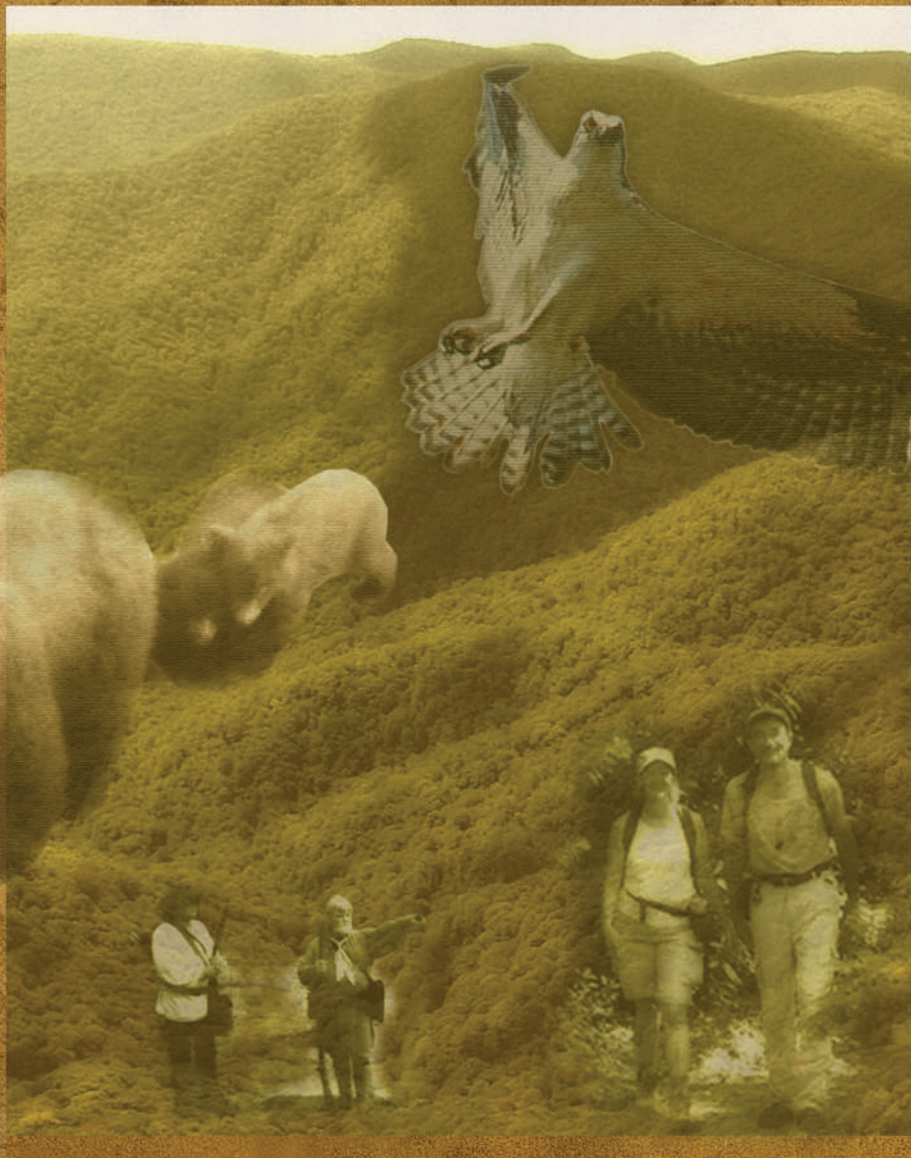


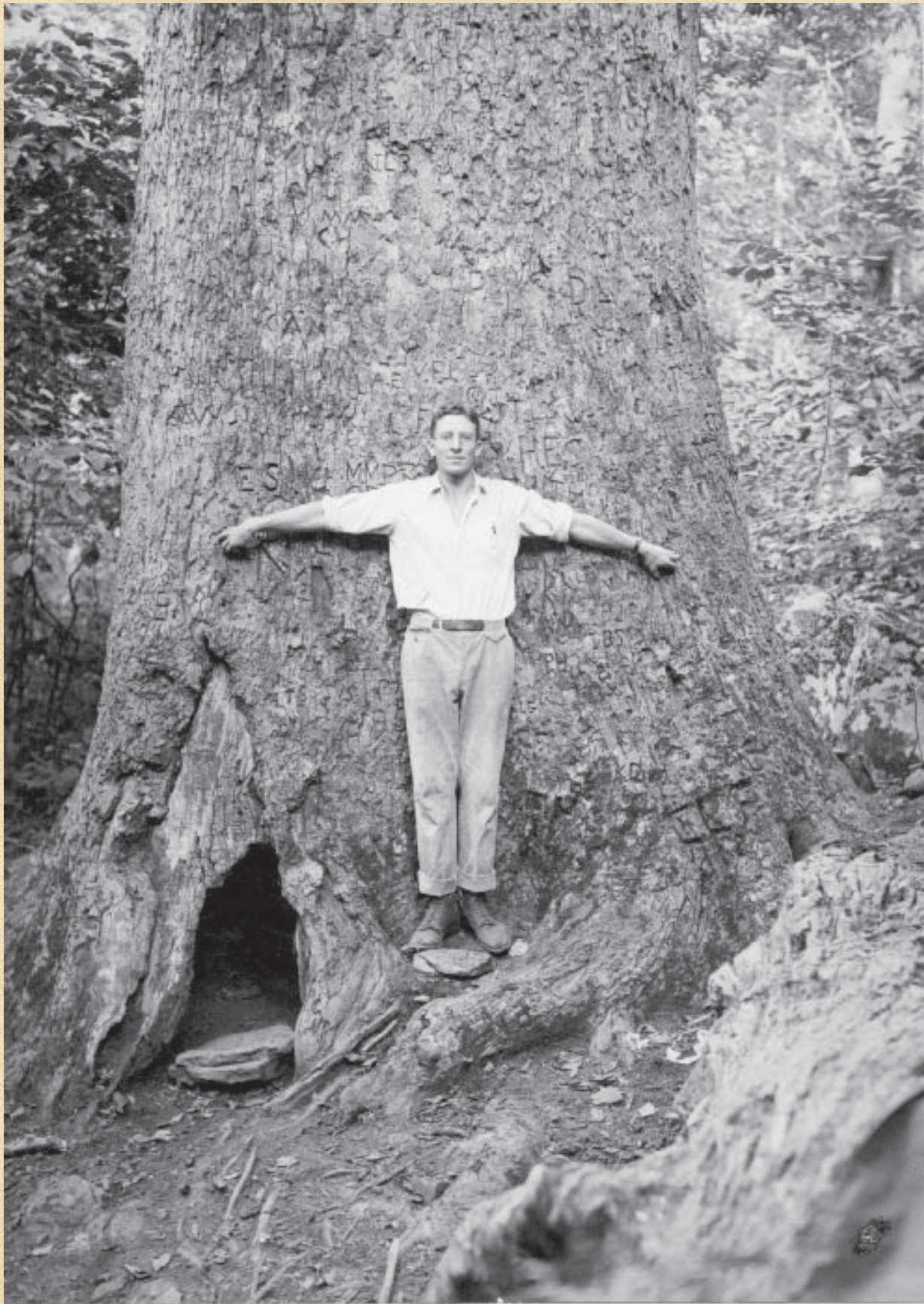
Attachment 4

North Carolina's Mountain
Treasures: The Unprotected
Wildlands of the Pisgah and
Nantahala National Forests

North Carolina's Mountain Treasures



The Unprotected Wildlands of the Pisgah and Nantahala National Forests



*Numerous historical accounts describe the great trees of the Southern Appalachians. This is a tulip poplar on Reems Creek in 1932.
photo courtesy of U.S. Forest Service*

Preface

The first edition of *North Carolina's Mountain Treasures* emerged in 1992 at a critical time in the preparation of forest plans by which the Nantahala and Pisgah National Forests would be managed. Its purpose was very specific: to arm citizens with accurate, detailed, current information they could bring to bear to help protect deserving wildlands and other ecologically significant areas on these forests.

The U.S. Forest Service is once again developing a new plan for the management of the Nantahala-Pisgah, a plan that will determine the fate of these two forests for a decade and more ahead. Times have changed, the forests have changed and so has *North Carolina's Mountain Treasures*. Its purpose, though, remains unchanged: to give the public sufficient information about the forests' special places to speak effectively on their behalf.



In 1987, the Forest Service issued a final forest plan. Conservationists found the plan seriously flawed and appealed it, forcing major amendments. The amendments and the accompanying analyses were underway when the first edition of *North Carolina's Mountain Treasures* appeared.

When the agency issued the final plan amendment in 1994, conservationists widely considered the amended plan to be the best in the region. And the process that produced it put the Nantahala-Pisgah in the forefront of the national forest management debate. The original *North Carolina's Mountain Treasures* was instrumental in both.

Ultimately, though, it was the commitment of citizens who love their national forests that did so much to shape the final version. Yet, despite the improvements--and they were significant--the plan left many of the forests' important wildlands unprotected. They are unprotected today, over a decade later, and continue to diminish. If anything, the peril is greater than ever. Threats mount in the form of sprawl, damaging off-road vehicle use, and the residue of old forestry practices long since discredited.

Once again, citizen activists--in many cases, a whole new generation of them--must come together to demand the best possible management of their national forests. We intend the

new *North Carolina's Mountain Treasures* to engage them and support them in that effort. And we hope it is equally successful. As habitat, open space and natural qualities decline across the landscape and in other ownerships, our public forests become ever more precious. This report identifies and details the best of what remains on the Nantahala-Pisgah: the special places we can least afford to lose.



The Little Tennessee River is fed by cold spring waters from the Nantahala Mountains.

Photo by Ralph Preston

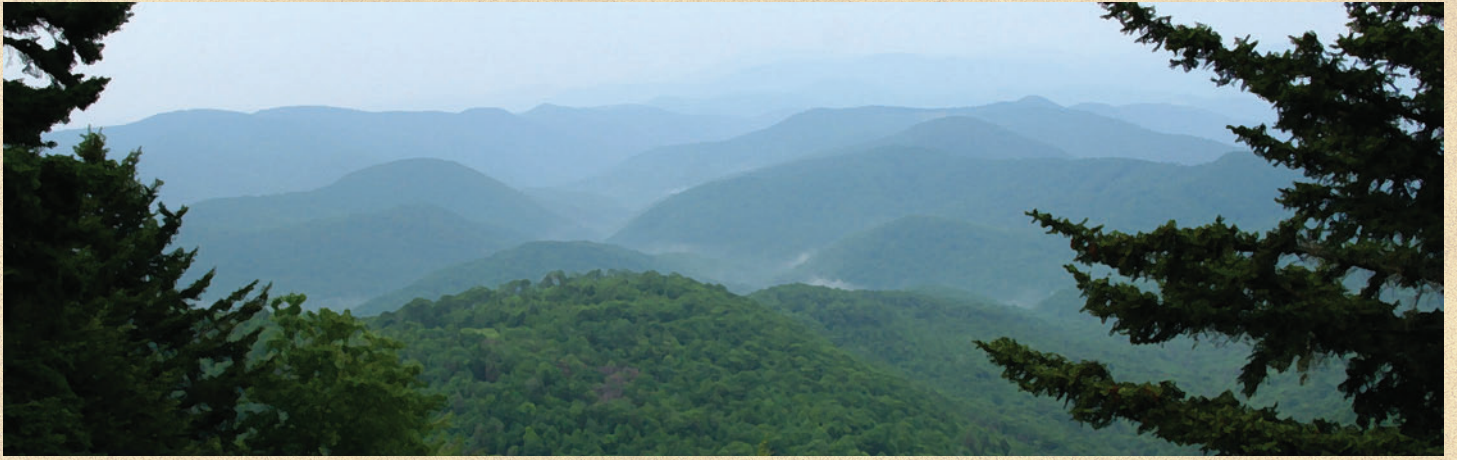


Table of Contents

Preface	3
Introduction	7
Acknowledgements	9
The Southern Appalachian Ecosystem	10
Threats to the Landscape	12
Global Climate Change	12
Hemlock Woolly Adelgid	14
Off-Road Vehicles	15
Population Growth and Fragmentation of Private Lands	16
Logging on the Nantahala and Pisgah	17
Why Protect Wild Areas?	18
The Wilderness Act of 1964	19
Unicoi Mountains Conservation Area	22
Unicoi Mountains (NC)	22
Upper Bald River Wilderness Study Area (TN)	24
Snowbird Creek – Lower Snowbird (NC)	25
Sycamore Creek (TN)	25
Joyce Kilmer-Slickrock Extensions	26
Santeetlah Headwaters	27
Nantahala Mountains Conservation Area	30
Ash Cove	33
Cheoah Bald	34
Tusquitee Bald	35
Boteler Peak	36
Southern Nantahala Wilderness Extensions	37
Tellico Bald	39

Wesser Bald	40
Piercy Mountain Range	41
Siler Bald	42
Alarka Laurel	43
Blue Ridge Escarpment Conservation Area	45
Fishhawk Mountain	46
Overflow Creek (Blue Valley)	47
Terrapin Mountain	48
Panthertown Valley	49
Balsam Mountains Conservation Area	50
Middle Prong Extension	52
Shining Rock Wilderness Extension	53
South Mills River/ Laurel Mountain/Pink Beds Wild Areas	54
Laurel Mountain	55
Daniel Ridge	56
Cedar Rock Mountain	57
Linville/Grandfather Mountain Conservation Area	58
Dobson Knob	60
Linville Gorge Extensions	61
Upper Wilson Creek/ Lost Cove/ Harper Creek/Sugar Knob Wild Areas	62
Lost Cove	63
Harper Creek/Sugar Knob	64
Bald Mountains Conservation Area	66
Bald Mountains	68
Pigeon River Gorge	69
Bluff Mountain	69
Ethno-habitats	71
Black Mountains Conservation Area	73
Craggy Mountains (Big Ivy)	75
Black Mountains	76
Jarrett Creek	78
Mackey Mountain	79
Woods Mountain	80
Highlands of Roan/Unaka Mountains Conservation Area	81
Nolichucky Gorge	82
Highlands of Roan	83
The Lands Nobody Wanted	84
The Land and Water Conservation Fund	85

NORTH CAROLINA - TENNESSEE

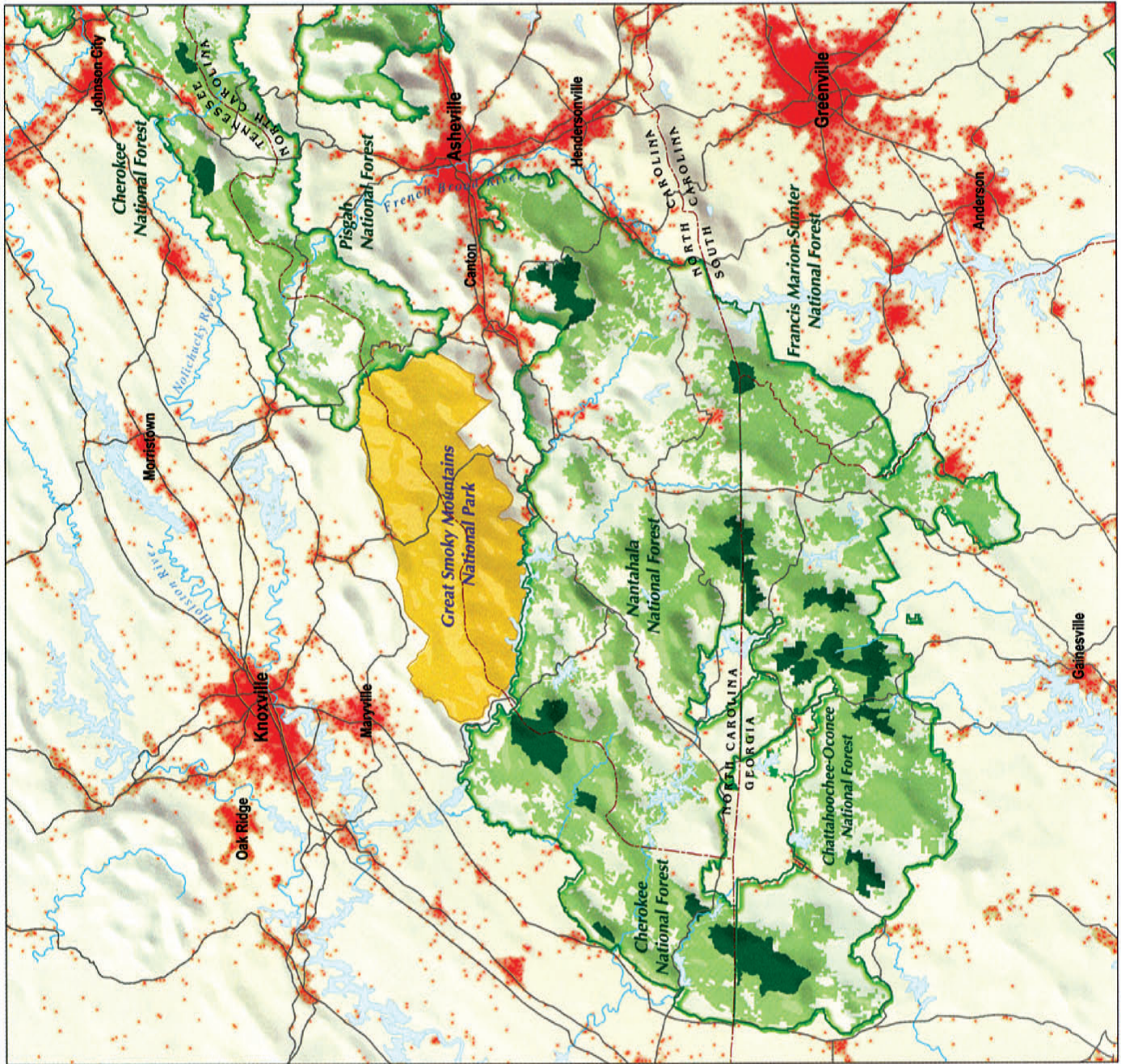
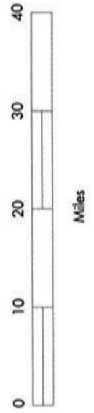
Approximately, only 4% of National Forest land in North Carolina and 10% of National Forest land in Tennessee are currently protected as designated Wilderness.

-  Protected Wilderness areas
-  National Forest land (contains remaining unprotected wild lands)
-  State and private land within National Forest boundary
-  Cities, towns, and other developed areas

locator map



data sources: U.S. Forest Service 2002,
The Wilderness Society 2001, U.S.
Geological Survey 2000, ESRI 1998



Introduction

In all six of the national forests in the Southern Appalachians there remain, sometimes against all the odds, pockets of forested land that are largely wild and without roads. Some of these places are permanently protected within the National Wilderness Preservation System. Others are along protected Wild and Scenic Rivers corridors and still others enjoy some safety because they fall within management categories now considered unsuitable for road building and logging.

But many important tracts are not adequately protected and thus remain at risk to future timber harvests. These are the subject of this new edition of *North Carolina's Mountain Treasures*. The report focuses on the unprotected wildlands of the Nantahala and Pisgah National Forests. The Wilderness Society and its partners have identified seven landscape conservation areas in these two forests that deserve protection and urgently need it. These areas contribute much to the health and viability of the globally significant Southern Appalachian ecosystem and we discuss those contributions, too.

This publication briefly looks at each area, and describes its important wilderness, wildlife, scenic and recreational values and resources. Maps accompany each description. These areas comprise some of the wildest and least roaded lands in western North Carolina. Certainly, there are other areas in this part of the state that are, by any reckoning, important natural areas--places that are, and deserve to be, Mountain Treasures. But we have chosen to highlight in this report areas that lack long-term protection and thus remain at risk.

That risk will become apparent elsewhere in this report. The current status for the areas we focus on ranges from Wilderness Study Areas, which are generally well-protected but only in the short term, to some areas in which nearly every acre is within a management status that allows for logging and the road-building that so commonly attends it.

Clearly, then, some areas are better protected than others. But there is some level of uncertainty about permanent protection even for Wilderness Study Areas--areas found to be suitable for wilderness, recommended to Congress for designation, and meant to be managed as wilderness until Congress decides. Thus we include the five Wilderness Study Areas in this report.

How we got where we are today

In 1987, the U.S. Forest Service adopted a management plan for the Nantahala and Pisgah National Forests. That 1987 plan opened up many of the forests' most important wildlands to roads and to logging. Conservation organizations objected to that and to a number of other provisions:

- the continuation of sales below cost (those that fail to recover what it costs the agency to put the timber on the market

and result in a loss to taxpayers);

- inadequate consideration of the impact of proposed activities on threatened or endangered species;
- inadequate planning for protection of old-growth forest stands; and,
- too great a reliance on clear-cutting, the removal of all trees in a harvested stand.

Conservationists appealed the plan and the Chief of the Forest Service ordered it redone. Curing those deficiencies required a major amendment to the forest plan. The amendment and the analysis to support it were underway when the first *North Carolina's Mountain Treasures* appeared in 1992 and helped move citizens to action during that crucial phase in the planning process.

The Forest Service issued the amendment in 1994 and conservationists were pleased to note that the amended plan was a significant improvement over the original. It afforded welcome protection to some wildlands, placing some key backcountry areas into more protective management categories. It established a framework for establishing large, medium and small old-growth areas located across the forests by watersheds. Silvicultural or forest management practices were also improved and diversified, eliminating clearcutting as the tool of first resort. The amended plan also recognized that forests need natural processes to recover and retain their health and vitality. And it provided for improved management of habitat for black bear, a species important in the Southern Appalachians for many reasons, not least as an indicator of forest health.

Amidst this good news, though, was the inevitable bad. Many of the wildland areas that the first *Mountain Treasures* identified remained unprotected and thus vulnerable to the loss of the very values that made them invaluable to begin with. Since 1994, then, the work of North Carolina conservationists has largely been the work of protecting these special places, often acre by acre, until the forests' management plan underwent its next revision and provided us a new opportunity to achieve lasting protection for these lands.

That time is now. The U.S. Forest Service is launching a plan revision. As in the 1990s, this version of *North Carolina's Mountain Treasures* examines the status of unprotected wildlands in the Nantahala-Pisgah and is intended as a primary tool to galvanize, guide and facilitate effective public participation in the forest planning process.

How you can get involved

The Wilderness Society strongly encourages interested citizens to learn more about these unprotected wildlands and to become involved in the forest planning process. Our

national forests belong to all Americans. They are a part of our birthright and our heritage as U.S. citizens. The Congress has carefully enacted laws to ensure that all of us have a voice in how these lands are managed and cared for. If there is a single lesson from the last planning process for the Nantahala-Pisgah it is that strong, informed public participation does make a difference. Our challenge is to take full advantage of that opportunity and to do all we can to make certain that these rich and beautiful lands survive intact, not just for us but for our children and theirs.

You can contact the Forest Service and ask to be put on a mailing list to receive all information and notices regarding the forest planning process. Write to:

Forest Supervisor
National Forests in North Carolina
P.O. Box 2750
Asheville, NC 28802

You can also contact the agency electronically at:
www.cs.unca.edu/nfsnc/

Web site for NC Mountain Treasures: www.ncmountaintreasures.org

Web site for The Wilderness Society: www.wilderness.org

Our Partners

The Wilderness Society and its Southern Appalachian partners will be actively involved at every stage of the forest plan revision process. You can stay abreast of what's happening--comment opportunities and deadlines, public hearings and the availability of new and important information--by going to our websites at any of these addresses:

Southern Appalachian Forest Coalition: www.safc.org

Wild South: www.wildsouth.org

Western North Carolina Alliance: www.wnca.org

WildLaw: www.wildlaw.org

Southern Environmental Law Center:
www.southernenvironment.org



Acknowledgements

This report rests on the work of countless people for over more than a decade. Those most immediately responsible for bringing it to publication are:
Brent Martin, Southern Appalachian Director with The Wilderness Society
Hugh Irwin, Conservation Planner with the Southern Appalachian Forest Coalition
Danielle Bouchonnet, intern, The Wilderness Society
Lamar Marshall, Cultural Heritage Director, Wild South
Josh Kelly, Botanist, Educator & Staff Biologist, WildLaw

They built on the work of many others, more than we can adequately thank. But several deserve special mention. Bill Thomas and Ted Snyder of the Sierra Club and John Ray of the North Carolina Bartram Trail Society redrafted many of the area descriptions based on extensive, first-hand knowledge of these special places gained in the field. They also assessed changes that have occurred since the last edition, and contributed advice and invaluable knowledge at every stage.

Rob Messick contributed an immense amount to the report, also based on his personal knowledge of many of the places we detail. He proposed new area boundaries in many cases and recommended several new areas for this revision, drawing on his extensive old-growth field work.

Josh Kelly of WildLaw also reviewed and provided critical information on old-growth, botanical and other special features of areas.

Amy Tidwell, a former Wilderness Society staffer, kept the revision process moving forward and made sure that key players remained in touch at critical stages.

The Wilderness Society and its partners in *North Carolina's Mountain Treasures* offer our deepest thanks to the Lyndhurst Foundation, Z. Smith Reynolds Foundation, EMSA Fund, and Fred Stanback. Without their generosity, their confidence, and continued support, neither this report nor the work of many of the individuals who contributed to it would have been possible.

In partnership with many other conservation groups, The Wilderness Society has published *Mountain Treasures* reports for most of the national forests in the Southern Appalachians. North Carolina's was the first and a model for those that followed. In turn, this report reflects the best of others in the series. The goal of the 1994 report was to depict individual wild areas. It did that well. Bill Thomas suggested grouping areas into clusters, a device that both improves the utility of the report and reflects the important idea of landscape-level conservation that flows from the principles of conservation biology.

The 2002 publication, *Return the Great Forest: A Conservation Vision for the Southern Appalachian Region*, admirably set forth the challenge. Recognizing, planning for and protecting these places at the landscape level, rather than in isolation

from one another, is our best hope--perhaps our only hope--of securing for our region a conservation network that sustains the life forms that are natural to it. *Return the Great Forest* also involved The Wilderness Society and other conservation organizations. It envisions "a biologically diverse region sustained by a connected network of large natural areas."

The future of North Carolina's wildlands is central to this vision because many of the most significant large natural areas in the region are partly or wholly within our state.

North Carolina's Mountain Treasures also builds upon an earlier publication by The Wilderness Society, *Mountain Treasures at Risk: The Future of the Southern Appalachian National Forests* (Jackson, 1989). That publication took an early and important cumulative look at the forest plans adopted for the six national forests surrounding the Great Smoky Mountains National Park. It criticized those plans for promoting excessive logging and road building, and catalogued the impacts of those activities on scenic beauty, recreation, biological diversity, clean waters and other natural values.

The Society's work continues in the region, applying the organization's expertise in forest policy, research, ecology, economics and law to the development of new models for sustainable forest management.

The Wilderness Society, founded in 1935, is a non-profit conservation organization dedicated to safeguarding the nation's public lands. The Society's headquarters are in Washington, D.C., and it has 13 regional offices around the country. The Western North Carolina office is in Sylva, NC. For more information on The Wilderness Society and its programs, go to www.wilderness.org



The Southern Appalachian Ecosystem

The Appalachian Mountain chain is a natural marvel running from Quebec south 1,500 miles to Alabama. It is impressive along its length, but it is in the Southern Appalachians that the chain is at its most scenically spectacular and biologically rich.

These ancient, rugged mountains range in elevation up to Mt. Mitchell's 6,684-foot summit. In places they receive 90 inches of rainfall per year. That is a recipe for species richness and the Southern Appalachians harbor an astonishing range of plant and animal life. Over 2,000 kinds of plants thrive here, including over 130 species of trees--more than are found in all of Europe. The region boasts 700 vertebrate species, among them 50 varieties of salamanders, more than in any area of comparable size on the planet, and around 150 species of nesting birds. Thousands of invertebrate species contribute to the region's remarkable natural life.

The superlatives do not end here, though. The Southern Appalachians, which stretch across parts of five states from Georgia to Virginia, contain the greatest concentration of federal public land and the largest remaining expanses of wilderness in the Eastern United States. North Carolina's Nantahala and Pisgah National Forests alone comprise over a million acres of the region's 3.7 million-acre federal public estate. The balance is found in two important units of the National Park System--the Blue Ridge Parkway and Great Smoky Mountains National Park--and in its four other national forests: the Cherokee in Tennessee, the Chattahoochee in Georgia, the Sumter in South Carolina and the Jefferson in Virginia.

Not surprisingly, the Southern Appalachians contain the greatest remaining acreage of old-growth forest in the Eastern U.S. They offer a range of unusual habitats, such as beech gaps, boulderfield communities, rare high elevation bogs, mountain balds, hardwood coves and spruce-fir stands.

These mountains lie within a day's drive of upwards of a third of the nation's people and have become a magnet for outdoor recreation in virtually all its forms: white water boating; hunting and fishing; hiking and camping; bird-watching; and, the search for quiet and solitude. The famous Appalachian Trail winds through the heart of the region, traversing much of its spectacular high country. Great Smoky Mountains National Park is the most heavily visited in the entire National Park System with over 10 million visitors each year. Visitation to the Nantahala and Pisgah National Forests dwarfs that number with around 35 million visitors.

What brings visitors in ever-increasing numbers to this land? At the threshold, it is the simple fact that it is our public land and is open to the public. For many, it is the opportunity to enjoy the unspoiled scenic beauty and to escape from the pace of life in more developed places into quieter, more natural surroundings. For some, it is secure habitat that sustains wild-life for hunting, angling and simply watching.



Pink Lady Slipper

photo by Lamar Marshall

Others are drawn by that magical word: wilderness. And that attraction grows. In fact, demand for wilderness recreation is expected to increase steadily in the Nantahala-Pisgah. There is not enough wilderness to meet today's demands, let alone tomorrow's. The U.S. Forest Service calculates that demand for wilderness recreation will be double the available opportunities by 2030. Of the one million acres within these two national forests, a scant 66,500 have been designated wilderness, less than 7 percent of the total.

Because of their location within the Southern Appalachian region, the Nantahala and Pisgah National Forests are an integral part of the broader ecosystem. Management decisions that affect these two forests must be made with the health of



American Ginseng

photo by Lamar Marshall

other adjacent federal lands in mind. Many of the unprotected wildlands we identify in this publication are contiguous to wild areas in other national forests in Tennessee, Georgia and South Carolina.

That adjacency--the "connectedness" of which the great conservationist Aldo Leopold spoke--should be the guiding consideration in forest management decisions. In 2002, the Southern Appalachian Forest Coalition published *Return the Great Forest: A Conservation Vision for the Southern Appalachian Region*. The book details the fact that the natural areas in our national forests comprise large landscape conservation areas that in many cases transcend the artificial boundaries of state and other agency management schemes. There are where they are, regardless of jurisdictional maps. Certainly, those maps serve as useful locators, name tags. But when they become rigid boundaries for compartmentalized management and parochial thinking they operate to defeat the natural values these connected landscapes serve and are meant to serve. Bureaucracies often can't seem to see past the lines on maps; black bears and songbirds don't even know they exist.

It is thus crucial that the National Park Service and the U.S. Forest Service work together to coordinate planning for their various pieces of this complicated, interdependent web. State agencies, local governments, citizens and organizations also have a constructive role to play.

Protecting and planning for these landscape conservation areas is our best hope for securing a functioning conservation network in the Southern Appalachians. Many of these landscape conservation areas, and many of the most significant ones, are either entirely or partially within North Carolina. If we are to secure a network of conservation lands that endures into the future to guarantee habitat for wildlife and rare species, productive mountain streams and the clean water they

provide, and wildland areas that offer solitude, recreation and renewal to humans, we must protect the areas *North Carolina's Mountain Treasures* identifies.

The Nantahala and Pisgah National Forests feature some of the finest wild areas in the Southeast. Much has changed in these mountains since Native Americans migrated here thousands of years ago and even more since Europeans first arrived. But much remains in a natural state. Protecting the lands in that condition is our challenge and the subject of this book.

"If your bank account was overdrawn, you wouldn't keep spending, would you? Nor should we continue to log and build roads in what precious little remains of eastern wilderness. This book is a remarkable vision, a blueprint for the survival of a region as we've known it. May our policymakers have the valor and genius to carry it through. Long live the wild coves and balds, creeks and laurel thickets of the southern Appalachians, an American treasure more precious than gold." Janisse Ray *Author of Ecology of a Cracker Childhood*



Threats to the Landscape



American chestnut, an American tragedy that might become a restoration success story.

photo by Lamar Marshall

Along with the rest of the Southern Appalachians, North Carolina is changing. The range of change is remarkable. Some change comes quietly as the tiny hemlock woolly adelgid ravages our hemlock forests. Some come with a roar as the churning wheels of off-road vehicles forge new trails through once-quiet woodlands and once-clear streams. Some come in the steady advance of burgeoning populations and attendant development on private lands, fueled by the same realization that brought or kept us here: it's a lovely place to live and raise a family. And looming over all these is the reality of global climate change that can transform the landscape and its inhabitants. All these changes are relentless.

This section of *North Carolina's Mountain Treasures* looks at some of these threats and the changes they portend. They will have much to do with the nature of our public forests in the years to come. But as they transform adjoining private land, eliminating habitat and habitat connections, changes will also underscore not only the central significance of those forests and wilderness areas but also the necessity of anchoring a vibrant, functioning ecosystem that will keep North Carolina a wonderful place to live.

Global Climate Change

Those who doubt the reality of global climate change probably also fret about sailing off the edge of the world. Not all the evidence is in, surely, but the weight of scientific evidence grows daily and is sufficient now to convince most people--

even many former doubters-- that climate change is well along.

Its impacts will affect us all and some are already apparent. Rising temperatures transform our lands and waters rapidly and dramatically. Glaciers are receding. Rising sea levels erode beaches and coastal wetlands. Inland lakes and wetlands, too, are drying up. Droughts and severe storms are more frequent as precipitation patterns shift. Wildland fires are becoming both more frequent and more intense.

Sportsmen, whose pursuits bring them closer than most to the natural world and perhaps more often, are seeing some of those impacts first.

A recent report from the Bipartisan Policy Center, "Season's End," documents projected consequences, along with some already-visible effects, of climate change on American hunting and fishing. (The Center's Advisory Board includes four former U.S. Senate Majority Leaders: Howard Baker, Tennessee; George Mitchell, Maine; Tom Daschle, South Dakota; and, Bob Dole, Kansas.)

From upland birds and waterfowl to big game to freshwater fish, virtually no group important to hunters and anglers is likely to escape unscathed, the report finds. Here are excerpts.

- Upland birds: In the Deep South, summertime drought and high temperatures will shrink bobwhite quail populations by disrupting the birds' breeding cycles and reducing the availability of insects they feed on. Hot, dry conditions will also stunt the growth of vegetative cover, leaving broods vulnerable to predators.

- ♦ Big game: Across the continent, deer, elk and other big game populations will shrink as high levels of greenhouse gases make the plants they eat less nourishing and tougher to digest.

- ♦ Freshwater fish: Nationally, up to 42 percent of current trout and salmon habitat will be lost before the end of the century and the South is one of the regions that will experience especially severe reductions. In lower elevations of the Appalachian Mountains, as much as 97 percent of the wild trout population could die.

While better able than trout to adapt to increased water temperatures, bass, bluegill and other warm-water species will face other threats from global warming. For example, changes in precipitation patterns--heavy, flood-producing rains interspersed with extended droughts--will cause major fluctuations in water levels, dramatically reducing the survival rate of eggs, larvae and fry.

- ♦ Waterfowl: Hunters from the Dakotas to Louisiana, from California to Virginia are reporting that migrations are occurring later in the season--and in some instances, not occurring at all. The Chenier Plain marshes of Louisiana, supporting over 1.3 million waterfowl today, could eventually support as little as one percent of that number.

(A hard copy of the report is available by contacting the Bipartisan Policy Center, 1225 I Street N.W., Suite 1000, Washington, D.C. 20005. Phone: 202.204.2400)

If climate change is likely to fall hard on game species, songbirds and others, it may be a boon to less welcome species--pests, if you will. The following section looks at the ravages of the hemlock woolly adelgid. Cold winters, which tend to knock back the adelgid and other insect pests, will be less a factor, probably allowing adelgids to sustain voracious populations that normal winters historically have constrained. And as temperate zones swing farther and farther north, the range of such pests will expand. Invasive plants are gaining new footholds, native plants struggling.

Wildlife that depend on these habitats are under increasing stress as urban sprawl, energy development in some parts of the country and motorized recreation nearly everywhere encroach on the very habitats set aside to protect wildlife.

What Does All of This Have To Do With Wilderness and Forest Management?

Every natural system, including wilderness, is vulnerable to climate change. Greg Aplet, senior forest scientist for The Wilderness Society, and other scientists are unequivocal on that point. Yet Aplet believes that wilderness protection is a crucial part of a strategy to address climate change and he cites two reasons:

- ♦ First, climate change represents yet one more stress,



Eastern hemlock

photo by Lamar Marshall

piled atop other stresses forest ecosystems now face. When all these stresses are combined, ecosystems are at greater risk. Because wilderness ecosystems are protected from a number of other stressors--such as fragmentation from logging and roads and motorized-recreation--wilderness should be more resilient to climate change than unprotected areas.

• Second, because climate change has so clouded the future, including the future of our wildlands, the challenges themselves are unclear. So are the best responses. We will probably need to try a range of approaches to adaptation, including, possibly, such heavy-handed tactics as cultivation and assisted migration. But because we know so little about what will work, we will also need places where we do little or nothing. Wilderness is such a place and will continue to serve that vital role as we learn which approaches work best.

Maintaining healthy, intact ecosystems is one of our best options for helping wildlands and the species that depend on them to adapt to climate change. An old biological adage says: “adapt, migrate or die.” But what if change is so swift that adaptation is impossible, or if there are no suitable remaining places into which to migrate (or if there are and populations can’t overcome human-created barriers to reach it)?

As it writes new plans for the Nantahala and Pisgah, the Forest Service has a clear duty to very carefully and deliberately consider climate change in all of its management proposals. That will require at the outset that the agency gathers, analyzes and acts upon the best science available in making its decisions. Our job as citizens is to make sure that happens; they are our forests.

The Hemlock Woolly Adelgid

The adelgid is a tiny insect, no bigger than the “e” in lethal, and of Asian origin. It turned up in our Pacific Northwest in



Hemlock infested with woolly adelgids



Old-growth hemlock

the 1920s and by the 1950s had made its way to the Eastern Seaboard, first detected here in a Virginia nursery. It gets its name from the trademark white “wooly” egg sacs it leaves on the branches of hemlocks. Though not particularly harmful to hemlocks in its native Asia, the adelgid arrived here to a system with no natural predators and no natural resistance. It is a lethal threat to the two species of hemlock we see in our Southern Appalachian forests: the eastern hemlock, (*Tsuga canadensis*) and the less-common Carolina hemlock (*Tsuga caroliniana*).

The adelgid reached western North Carolina’s Nantahala and Pisgah National Forests in 2001 and some experts fear that today it infests half the hemlock forests in the Eastern U.S. The recital is a grim one. The National Park Service estimates that fully 80 percent of the hemlocks in Great Smoky Mountains National Park are already dead from the ravages of the insect and maybe as many as 90 percent have perished in Virginia’s Shenandoah National Park.

It is difficult to overstate the significance of hemlock forests in our region. Eastern hemlocks grow on 19 million acres in forests from Georgia to Canada and are the predominant tree species on 2.3 million acres across their range. Those who have walked through a hemlock forest will know without being told the beauty and aesthetic value of this remarkable species.

Among other things, the hemlock is the longest-lived tree in our forests, some reaching 800 years. The largest ever recorded soared 175 feet. It is amazingly shade tolerant, allowing new hemlocks to emerge in forest gaps to maintain hemlock stands.

Foresters refer to the hemlock as a “keystone species,” one whose role in a system is disproportionately large compared to its abundance. Predictably, the disappearance of such a species is likely to result in the disappearance or diminution of many species associated with it.

Hemlocks, the U.S. Forest Service’s Southern Research Station notes, play an important role in the ecology and hydrology

of mountain ecosystems. They offer critical habitat for birds. As many as 90 species can be found in hemlock forests. A few, mostly songbirds, seem particularly associated with hemlocks: the black-throated green warbler, the Blackburnian warbler and the Acadian flycatcher. Some warblers nest nowhere else.

Hemlocks do best in moist ground and, while they are found from swamps to ridges, they are especially common along streams where they play a major role in stream ecology, helping to soften temperature extremes, creating structure in stream courses, offering a rich breeding ground for the invertebrates that fish feed on. In a study the U.S. Geological Service did for the National Park Service, researchers found:

Hemlock-dominated watersheds supported more aquatic invertebrate (insect) species than streams draining hardwood forests. Fifteen aquatic insect species were strongly associated with hemlock and three species were found only in hemlock streams. Brook trout were two and a half times as likely to occur in hemlock streams as in hardwood streams, and were twice as abundant in hemlock streams.

So if there are brook trout in your favorite mountain stream, thank a tree--most likely a hemlock. In all, according to some experts, hemlock forests are home to upwards of 120 vertebrate species as well. Hemlocks are a favored browse species for white-tailed deer, a dietary preference that can inhibit hemlock regeneration as deer nip off new growth.

How Does the Adelgid Spread and Kill?

Winds can carry the pest. So can migratory birds, mammals and humans. Another source apparently is infected nursery stock. And the pest itself is prolific. All hemlock woolly adelgids are females and continue the cycle asexually. The annual increase in numbers is startling: one adelgid can lay up to 300 eggs and that will produce as many as 90,000 new adelgids in a single year. Generations of the pest inhabit the same tree.

The hemlock woolly adelgid attaches itself to the base of hemlock needles and feeds on starch. That slows the growth of needles and causes them to drop, which in turn deprives the tree of nutrients. The crown thins and branches die back. Infected trees die in a surprisingly short time--5 to 10 years, some researchers say, as few as 3 to 5 years according to others.

Dire Comparisons...and Some Hope

The disappearance of hemlocks promises both aesthetic and potentially devastating environmental consequences. Some analysts are comparing it to the chestnut blight, a fungus that struck in the early part of the last century and by 1940 wiped from the landscape an estimated 3.5 billion chestnut trees. The loss transformed the forests of the Southern Appalachians and the hemlock woolly adelgid is on a path to wreak a similar transformation.

But forest science is much advanced since the chestnut blight struck and researchers from a variety of state and federal

agencies and universities are aggressively at work to stop the spread of the adelgid. Prospects range from pesticides, which are practical on individual trees or in small stands but are likely not much use in deep forests, to biological methods that could well work in the backcountry. In particular, two nonnative beetles that prey on adelgids--and only on adelgids--show promise.

Adelgids and the Nantahala-Pisgah Forest Plans

As the research continues, though, hemlocks will continue to die. The question is what will replace them. To a surprisingly large degree, that is a matter of human choice: what do we want our forests to look like--to be and do--in the wake of the loss of hemlocks. Forest ecologists doubt that there is another single coniferous species that is ideally suited to replace the hemlock and its role in ecosystem health in western North Carolina. A likelier option is some combination of conifers chosen fairly deliberately to fill the void. Absent some such action, hardwoods are likely to claim the vacuum.

These matters of choice are very much the province of the revised forest plans for the Nantahala and Pisgah National Forests.

Off-Road Vehicles: A Forest Service Chief's Prophetic Words

Conservationists remember with considerable fondness the tenure of Mike Dombeck as Chief of the U.S. Forest Service. Among other things, Dombeck presided over the development of the Roadless Area Conservation Rule of 2001, a policy that aimed to maintain intact the remaining 60 or so million roadless acres on our national forests.

In a series of speeches delivered after he left his agency post, Dombeck outlined what he termed the top 10 threats to the national forest system. "I believe off-road vehicle or all-terrain vehicle use will be the public land issue of the decade," said the former Forest Service Chief. "We have more people going more places on public land more often, with more kinds of all-terrain vehicles than ever before. Many people want to go anywhere anytime with anything regardless of the impact on the land, water, vegetation or wildlife."

Dombeck predicted that bringing "support, order and agreement" to the use of such all-terrain vehicles (ATVs) and off-road vehicles (ORVs) on public land will be tough enough to make the "spotted owl issue look easy."

Reading Dombeck's comments, it is difficult not to conclude that ATV-related problems will be coming soon to a national forest near you, if they aren't already there...and they probably are.

Numbers of off-road-vehicle (ORV) users in the U.S. have multiplied, rising to 36 million in 2000 compared to 5 million 30 years earlier. Some sources put the number of ATVs in

use in the U.S. at as high as 7 million. Soaring gasoline prices seem to have made little difference in sales numbers.

ATV model names--"Brute Force" and "Outlaw"--seem chosen to encourage bad behavior and the television ads for them reinforce the idea. Some ATV riders seem intent on riding the machines as they see them advertised on television: "without limit." Here, as elsewhere on America's public lands, ATV operators routinely remove or ignore barriers meant to prevent their entrance to areas declared off-limits.

Some organized off-road vehicle groups take their sport and their responsibility seriously, working to educate riders and to maintain and repair trails. They argue that a small percentage of "bad apples" is the source of most of the abuse and that may be true. But as another former Forest Service Chief notes, "the cumulative impact is tremendous" if even a percent or two of ATVs go off the trail." In any case, so many have done just that that there are an estimated 14,000 miles of so-called "user-created" trails on our national forests.

Predictably, conflicts between human-powered recreationists and ORVs have soared. A family walking in the quiet woods disrupts no one else's outdoor experience; a churning ORV is another matter. That loss of a quiet recreational experience is important. But the greater concern is the environmental damage from unmanaged motorized recreation. The machines are bigger, more reliable, more powerful. Damage



from them has increased in proportion to numbers. The costs include ruined wetlands, beaten-down stream banks, gashed meadows, disrupted wildlife habits and habitat.

In addition to the site-specific damage from ORV use, there are questions, too, about ORVs' immediate impacts on human health. An American Lung Association report from 1999 found that the Southeast produces more volatile organic compounds or VOC than any region of the country. (These compounds react with heat and sunlight to form ground-level ozone, smog's primary component.) Across the region, pollution from off-highway vehicles accounts for 14 percent of VOC emissions, third behind highway vehicles (32 percent) and industrial solvent use (24 percent).

The region also led in the nation in production of particle pollution and the contribution of off-highway vehicles topped that of highway vehicles, 6 percent compared to 5.

The Wilderness Society notes that, "Dirt bikes, all-terrain vehicles, snowmobiles and other off-road vehicles are major sources of air, water and noise pollution nationwide. Most already in use are powered by two-stroke engines that are antiquated, highly polluting and inefficient. Off-road vehicles are a major source of pollution on America's national parks, monuments, forests and other public lands"

None of this is to say that there isn't a place for responsible motorized use on our national forests. But that place isn't everywhere. Each must be carefully chosen, then managed just as carefully. As Chief Dombeck said in his warning about the challenge of ORV management, "...all our activities must take place within the ecological limits of the land."

There is some evidence, in addition to the recent actions on the Tellico riding area, that the Forest Service is beginning to heed the warning of its former chief. In 2007, the agency announced that it would begin imposing limits on ATVs and other off-road vehicles across the forest system's 193 million acres.

In effect, that action should mean, pursuant to a rule the agency imposed in 2005, that national forest trails will be closed to ATVs unless specifically posted open, a rule that is in effect on some forests already. And it should mean an end to the "open unless posted closed," go-almost-anywhere non-rule that has been in effect. Trail maps, expected to be available for all national forests by 2010, will document the changes.

While the new attention to ATV and ORV abuse is welcome, it faces two obvious limits. The first has to do with how the agency chooses the trails it will leave open to motors. Simply changing signs from "closed" to "open" will mean little. Each trail or trail segment proposed for motorized use must be analyzed to ensure that motorized use is appropriate in that place and that it can occur without damage to soil, water, wildlife, and other recreational activities. Perhaps more significant is whether and how the agency plans to enforce closures. While it may be finding the will to wrestle with the problem, it lacks the resources--people and money--to manage rules now in effect.

Population Growth and the Fragmentation of Private Lands

Those of us fortunate enough to live in one of the 18 counties containing the Nantahala and Pisgah National Forests are not surprised that others want to live here too, but we may be surprised by their numbers. Between the year 2000 and 2030, the population of these counties is expected to increase by 30 percent.

Across the entire state of North Carolina, the increase will be even greater: an estimated 52.5 percent. More people will demand more of everything--building sites, roads, schools, businesses, shopping, and recreational facilities, both off and on the national forests. Americans have a penchant for fleeing metropolitan areas for bucolic settings, then cluttering them

with the full range of services and conveniences they so pointedly left behind. All of that means more stress on our national forests, already struggling with the other serious pressures outlined in this section. According to the U.S. Forest Service report *National Forests on the Edge* (2007), the Nantahala-Pisgah National Forest ranks fourth in the nation for development threats around its perimeter.

A recent example of what a burgeoning population portends is the controversial plan to build Interstate 3 (I-3) and the so-called Corridor K. Both roads, as proposed, would slash through some of the last remaining wild places in the Southern Appalachians.

I-3 would be a four-lane highway running from Savannah, Georgia, to Knoxville, Tennessee. The dollar cost is high: an estimated \$25 million per mile. The environmental cost is greatly higher, probably incalculable. Most obviously, massive earthmoving would send tons of muddy runoff into local water supplies. Further, an I-3 would serve as a more direct route for the transport of radioactive materials across the South with all the attendant human health and safety implications of that enterprise.

Opposition to I-3 may have derailed it temporarily, but Corridor K could well take its place. And a devious place it is. Corridor K would link Chattanooga with Asheville and would by itself be a good deal less damaging project. But the worrisome question is whether it will remain by itself or whether it will be only the beginning in an incremental scheme to achieve an I-3 roadway a bite at a time. If Corridor K were completed, so too would be one stretch of what could still become I-3. Other equally innocent-seeming "corridors" could eventually complete the whole.

Development on private land is, of course, beyond the reach of the new forest plans the Forest Service will soon be writing. But the two--private development and public land management--are far from unconnected. A principal role of our national forests and other public lands is to provide and to protect precisely those things that are already in short supply on nearby private lands and sure to dwindle further as population pressure increases. Those things are often called "ecosystem services" and they include clear air and water, fish and wildlife habitat, recreational opportunities and a refuge of sorts for species with nowhere else to go.

As those elements decline on private land, they become even more valuable on our public lands. That simple fact sharpens considerably the importance of making wise decisions for the management of our national forests. It will be prudent to consider the development of a sensible new forest plan for the Nantahala-Pisgah National Forests as a hedge against the massive development pressures expected in Western North Carolina and other areas of the Southern Appalachians.

Logging on the Nantahala and Pisgah

Thanks to the work of another generation of forest activists,

logging on North Carolina's National Forests is a very different creature than it was a decade and a half ago. Timber harvest has decreased on the Nantahala-Pisgah from the historically high levels seen throughout the 50s, 60s and 70s.

Harvest levels were high and the means of achieving them was most often clearcuts. That heavily impacted the native forests just then beginning to recover from the devastating logging that occurred around the turn of the last century.

The forests of the Southern Appalachians are remarkably resilient, but for all their resiliency they require time to recover the species and structural diversity that characterized the original forests of the Southern Appalachians. If logging in the early decades of the 20th Century was scandalously exploitive in the extreme, large-scale clearcutting in the middle of the century tended to perpetuate the damage and to greatly retard the forests' recovery.

Such destructive logging has slowed over the last 20 years but it hasn't stopped. The 1987 forest plan for the Nantahala-Pisgah called for clearcutting around 4,500 acres a year. But after conservationists appealed that plan and forced revisions in it, the final plan amendments in 1993 reduced the clearcutting to around 240 acres a year. Even that is supposed to be limited to efforts to restore damaged ecosystems and to restore short-leaf pine.

Also in the original 1987 plan, the allowable sales quantity (ASQ) was a stunning 72 million board feet per year. The final 1993 amendment more than halved that number to 34 million board feet. In 2006, the last year for which the Forest Service provides the information on its website, 13 million board feet were harvested on 1,308 acres. Only 20 acres were clearcut.

There is a tremendous need for a restoration focus on the



Nantahala-Pisgah National Forests to address their degradation over the last century. The public increasingly recognizes the need for forest restoration and so, as a public matter, does the Forest Service. Conservation organizations across the Southern Appalachians are working with the agency to ensure that restoration efforts are just that and not merely an excuse to slide back into large timber harvests. Restoration must address watershed and stream restoration, restoration of species diversity and structure, and attack exotic species and diseases. That work alone will demand a concerted effort and consume all available resources.

It will be important in reviewing the new forest plans to ensure that restoration is truly restoration and are not merely an excuse to slide back into the practice of large timber harvests. If restoration becomes merely a guise, it holds the potential for considerable mischief.

Conservationists meet regularly with Forest Service staff to define restoration in Appalachian ecosystems. Such scrutiny will be even more important for the upcoming plan if we are to ensure that restoration efforts do not simply become code words for business as usual.

Why Protect Wild Areas?

"We need wilderness preserved--as much of it as is still left, and as many kinds--because it was the challenge against which our character as a people was formed. The reminder and the reassurance that it is still there is good for our spiritual health even if we never once in ten years set foot in it. It is good for us when we are young, because of the incomparable sanity it can bring briefly, as vacation and rest, into our insane lives. It is important to us when we are old simply because it is there—important, that is, simply as an idea."

Structural diversity is a term increasingly used in ecology to denote characteristics of the physical structure of ecosystems. For example an old growth forest generally has high structural diversity with well developed dominant, sub-dominant, and suppressed trees and shrubs, herbaceous layer(s), down woody debris, and well-developed soils with abundant organic matter. Plantations, clear cuts, and other managed forests are generally lacking many elements of this structural diversity (in addition to the species diversity they also generally lack). Landscape ecology also includes the "landscape stability principle", which emphasizes the importance of landscape structural heterogeneity (structural diversity) in developing resistance to disturbances, recovery from disturbances, and promoting total system stability. Hugh Irwin

--Wallace Stegner, from his *Wilderness Letter*

For well over a century, Americans have been setting aside certain public lands for protection in an undeveloped state. For much of that time, the practice was uniquely American,



Logging road on Southeastern National Forest

though many other nations now embrace it. Why? Stegner argued that there is something about wild country that resonates deeply in the American spirit. Today's wilderness lovers would agree, even as they find the question of "why wilderness" an odd one.

For many of us, the values of wilderness are intrinsic, self-evident and have little to do with utilitarian accounting. We share Albert Einstein's view: "Not everything that can be counted counts and not everything that counts can be counted." But the process of protecting wilderness on our federal public lands is finally a political one. As such, wilderness must contend in both the marketplace of ideas and the marketplace itself. Fortunately, it contends very well in both venues.

Start with outdoor recreation, a huge and growing part of our economy. Families do not outfit themselves for adventures in clearcuts and strip mines. They seek peaceful places, natural quiet and natural sounds. At the high end of that scale is wilderness--designated or de facto. It draws countless hikers, back-country hunters and anglers, campers, white water boaters, all of whom spend money, lots of it, to equip themselves and simply to get there. The economic engine that those activities comprise is real and measurable.

We also know from years of research that some of the most economically robust places in the nation are those nearest wild country, often designated wilderness. Businesses relocate to such places, knowing that competent, well-equipped workers are either there or will come, seeking what teeming cities are so often unable to provide: a high quality of life, what some refer to as "a paycheck from God."

If the criterion is direct human benefit--what's in it for us--consider that wild nature yields a significant percentage of the pharmaceuticals we all rely on in medicine, dentistry and

other healing arts. Some antibiotics, including penicillin and cephalosporin, derive from natural substances. Against this established fact stands another: only a small number of the plants and animals on the planet have been studied for their medicinal properties, even as we go about the sad business of extirpating them, killing things finally and forever whose names we scarcely know and whose value to humankind we can scarcely imagine. Wilderness stands as a bastion against that disappearance, a reservoir of native plants and animals, insulation against our casual destruction of them.

It is perhaps most of all in this function of warehouse for diversity, that wilderness stands most apart. But that is just one element of its utility as a natural laboratory. By serving as a control or benchmark, wild areas can help us evaluate and understand our impact on the environment and to better measure our successes or failures on adjacent non-wilderness land, both public and private. Wilderness areas are places where natural processes are allowed to unfold without significant intervention by man. They have much to teach us about water quality and clarity, soil fertility and plant and animal distribution, about natural systems functioning naturally. By knowing and understanding the status and trends in undisturbed areas, we can measure management on nearby lands and make better choices about farming methods, flood control, forestry practices and wildlife management.

Large tracts of protected forest also provide critical habitat for many species of wildlife. Backcountry hunters and anglers know this fact both intuitively and from much-valued personal experience. Not only are hunting and fishing allowed in protected wilderness, wilderness provides the best of those pursuits for true sportsmen and women, those for whom the hunt itself is every bit as important as the harvest.

Science is telling us, too, that interior forest songbirds need relatively unbroken areas of mature forest in order to maintain viable populations. And other wide-ranging species such as black bear prefer wild settings. Our knowledge of these species and their needs grows all the time. As we learn more about our native flora and fauna, prudence suggests that we let some of our public land stand undeveloped rather than risk erasing the complex web of sustaining elements critical to their well-being.

Wilderness and unbroken backcountry serve these functions admirably and they will do so sustainably if we have the wit and the will to let them. Their role becomes ever more important as we lose precisely those attributes on private land at an accelerating rate. As undisrupted habitat and open space dwindle on other ownerships, their retention on natural public lands becomes more and more vital. If we were to single out one purpose for our public lands that surpasses all others it would be this: to provide things that private lands cannot or do not provide. Among those are public recreational opportunities, opportunities for solitude and primitive experiences, undisrupted habitat and natural settings.

Wild places enrich our lives and serve humankind in countless ways--some obvious, others less so; some quantifiable, some not. While we are sometimes called on to justify

wilderness in terms of its human utility, that, to invoke Wallace Stegner once more, is perhaps the least of it. "What I want to speak for is not so much the wilderness uses, valuable as those are, but the wilderness idea, which is a resource in itself," he said, also in his *Wilderness Letter*.

For the convinced wilderness lover, that is reason enough to treasure and protect it. Others may need reassurance that wilderness, if not an actual economic plus is at least economically neutral, and that there are practical, human-centered reasons, not just spiritual and moral ones, for letting it endure. If it is put to such utilitarian tests, and it surely will be, wilderness can pass, profane though such tests may seem.

Those tests may seem stranger still to our children who will inherit this more crowded, more frantic planet from us. They are likely to be less interested in the dollar price of the logs we sold than of the transcendent value of the wild forest we surrendered in the process. If we choose wrongly, they won't ask why wilderness. They'll ask why on Earth not?

The Wilderness Act of 1964

Ordinarily, the worst way to figure out what Congress intended in legislation is to read the law itself. But the Wilderness Act of 1964 is a sparkling exception. As it has rarely been before or since, the Congress was not only clear but eloquent in this landmark law:

"In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States...leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness."

That was the why of it -- here's the what:

"A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain."

The Act goes on to speak of wilderness as "an area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation...and has outstanding opportunities for solitude or a primitive and unconfined type of recreation..." (A "trammel" is a trap, a hobble, a restraint; wilderness is subject to none of those.)

In that Act, a planetary first, the Congress established a National Wilderness Preservation System and included within it an initial 9.1 million acres. The Wilderness Act applies only to federal public lands and reserves to the Congress the right to designate wilderness on those lands. Today, permanent

wilderness protection exists in every federal public management system: forests, parks, wildlife refuges, the public domain lands of the American west. And the wilderness system has grown to over 105 million acres. Some advocates say there is a like amount, or even more, that fully deserves protection as wilderness.

Wild places in the Eastern U.S. weren't forgotten, though they would later pose certain challenges. The 1964 Act designated two wilderness areas on the Pisgah National Forest: 7,655 acres in a place called the Linville Gorge and another 13,400 acres at Shining Rock. But in 1964, wilderness in many minds seemed mainly to mean the expansive public lands, mostly mountains, of the American West; Eastern wilderness was more the exception than the rule.

Because of settlement patterns, there were few places in the East that hadn't seen human use and settlement of some sort over the years since Europeans arrived. Populations were larger there and had been in place longer. Much of the land had been logged or farmed. The public estate was smaller, much of it reacquired over the years from one failed private enterprise or another.

Eastern populations continued to grow in the years following the Wilderness Act, to become more mobile and to demand more wild places in which to escape urbanization. At the same time, critics charged that the U.S. Forest Service was taking an excessively narrow view of wilderness suitability, imposing a "purity standard" that disqualified lands ever logged or cleared and tilled from wilderness consideration. Thus growing demand confronted an artificially constrained potential supply.

If there was confusion--willful or otherwise--about what the 1964 Act meant and intended, the Congress eliminated it with the passage of the Eastern Wilderness Act in 1975. Though the 1975 Act doesn't employ just these words, the Congress in effect stated its intention to consider lands that were wild again, not just those that had been wild forever.

With the 1975 Act, which the Congress carefully specified would apply only east of the 100th Meridian, the dam broke. The Act designated 16 new wilderness areas in the East, most in the Southeast. They included 15,000 acres of land in the Nantahala and Cherokee National Forests as the Joyce Kilmer-Slickrock Wilderness and 3,600 acres in North and South Carolina and Georgia as the Ellicott Rock Wilderness. The Congress also created 17 wilderness study areas (areas meant to be managed in such a way as to protect their wilderness values until the Congress decides their future).

In an enormous leap forward for Eastern wilderness, the North Carolina Wilderness Act of 1984 designated several more areas as part of the National Wilderness Preservation System. On the Nantahala, the Congress designated:

- 3,680 acres as an addition to the Ellicott Rock Wilderness;
- 10,900 acres as the new Southern Nantahala Wilderness;
- 2,980 acres as an addition to the Joyce Kilmer-Slickrock Wilderness.

New wilderness protection on the Pisgah included:

- 3,400 acres of additions to the Linville Gorge Wilderness;
- 7,900 acres as the new Middle Prong Wilderness Area;
- 5,100 acres of additions to the Shining Rock Wilderness.

The North Carolina Wilderness Act also established several wilderness study areas on the Pisgah, among them: Harper Creek (7,138 acres); Lost Cove (5,708 acres); and an extension to the Craggy Mountain wilderness study area totaling 1,280 acres. Two new wilderness study areas were also created on the Nantahala: Overflow (3,200 acres); and, Snowbird (8,490 acres). In all, the 1984 Act designated 68,700 acres as wilderness and established wilderness study areas totaling 25,816 acres.

Today, according to the U.S. Forest Service, there are 103,226 acres of wilderness in North Carolina, nearly two-thirds of it on the Nantahala and Pisgah, lesser amounts on the Croatan and Uwharrie National Forests. Acreages, of course, though handy measures of relative size and relative success, matter little in the scope of things. It is the places that matter. It is in these splendid wild places where we live our stories about wilderness. It is from them that we take away the images that energize the American wilderness movement and the people who comprise it.

How much wilderness ought we to protect? For some, the first acre was one too many. For others, such as noted writer Wallace Stegner, the answer is "as much of it as is still left and as many kinds--because it was the challenge against which our character as a people was formed." We have the opportunity to add to our enduring resource of wilderness by doing what we can to help shape the upcoming Nantahala-Pisgah Forest Plans. Central to that process is defending the forests' remaining roadless areas.

Roadless Areas and Wilderness

A first definition of wilderness is roadlessness. But the connection between roadless areas and formally protected wilderness goes a good deal deeper than that. In the Wilderness Act of 1964, the Congress directed the Secretaries of the Interior and of Agriculture to review the lands under their jurisdiction for wilderness suitability and to recommend to the President, and he to the Congress, which areas merited permanent protection.

So in 1972 the Forest Service launched what it called the RARE process (for Roadless Area Review and Evaluation) starting with 1,149 potential areas containing 56 million acres. When the agency called the process complete in the Fall of 1973, it designated a scant 274 wilderness study areas totaling 12.3 million acres across the forest system. The flaws in the process were clear to conservationists who demanded that it be redone. In particular, they argued that the analysis gave especially short shrift to deserving areas in the national grasslands

and in the forest lands of the Eastern U.S.

In response, the agency initiated RARE II. When that review was completed in 1979 the agency identified 2,919 areas, around 62 million acres, as lands having wilderness characteristics, a far cry from the findings of the earlier review. Of these, the Forest Service recommended wilderness designation on 15 million acres, called for further planning consideration for 11 million acres and proposed non-wilderness management for the remaining 36 million acres. Though it was a vast improvement over the original RARE, conservationists still found much to fault in RARE II. And when forest wilderness legislation came up for consideration in the years following, the Congress went beyond the agency recommendations more often than not in designating wilderness.

The RARE II review, then, established something of a starting point, at least for future wilderness protection efforts on national forests.

In North Carolina, the RARE II inventory identified over 200,000 roadless acres: 90,770 on the Nantahala National Forest, 76,668 on the Pisgah, 27,845 on the Croatan and 4,970 on the Uwharrie.

Roadless Areas Then and Now

North Carolina's forests contain around 35 confirmed roadless areas, as the Forest Service defines the term: an area with no more than a half mile of improved road per 1,000 acres. Our state's roadless areas have changed in the years since RARE II. In many cases this loss has been due to road building within RARE II areas, and with far too few exceptions, the changes have been losses, some of them major ones. Today's Roadless Inventory stands at 178,000 acres.

To understand our current roadless acreage, several factors must be considered: wilderness designations in 1984 (after RARE II); areas changing names; the fact that there are no GIS coverages (or good maps) of the RARE II areas. Cheoah Bald is a good example of one of the largest roadless areas in the region being reduced from its original acreage of over 20,000 acres to less than 8,000 acres due to the building of new roads. Roadless acreage has slightly increased because the roadless inventory of the 1990s was performed with more public oversight and input than RARE II. On the other hand we have lost RARE II acreage because there has been a systematic attempt to whittle away these areas with new roads.

Nantahala National Forest	RARE II	Today
Cheoah Bald	21,434	7,810
Tusquitee Bald	16,860	13,791
Boteler	12,445	4,221
Fishhawk Mountain	4,890 acres	0
Snowbird	5,490 acres	8,504
Wesser Bald	0	4,094

Pisgah National Forest

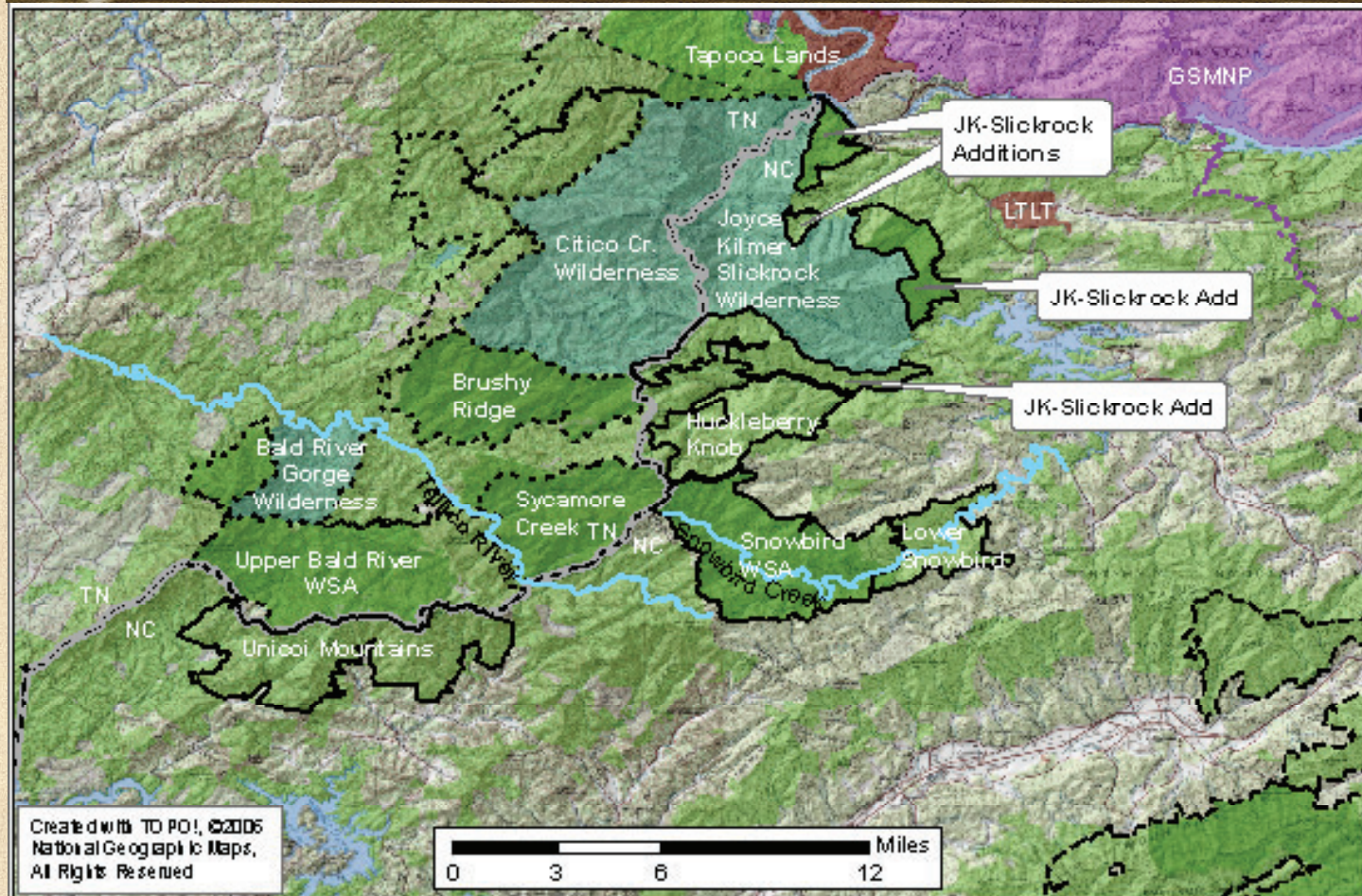
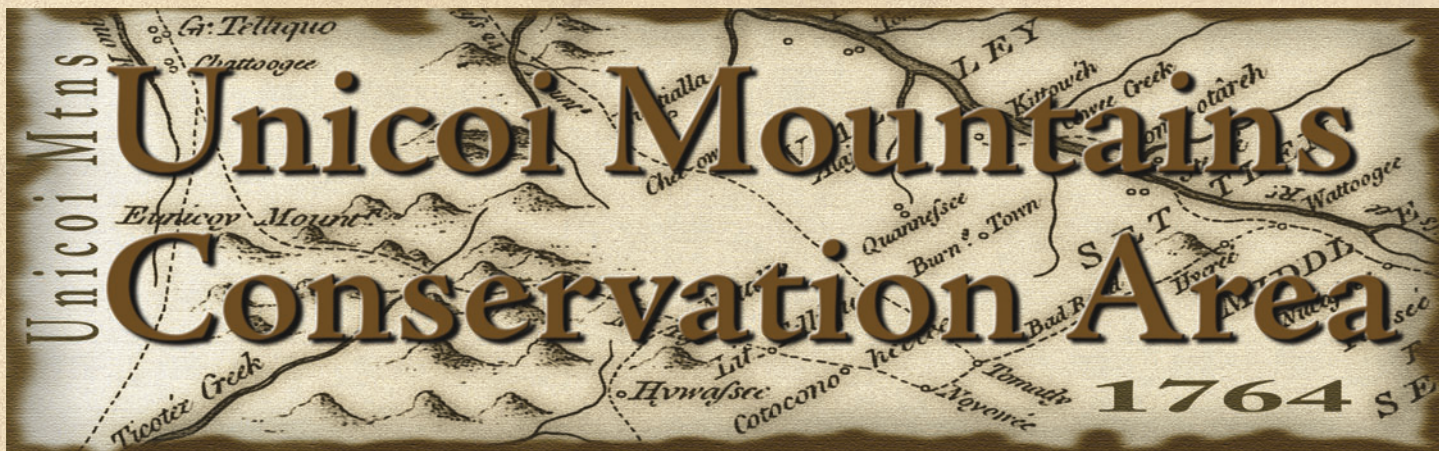
Nolichucky	3,920 acres	0
Upper Wilson	6,530 acres	4,990
Wildcat	7,120 acres	0
Craggy Mountain	2,295 acres	2,659
Harper Creek	7,138 acres	7,351
Lost Cove	5,708 acres	5,954
Bald Mountain (Big Creek)	4,200	12,017
Mackey Mountain	0	5,934
Jarrett Creek	0	7,500
Woods Mountain	0	9,606

Where Have They Gone?

An area's inclusion in the Forest Service's roadless area inventory does not necessarily mean that the agency will manage it in such a way as to protect its wild, natural values or that all management activities will end. Some management plans and categories allow for roadless areas to remain undisturbed; others allow for resource utilization. Much of that activity can alter a roadless area's conditions such that some or all of it no longer meets roadless area criteria. This list of such activities is a long one:

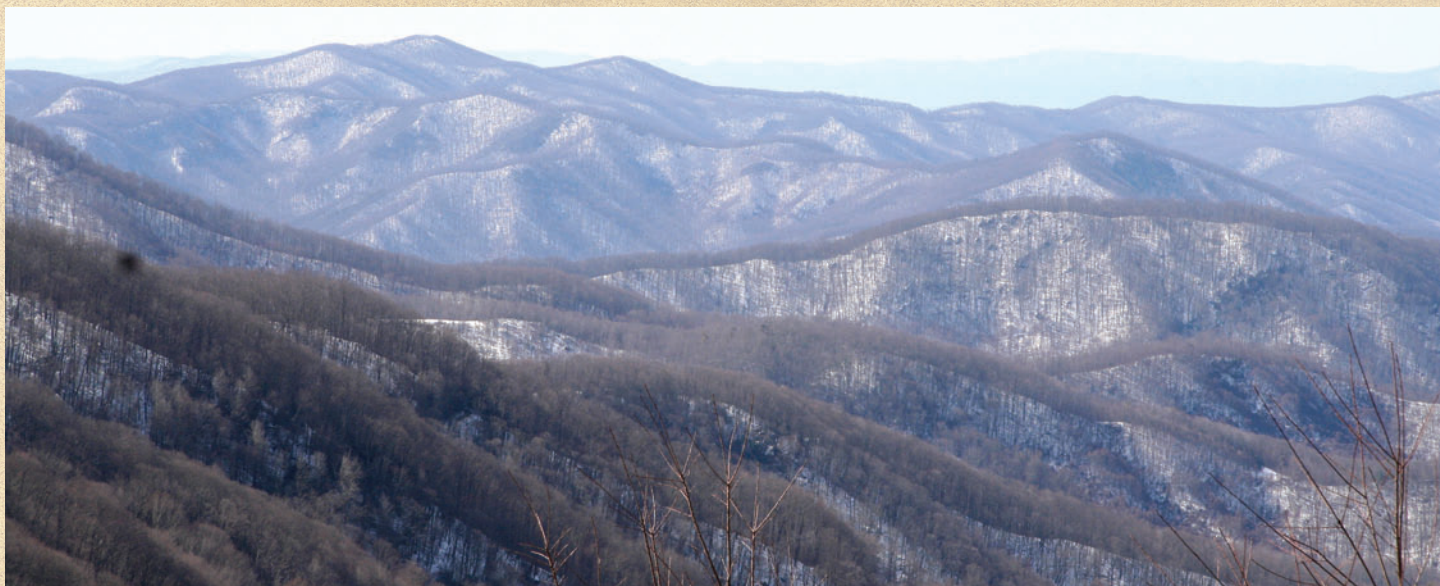
- mining and prospecting with heavy earth-moving equipment;
- planting of non-native vegetation on more than 15 percent of the area;
- road building or rebuilding that results in more than a half mile of road per 1,000 acres;
- timber harvesting that results in trees less than 10 years old in more than 20 percent of the area;
- erecting buildings or other structures;
- building transmission lines, pipelines or utility corridors with cleared rights-of-way;
- creating major recreational areas such as campgrounds, visitor centers or resorts;
- changing recreational use from non-motorized to motorized;
- reclassifying old temporary roads and undrivable "wood" roads abandoned decades ago to system roads; and
- creating high-standard surfaced trails.

The sequence, then, begins to take shape. Roadless areas are the universe of the likeliest new wilderness areas--places that meet the threshold test for wilderness suitability. Their loss diminishes that universe and prospects for additional wilderness in the years ahead. Forest plans set the management direction for our national forests, including roadless area treatment, management and protection, for the next 15 years and beyond. How valuable roadless areas fare over that period depends directly on the forest plan. So does our North Carolina wilderness future.



	Designated Wilderness/Other Designated USFS Lands		Designated Wild and Scenic River Segment
	USFS Ownership		Suitable or Eligible for Wild and Scenic Designation
	Inventoried Roadless Areas		Appalachian Trail
	National Park Lands		Bartram Trail
	State Conservation Lands		Benton MacKaye Trail
	Private Conservation Lands		Mountains to Sea Trail
	Local Government Conservation Lands		Art Loeb Trail
	Featured Mountain Treasure Areas		Other Trails
	Other Mountain Treasure Areas		

Master Legend for All Maps In This Publication



The Unicoi (Unaka) or "White Mountains" were so named by the Cherokees because of the winter snows on these high places. This view is looking east from Beech Gap on the Cherohala Skyway toward Beaverdam Bald.

Photo by Lamar Marshall

Unicoi Mountains Conservation Area

Unicoi Mountains (NC)

Upper Bald River Wilderness Study Area (TN)

Snowbird Creek – Lower Snowbird (NC)

Sycamore Creek (TN)

Joyce Kilmer-Slickrock Extensions

Santeetlah Headwaters

The Unicoi Mountains lie to the southwest of Great Smoky Mountain National Park and boast natural and scenic values that rival those of its better-known neighbor. The Tennessee-North Carolina state line splits the range. Lands on the Tennessee side fall within the Cherokee National Forest, those on the North Carolina side within the Nantahala National Forest.

The Unicoi Mountains name designates both this large landscape area as well as a specific area. The broader area includes 400,000 acres of public land in the two national forests. And they function as a single, large conservation area that should be treated as such. Trails in the area carry visitors to places as remote and unspoiled as any in the Eastern U.S.

The conservation area we propose is an important refuge for a range of species--black bears among them--that rely on its clear streams, healthy, surprisingly intact forests and natural processes that operate here much as they always have. The Unicoi Mountains Conservation area enjoys another advantage: Forest Service ownership is more consolidated than in other areas and suffers less from the diverse ownership patterns that often complicate conservation.

Because of its rugged, remote--and thus largely unroaded and undeveloped--character, significant portions of the Unicoi Mountains Conservation Area have never been logged or have been logged only once and have since had nearly a century to recover. Within this large native forest are intact stands

of old-growth: over 8,000 acres have been inventoried in the Nantahala National Forest.

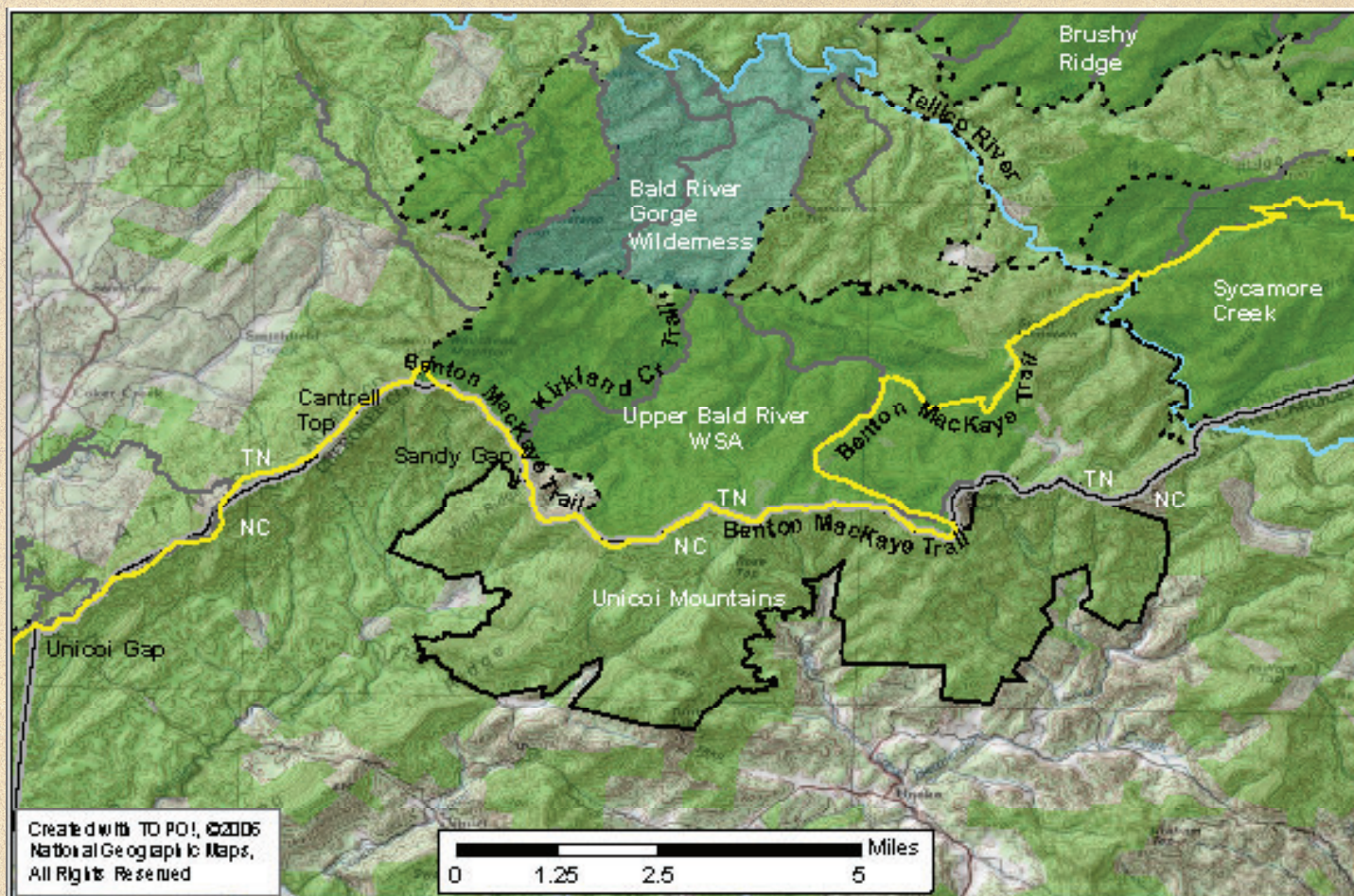
An Invaluable Reservoir for Restoration

This area offers a promising anchor for recovery of the entire ecosystem, given the fact that the Unicoi Mountains are considered a "biological hotspot," defined as an area "characterized by high biological diversity and populations of rare species." It is crucial territory for wide-ranging black bears and a vital nursery for neotropical migratory birds. A number of rare species--plants, amphibians, fish and mammals--thrive and depend on the high precipitation in the Unicoi Mountains; precipitation at the highest peaks averages over 90" annually, making it one of the wettest mountain ranges in the Southern Blue Ridge along with the Highlands Plateau and the Southern Nantahalas. The voluminous precipitation provides ample habitat for rare bryophytes and salamanders, including the endemic Junalaska salamander found nowhere else.

Citico Creek, which flows from the center of the Unicoi Mountains complex, is a critical aquatic refuge watershed, sheltering several rare species, such as the yellowfin madtom and the smoky madtom. Other healthy streams, such as Slickrock Creek and Snowbird Creek, offer important habitat to native trout and other species.

The Unicoi Mountains have a vibrant history of both Native American and early European settlement and relics of both periods abound in the area.

The values of the Unicoi Mountains Conservation Area extend far beyond its boundaries. Its protection would connect it with other important areas, some already protected as wilderness but with truncated boundaries that leave them vulnerable. Together, these lands offer a reservoir of species richness and room enough to allow it to spread into areas from which it has disappeared.



Unicoi Mountains (adjacent to Upper Bald River (TN) Wilderness Study Area)

Approximate Size: 8,931 acres

Old Growth Acreage: 227 acres

Location: Cherokee County, North Carolina, 12 miles northwest of Murphy, on the Tennessee border, Nantahala National Forest, Tusquitee Ranger District
USGS Topographic Maps: McDaniel Bald, Unaka

A high ridge marks the North Carolina–Tennessee state line west from Beaverdam Bald to the terminus of Forest Road 50 at Sandy Gap. Sandy Gap is also the trailhead of the Kirkland Creek Trail which goes through the adjacent Upper Bald River Area in Tennessee. The Benton MacKaye Trail, considered an Appalachian Trail alternate trail, follows the state line dividing the Unicoi Mountain Area from the Upper Bald River Wilderness Study Area.

The Unicoi Mountain area is contiguous to the Upper Bald River Wilderness Study Area in adjacent Cherokee National Forest in Tennessee and is recommended for wilderness in the Cherokee National Forest Management Plan. The Unicoi Mountains area would be a sensible, natural addition for wilderness study, forming a large area in both states of approxi-

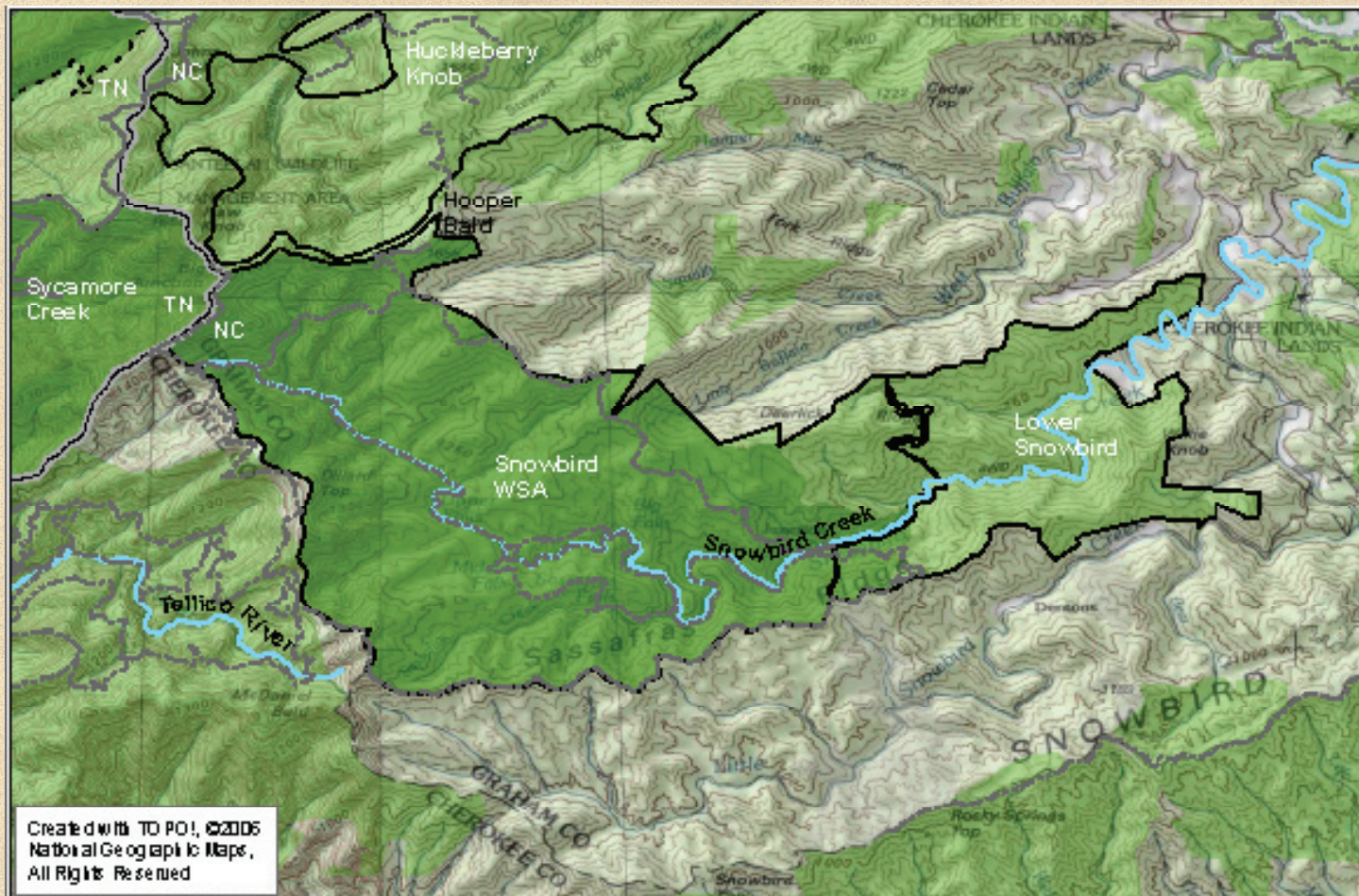
mately 18,000 acres.

On both sides of the state line the forest has recovered from past logging, and now supports a recovering northern hardwood forest. There are two old-growth candidate sites on the Tennessee side of the area. Left undisturbed for a few more years, the growth will become awe-inspiring. The Forest Service has placed the Unicoi Mountain area in a large patch of Old Growth Recovery Area.

This area of the mountains has historical significance. On the west of Forest Road (FS) 50 the ridge continues to Cantrell Top. Unicoi Gap at the lower end of Cantrell Top is a gap on the old trading trail between the Cherokee town of Tellico



This original segment of the Unicoi Turnpike was built on an ancient Cherokee trading path. *photo by Lamar Marshall*



and Cowee Town of the Middle Cherokee. This Unicoi Trail crossed from the Hiwassee River drainage into the Tellico River drainage at Unicoi Gap. The Joe Brown Highway today roughly follows the route of the trading route, from Murphy through Unicoi Gap to Tellico Plains. This old trail was recently designated a section of the "Trail of Tears" by Congress as one of the routes by which the Cherokee were removed from the Southern Appalachians and relocated to Oklahoma. Legend holds that a Cherokee chief is buried in the area.

The Upper Bald River roadless area (TN) is recommended for wilderness study by the Cherokee National Forest in their last forest plan. The Unicoi Mountains (NC) are contiguous to this area and would be a sensible, natural addition for wilderness study. The Benton Macaye trail generally follows the state line between these two areas.

Snowbird Creek/ Lower Snowbird (NC)/Sycamore Creek (TN)

Approximate Size: 8,969 acres

Roadless Acreage: 8,504 acres

Location: Graham County, North Carolina, 10 miles southwest of Robbinsville, Nantahala National Forest, Cheoah Ranger District

USGS Topographic Maps: Big Junction, McDaniel Bald, Santeetlah Creek, Marble

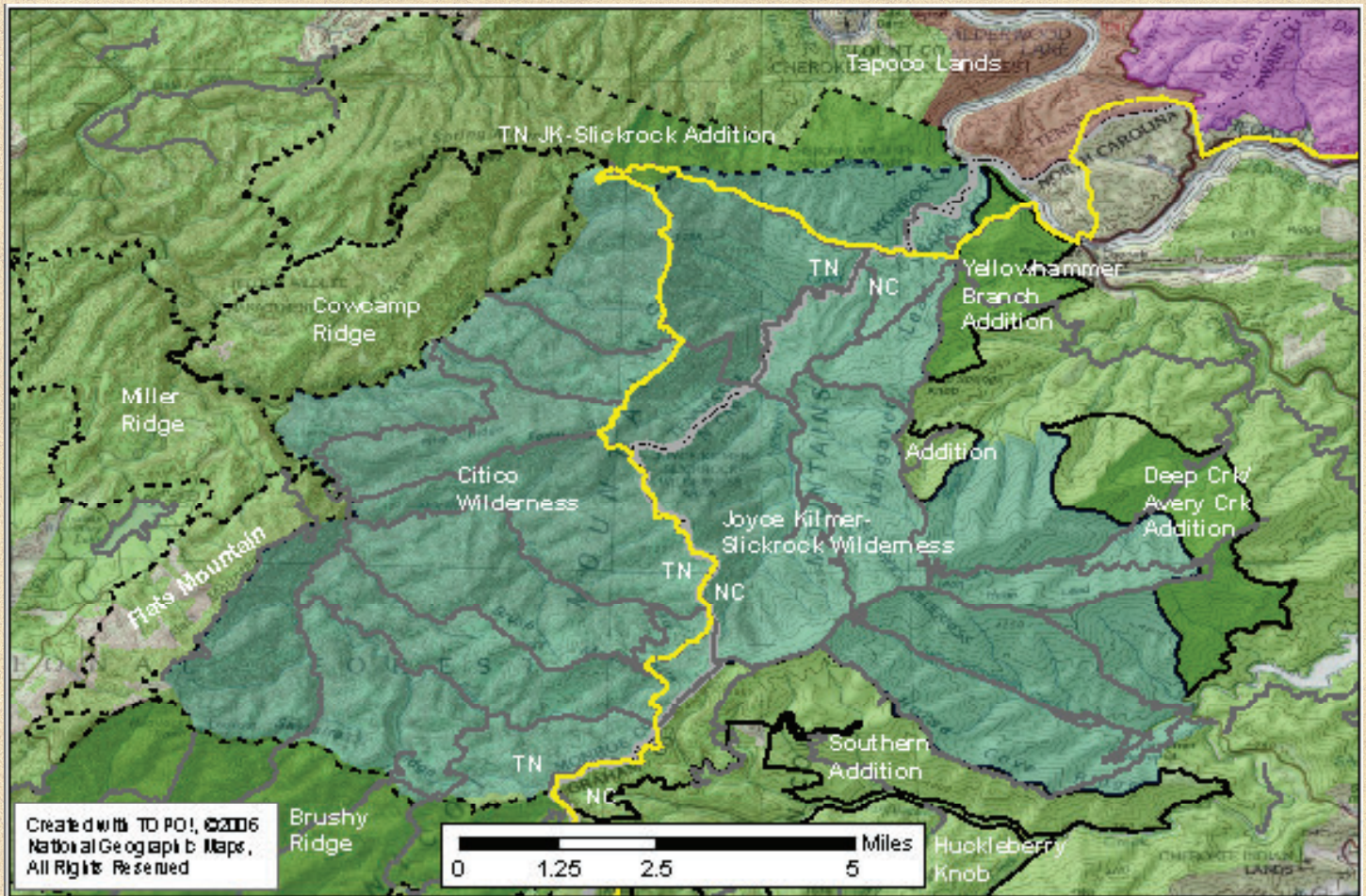
Most of the Snowbird area is a designated a Wilderness Study Area. The only reason it was not recommended for Wilderness in 1987 was political, with a strong local opposition to Wilderness at that time.

After studying Snowbird Creek, the U.S. Forest Service in 1994 found it qualified for protection as a National Wild and Scenic River. The roadless area encompasses the entire upper watershed of the creek, including major tributaries Sassafraas Branch and Meadow Branch. The Snowbird Creek watershed is well-known for its trout fishing.

The Bemis Hardwood Lumber Company logged the valley in the early 1940s using a logging railroad that changed from standard to narrow gauge at Junction. Because of its low value at the time, most of the hemlock was left, and magnificent specimens, though dying, are scattered throughout the watershed. Some large American chestnut trees remain at the upper end of the valley.

Above High Falls the creek supports a reproducing population of native brook trout. Hooper Bald, one of the largest balds in the Southeast, lies adjacent to the upper boundary of the area. Near the top of the area is McGuire's, site of an old hunting lodge. The pens still stand from which Russian wild boars escaped into the neighboring mountains.

A main trail runs up Snowbird Creek using the old logging railroad bed. It requires multiple wet crossings and after sev-



eral days of rain or even a single heavy summer downpour the crossings can be impassible. A branch railroad bed trail runs up Sassafras Branch passing the high Sassafras Falls. Several trails climb out of the valley, but hikers should inquire at the district ranger station about recent maintenance. Cherochala Skyway traverses the ridge at the head of the watershed.

Lower Snowbird Creek adjoins the wilderness study area to the east. This 2,710-acre area did not make the final list for inclusion among Inventoried Roadless Areas on the Nantahala National Forest but early logging operations may have missed some steep, upland slopes southeast of the Wilson Cabin area which may yet harbor some old-growth sites.

Sycamore Creek roadless area adjoins Snowbird Creek on the Tennessee side of the divide to the west. Though it is a natural continuation of Snowbird, sharing the same wild and natural values, it enjoys no particular protection. It should be considered part of the whole and protected as such.

The Snowbird Mountain Treasure is important and irreplaceable habitat for rare organisms like the Junaluska Salamander, found only in the Unicoi Mountains, the hell-bender, and the Federally Endangered Carolina northern flying squirrel.

Joyce Kilmer-Slickrock Extensions

Approximate Size: 7,414 acres

Roadless Acreage: 4,592 acres (1,896-Deep Creek/Avery Creek; 1,271-Yellowhammer Branch; 1,425-TN Joyce Kilmer-Slickrock addition)

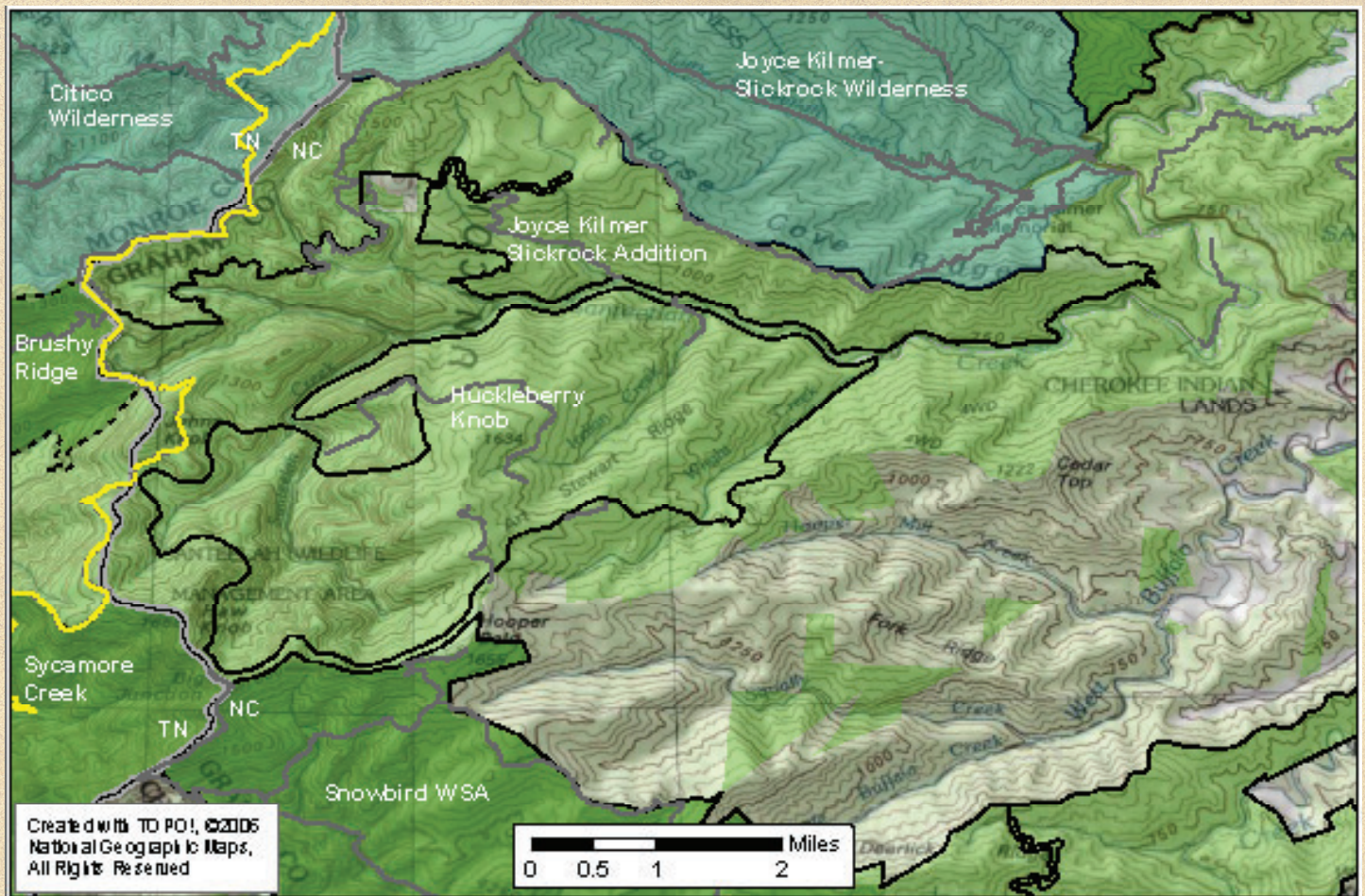
Old Growth Acreage: 835 acres

Location: Graham County, North Carolina, 10 miles northwest of Robbinsville, Nantahala National Forest, Cheoah Ranger District

USGS Topographic Maps: Santeetlah Creek, Tapoco, Big Junction

These proposed additions are found along the southern and northeastern boundary of one of the largest and most significant wilderness areas in the Eastern United States. Along with other lands in Tennessee, they complement the existing 33,727-acre wilderness expanse that includes the Joyce Kilmer-Slickrock Wilderness in North Carolina and Citico Creek Wilderness in Tennessee. The extensions are an integral part of and indistinguishable from the designated wilderness.

The northeast parcels also form a close link to 10,000 acres of Topoco conservation lands, over half of which the Forest Service and the National Park Service acquired through the Land and Water Conservation Fund. Alcoa Aluminum placed the remainder under a conservation easement. These areas as well as a Tennessee wilderness addition to Joyce Kilmer



—Slickrock Wilderness recommended for wilderness in the Cherokee National Forest Management Plan connect national forest lands to Great Smoky Mountains National Park, separated from it only by narrow U.S. Highway 129. Conservation biology tells us that this connection--here between national forest land and the national park--has important conservation benefits, among them crucial corridors for wildlife.

Protecting parcels to the northeast and south of the Joyce Kilmer-Slickrock Wilderness will expand the wilderness and safeguard views from nearby roads. These areas are highly visible from the scenic Cherohala Skyway.

Tributary streams in this area flow into Santeetlah Creek, home to rare salamanders and other sensitive species. Protection will also provide prime, safe stream habitat for Southern Appalachian brook trout populations, with high-quality water and ample stream structure from fallen trees. Portions of the Nantahala-Pisgah old-growth network lie within the additions, as well as 844 acres of verified old-growth at Yellowhammer Branch and at least four old-growth candidate sites.

These additions include two roadless areas in Deep Creek/Avery Creek and Yellowhammer Branch totaling 3,167 acres. But much of the area remains open to logging and road building.

Santeetlah Headwaters

Approximate Size: 4,433 acres

Old Growth Acreage: 1,173 acres

Location: Graham County, North Carolina, 11 miles northwest of Robbinsville, Nantahala National Forest, Cheoah Ranger District

USGS Topographic Maps: McDaniel Bald, Unaka

The centerpiece of the Santeetlah Headwaters area is the 5565' Huckleberry Knob, the tallest mountain in the Unicoi Range and the source of the clear, bold waters of Santeetlah Creek. Extending northeast from its summit are Doc Stewart and Art Stewart Ridges, which form the perimeter of the Indian Creek watershed. Also included in the Mountain Treasure are the Santeetlah Bluffs, recognized as a special area of virgin forest by the Forest Service and the coves around the little known and beautiful Wright Creek Falls, an impressive 80' drop. Much of the area is visible in sweeping panoramas from the Cherohala Skyway.

The Santeetlah Headwaters Mountain Treasure includes what is arguably the most important collection of old-growth on Nantahala National Forest outside of Joyce Kilmer in a variety of forest types including Northern Hardwoods, Boulderfield Forest, High Elevation Red Oak Forest, Acidic Cove Forest, Rich Cove Forest and what was one of the world's

finest examples of Hemlock Forest before it was devastated by the hemlock wooly adelgid. These forests contain some of the largest specimens of a number of trees on Nantahala National Forest including an 80" poplar, a 66" red oak, a 64" sycamore, a 52" sugar maple, a 49" black cherry, and many other individuals of various species over 4 ft. in diameter at breast height. Hot spots for big trees include the Santeetlah Bluffs, all sections of Indian Creek not logged in the 1970s and 80s and the coves around the falls on Wright Creek. A large area of old-growth Northern Hardwoods west of Huckleberry Knob remains undelineated. The human-maintained grassy balds on the summit of Huckleberry Knob are also important wildlife habitat and accessible via trail from the Cherohala Skyway.

A number of rare species find a home at the Santeetlah Headwaters, including the Carolina northern flying squirrel, the Indiana bat, and rock gnome lichen, all Federally Endangered. The population of northern flying squirrel is considered unique because of its isolation and the lack of red spruce in the Unicoi Mountains. Instead of utilizing spruce, that population of northern flying squirrel depends on declining Eastern hemlock for coniferous forage and shelter. In an effort to support this imperiled population of northern flying squirrels, the U.S. Forest Service along with state and federal wildlife agencies plan to plant red spruce along the Cherohala Skyway, as well as treat stands of hemlock critical to the squirrel.

The Santeetlah Headwaters are critical from a landscape connectivity perspective as well. The area is only separated

from the Snowbird and Sycamore Creek (TN) Mountain Treasures by the Cherohala Skyway and lie just across Santeetlah Creek from the southernmost proposed addition to Joyce Kilmer-Slickrock Wilderness. Except for the Santeetlah Bluffs, the entire area is currently in management designations that allow logging and road building. Managing the Santeetlah Headwaters for anything less than maximizing its ecological, aesthetic and recreational values is a folly and this area deserves some form of permanent protection.



The Trading Path from the Valley Towns to the Overhill Towns connected Tellico Plains to Hanging Dog and Valley River.



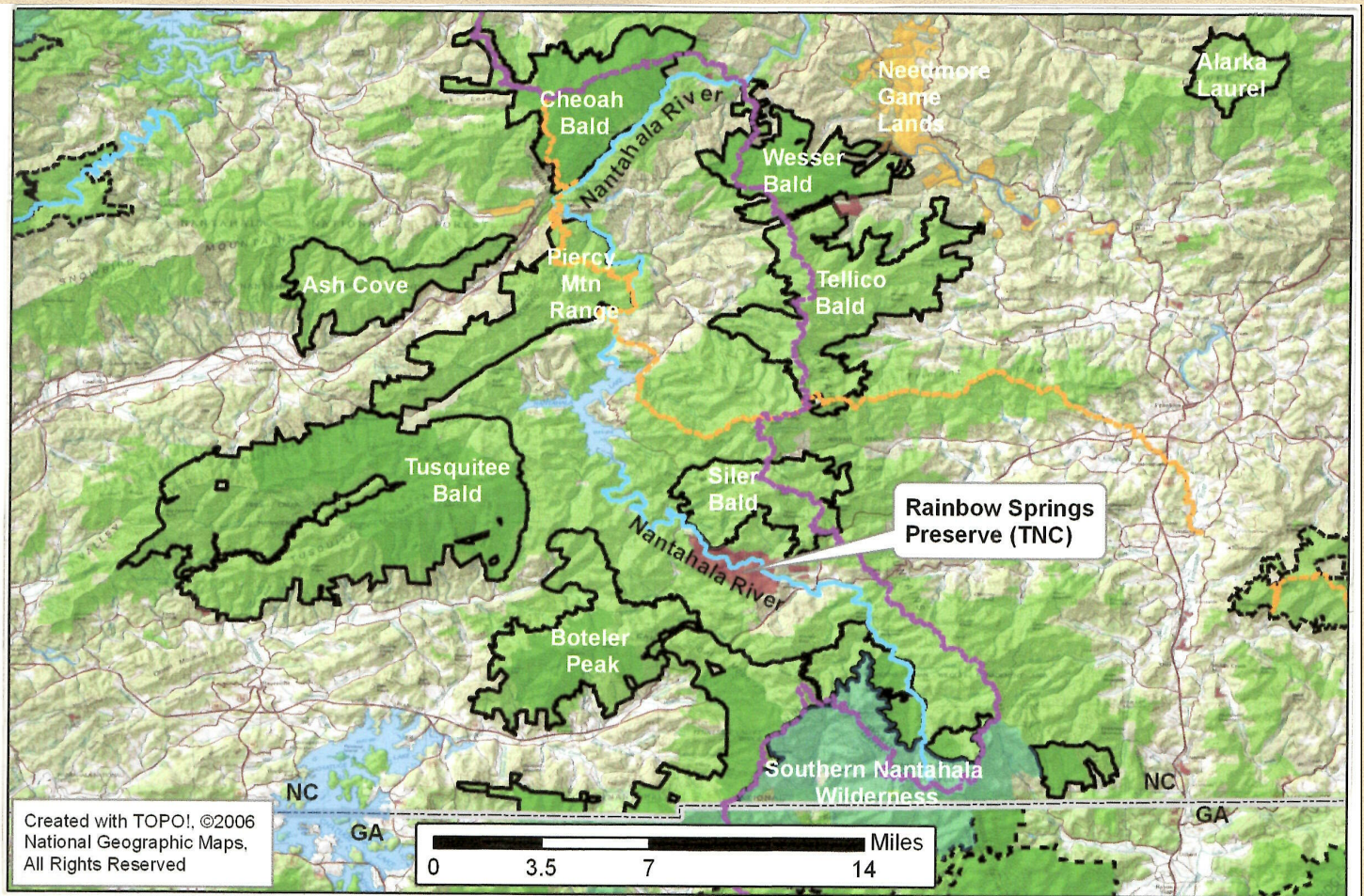
The crystal waters of the famous Tellico River flow down from the Unicois to Tellico Plains, the "Gathering Place" for traders.



Unicoi or Unaka Mountains were from the Cherokee word for "White Mountains." The red lines are trails and roads within the Cherokee country. The Unaka Road is the Unicoi Turnpike, a part of the Great Trading Path from Charles Town, South Carolina and used extensively in the deerskin and fur trade from the early 1700s. The road noted in 1837 as "from Tellico Iron Works" is the Trading Path from the Overhills to the Valley Towns used by the Cherokee as a shortcut from the Valley Towns. The old trail followed Hanging Dog and Beaverdam Creeks up and over the main Unicoi ridge and Waucheesi Mountain, thence to Tellico Plains. The mountains were a last refuge of the Cherokee at the time of Removal. The Snowbird area is still the homeplace for many Indians who hid out and refused to go West, leaving their beloved mountains.

From the W.G. Williams Army map of 1837

Nantahala Mountains Conservation Area



Nantahala Mountains Conservation Area

Ash Cove
Cheoah Bald
Tusquitee Bald
Boteler Peak
Southern Nantahala Wilderness Extensions
Tellico Bald
Wesser Bald
Piercy Mountain Range
Siler Bald
Alarka Laurel

Steeped in history, lavish in its wildlife and scenic beauty, the Nantahala Mountains Conservation Area is a priority for permanent protection. Its unprotected wildlands top 107,000 acres and nearly another 25,000 acres are safely within the Southern Nantahala Wilderness.

Of the magnificent mountain ranges that run perpendicular to the Appalachian chain, the “transverse” ranges that form the spine of the Blue Ridge, the Nantahala Mountains are the southernmost. They lie in northeast Georgia and southwest North Carolina, extending north from the state line for 25 miles to Lake Fontana. As we delineate the broader conservation area, it includes the Cowee Range just to the east.

Two of the South’s best-known rivers drain the area--the

Nantahala River to the west and the Little Tennessee to the east. Peaks of 5,000 feet are common along the Nantahala Range and one, Standing Indian, reaches to 5,499 feet. The Southern Nantahala Wilderness Area perches on the area's high southern rim, looking into the expansive semicircle of Standing Indian Basin in Georgia, the headwaters of the Tallulah River.

A number of attributes converge to give this region an exceptional inventory of old-growth forests. Its soil is rich, moisture is plentiful, the elevation high. The result was logs of such size and quantity that at the turn of the last century, even when virgin timber was the rule and not the exception, many came from some distance just to look--something akin to going to see the elephant in that simpler time.

For all the old-growth that came out of the forests of the Nantahala region, much remains. Recent field surveys have found nearly 20,000 acres of old-growth forests, mainly surviving because steep slopes made them difficult or impossible to reach. There may well be that much more yet to be surveyed.

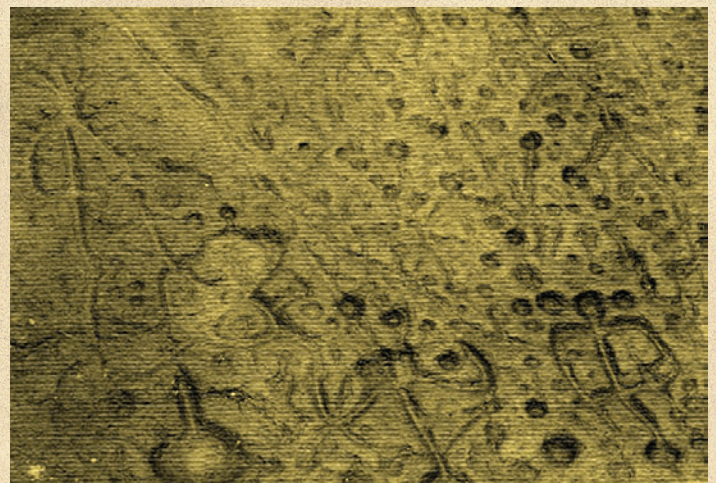
Other natural elements in the region are equally impressive, including its aquatic systems. The Little Tennessee River's middle and upper reaches comprise an aquatic diversity area considered unique in the Blue Ridge, because in modern times no species are known to have been extirpated. Several streams are recognized as critical refugia. They include Betty Creek, with one of the region's healthiest brook trout populations, and Cowee Creek ranked high for its biotic integrity, a standard that considers the biological completeness of a system.

Around half the Nantahala Mountains' area is ranked as a biological hotspot, but some experts believe that understates the case: because of the terrain, many areas have been inaccessible to biologists for wider surveys. Among habitats the region sustains are those for yellowbellied sapsuckers, golden-

crowned kinglets, Appalachian cottontails, over 30 locally and globally rare plants and other species of conservation interest.

The area's human history is as diverse and layered as its natural history. The largest mountain Cherokee town ever built, Cowee, stood in the Little Tennessee River Valley which also served over the centuries--perhaps dating to pre-Columbian days--as the main trade route from the coast to the Tennessee Valley.

Though we describe many of the constituent parts of the Nantahala Mountains Conservation Area below as individual Mountain Treasures, it is important to remember that in many cases they adjoin one another, share important values and together provide the connectivity so important to natural diversity.



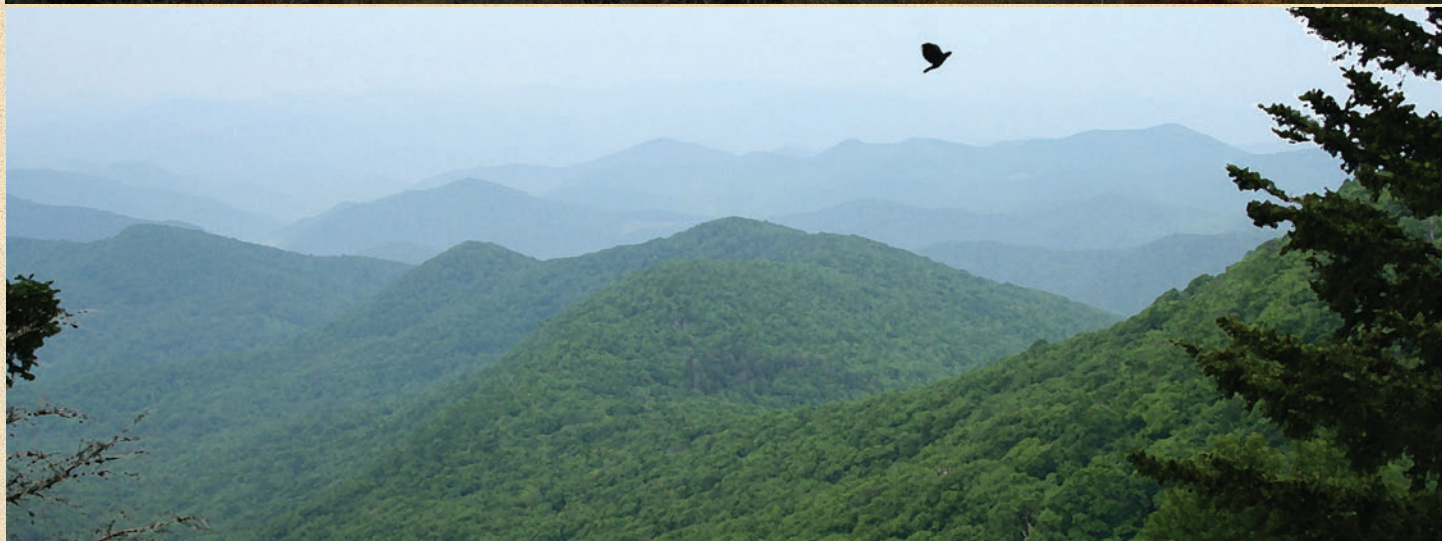
Judaculla Rock, a Native American petroglyph site located on Caney Fork of the Tuckasegee River

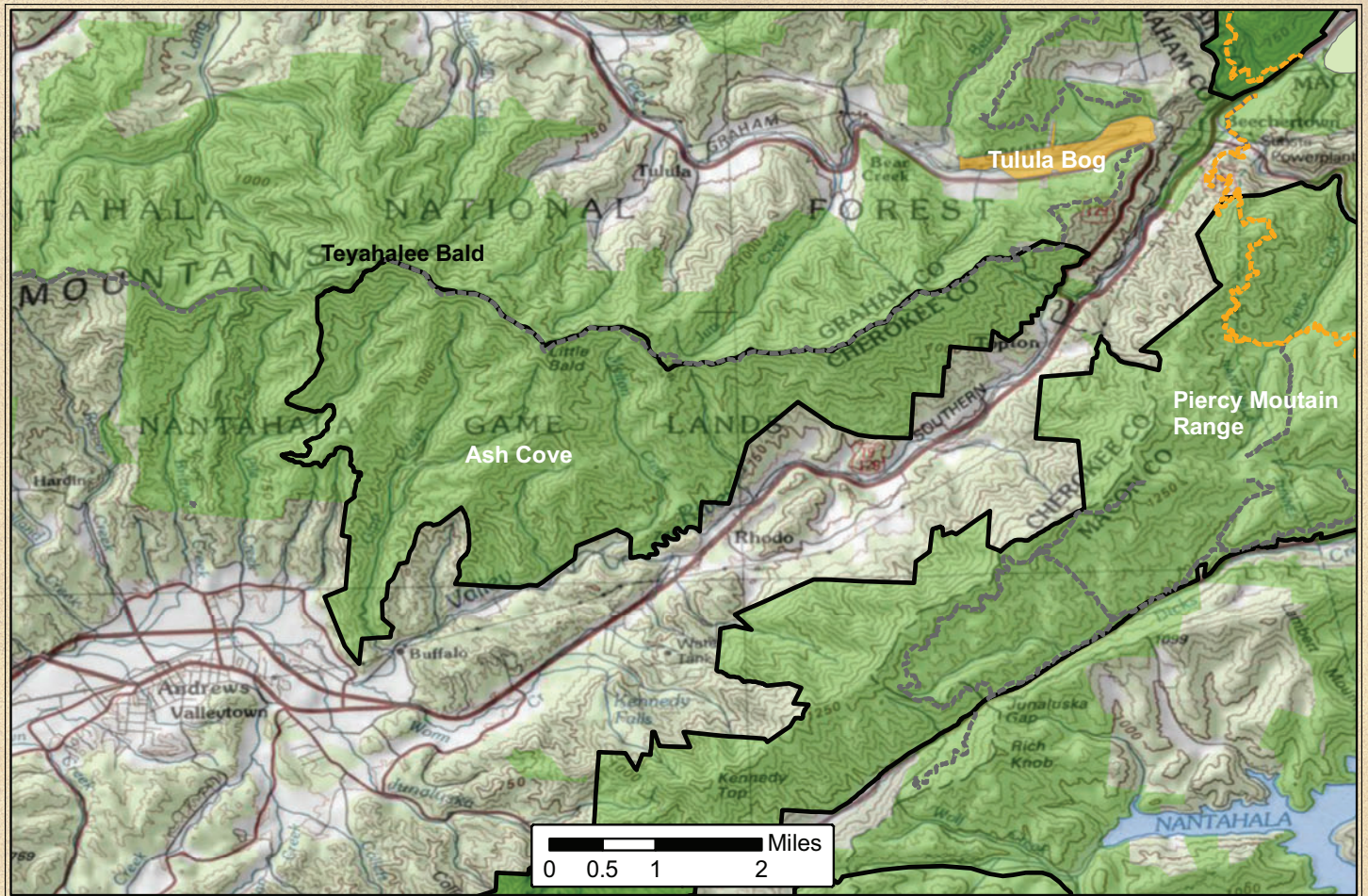


Siler Bald

photo by Ralph Preston

Native Views: Top to Bottom - Cowee Mountains from Cowee Mound; the Blue Ridge Escarpment; Tusquitee Bald from Spikebuck (Hayesville, NC); Unicoi Mountains from Unaka, NC





Ash Cove

Approximate Size: 5,884 acres

Old Growth Acreage: 1,708 acres

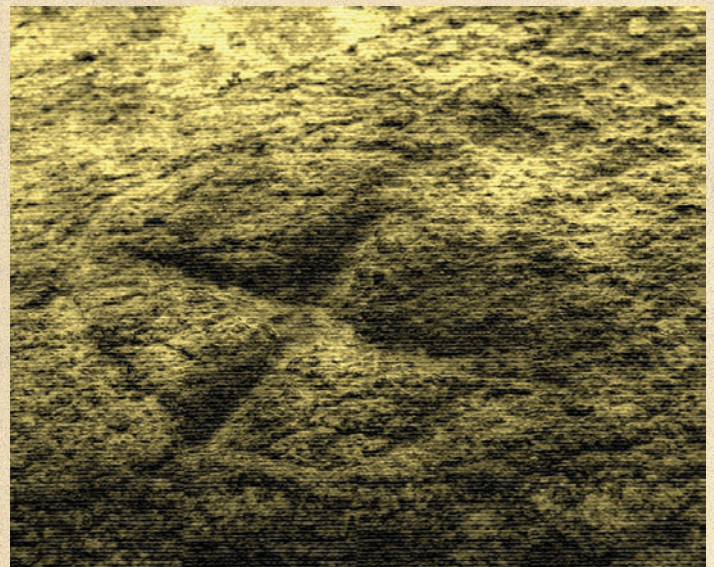
Location: Northeast of Andrews, NC, in Cherokee County bordering the Tusquehee Ranger District boundary, Nantahala National Forest

USGS Topographic Maps: Andrews, Robbinsville, Hewitt, Topton

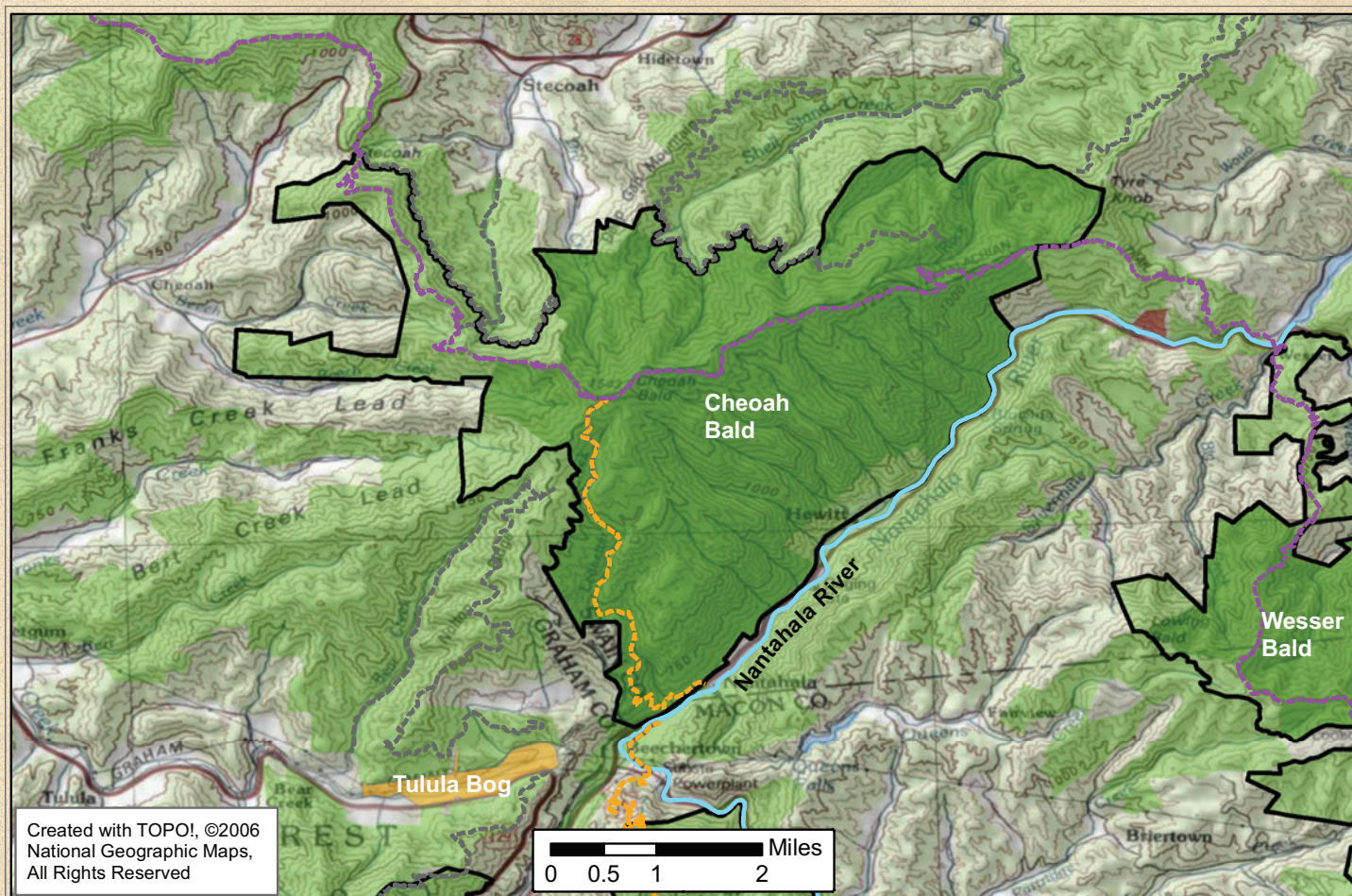
The Ash Cove Mountain Treasure is on the eastern end of the Snowbird Mountains that rise above Andrews, NC. The Snowbird ridgeline carries the old western extension of the Bartram Trail. With completion of the Bartram Trail to Cheoah Bald, the Forest Service abandoned the western extension. The Cheoah Ranger District now refers to this old trail as the Valley River Trail and is searching for volunteers to restore it to suitability for hiking.

The trail travels along the ridgeline for 20 miles to Porterfield Gap, passing near 4,700-foot Teyahalee Bald (formerly Joanna Bald) at the northwest end of the Ash Cove area. Teyahalee Bald is a prominent feature for hikers traveling the Fires Creek Rim Trail that is just across the valley to the south on the Valley River Mountains. The Piercy Bald Mountain Treasure is close to Ash Cove on the northeast end and the Ash Cove Mountain Treasure should be considered together with

the Piercy Bald unit as a smaller but representative sample of a primitive area in need of protection. If the Valley River Trail is reconstructed to Porterfield Gap, it can carry hikers north over the Snowbird ridge spine to connect with the Snowbird Trail system in the Snowbird Wilderness Study Area, thus connecting these two Mountain Treasures areas. The proposed 4-lane Corridor K, if built, would threaten this area.



A cosmogram or "sun circle" on a rock near the Cherokee Town site of Cowee.



Cheoah Bald

Approximate Size: 9,453 acres

Roadless Acreage: 7,810 acres

Old Growth Acreage: 4,635 acres

Location: Swain and Graham counties, NC; 12 miles southwest of Bryson City; Cheoah Ranger District, Nantahala National Forest

USGS Topographic Maps: Hewitt, Wesser, Tuskegee, Noland Creek

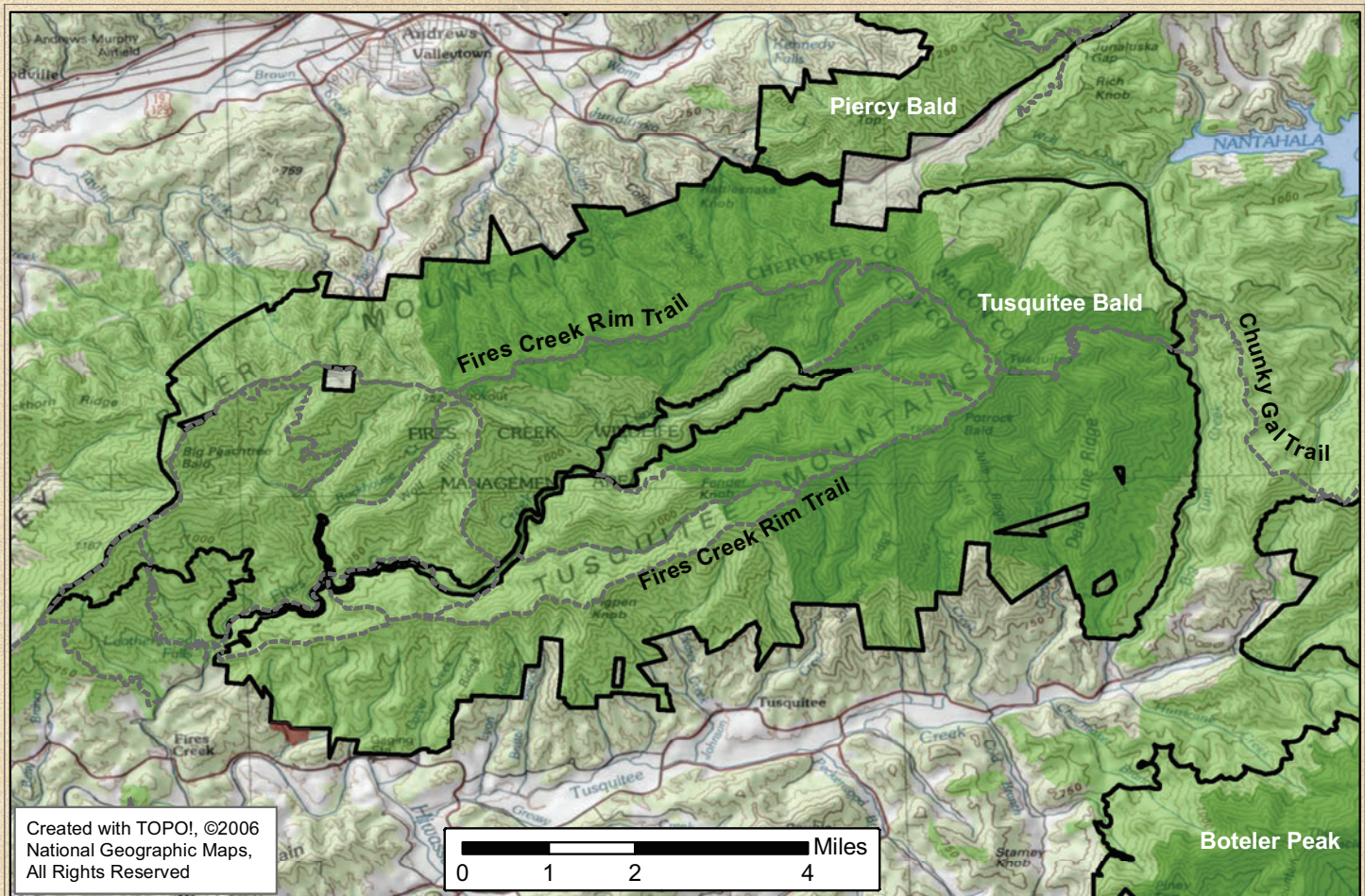
The Cheoah Bald roadless area once encompassed over 21,000 acres. But logging and road building during the 1980s and 1990s reduced the size of the inventoried roadless area to 7,810 acres. The larger Mountain Treasure area is still exceptionally wild, with tremendous biological, scenic, and recreational values.

Almost 5,000 acres of old-growth forest have been documented in the area. Conservationists urge the restoration and protection of the larger area through, among other things, the decommissioning of some of the logging roads. During the RARE II study in the late 1970s and to this day, conservationists have considered this area a top candidate for wilderness. Almost 10 rugged miles of the Appalachian Trail traverse the area. The Trail runs over Cheoah Bald, at 5,062 feet the “grandstand of the Appalachians.” This is believed to be the

northern endpoint of William Bartram’s travels through the Southern Appalachians and is the current terminus of the Bartram Trail. The mountain is home to the endemic Cheoah bald salamander, which has not been fully studied, other rare species like the cerulean warbler, and globally rare plant species like sweet white trillium and mountain catchfly. The bald offers sweeping views northward of the Smokies, Stecoah Valley, the site of a Cherokee town, and portions of Lake Fontana. To the northwest are the Yellow Mountains, Joyce Kilmer and Snowbird, and to the south the Wesser/Tellico/Wayah Ridge, Piercy Bald, Ash Cove, and Tusquitee.

The Appalachian Trail’s Sassafras Gap shelter stands near the center of the tract. The Nantahala River runs through the spectacular Nantahala Gorge along the southeast border. The Forest Service plans to study the Nantahala River for suitability for National Wild and Scenic designation.





Tusquitee Bald

Approximate size: 29,177 acres

Roadless acreage: 13,791 acres

Old growth acreage: 3,990 acres

Location: Cherokee, Macon and Clay counties, NC; 10 miles east of Murphy; Tusquitee Ranger District, Nantahala National Forest,

USGS Topographic Maps: Shooting Creek, Hayesville, Topton, Andrews, Peachtree

The Tusquitee Bald Mountain Treasure is one of the largest, unprotected primitive areas in the Nantahala National Forest. Over 13,000 acres have been inventoried as roadless. The area consists of a horseshoe-shaped rim of mountains rising 1,900 feet on the southwest end of the horseshoe to 5,200 feet on the northeast end. Fires Creek drains the 15,000 acre interior basin, which is a bear sanctuary, a wildlife management area, and a North Carolina State Natural Heritage Area. The only road access from outside the basin is from the southwest near Leatherwood Falls. To the northeast is the adjoining Percy Bald Mountain Treasure area. To the southeast, the Boteler Peak area joins at Big Tuni Creek and the Bob Allison Campground.

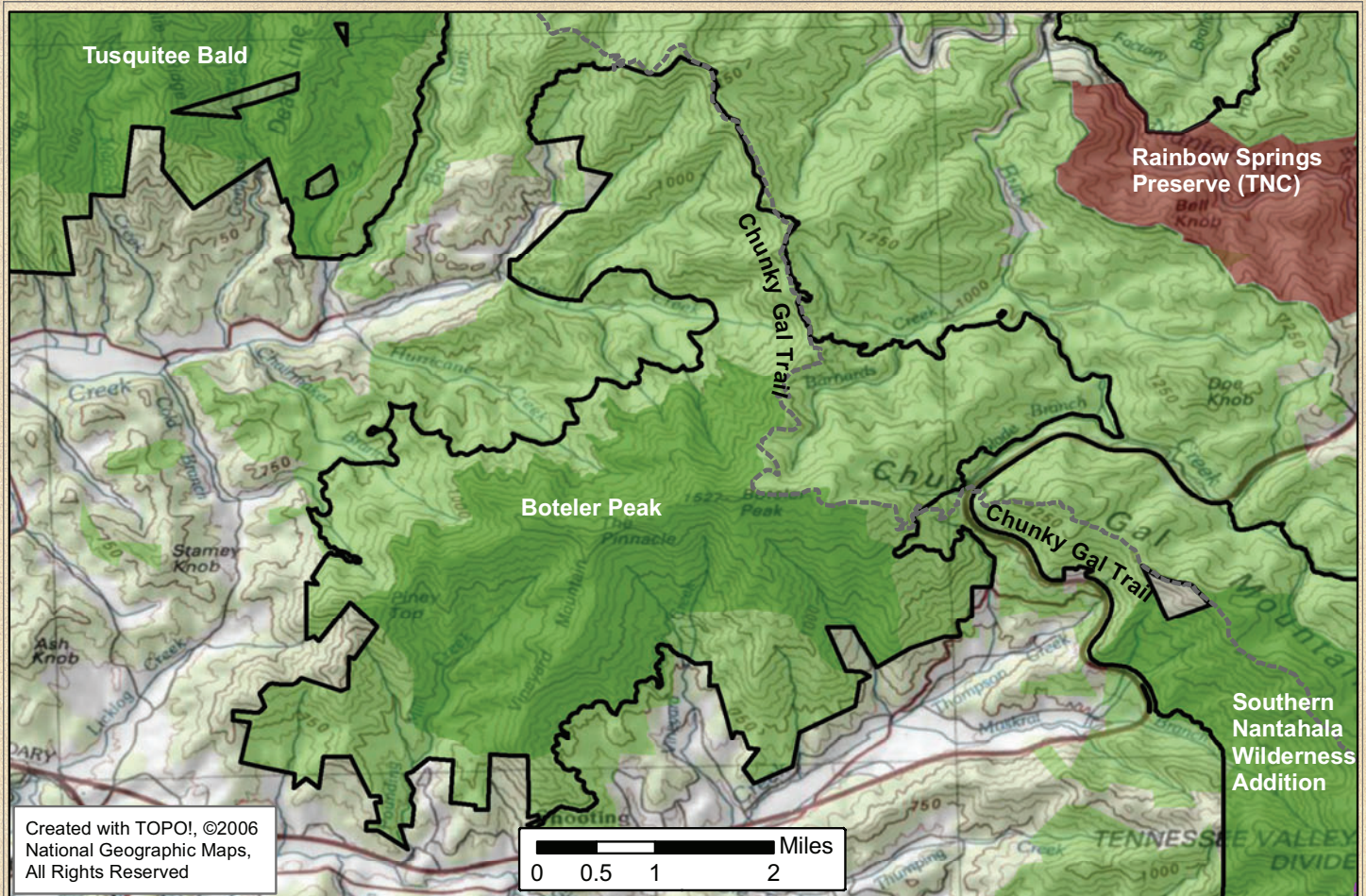
The area is replete with hiking trails. The principal trail, and one of the premier backpacking trails in western North

Carolina, is the 26-mile Rim Trail which circles the basin on the sometimes knife-edged ridge, affording excellent views. Chunky Gal Trail leaves the Tusquitee Bald area and runs southeast down Big Tuni Creek to the Boteler Peak Mountain Treasure area and on to join the Appalachian Trail at White Oak Stamp in the Southern Nantahala Wilderness. The Old Road Gap Trail runs northeast from the Tusquitee Bald Area to the Percy Bald Mountain Treasure Area, providing access here to the North Carolina sections of the Bartram Trail and the Appalachian Trail.

Trout fishing in Fires Creek and several other streams in the basin is excellent. The pristine waters of Fires Creek also supports several rare aquatic insects and rare bryophytes. The rare southern waters shrew inhabits the streamside zone as does one of the largest populations of the rare mountain camelia.



Wilderness lover Rob Cox crosses an ice cold stream



Boteler Peak

Approximate size: 10,673 acres

Roadless acreage: 4,221 acres

Old growth acreage: 917 acres

Location: Clay County, NC; 15 miles southwest of Franklin; Tusquitee Ranger District, Nantahala National Forest, USGS Topographic Maps: Shooting Creek, Rainbow Springs, Topton

The Boteler Peak Mountain Treasure area connects to the Tusquitee Bald area to the northwest and the Southern Nantahala Wilderness area to the southeast. It serves as a vital corridor for bear to travel between the sanctuary in the Tusquitee Mountain Treasure area and the Southern Nantahala Wilderness. The Chunky Gal Trail traverses the Boteler Peak area and passes beside Boteler Peak. An overlook on Boteler Peak affords a splendid view of the wild lands to the north.

The Forest Service dates some stands on the mountain from the 1700s--and these are truly primeval forest--while other portions of the Boteler Peak area are recovering from extensive logging and should be allowed to continue to heal. Boteler Peak and Upper Perry Creek both contain verified old-growth totaling over 900 acres.

The eastern side of this Mountain Treasure has outcrops of serpentine rocks which result in very unusual and rare plant

associations and is noted for its abundance of rare species and one-of-a-kind serpentine barren. At least 17 rare species have been reported from the serpentine barrens, including Rhianon's aster, found nowhere else.

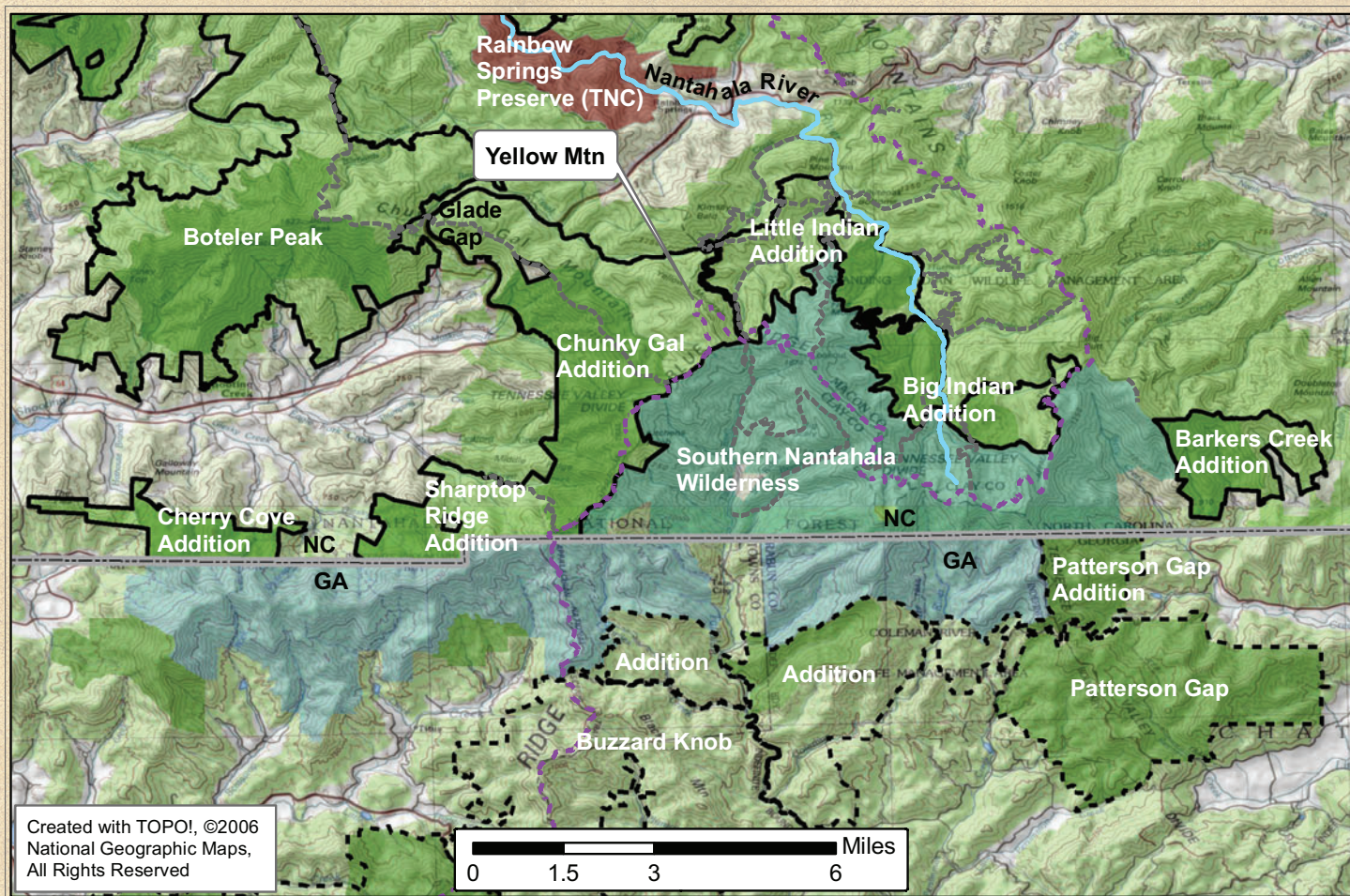
The Chunky Gal Trail connects southeast to the Appalachian Trail near White Oak Stamp and going northwest, extends 22 miles to Tusquitee Bald. Hikers can take the Old Road Gap Trail out of the Tusquitee Bald area to connect to the trails in the Piercy Bald unit and then to the North Carolina Bartram Trail near Sutherland Gap. The Bartram Trail also leads north to intersect the Appalachian Trail again at Cheoah Bald. A 135-mile hike south on the Appalachian Trail returns hikers to the eastern starting point of the Chunky Gal Trail at White Oak Stamp.

This wonderful backpacking and bear corridor should be preserved for future generations to experience.



Eastern wild turkey

photo by Lamar Marshall



Southern Nantahala Wilderness Extensions

Approximate size: 15,574 acres.

Roadless acreage: 7,690 (844-Cherry Cove; 594-Sharptop Ridge; 3,475-Chunky Gal; 647-Little Indian; 1,154-Big Indian; 976-Barkers Creek)

Old growth acreage: 1,523

Location: Clay and Macon Counties, NC; 15 miles southwest of Franklin; Wayah and Tusquitee Ranger Districts, Nantahala National Forest

USGS Topographic Maps: Rainbow Springs, Prentiss, Macedonia, Hightower Bald, Shooting Creek

Congress designated the Southern Nantahala Wilderness in 1984. Its 24,500 acres straddle the border of North Carolina and Georgia. Standing Indian Mountain, part of a south-facing horseshoe-shaped massif that forms the Tallulah River basin, dominates the area.

To the north, ridges radiate from the closed end toward the upper Nantahala River. All of the logical wilderness extensions involve these ridges and all would add to the value and integrity of the existing wilderness. Moving clockwise from the west to the north and then east around the closed end of the horseshoe the extensions are:

- Cherry Cove, another northwest-running basin connecting

to wilderness in Georgia;

- Sharptop Ridge, a northwest-running ridge and stream basin connecting to the wilderness in Georgia;
- Chunky Gal, which includes ridges running west and northwest; Middle Ridge, Ravenrock Ridge, and Chunky Gal Mountain, which runs all the way out to U.S. Highway 64 and includes the Riley Knob white oak Forest Service Natural Area. This proposed extension is the largest and very important. It includes Whiteoak Stamp, a rare high elevation mountain bog, as well as Muskrat Cove with its possible virgin timber. Another important biological site is Riley Knob, which is influenced by nutrient-rich amphibolites rock and home to one of the largest populations of the globally rare glade spurge. The Appalachian Trail runs along the east boundary of this area coming north from Georgia. Chunky Gal Mountain is really a major spur of Boteler Peak to the northwest, and provides a trail corridor to the Boteler Peak Roadless Area and beyond to the Tusquitee Roadless Area;
- Yellow Mountain, another northwest-running ridge just northeast of Chunky Gal and separated from it by a road. It has seen some more recent logging;
- Little Indian, essentially the basin of Little Indian Creek that feeds into the Nantahala River to the north-northeast. Congress arbitrarily set the north and east boundaries of the Southern Nantahala Wilderness to follow the 4,400-foot contour line rather than to the logical physical boundary of the Nantahala River. Protection of the Little Indian unit would



correct the problem;

♦ Barkers Creek includes over 900 acres inventoried as roadless and this area could be expanded to nearly 2,000 acres. Falls Branch, Barkers Creek, and Commissioner Creek are beautiful mountain streams that flow south into Betty Creek. Like much of the Nantahala Mountains, nutrient rich amphibolite rock produces a lush diversity of plant life and this section of the Mountain Treasures supports five occurrences of Montane Cedar-Hardwood Woodland, a natural community that is habitat for many rare plants and animals.

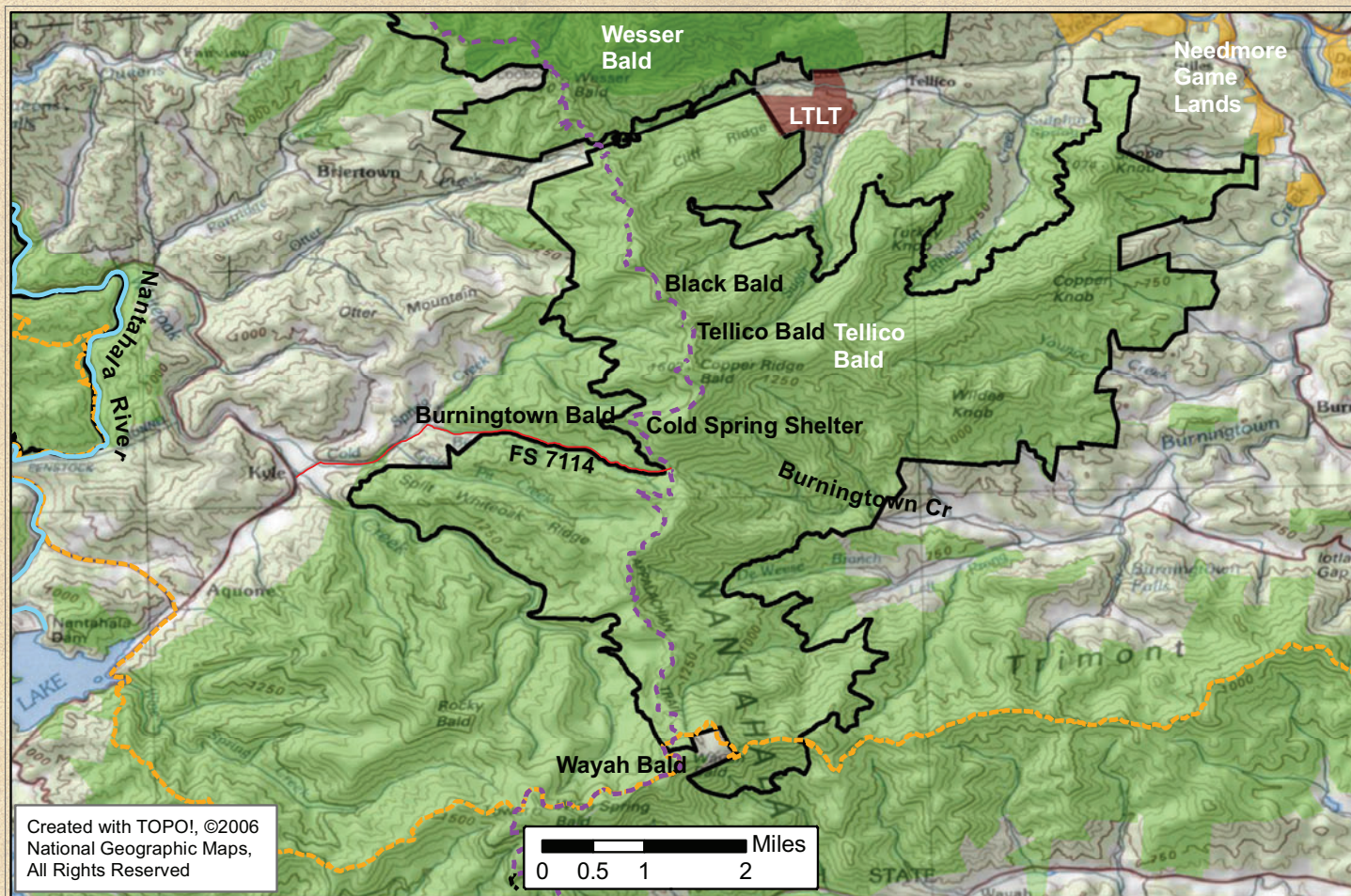
The heart of the largest western segment is Chunky Gal Mountain which stretches from the Tennessee Valley Divide to Boteler Peak. Chunky Gal Mountain contains 1,523 acres of old-growth. The area connects to the Boteler Peak unit at Glade Gap and allows hikers and game to move freely into Tusquitee Bald and Cheoah Bald further north. It contains the Appalachian Trail, the Chunky Gal Trail and other day hiking trails that get extensive use. The hike along Chunky Gal Mountain on the namesake trail passes by wonderful old-growth oaks. Forest visitors also use the trails near the Standing Indian campground extensively.

This extension of the existing Southern Nantahala Wilderness is a keystone in creating both a bear corridor and primitive backpacking corridor between the Southern Nantahala and areas to the north and it should be permanently protected.



Catesby's Trillium

photo by Lamar Marshall



Tellico Bald

Approximate Size: 12,522 acres

Old growth acreage: 1,846 acres

Location: Macon County, NC; 10 miles northwest of Franklin; Wayah Ranger District, Nantahala National Forest

USGS Topographic Maps: Wesser, Wayah Bald, Alarka, Franklin

This high altitude area is characterized by dense, high elevation old-growth forest. In the fog, or when ice-rimmed, the trees present a fairyland appearance. FS 7114 penetrates the area from Kyle to the west, and ends at the ridge crest. The eastern portion of this road, down Burningtown Creek, has been closed and abandoned. The bed of FS 7114 is the most likely route of the Cherokee trading path from Cowee Town, capital of the Middle Cherokee, to Tellico, largest town of the Overhill Cherokee.

Burningtown Creek, a tributary of the Little Tennessee River, drains the east side of the area. Several small streams run off the west slopes, all adding their waters to the Nantahala River. Four central peaks--Burningtown Bald, Copper Ridge Bald, Tellico Bald and Black Bald, all over 5,000 feet in elevation--were probably large cattle pastures in pioneer days.

The Tellico Bald Mountain Treasure is at the heart of one of the largest expanses of public land in the region. The

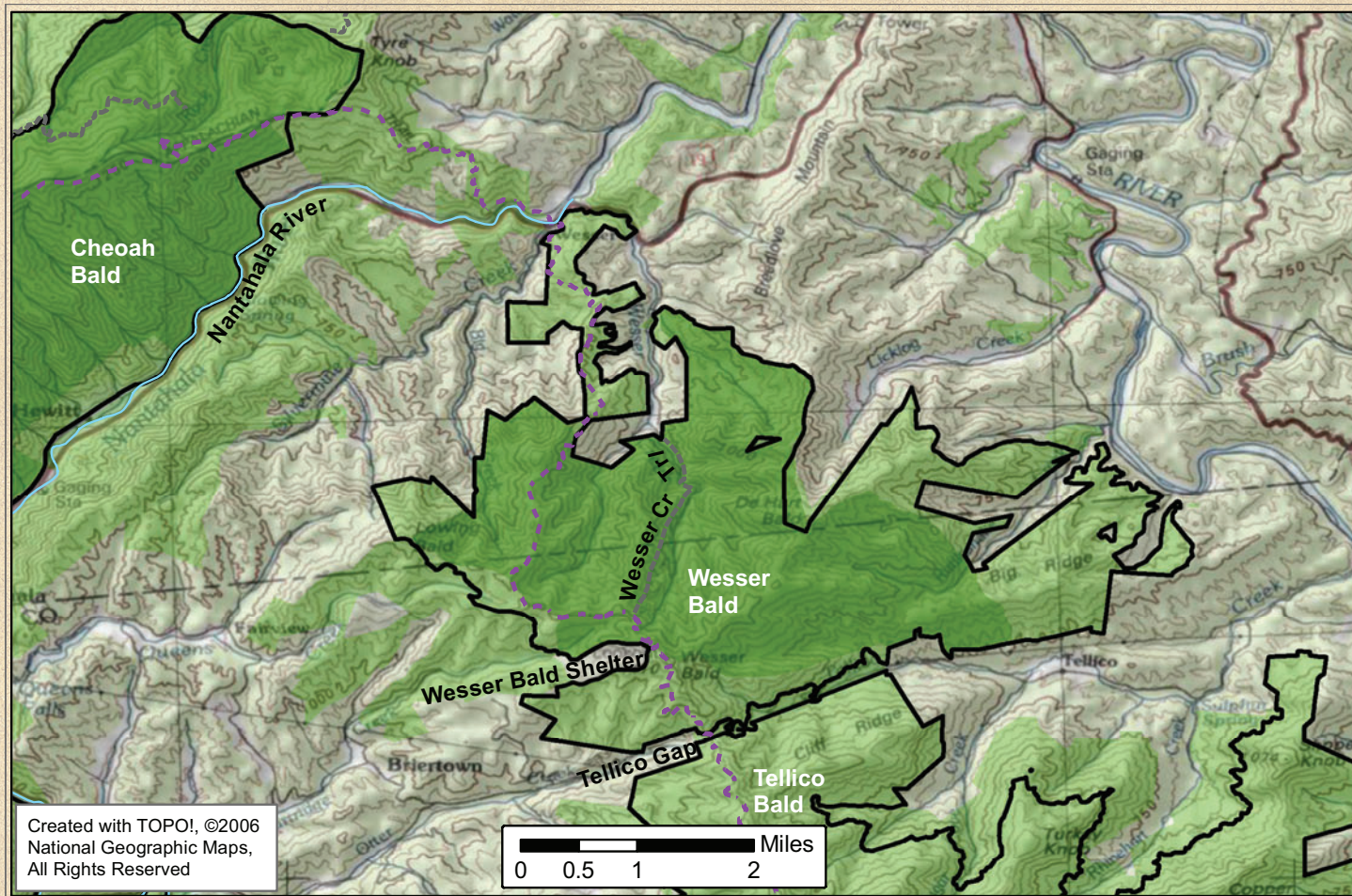
special places in this mountain area are too numerous to name; however, the outcrops of Cliff Ridge and the Rich Cove Forest of DeWeese Creek are two examples. Unfortunately, much of this Mountain Treasure is zoned for timber production under the current Forest Plan and the area was impacted by the Horseshoe Timber Sale, which logged over 500 acres. If this area is able to retain its unique values, it will need more conservation-minded management under the next Forest Plan.

The Appalachian Trail bisects the area on a north-south axis. The Cold Spring Trail Shelter serves hikers along this



Turk's Cap Lily

photo by Lamar Marshall



portion of the Trail.

Wesser Bald

Approximate size: 6,655 acres

Roadless acreage: 4,094 acres

Old growth acreage: 1,339 acres

Location: Swain and Macon Counties, NC; 10 miles northeast of Beechertown; Wayah Ranger District, Nantahala National Forest

USGS Topographic Maps: Wesser

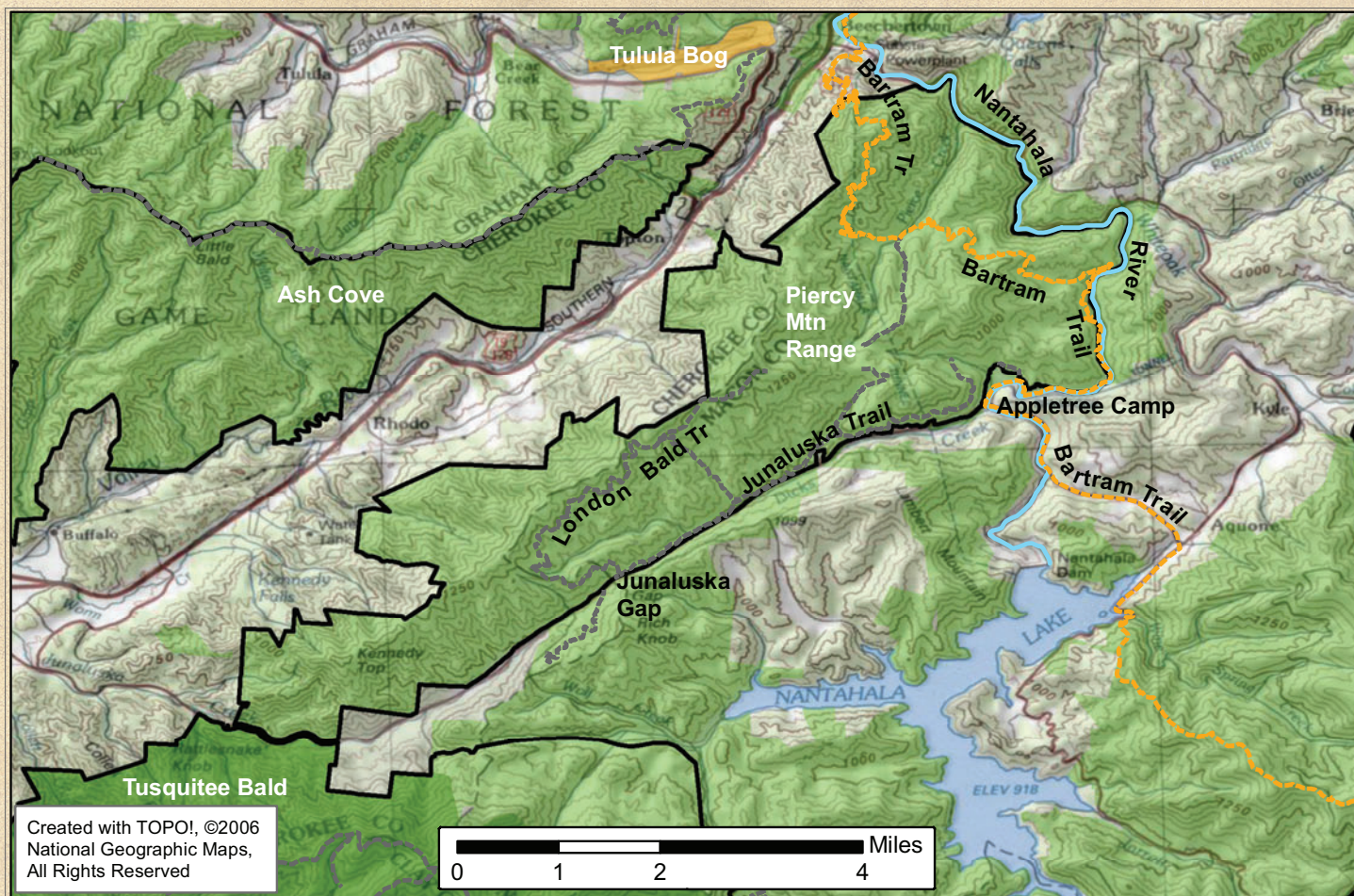
This Mountain Treasure extends northward from Tellico Gap in the general direction of Wesser, on the Nantahala River. South of Tellico Gap is the Tellico Bald area. The two areas are separated only by an electric power line and a one-lane gravel road that has multiple tight switchbacks on both sides of the gap.

The Appalachian Trail runs north to south through this area along the main ridge, with an AT shelter in the center. North of the shelter the Trail descends quickly to a bridge over the Nantahala River at Wesser. This is the location of the Nantahala Outdoor Center and a place for AT through hikers to get mail, showers and supplies. The area is relatively undisturbed by recent timber activity. The Wesser Creek Trail (the old AT) splits from the AT just north of Wesser Bald and drops very steeply via switchbacks into a deep cove with

cliff headwalls. This area is good for spring wildflowers and big trees. There is a closed road north from Tellico Gap and its new parking area to Wesser Bald. The AT takes a much longer route from Tellico Gap to the top to achieve gentler grades. Advocacy by the Nantahala Hiking Club has resulted in the U.S. Forest Service installation of a viewing platform on the old Wesser Bald fire tower which provides outstanding 360-degree views. There is another outstanding view toward Cheoah Bald and the Nantahala Gorge from the "Jump Up" where the AT makes its first real plunge downward into the Gorge over a rocky spine several miles north of Wesser Bald.



Nantahala Mountains - beloved home of the Cherokees



Piercy Mountain Range

Approximate size: 9,107 acres

Old growth acreage: 2,515 acres

Location: Cherokee and Macon counties, NC; 8 miles east of Andrew; Wayah Ranger District, Nantahala National Forest

USGS Topographic Maps: Tipton, Hewitt, Andrews

There are 26 miles of developed trails in this area including a section of the North Carolina Bartram Trail. Clusters of old-growth oak are visible from some of the ridgeline trails. The London Bald Trail travels from Junaluska Gap on the southeast end to the Bartram Trail near Sutherland Gap and stays near the ridgeline with views of the Nantahala Ridge spine and Nantahala Lake. This is an important corridor for both game and recreationists, providing a continuous, wild corridor between the Southern Nantahala Wilderness and the Cheoah Bald Mountain Treasures areas. Its many hiking loops offer great day-hiking.

The North Carolina Bartram Trail crosses the northern side of the area. A long ridge trail begins near Junaluska Gap and winds along the high ridge almost the full length of the area. Intersecting this ridge trail are many side trails that offer short loop trips. Another trail along Piercy Creek leads to a trail-

head on the Nantahala River and the road which parallels it.

The Appletree Group Camp near the eastern corner of the area is an important destination for larger groups. Campers here can hike out of the campground or by short drives reach a variety of other trails in the western mountains.

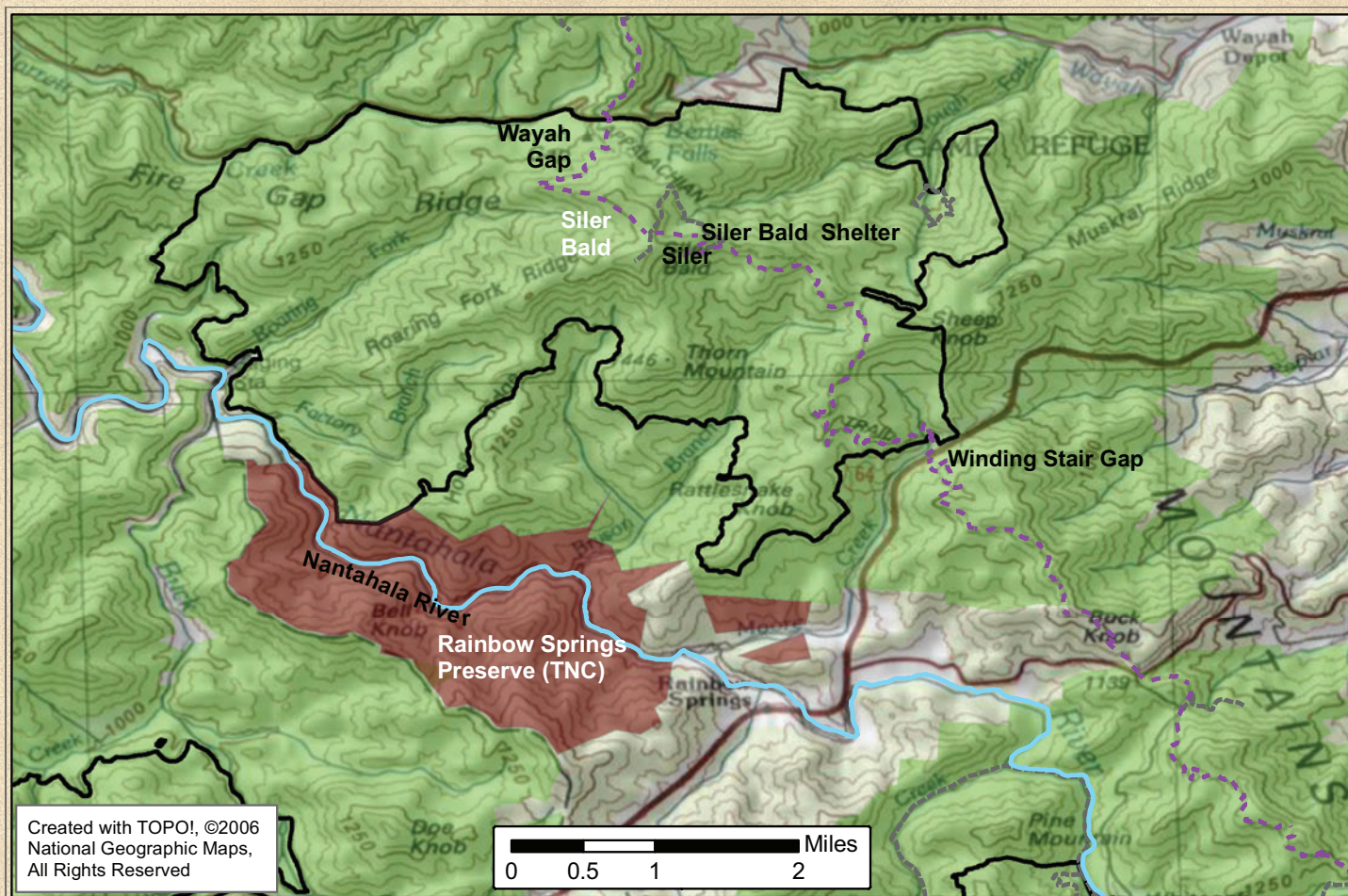
The aqueduct from Aquone Reservoir to the Nantahala powerhouse passes under this area. Uniquely, there is a waterfall inside the duct: builders drove bores from each end and when they finally met they were vertically misaligned.

The old-growth forests, high mountains and clear streams of the Piercy Mountains provide first-class hunting, fishing, and hiking opportunities and habitat for several rare plants and animals but the wilderness quality of this area is compromised by a network of logging roads and recent logging. The next Nantahala-Pisgah Forest Plan should manage this area for recreation and wildlife habitat rather than logging roads.



Wilderness tranquility

Sketch by Janice Barrett



Siler Bald

Approximate size: 6,279 acres

Roadless acreage: 0

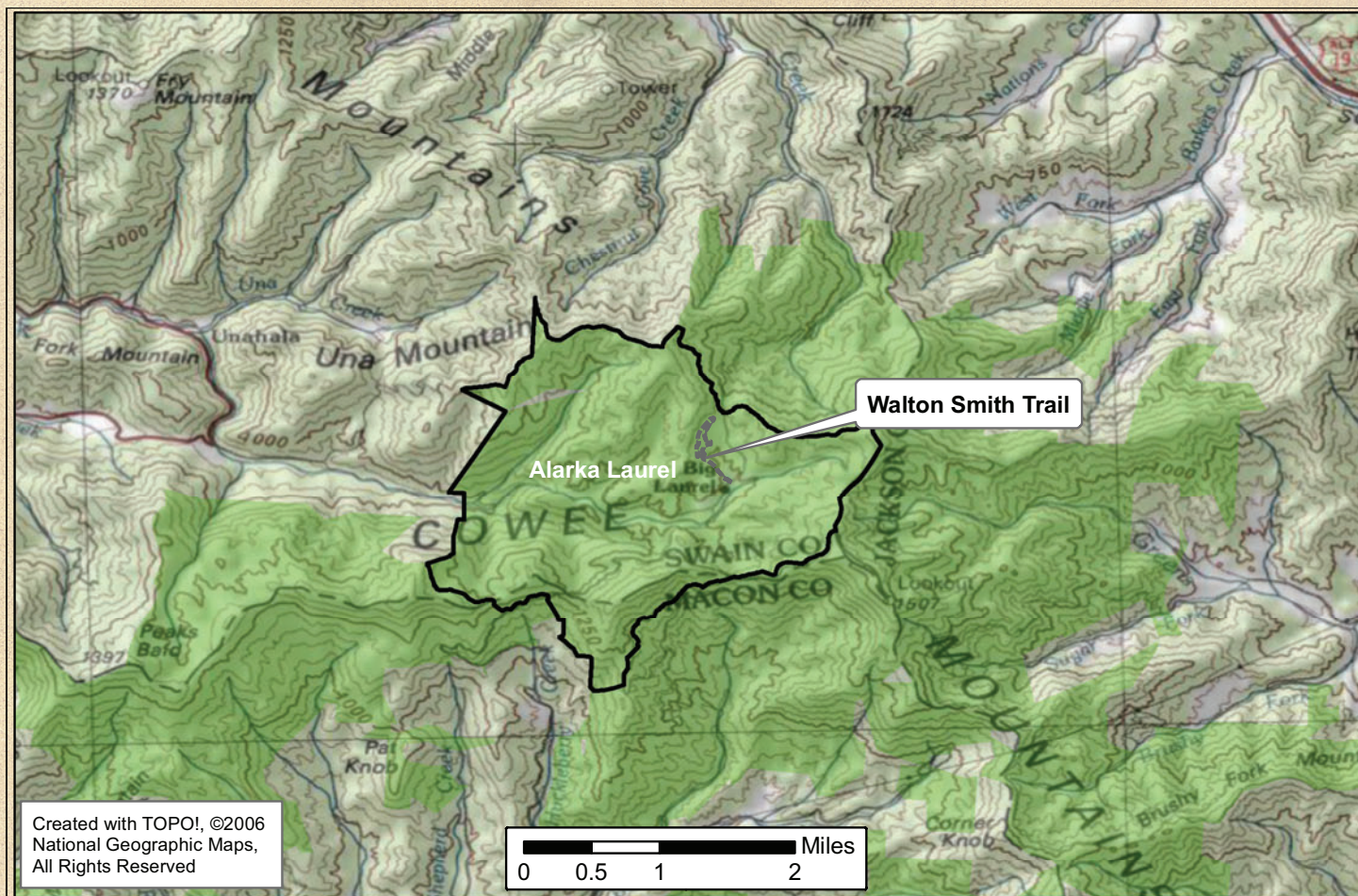
Old growth acreage: 13

Location: Macon County, NC; 10 miles southwest of Franklin; Wayah Ranger District, Nantahala National Forest
USGS Topographic Maps: Wayah Bald, Topton, Rainbow Springs

Siler Bald, named for the same Siler family that gave its name to a bald in the Smokies, is most important because it protects a long corridor of large areas that the Appalachian Trail strings together. The bald itself is open and planted in grass which the Forest Service maintains by mowing. The Appalachian Trail crosses this area from Winding Stairs Gap on U.S. Highway 64 in the south to Wayah Gap in the north. A shelter on the AT provides overnight facilities for through hikers.

The Right Prong of Rough Fork drainage on the northeast side of the area is an intriguing deep forest, and relatively untouched. There is no trail into this woodland dell, so caution is advised for those who try to penetrate it, though the successful will be rewarded with a lovely waterfall. Spring flowers are abundant in the coves around Siler Bald. In the fall, there is usually a bumper crop of grapes and blueberries.





Alarka Laurel

Approximate size: 2,485 acres

Old growth acreage: 68 acres

Location: Macon and Swain Counties, NC

USGS Topographic Maps: Alarka, Greens Creek

Alarka Laurel is an unusual high-elevation, flat-bottomed, "hanging" valley located in the Cowee Mountain range. Wild strawberries and grasses line the main road that leads to the top of Alarka Laurel and the Walton Interpretive Trailhead. It includes an open area that is ideal for camping. Native brook trout populate the area's streams.

The Walton Smith Interpretive Trail leads the traveler deep into the forest. There are definite changes in the surroundings as one travels along the trail. Laurel and rhododendron thickets cover the initial stretch, then open into hardwood patches with oak and tulip poplar. Soon the path side turns to ferns and moss-covered logs. Fragments of white quartz rock occasionally litter the ground along the path. Many wildflowers also cluster along the way in patches that are mostly labeled. There are trillium patches near the beginning of the trail and fire pink in the last half.

About halfway along the trail large trees that look like hemlocks begin to appear. On closer inspection the large "hemlocks" are actually red spruce. Sadly, the same insect that has

devastated pine has been infesting the red spruce as well. The southern pine beetle has caused considerable damage to this old-growth red-spruce, but young red spruce are growing to replace their elders. Despite the damage done by the southern pine beetle, the spruce bog at Alarka is considered biologically unique and irreplaceable.

A boardwalk leads the traveler into the red spruce bog. With the loss of some of the red spruce the bog has become overgrown with smaller plant species like laurel and rhododendron. The ground level of the bog is not visible from the



Alarka Creek

photo by Ralph Preston

boardwalk.

The main road intersects the end of Walton's Trail and leads directly back to the trailhead.

Wilderness: Islands in a Sea of Development

Only a few centuries ago, Indian settlements were tiny islands scattered within the continent-wide wilderness of America. Carolina parakeets, Passenger pigeons, Ivory-billed woodpeckers and buffalo were just a few of the species that made the Appalachian Mountains rich and teeming with life. Early explorers described the land as a paradise.

Today, designated Wilderness areas are scattered islands within a vast sea of human developments, roads, agricultural lands and unnaturally managed timberlands.

These Wilderness islands are the remnants of "Original America" and represent an era of freedom that can never fully be known again. Population, human habitat and land conversion has changed the landscape forever. For this reason, every remaining public roadless area is precious and must be preserved.



Old-growth white oak

photo by Lamar Marshall

Cherokee Mountains



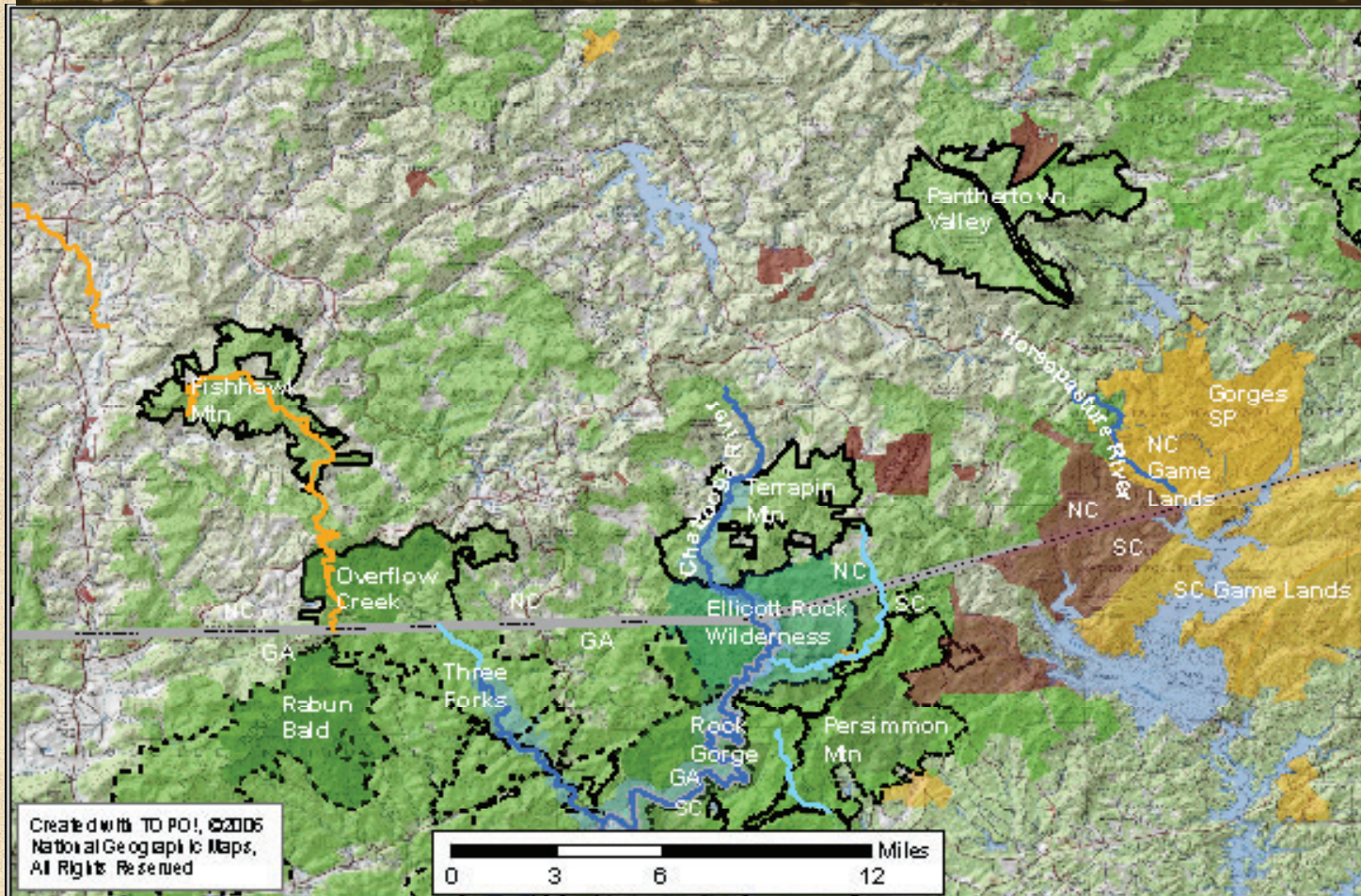
William Bartram traveled alone deep into the Cherokee country and on May 22, 1775, arrived at Cowee and explored the surrounding mountains.

Cowee Town was a Middle Cherokee town located about seven miles north of the modern town of Franklin on the Little Tennessee River. He visited several Cherokee towns in the vicinity and climbed the Coweese to Alarka with a licensed trader who resided near modern West's Mill.

On May 24, he departed Cowee and crossed the Nantahala Mountains at Burningtown Gap. He recorded the following observation in his journal:

"I began to ascend the Jore Mountains, which I at length accomplished, and rested on the most elevated peak; from whence I beheld with rapture and astonishment, a sublimely awful scene of power and magnificence, a world of mountains piled upon mountains. Having contemplated this amazing prospect of grandeur, I descended the pinnacles..."

Blue Ridge Escarpment Conservation Area



Blue Ridge Escarpment Conservation Area

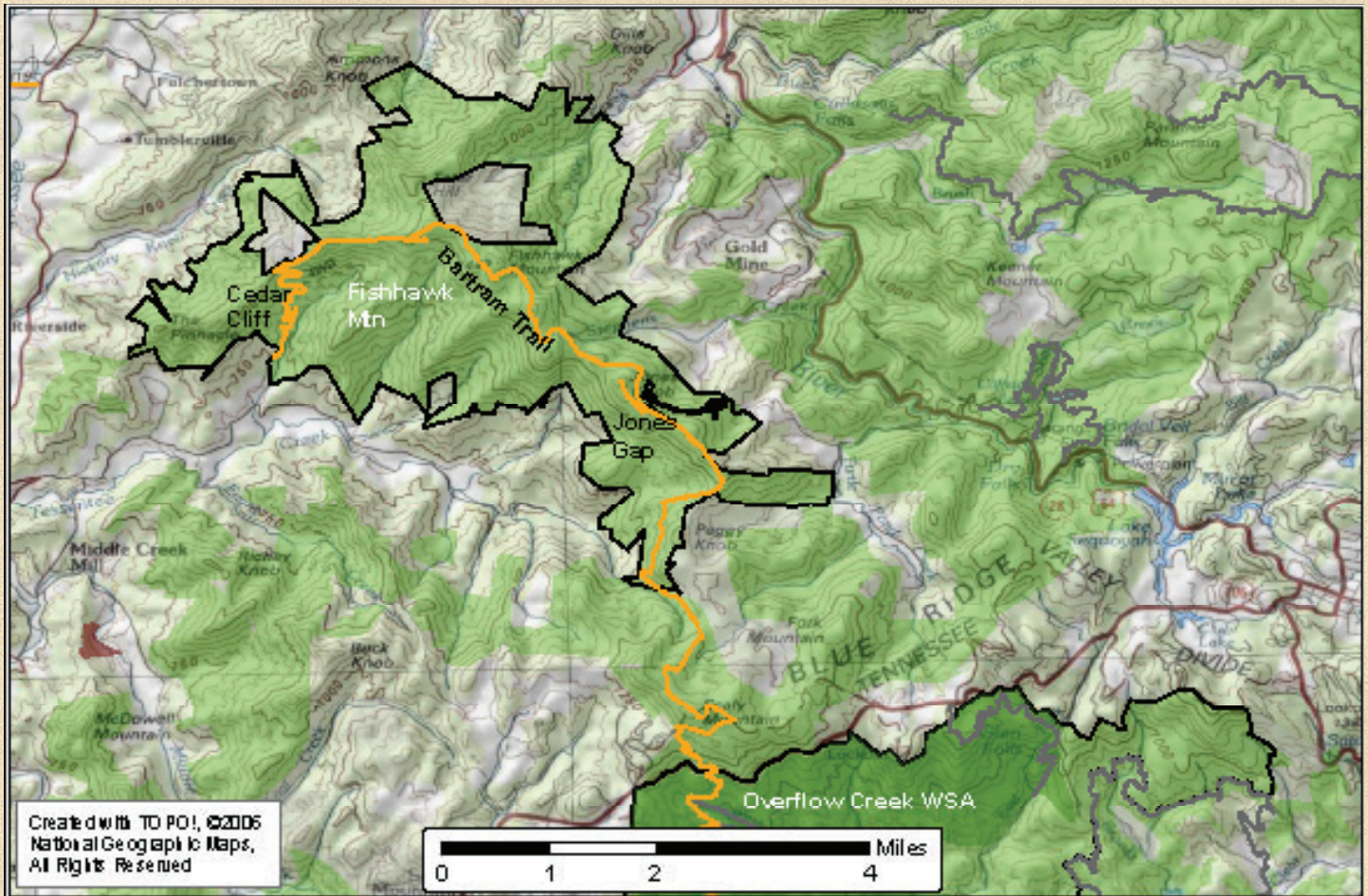
Fishhawk Mountain
 Overflow Creek (Blue Valley)
 Terrapin Mountain
 Panther town Valley

Standing at the intersection of three states--North Carolina, South Carolina and Georgia--is the massive cliff line of the Blue Ridge Escarpment. Along this precipitous east-facing slope, the Blue Ridge Mountains drop off thou-

sands of feet into the rolling piedmont.

It is an area of breathtaking beauty and exceptional species richness. The Nature Conservancy notes that the region boasts some of the highest natural diversity of rare plants and animals found anywhere on the planet, owing partly to its heavy annual rainfall--the highest east of the Pacific Northwest--and partly to its ruggedness, remoteness, and a wild character rare in the populous Eastern U.S. And within the tri-state area are 30 biological hotspots sheltering plants, amphibians, birds and mammals.

Its old-growth forests are exceptional as well. Field surveys of just the North Carolina portion of the area found nearly 2,800 acres of old-growth.



In all, the region encompasses over 400,000 acres of public lands--some in the Nantahala, Chattahoochee and Sumter National Forests, some in large state holdings in all three states. And it is the only place in the National Wilderness Preservation System where a designated wilderness laps into three states, the Ellicott Rock Wilderness Area. It encompasses 8,274 acres—the largest share, 3,394 acres, in North Carolina. The Ellicott Rock Wilderness straddles the Chattooga Wild and Scenic River which rises in North Carolina's mountains and skirts Terrapin Mountain, a Mountain Treasure described below.

For all its wildness, much of the escarpment is unprotected from mounting threats. The region is a magnet for vacation homes and such recreational facilities as golf courses, and urban development inches northward from such places as Greenville. Biological diversity does not recognize ownership boundaries and, in fact, private lands may support more than public lands do. Only broad-based conservation efforts, across landscapes and ownerships, will ensure the region's vitality for future generations. The upcoming forest plan revisions are a crucial step in that effort.

Fishhawk Mountain

Approximate Size: 5,668 acres

Old Growth Acreage: 389 acres

Location: Macon County, NC, north of Highlands, NC

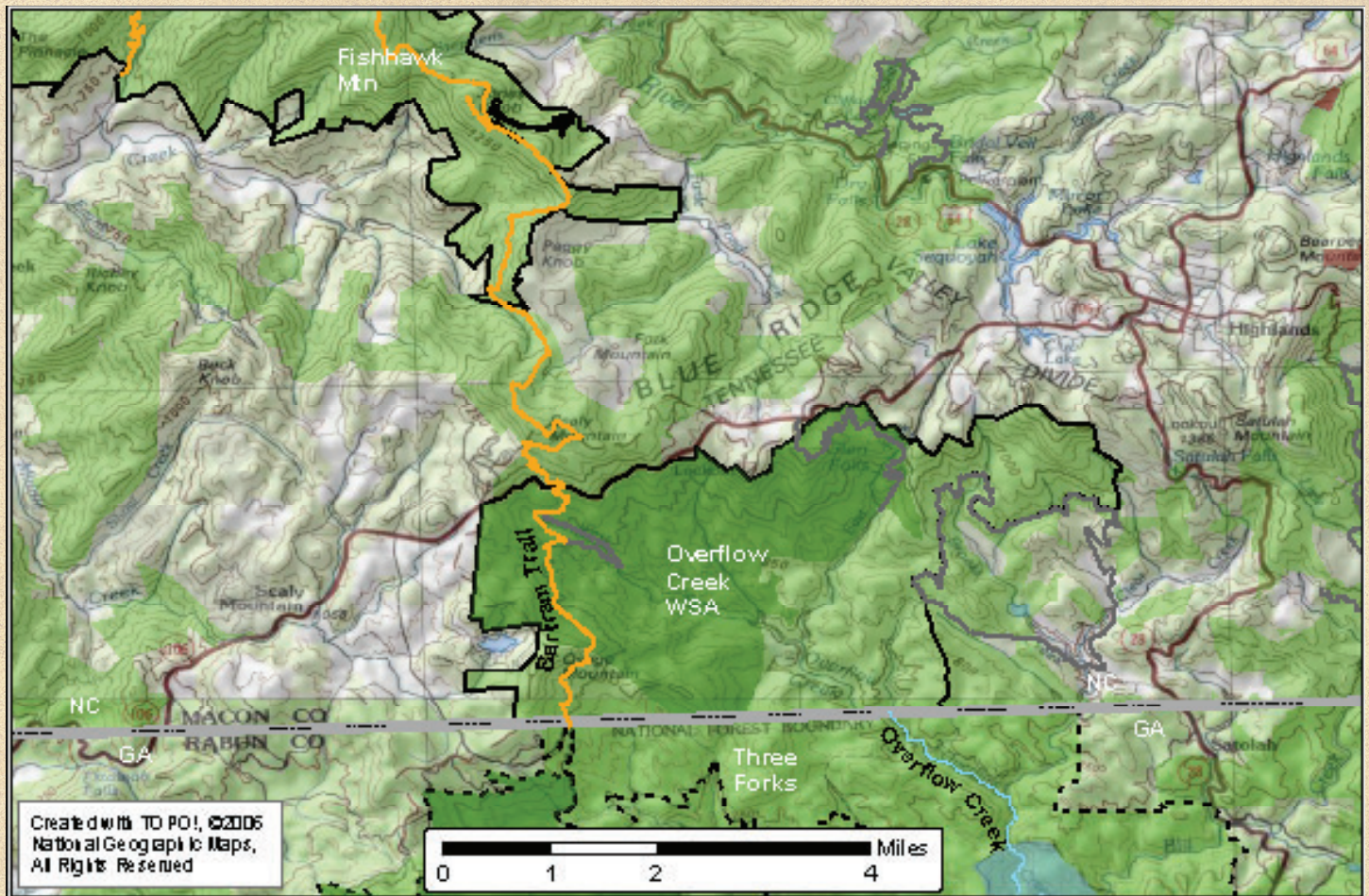
Wayah Ranger District

USGS Topographic Maps: Scaly Mountain

The outstanding feature of this gem is its cliffs. A dozen or more rock faces afford the hiker an abundance of long-distance views, at least one in every direction. The cliffs provide excellent nesting habitat for peregrine falcons. Cedar Cliff, on the western end of the area, is a rock face on which cedar trees have gained a toehold, pushing their roots into fissures on the cliff's hot, southern exposure. These ancients have clung there for over a century in one of the most adverse environments imaginable. Botanists consider Cedar Cliff among the best examples of a mountain cedar glade because of its size, diversity and the rare plants it harbors.

At Jones Gap the springtime blossoms of trillium and other ephemerals make a dazzling display of color. It's worth a trip just to see them. There is much private land surrounding Fishhawk, and it is being hemmed in by development. That makes protection of this area even more critical.

The North Carolina Bartram Trail bisects this Mountain Treasure, running generally along the crest of a long ridgeline.



It is well marked and a corps of volunteers fully maintains it. There are several good camping sites with plentiful water along the trail.

Overflow Creek (Blue Valley)

Approximate size: 6,008 acres

Roadless acreage: 3,509 acres

Old growth acreage: 315 acres

Location: Macon County, NC, 5 miles southwest of Highlands; Highlands Ranger District, Nantahala National Forest

USGS Topographic Maps: Highlands, Scaly Mountain, Rabun Bald, Satolah

Overflow Creek, a congressionally designated wilderness study area, is one of the three chief tributaries that join to make the West Fork of the Chattooga River, which is protected within the National Wild and Scenic Rivers System. This area, which adjoins the Three Forks Mountain Treasures Area in Georgia, provides important watershed protection to the downstream Chattooga River. The Overflow Valley lies immediately below the intensely developed Highlands, NC area. There is much local interest in permanently protecting this area from development and from irresponsible forest management. There are numerous communities of old-growth

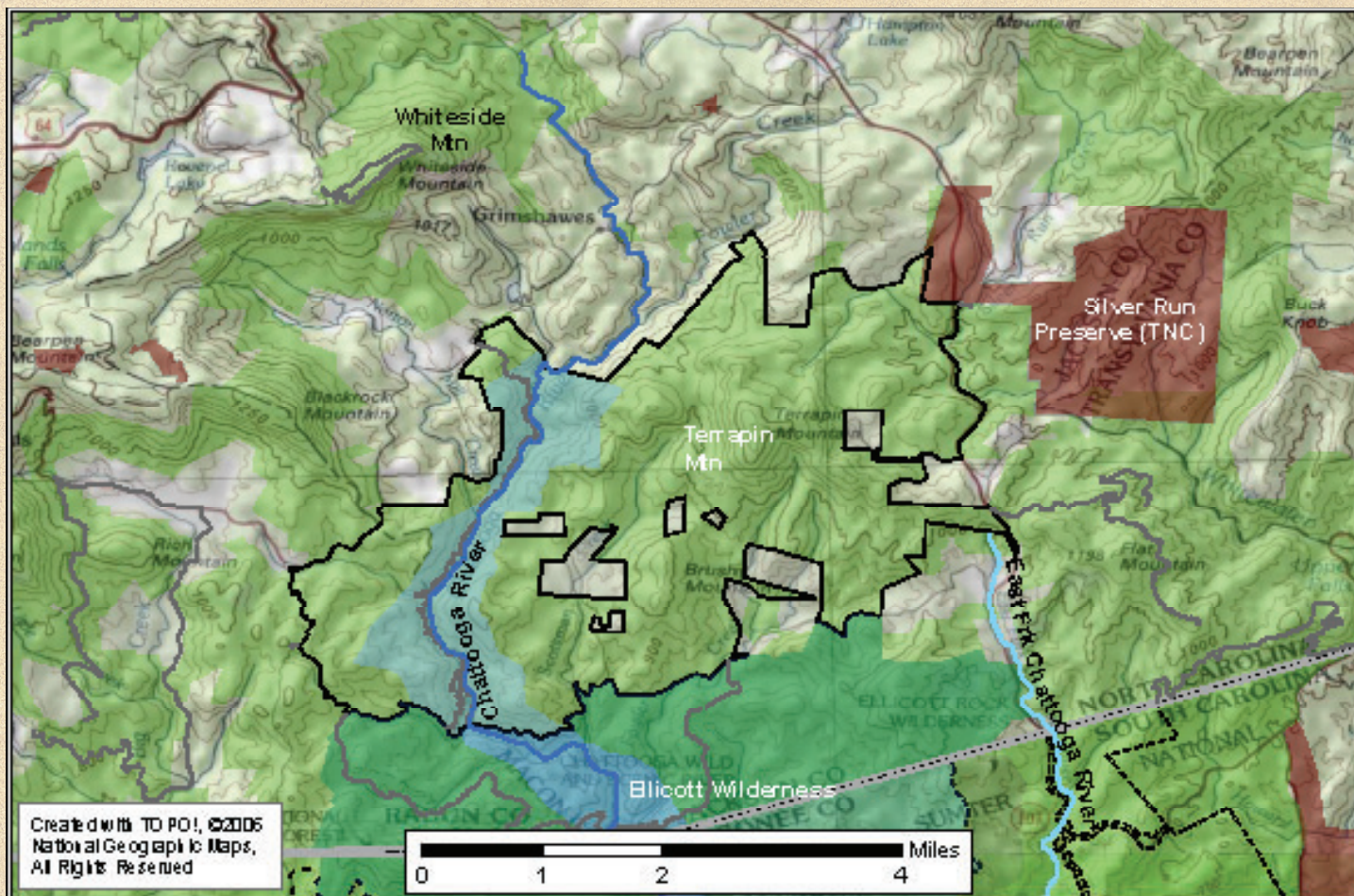
timber in this area, especially in the isolated coves.

The Bartram Trail crosses from south to north along the western side of the area. Glen Falls is a popular and scenic hiking destination that creates a "spray cliff" habitat important for several species of mosses and liverworts.



Cullasaja Falls

photo by Ralph Preston



Terrapin Mountain

Approximate size: 6,648 acres

Old growth acreage: 410 acres

Location: Jackson and Macon counties, NC, 5 miles east of Highlands; Highland Ranger District, Nantahala National Forest

USGS Topographic Maps: Cashiers, Highlands

This rock-sided haystack is one of the most prominent features of the area between the resort towns of Highlands and Cashiers, NC. Precipitous rock faces rising 500 to 800 feet encompass both the south and west sides of Terrapin. Fowler Creek has its origin in the southeast part of this area. Its headwaters gather in a U-shaped amphitheatre of rock cliffs, difficult of access, and isolated and remote in feeling.

The Chattooga Wild and Scenic River flows along the western boundary of this Mountain Treasure through the rugged, remote and biologically important Chattooga Cliffs reach. From the top of Terrapin's western cliffs, hikers have a direct and unimpeded view of Whiteside Mountain, looking directly across the river valley and the vale of Grimshawes.

To the north is Little Terrapin, which repeats the cliffs of the main peak. If anything, Little Terrapin is steeper, and demands considerable technical ability from climbers.

To the northwest is Bear Pen Mountain. The rounded top of this high point is clothed in old-growth hardwood forest. If

the namesake bear pen ever existed, nature has reclaimed it.

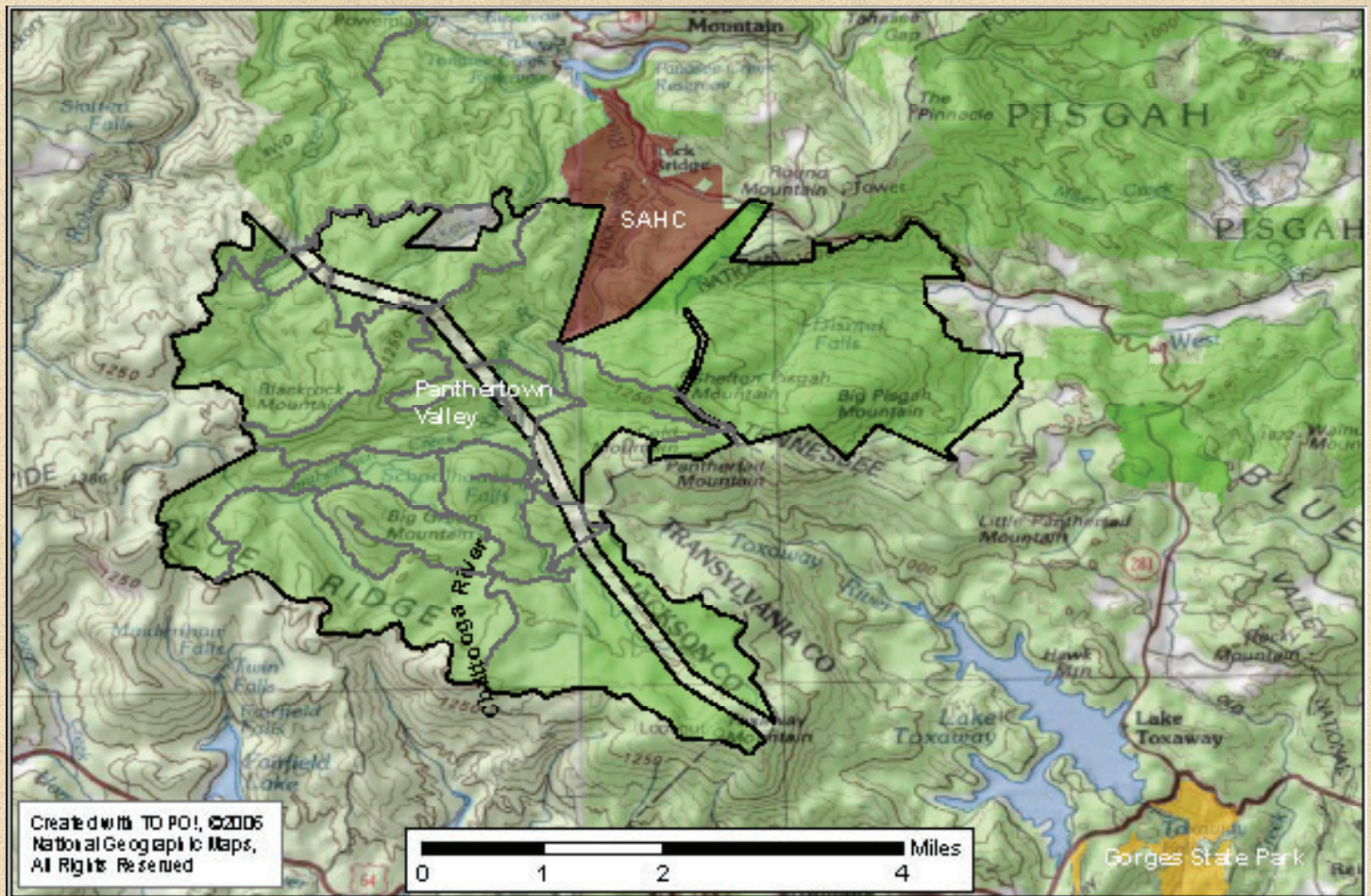
The biological values present in the Terrapin Mountain Treasure equal the scenic and recreational values. Rare plants include numerous bryophytes, like *Plagiochila shapii*, and vascular plants like granite dome goldenrod. Many rare animals and the high quality water of the Chattooga River are attractions for those inclined to wildlife watching and fishing.

There are no trails in the Terrapin Mountain Treasure. The hiker here needs either local knowledge or well developed map navigation skills. An old logging road approaches the base of Bear Pen Mountain.



Whiteside Mountain

photo by Ralph Preston



Panthertown Valley

Approximate size: 8,762 acres

Old growth acreage: 82 acres

Location: To the west of Blue Ridge Parkway and north of the NC/SC boundary, Jackson County; Nantahala National Forest

USGS Topographic Maps: Lake Toxaway, Reid

Panthertown Valley, (correctly pronounced “paintertown,” as any local will take pains to tell you), is often referred to as the “Yosemite of the East” because of the massive rock outcrops soaring up to 800 feet high to surround the level valley floor. This Mountain Treasure is the unspoiled headwaters of the Tuckasee River, which begins where Greenland and Panthertown Creeks join in the valley and then drops through the nearly inaccessible Devil’s Elbow gorge.

This exquisite piece of wild land, once severely clear cut, is today a place of outstanding recreational value, with its exceptional trout streams and a wide variety of exploring possibilities on trails that follow old logging roads. Panthertown attracts many outdoor enthusiasts including hikers, mountain bikers, equestrians, rock climbers, photographers, anglers and birders.

The valley is geologically unusual in having a flat, sandy bottom bordered by the big rock knobs. There is a very unusual large bog bordered by a pine forest lying along Panthertown

Creek between Big and Little Green Mountains. Trails lead to the tops of both mountains.

Among the scenic delights of the area are its waterfalls, with a large one on Greenland Creek east of the Little Green. Panthertown Creek cascades just northeast of the bog and again upstream, northwest of Big Green Mountain. The Mountain Treasure runs all the way to the Bonas Defeat Gorge of the Tuckasee River and there is a 250-foot waterfall on Flat Creek in this area.

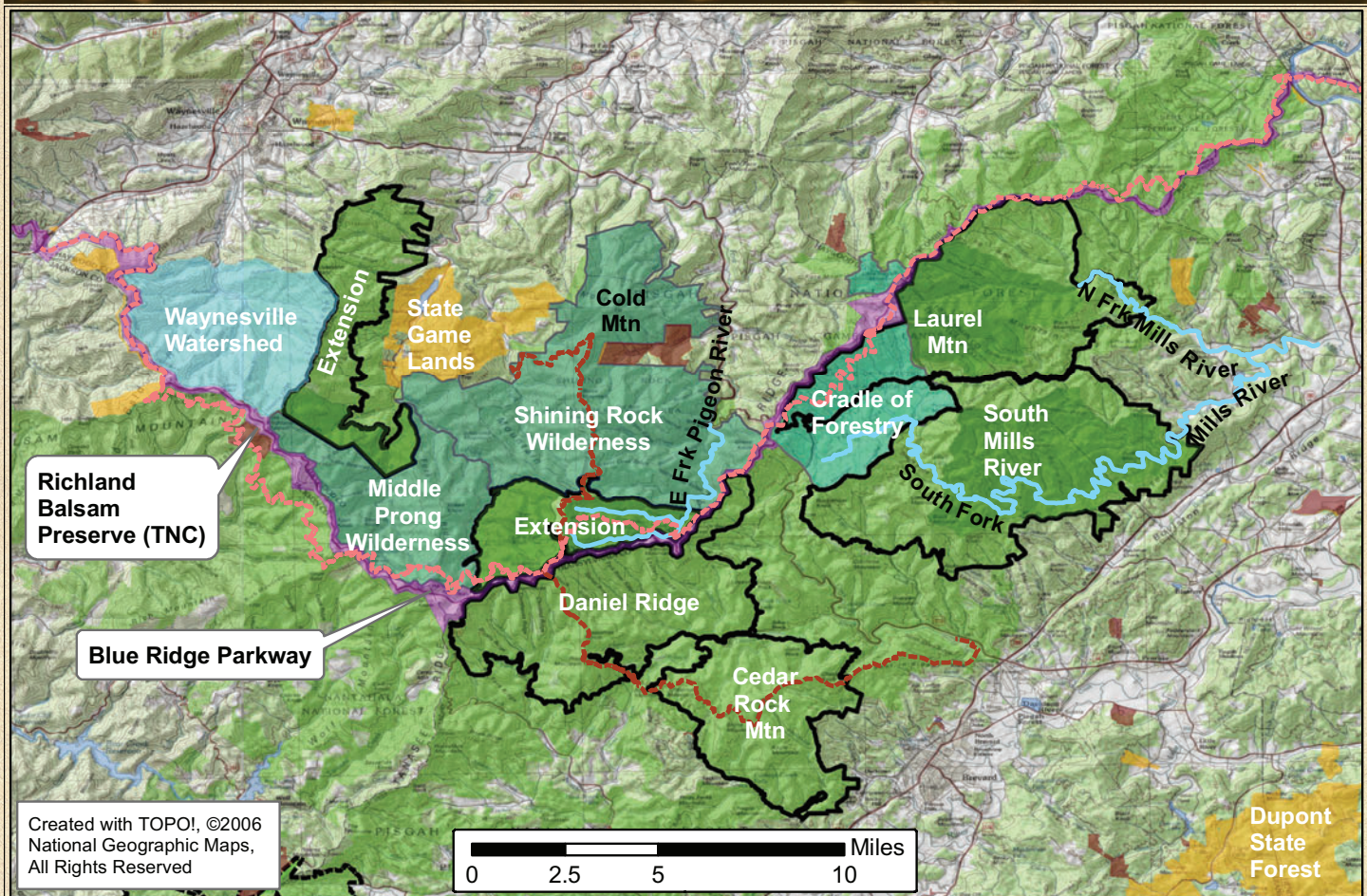
Biologically, Panthertown is noted for its extensive mountain bog and high quality granite domes, all of which have several rare species.

Looking Glass Rock rises from the forest floor like a giant sentinel.

*photo by
Lamar Marshall*



Balsam Mountains Conservation Area



Balsam Mountains Conservation Area

Middle Prong Extension
Shining Rock Wilderness Extension
South Mills River
Laurel Mountain
Daniel Ridge
Cedar Rock Mountain

The Balsam Mountain Conservation Area in the Pisgah National Forest comprises a very long ridge that curves from a bit southwest of Asheville, NC, to the

Great Smoky Mountains National Park and the main Unaka Mountain Range.

Much of the Pisgah was once part of George W. Vanderbilt's Biltmore Estate. Within the forest is the Cradle of Forestry, which Congress designated as a 6,500-acre historical site to mark the work of Vanderbilt's forester, Gifford Pinchot. He is considered to be the father of modern forestry and later became the first chief of the U.S. Forest Service.

The ridge of the Balsam Mountains is the longest of the cross-ridges in the Southern Appalachians. It soars to over 6,500 feet at the summit of Richland Balsam. Broad mountain slopes fall on both sides of the main ridge. The Blue Ridge Parkway tracks much of the main ridge's length.



Mt. Pisgah from Twelve O'Clock High

Photo and rendering by Lamar Marshall

Though destructive logging and consequent fires damaged the original forest, there are still remnants of old-growth in the region. The Southern Appalachian Assessment found over 30,000 acres of old-growth in the area and the Western North Carolina Alliance found almost 3,000 acres of verified old-growth in the Balsams, along with 68 candidate old-growth sites and over 1,300 acres that are suitable for recovery.

Two designated wilderness areas, the Shining Rock and the Middle Prong (to both of which we propose significant additions, totaling over 6,400 acres) grace the Balsams and speak to their wildness. The two wildernesses adjoin one another, split only by a single road roughly in the center of the ridge's open, north-facing arc. Within the Shining Rock Wilderness is 6,030-foot Cold Mountain. Though there are several higher peaks in the wilderness, none is better known than Cold Mountain, thanks to the best-selling book of the same name.

Much of the Balsam Mountains falls within a biological hotspot and the range generally is known for a diversity of habitats and communities, including cove hardwoods, grassy balds, spruce-fir forests, important bog complexes and boulder fields with the specialized communities they support.

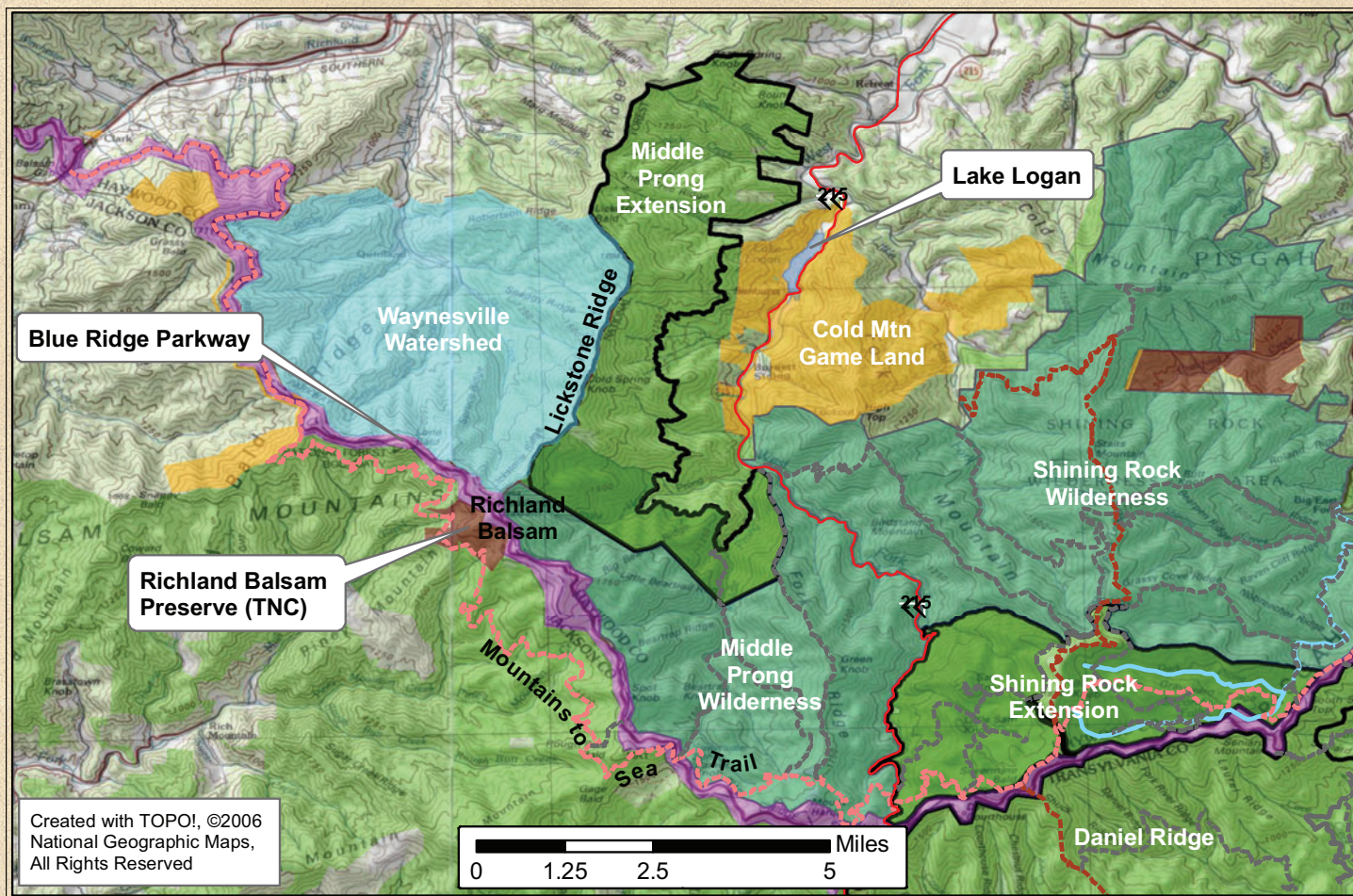
The Balsam Mountains give rise to three important rivers--the Pigeon, the French Broad and the Tuckasegee, a major fork of the Little Tennessee. The first defense for clean, productive rivers is careful protection of their headwaters.

Development pressure intrudes upon the Balsams from every direction and there are considerable opportunities to acquire valuable natural areas through purchases or to protect them through conservation easements. As with so many other important wild areas in North Carolina though, the first important step is to ensure that the next forest plan proposes sensible management of these important public lands.



Cold Mountain

photo and rendering by Lamar Marshall



Middle Prong Extension

Approximate size: 6,689 acres

Roadless acreage: 1,852 acres

Old growth acreage: not inventoried

Location: Haywood County, bordering the Blue Ridge Parkway

USGS Topographic Maps: Sam Knob

The Middle Prong Wilderness is separated from Shining Rock Wilderness on the east only by a state road, NC 215. It is basically the valley of the Middle Prong of the Pigeon River, together with its dividing ridges, Fork Ridge on the east, and Lickstone Ridge on the west, all running north from the Blue Ridge Parkway down to the Sunburst Campground.

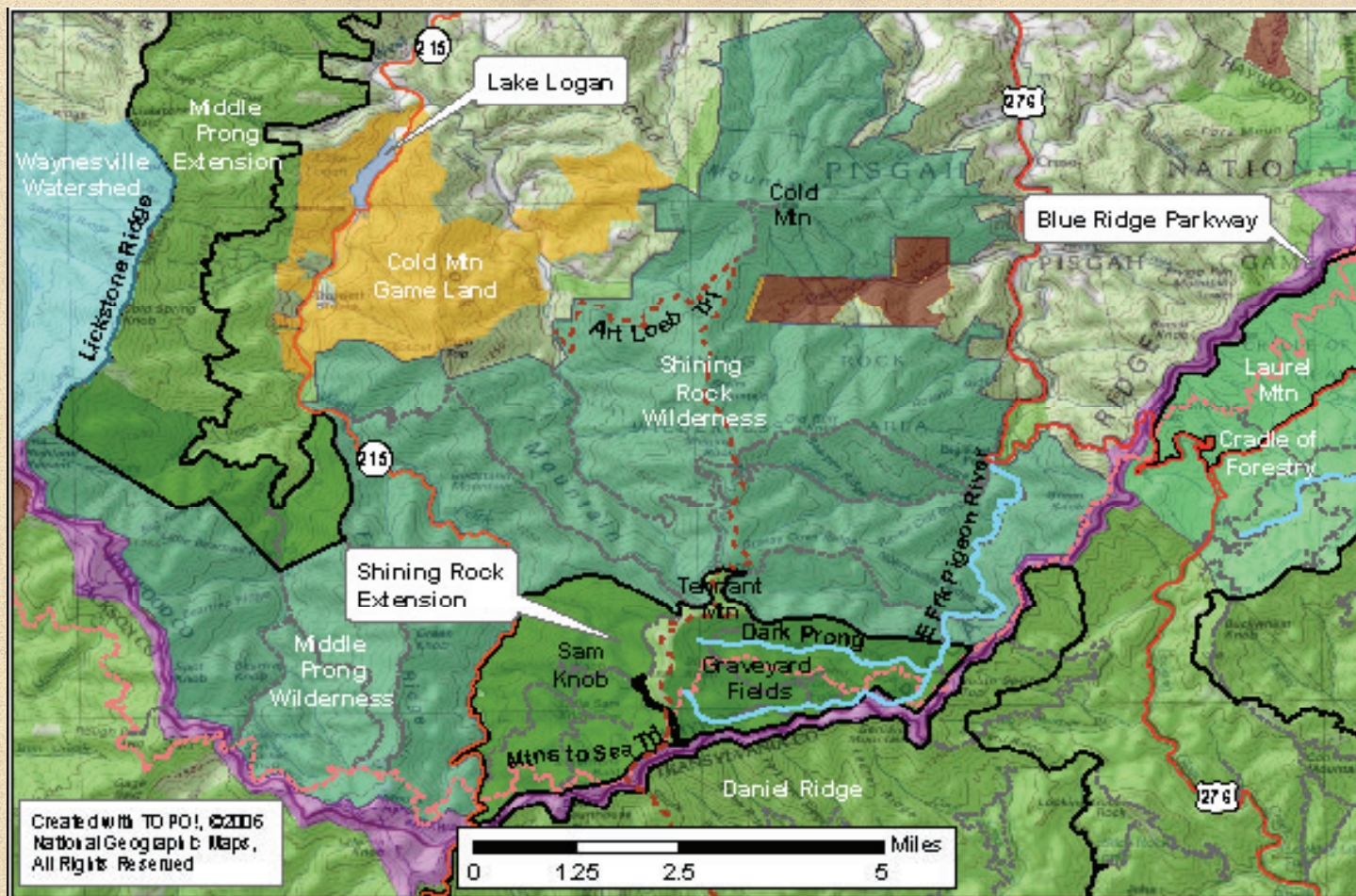
It would be logical to extend the wilderness farther north along Lickstone Ridge to the vicinity of Lake Logan, which the Forest Service acquired in 1999 as the result of a productive partnership between the agency, the State of North Carolina, the Boy Scouts and the Episcopal Church.

The community of Waynesville's watershed lies just west of Lickstone Ridge, and Shining Rock Wilderness lies just east across NC 215, arguing further for carrying protection of the Middle Prong Wilderness farther north to protect the watershed and wildlife habitat. The Lickstone Ridge area is a bear sanctuary. The area has a good trail system, including a portion of the Mountains-to-Sea Trail.

To the south of the Middle Prong Wilderness, and separated from it only by the Blue Ridge Parkway corridor, is the Roy Taylor Forest, also an essentially unroaded area. Seen in a proper conservation context, Middle Prong is important as one corner of a very large wild area interrupted only by the north-south state highway and the Blue Ridge Parkway, which runs east and west. On the northwest is Middle Prong. Shining Rock lies to the northeast, Daniel Ridge to the southeast, the Roy Taylor Forest to the southwest. Numerous animal species inhabit and migrate through these areas, including the cerulean warbler. Protection of the contiguous parts of these four areas has major benefits for wildlife, biodiversity and recreation.



Sandhill cranes fly across a wilderness sky. The plight of this bird inspired Aldo Leopold to devote his life to preserving natural habitats for wildlife.
photo by Lamar Marshall



Shining Rock Wilderness Extension

Approximate size: 4,863 acres

Roadless acreage: 4,556 acres (2,583-Sam Knob; 1,973-Graveyard Ridge)

Location: Haywood County, borders Blue Ridge Parkway
USGS Topographic Maps: Waynesville, Sam Knob, Cruso, Shining Rock

The Shining Rock Wilderness lies north of the Blue Ridge Parkway and east across NC 215 from the Middle Prong Wilderness. Over 800 acres of land in Crawford Creek is protected by conservation easements held by the State of North Carolina. Logical extensions of protection to the south toward the Parkway are Graveyard Ridge, the Dark Prong drainage and Sam's Knob. The areas were improperly excluded from the wilderness when it was designated. Over the years, the Forest Service has tended to invoke outside sights and sounds too much in drawing boundaries for proposed wilderness. Beyond that, Congress has elsewhere resolved the issue by bringing wilderness boundaries right up to highways--in one case an Interstate highway.

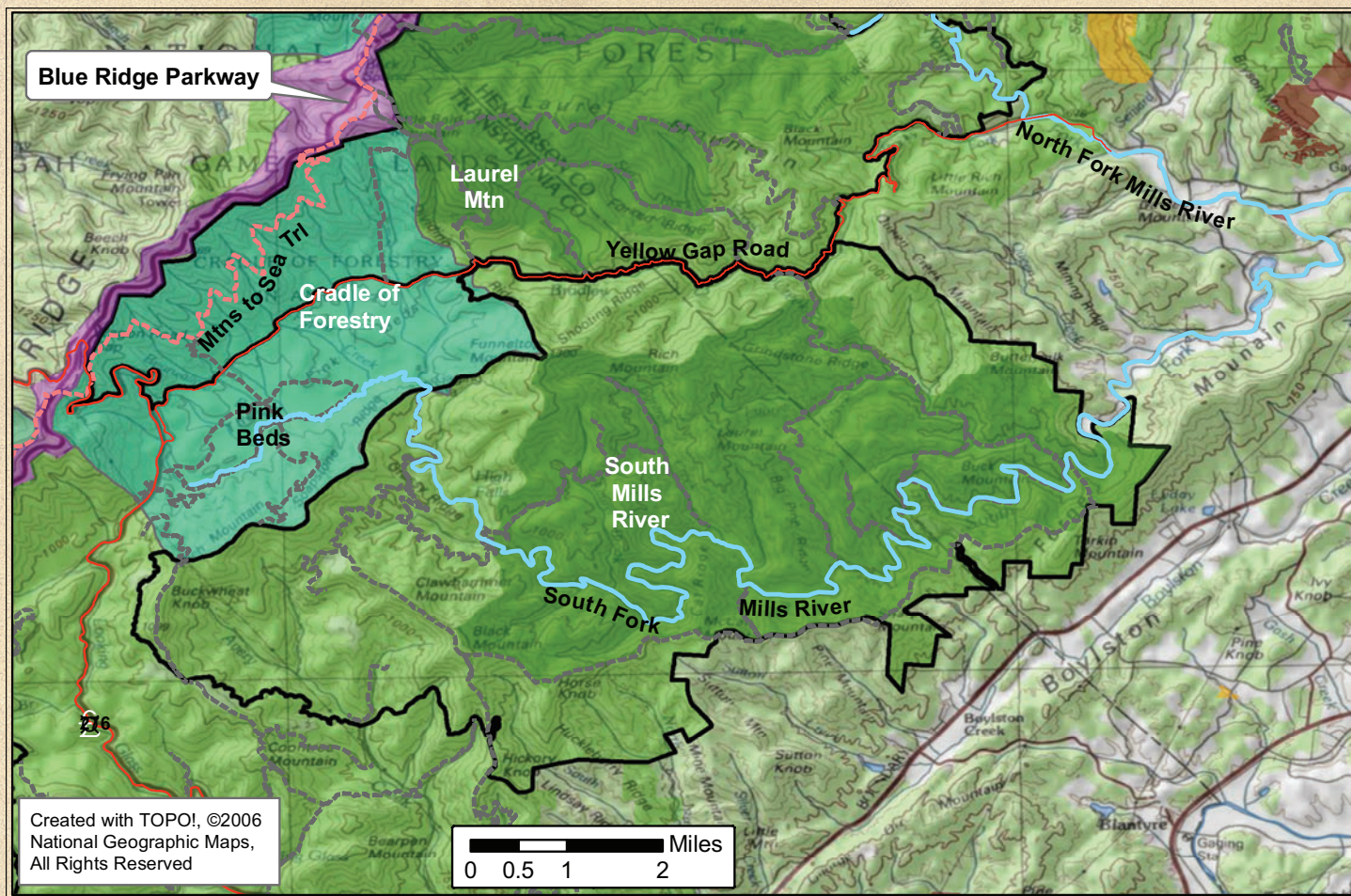
Graveyard Fields and Tennant Mountain are managed by periodic burning to maintain them as laurel/blueberry balds, which provide hawk habitat and extremely popular blueberry picking in the fall.

Because of its popularity, the Shining Rock wilderness is

heavily overused--a solid reminder that there is considerable public demand for wilderness recreation and not enough wilderness to satisfy it without compromising wilderness values, the wilderness experience or both.



Aldo Leopold: Author of A Sand County Almanac and one of the founders of The Wilderness Society



South Mills River

Approximate size: 17,120 acres

Roadless acreage: 8,629 acres

Location: Transylvania and Henderson counties, NC, 12 miles north of Brevard; Pisgah Ranger District Pisgah National Forest

USGS Topographic Maps: Pisgah Forest, Dunsmore Mountain, Shining Rock

The South Mills River Mountain Treasure is a remarkable transect of mountain scenery including ridgeline views, deep valleys with clear water trout streams and one of the biggest mountain bogs in the Southeast. It encompasses an area from the congressionally-designated Cradle of Forestry and the Pink Beds near US 276 on the west; the Blue Ridge Parkway and the Pisgah Inn on the spine of the Blue Ridge Mountains on the north; then it falls southward through the long ridges of the Laurel Mountain Roadless Area to the drainage basin of the South Mills River Roadless Area.

Only the Yellow Gap Road, a dirt connector between US 276 and the North Mills River Recreation Area, separates the South Mills River and the Pink Beds from the Laurel Mountain Roadless Area to the north.

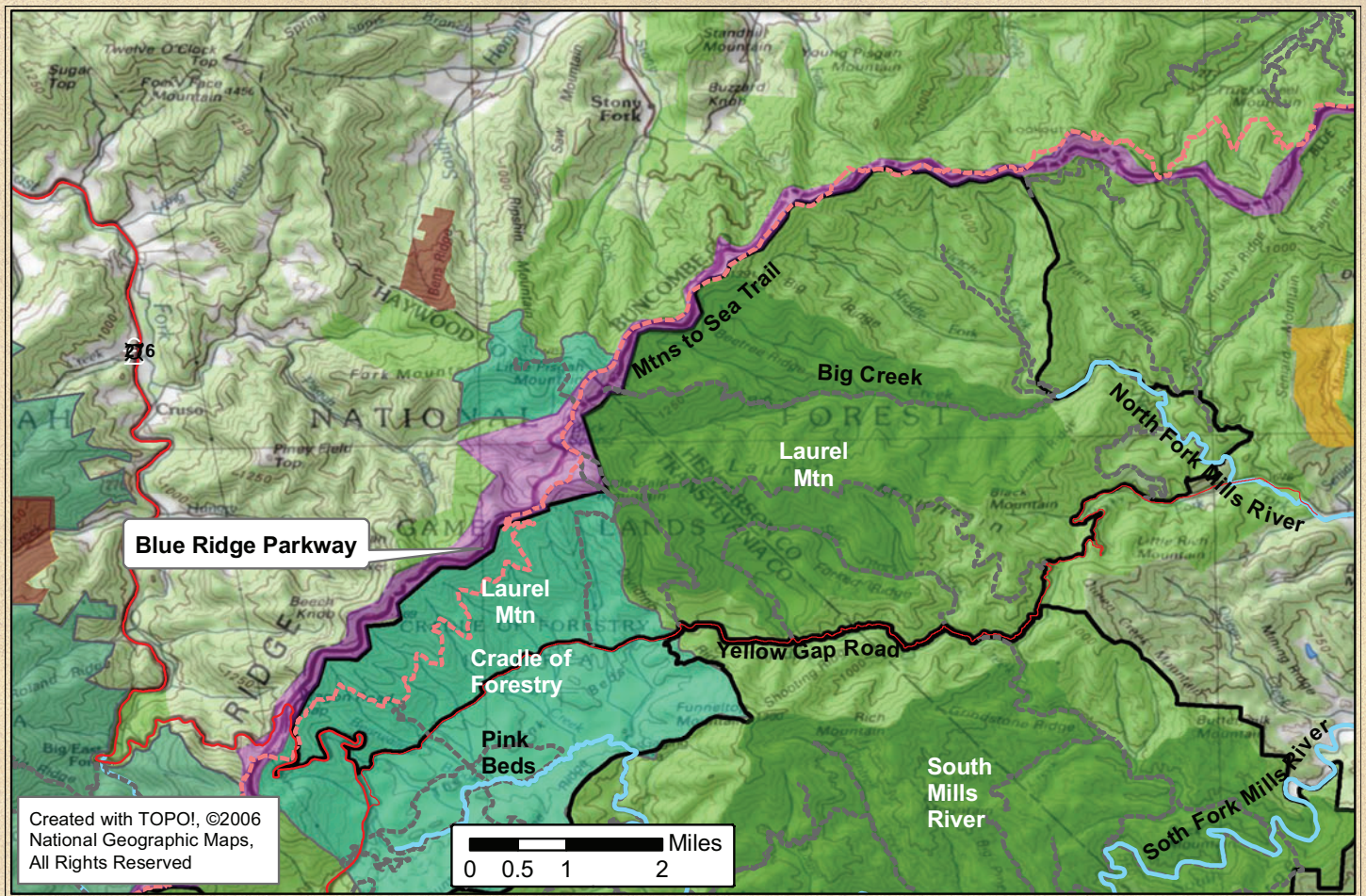
The area includes an extensive trail system, including part of the Mountains-to-Sea Trail, much used by hikers, campers, mountain bikers, horse riders, and hunters. Historically it is of

interest because it was once part of the Biltmore Forest, owned by George Vanderbilt in 1900 and where Gifford Pinchot established the nation's first forestry school. The remnants of Pinchot's first management experiments can still be seen along Big Creek in the Laurel Mountain Area.

The State of North Carolina gave the South Mills River an Outstanding Resource Waters classification 1988. The Congress designated the South Mills River a National Wild and Scenic Study River in 1990. Asheville and Hendersonville are planning to draw municipal water supplies from this watershed.

The Forest Service concluded in 1996 that several river segments are all eligible for National Wild and Scenic status: 20.1 miles of the South Fork Mills River within the Pisgah National Forest (beginning in the Cradle of Forestry and going to the junction with the North Fork); 5.3 miles outside the forest boundaries, plus 5.9 miles of the North Fork (from the Hendersonville Reservoir); and, 2.2 miles of the Mills River below their junction. If Congress were to designate all these qualifying sections, they would become the longest wild river in North Carolina.

This area's size, beauty, popularity and diversity suggest that it, along with other similarly unspoiled and popular nearby areas (Cedar Rock and Daniel Ridge, plus Sliding Rock, the Cradle of Forestry Visitor Center, the Trout Hatchery and North Carolina Wildlife Resources Education Center, and the Davidson River, Kuykendahl, North Mills River and Cove



Creek campgrounds) would logically qualify the entire Pisgah Ranger District for designation as a national recreation area.

The South Mills River is noted as one of the top trout fishing, turkey hunting, horseback riding and mountain biking areas in the Pisgah National Forest. The richness of hunting and fishing opportunities is mirrored by a wealth of biodiversity, including rare aquatic species like the hellbender and the endangered mussel, the Appalachian elktoe.

Laurel Mountain Area

Approximate size: 13,368 acres

Roadless acreage: 5,683 acres

Old growth acreage: 245 acres

Location: Henderson and Transylvania counties, NC, 20 miles southwest of Asheville; Pisgah Ranger District, Pisgah National Forest

USGS Topographic Maps: Dunsmore Mountain

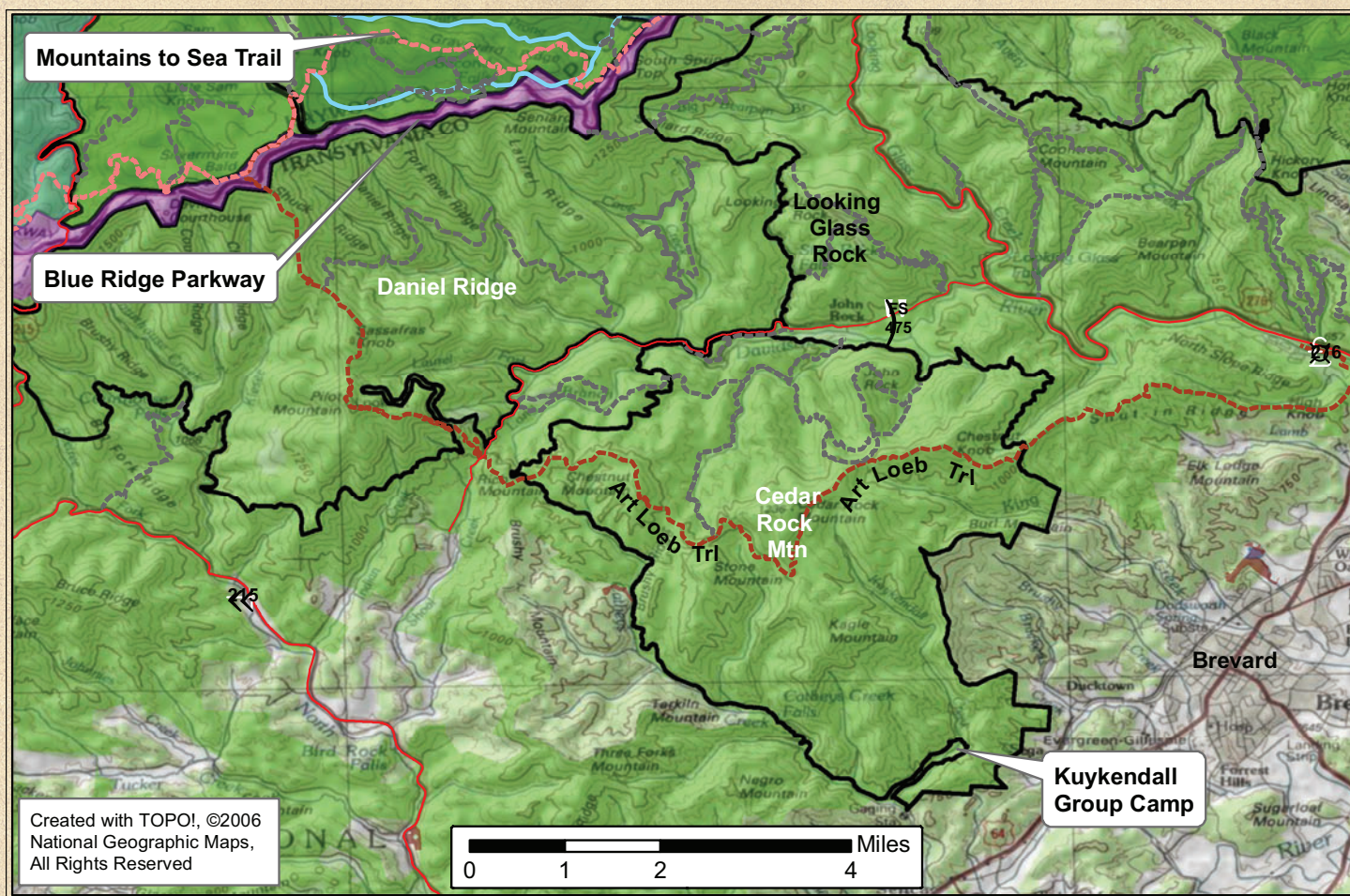
The Laurel Mountains Roadless Area shares much with the South Mills Mountain Treasure to its south, from which it is separated only by the dirt Yellow Gap Road as noted above. Extensive trail systems, including part of the Mountains-to-Sea Trail serve both areas and are popular with hikers, campers, mountain bikers, horse riders, and hunters. Both areas were part of the Biltmore Forest.

The natural features, as well as the historical and recreation values of both Mountain Treasures are very similar--not surprisingly, as they are virtually contiguous wild areas and should be considered as such.

Two of the outstanding features of the Laurel Mountain area are the granite domes on the Pilot Cove and Pilot Rock trails. These natural communities are incredibly scenic and biologically unique to the southern Blue Ridge Mountains.



Upper Whitewater Falls on the Blue Ridge Escarpment
photo by Lamar Marshall



Daniel Ridge

Approximate size: 12,982 acres

Old growth acreage: 2,149 acres

Location: Transylvania County, NC, 10 miles northwest of Brevard; Pisgah Ranger District, Pisgah National Forest
USGS Topographic Maps: Shining Rock, Sam's Knob

Daniel Ridge lies along the Blue Ridge Parkway and east of NC Route 215. It consists of the ridges and streams that drop from the Parkway elevations down to the valley drainage of the Davidson River. Much-visited Devil's Courthouse, a nesting site of the endangered peregrine falcon, sits on the north, and just across the Parkway to the north are Graveyard Fields, Sam's Knob and the very popular blueberry/laurel balds of Tennant and Black Mountains, which are really extensions of the Shining Rock Wilderness.

The U.S. Forest Service manages Daniel Ridge as a large patch of old growth restoration area, acknowledging the possibly virgin tracts in the higher elevation spruce/fir forest near the Parkway. There is an extensive trail system, including the Art Loeb Trail, (which runs from Cold Mountain in the Shining Rock Wilderness to the Davidson River Campground on US 276), and a portion of the Mountains-to-Sea Trail. Daniel Ridge is prime territory for camping, hiking and nature study. It has much to offer history buffs as well, with interest-

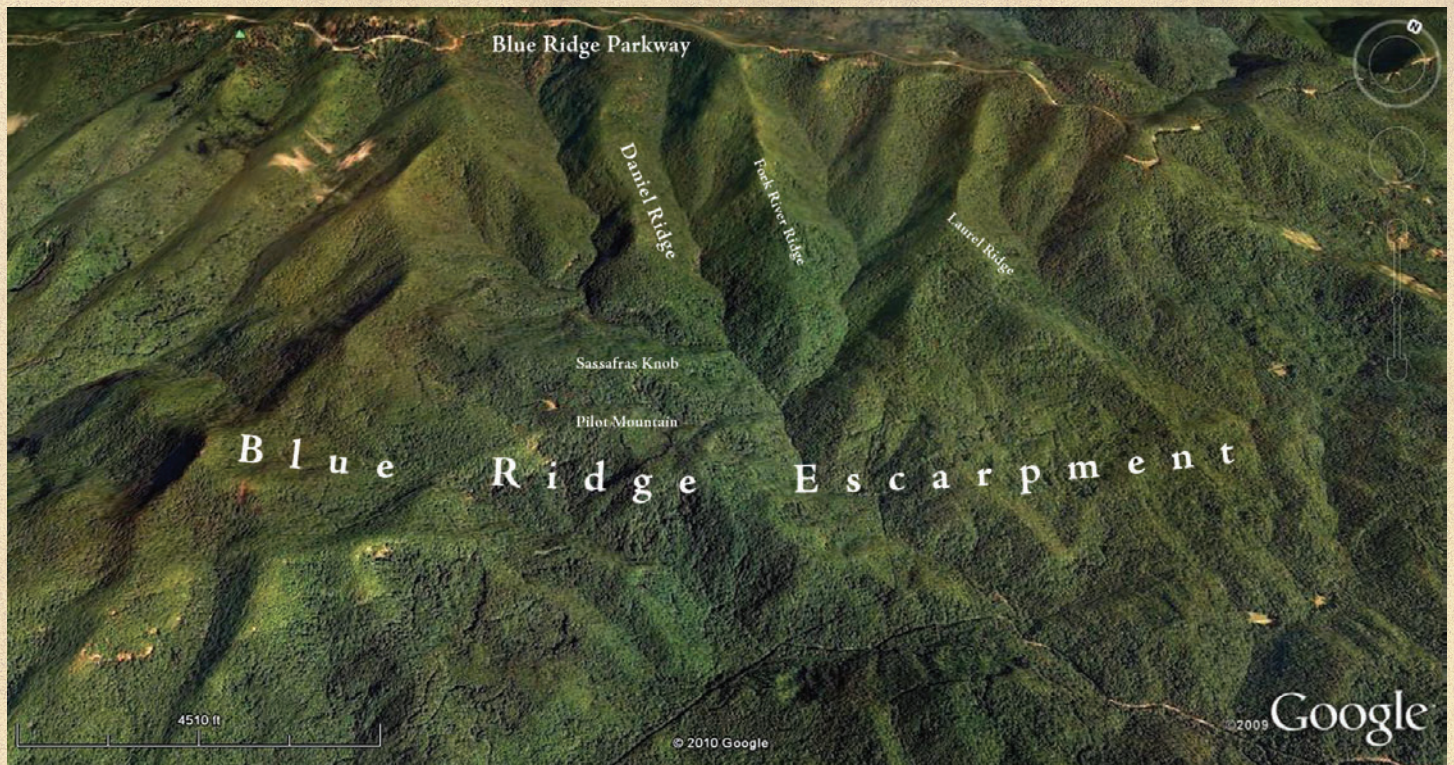
ing remnants from the logging days of the early 1900s, including moldering corduroy roads and old railroad trestles at creek crossings, plus the rare railroad spike and occasional logging cables.

Courthouse Falls, where Courthouse Creek plunges 45 feet, is a popular destination in the southwest corner of the Daniel Ridge conservation area.



Opossum

photo by Lamar Marshall



The Daniel Ridge area along the rugged Blue Ridge Escarpment. Image from Google Earth.

Cedar Rock

Approximate size: 8,694 acres

Old growth acreage: 123 acres

Location: Transylvania County, NC, 5 miles west of Brevard; Pisgah Ranger District, Pisgah National Forest
USGS Topographic Maps: Shining Rock, Rosman

This area, and the mountain of the same name, lie on the south side of the Davidson River, south of the Daniel Ridge area. It is part of a very popular hiking and camping complex. The major trail terminus for the complex is at the Davidson River Fish Hatchery and North Carolina Wildlife Resources Commission Education Center on FR 475 just west of the very popular Looking Glass Falls on US 276.

An extensive trail system includes the Art Loeb Trail which winds completely around the base of Cedar Rock, with connections to the Fish Hatchery area to the north and to Cathey's Creek and the Kuykendahl Group Campground to the south toward Brevard.

There is a shelter near Butter Gap. The Art Loeb National Recreation Trail is a memorial to a Carolina Mountain Club activist and runs from Cold Mountain at the north end of Shining Rock Wilderness south over the balds, crossing the Parkway and then easterly to Brevard, for a distance of about 30 miles.

Cedar Rock Mountain itself is a massif with spectacular bare rock faces, much used by climbers. It offers wonderful views of the Blue Ridge, the Davidson River Valley and its companion mountains, Looking Glass Rock and the John

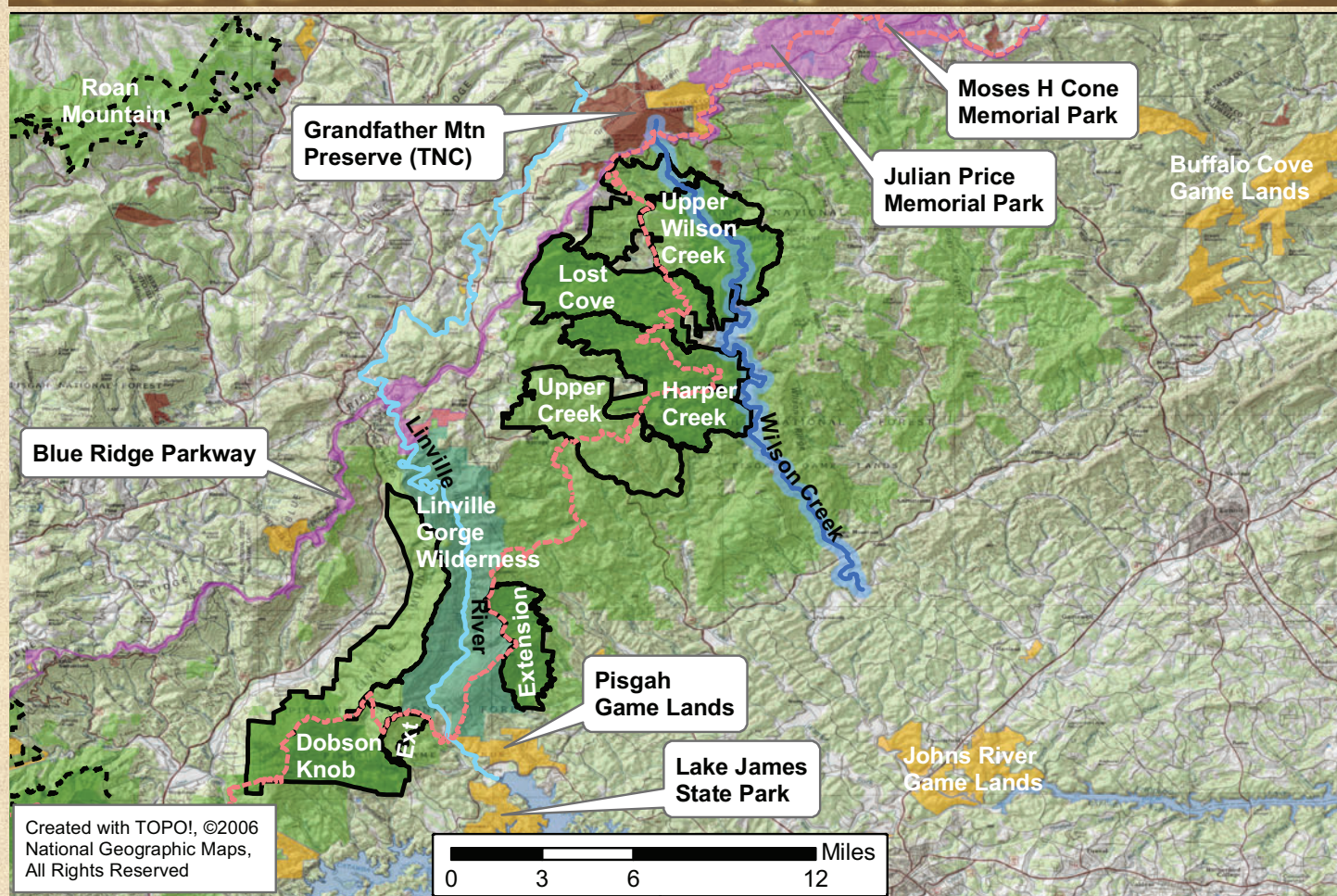
Rock Scenic Area. Visitors standing here on these billion-year-old granite rock faces, rounded by exfoliation from millions of years of weathering can appreciate that these are but the stubs of ancient mountains worn down after being thrust up by massive tectonic plate collisions some 300 million years ago.

This is primitive land, never glaciated, never submerged, where the forces of evolution have worked to produce biodiversity only the tropics can rival.



Hellgramites are the larval stage of the Dobsonfly which can grow to 4" long. They are an important food for bass and other fish. They require very clean, unpolluted water to survive.

Linville/Grandfather Mtn Conservation Area



Linville/Grandfather Mountain Conservation Area

Dobson Knob

Linville Gorge Extensions

Upper Wilson Creek/ Lost Cove/ Harper Creek/ Sugar Knob Wild Areas

The 138,000-plus acres of the Grandfather Mountain/ Linville Gorge Conservation Area is a study in contrasts, spectacular scenery and world-class biological richness.

Grandfather Mountain soars to almost 6,000 feet; the rim of the Linville Gorge averages 3,400 feet, with the Linville River which sculpted it flowing below at an average elevation of 2,000 feet. Over 60 rare plants and animals occupy their various niches on the mountain. It also shelters one of six known populations of a tiny tarantula, the spruce-fir moss spider. And, because of its height, Grandfather Mountain is on the southern edge of several species' ranges, including the northern saw-whet owl, the Appalachian cottontail and the black-capped chickadee. Migratory bird species, including warblers and other songbirds, abound and the mountain's seeps and springs provide habitat for 16 species of salamanders.

Other species that find a home in the area include deer, black bear, squirrel, raccoons, grouse and turkey. In all, there are 12 biological hotspots in this conservation area.

Important aquatic systems in the area include Wilson Creek, which flows for 23 miles from its source on Calloway Peak on Grandfather Mountain to its junction with the Johns River. Congress designated Wilson Creek a Wild and Scenic River in 2000. Efforts are underway to classify the Johns River riparian corridor as Outstanding Resource Water. The Linville River is a critical aquatic refuge and North Carolina has given it Natural and Scenic River protection.

The diverse elevations of the gorge and the mountain suggest considerable ruggedness in this conservation area. That tortured terrain accounts for the fact that a documented 27,800 acres of old growth forest remain. Steepness and

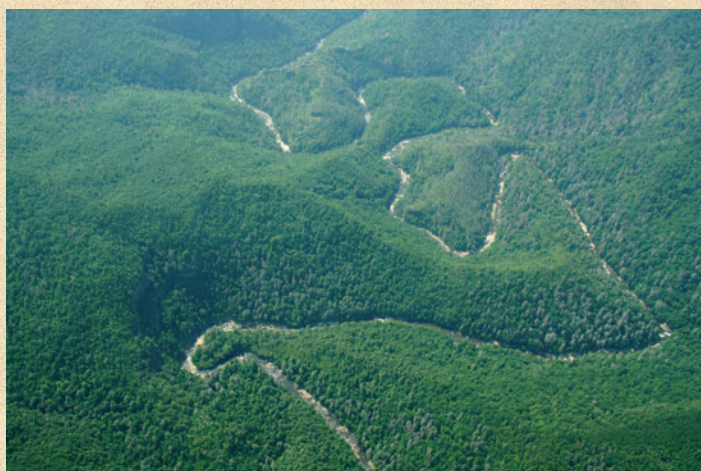
roughness discouraged loggers and developers across much of the area.

Within the conservation area are Dobson Knob and Linville Ridge to the southwest of the gorge. Restored and protected, they will provide very effective wildlife connectivity with the nearby Black Mountains Conservation Area.

The Grandfather Mountain/Linville Gorge Conservation Area is rightly considered to be one of the premier natural areas in the entire Southern Appalachian region. Despite that status, though, the area has far too little protection. Road building, residential development, destructive logging and, in some cases, poorly managed recreational use all nibble away at the area's biological and other natural values.

There are some exceptions to this at-risk status and the Linville Gorge Wilderness Area is chief among them. Within the wilderness is a single old growth tract of over 10,000 acres. We propose significant additions to the Linville Gorge Wilderness Area.

The Nature Conservancy manages a 3,000-acre tract on Grandfather Mountain under a conservation easement. Wild South is working on legislation to designate 25,500 acres of the Pisgah National Forest along the Blue Ridge Parkway from Grandfather Mountain to Blowing Rock as the Grandfather National Scenic Area.

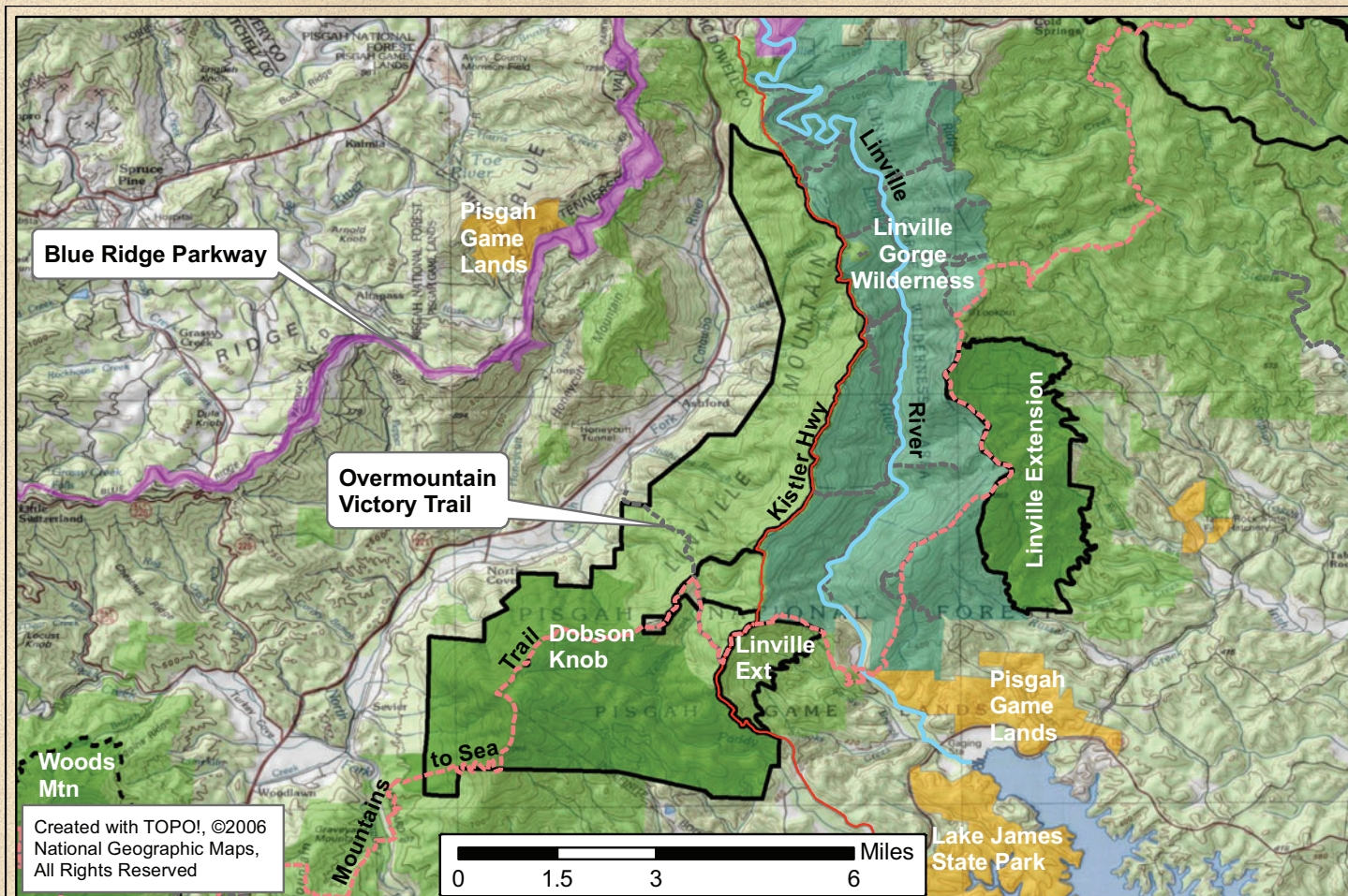


Above: Linville Gorge

Below: Alpine ecosystem of Grandfather Mountain

photos by Lamar Marshall





Dobson Knob

Roadless acreage: 6,128 acres

Old growth acreage: 5,002 acres

Location: Burke and McDowell Counties, NC, 15 miles north of Marion; Grandfather Ranger District, Pisgah National Forest

USGS Topographic Maps: Ashford, Little Switzerland

Dobson Knob is a massif with a double top at 3680 feet, from which ridges and valleys fall off in all directions. It is a key connector between Woods Mountain and the Linville Gorge Wilderness. A road separates Dobson Knob from the Linville Gorge Wilderness. A majority of this area is inaccessible and likely to remain so. The hollows drained by Black Fork and Yellow Fork, and below their confluence, Paddy Creek, are laurel and rhododendron "hells." Anyone seeking to traverse them should be prepared to crawl for much of the way. Because of this dense undergrowth, most of this Mountain Treasure is in old growth forest.

A recently constructed portion of the North Carolina Mountains-to-Sea Trail that climbs the western slope of the area gives access to it for the first time. Consisting of boulder fields and stands of never-harvested Virginia pine, this slope forms a rare, dry habitat in this part of the state.

In addition to the Mountains-to-Sea Trail, we find here a

segment of the Overmountain Victory Trail. Tennessee Volunteers used this historic trail to reach the Revolutionary War battlegrounds at Kings Mountain and at Cowpens.

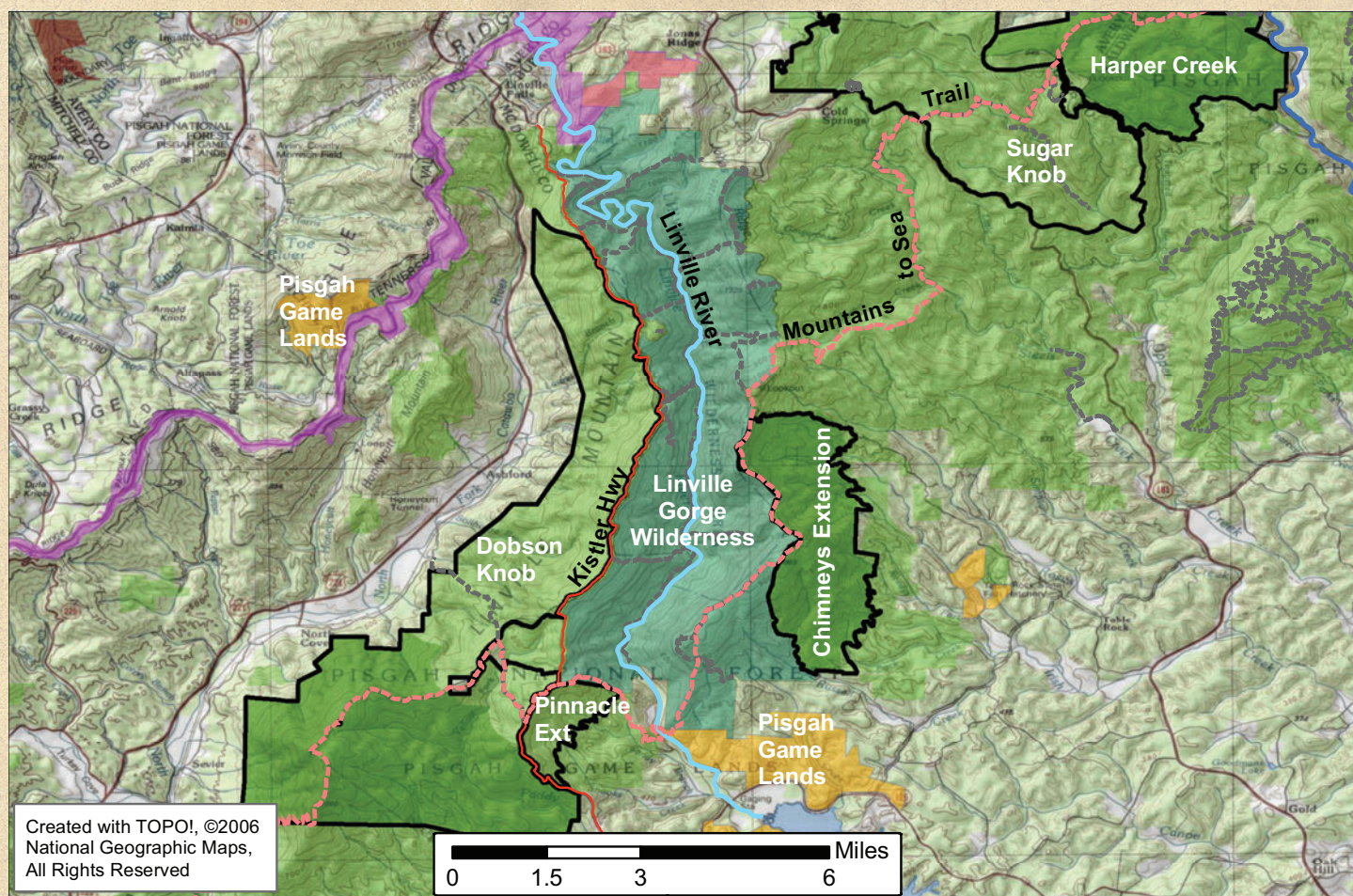
Dobson Knob has several high-quality Carolina Hemlock Bluffs that are excellent rattlesnake habitat. At the writing of this document, the Carolina hemlock, a species endemic to the Southern Appalachians, is in precipitous decline because of hemlock wooly adelgid. The Carolina hemlocks at Dobson Knob remain some of the healthiest in the region and are prime candidates for preservation.



The First Nations

The Cherokees so dominated the Appalachians from their epicenter in North Carolina into parts of Kentucky, Alabama, Georgia, Tennessee and South Carolina, that the early explorers named the mountain chain "The Cherokee Mountains."

Later, European frontiersmen slipped into the Cherokee domain to hunt buffalo, bear and beaver. They were called "Long Hunters" and they became legendary figures that represented the freedom of American Wilderness.



Linville Gorge Wilderness Extensions

Approximate size: 3,464 acres

Roadless acreage: 2,800 acres

Old growth acreage: 134 acres

Location: Burke County, NC, 14 miles northwest of Morganton; Grandfather Ranger District, Pisgah National Forest

USGS Topographic Maps: Ashford, Linville Falls, Chestnut Mountain, Oak Hill

Linville Gorge, sometimes referred to as the “Grand Canyon of North Carolina,” is one of the most rugged and scenic areas in the east. The Linville River is unusual because it rises west of the Blue Ridge and cuts a gorge through the Blue Ridge Escarpment for 12 miles. Linville Gorge has the best exposure of one of the largest thrust faults in the United States and is one of the few primeval gorge areas in the Appalachians.

In 1951, the Chief of the U.S. Forest Service designated the Linville Gorge a “wild area.” The Wilderness Act of 1964 included Linville Gorge as one of the original components of the National Wilderness Preservation System. The original designation protected 7,575 acres. The North Carolina Wilderness Act of 1984 increased it to today’s 12,002 acres. The Linville Gorge Extensions adjoin the southern half of Linville

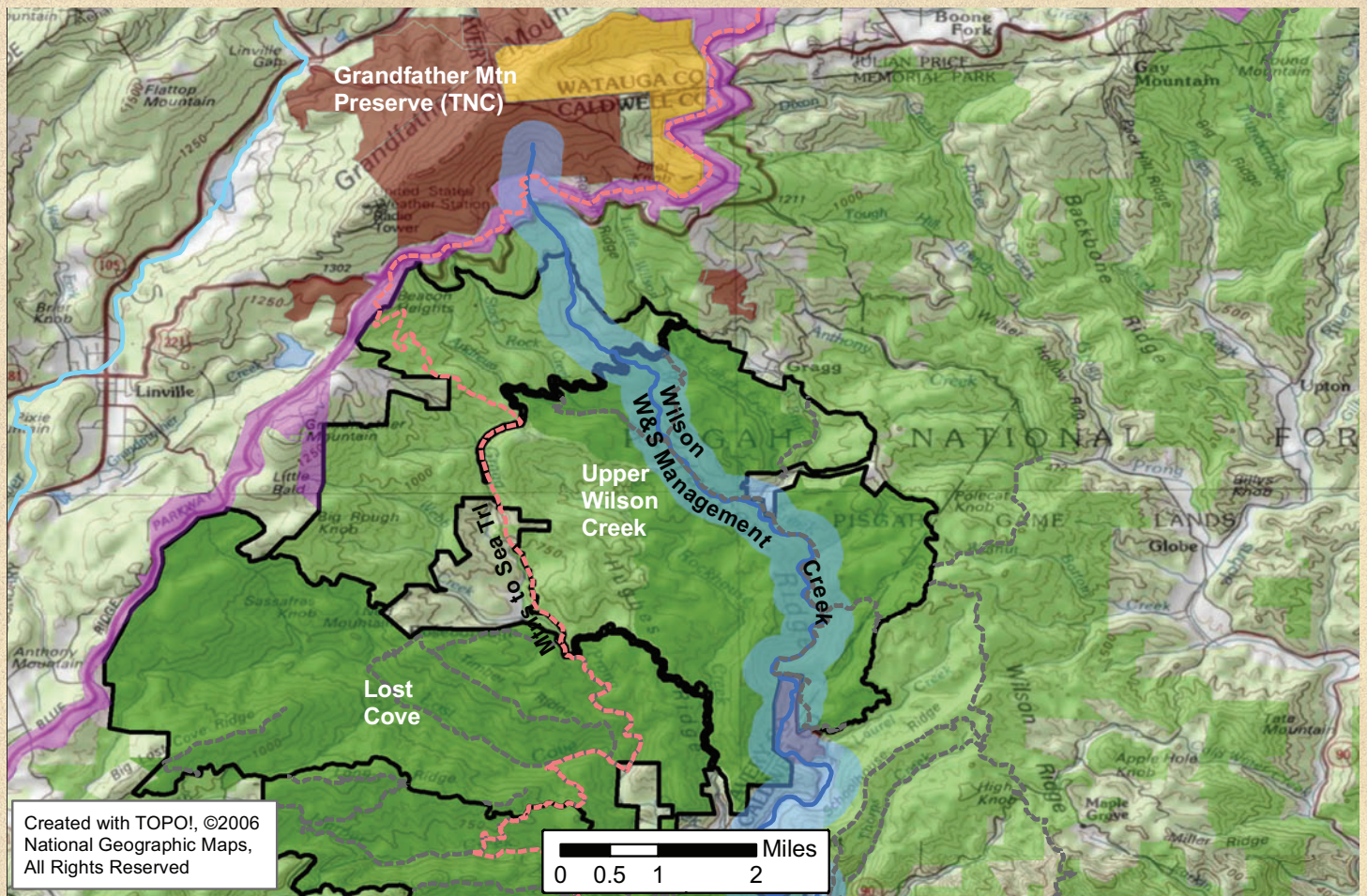
Gorge Wilderness. Today, much of the land in the proposed extension is zoned to allow for timber cutting. Given these areas’ exceptional wilderness potential, they deserve to be far better protected.

The smaller of the two extensions lies on the southwest side of the Linville Gorge Wilderness, just east of the Kistler Memorial Highway. The Dobson Knob Roadless Area (and Mountain Treasure Area) is across the Kistler Memorial Highway from this Linville Gorge extension. The North Carolina Mountain-to-Sea Trail skirts the northern boundary.

The larger of the two extensions is on the southeast side of the existing wilderness. It is east of Shortoff Mountain and just west of Chimney Gap. This section is inventoried roadless and contains headwater branches of Irish and Russell Creeks. The Mountain-to-Sea Trail passes along the western border of this addition as well.

Some of the extensive old growth found in the currently designated wilderness extends into the southwestern addition. A large designated Forest Service old growth patch centered on Linville Gorge extends into most of the southeast addition.

In 2007 the Shortoff and Pinnacle Fires burned thousands of acres on the southern end of Linville Gorge and its extensions. These fires leveled hundreds of acres of forest which are re-vegetating as woodlands with a diverse herb layer of grasses and wildflowers. Unfortunately, invasive species such as princess tree are a serious concern in Linville Gorge and its potential additions. The Forest Service could use substantial public support in the form of volunteerism to control invasive species across the forest.



Upper Wilson Creek/ Lost Cove/ Harper Creek/Sugar Knob Complex

These four wild areas are clustered to the northeast of the Linville Gorge Wilderness Area and to the southeast of the Blue Ridge Parkway. Each is separated from its neighbor only by an unpaved forest road. Though we include brief descriptions of each separately, the four areas share natural features and values and for conservation purposes should be considered as a single, essentially unbroken wild area. All consist of the ridges and valleys that fall some 2,000 feet from the Parkway southeast to Wilson Creek.

Upper Wilson Creek

Approximate size: 9,316 acres

Roadless acreage: 4,990 acres

Old growth acreage: 1,094 acres

Location: Avery and Caldwell Counties, NC, 10 miles southeast of Blowing Rock; Grandfather Ranger District, Pisgah National Forest

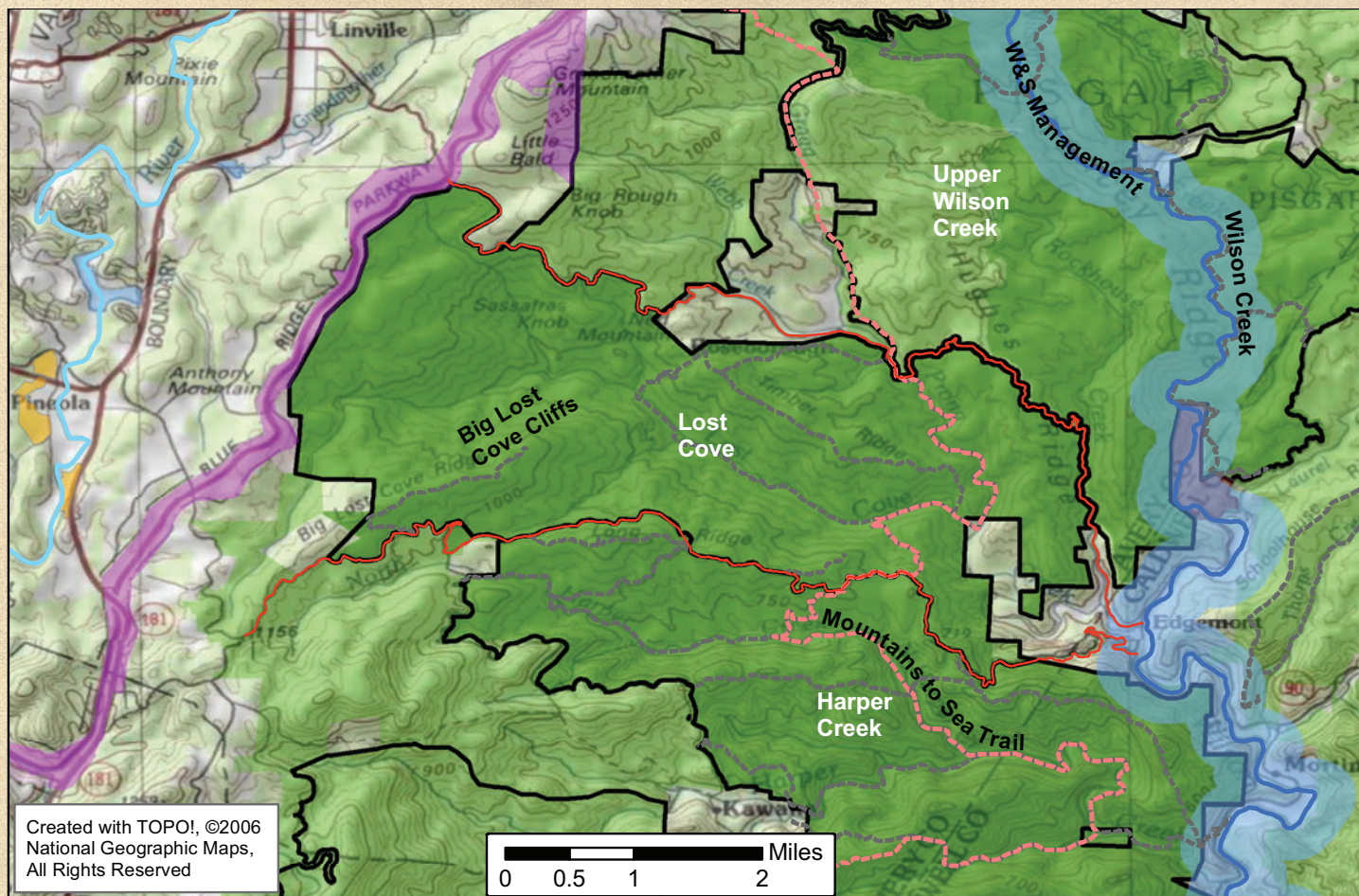
USGS Topographic Maps: Chestnut Mountain, Grandfather Mountain & Linville Falls

The northwest boundary of Upper Wilson Creek adjoins the Grandfather Mountain section of the Blue Ridge Parkway.

Wilson Creek and its tributaries--Little Wilson, Stackrock and Andrews Creeks--are all designated as part of the National Wild and Scenic Rivers System. Strewn with boulders and plunge pools, they offer endless pleasure to visitors' content. The headwaters of Little Wilson Creek, north of the Gragg Road (SR 1514), extend to the Blue Ridge Parkway. The stream falls in a nearly continuous cascade.

Upper Wilson Creek is a Forest Service-designated roadless area, which gives it some protection from logging and roadbuilding. The Foothills Conservancy of North Carolina, a regional land trust, is in the process of acquiring 649 acres of private land along four miles of Wilson Creek to protect it from development. When the sale is complete, the North Carolina Wildlife Resources Commission will manage the land.

Wilson Creek is a magnet for anglers because of its world-class trout fishery, and for kayakers because of its challenging white water. It is also classified as an Outstanding Resource Water by the North Carolina Division of Water Quality.



Lost Cove

Approximate size: 5,954 acres

Roadless acreage: 5,954 acres

Old growth acreage: 1,098 acres

Location: Avery County, NC, 5 miles southeast of Linville;

Grandfather Ranger District, Pisgah National Forest

USGS Topographic Maps: Chestnut Mountain,

Grandfather Mountain

Lost Cove lies south of adjacent Upper Wilson Creek and its northwest boundary also reaches to the Blue Ridge Parkway along its Grandfather Mountain section. Lost Cove is a wilderness study area, meaning the Forest Service is required to manage it to protect its wilderness values until Congress acts. The 1994 Forest Plan recommends it for wilderness designation. The area is also a black bear sanctuary.

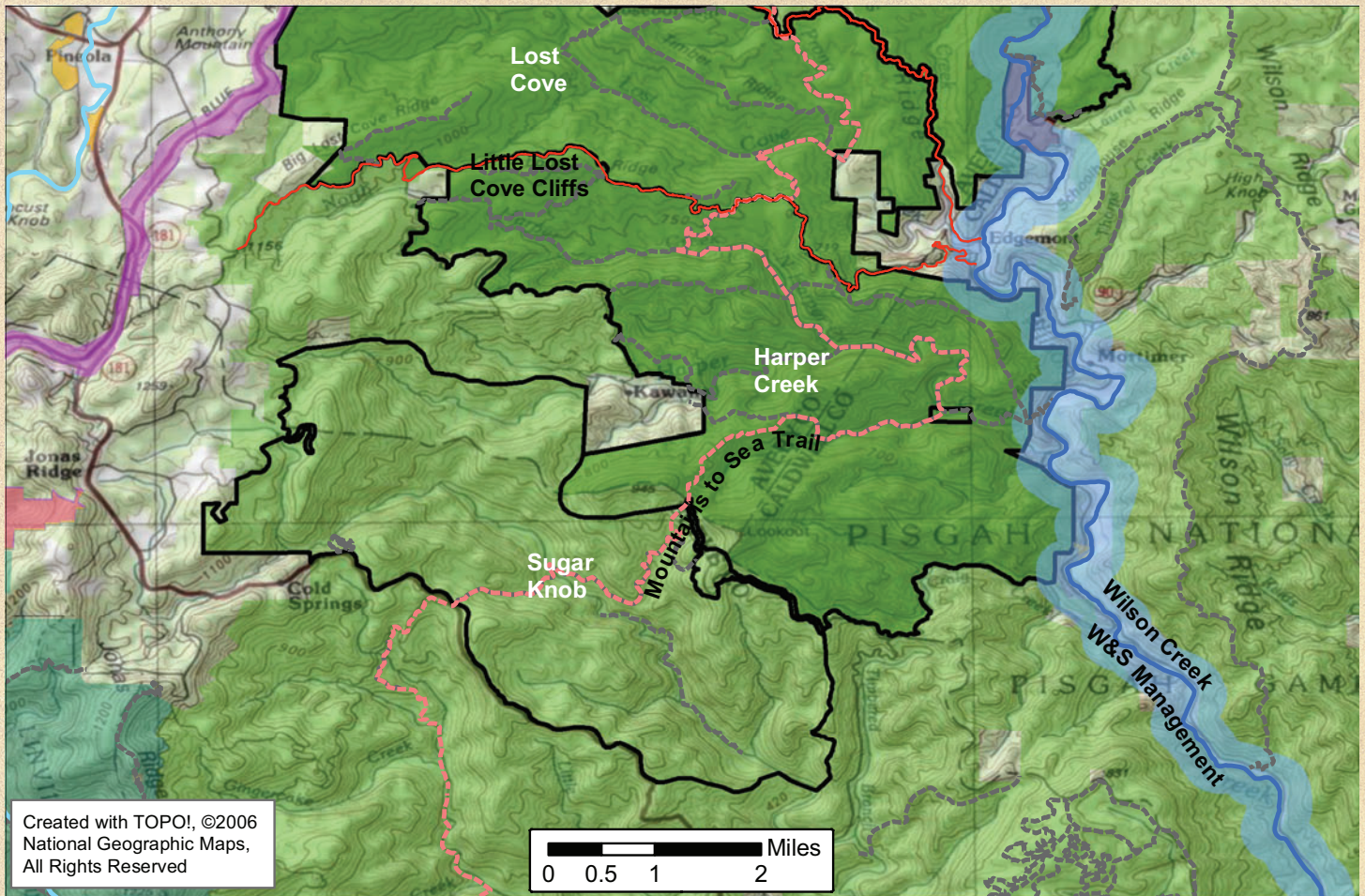
Peregrine falcons nest in the Big Lost Cove Cliffs, a place that rewards hikers to Beacon Heights with stunning views. There is a good and well-used trail system in the area, also served by a portion of the Mountains-to-Sea Trail.

Geologically, Lost Cove is within the Grandfather Mountain Window, an erosion feature that exposes ancient rocks where the once-overlying Blue Ridge Thrust Sheet has eroded away. Erosion has been at work here for over 300 million years, since the Appalachian Mountains were thrust up by the closing of the proto-Atlantic Ocean in the late Devonian

Period.

The land has never been covered by glaciers or oceans, so evolution has operated without interruption to provide the stunning biological diversity for which the Southern Appalachians are so well known.





Harper Creek/ Sugar Knob

Approximate Size: 14,767 acres

Roadless Acreage: 7,351 acres

Old Growth Acreage: 224 acres

Location: Avery, Burke and Caldwell counties, North Carolina, 20 miles southwest of Blowing Rock; Pisgah National Forest, Grandfather Ranger District

USGS Topographic Maps: Chestnut Mountain, Grandfather Mountain

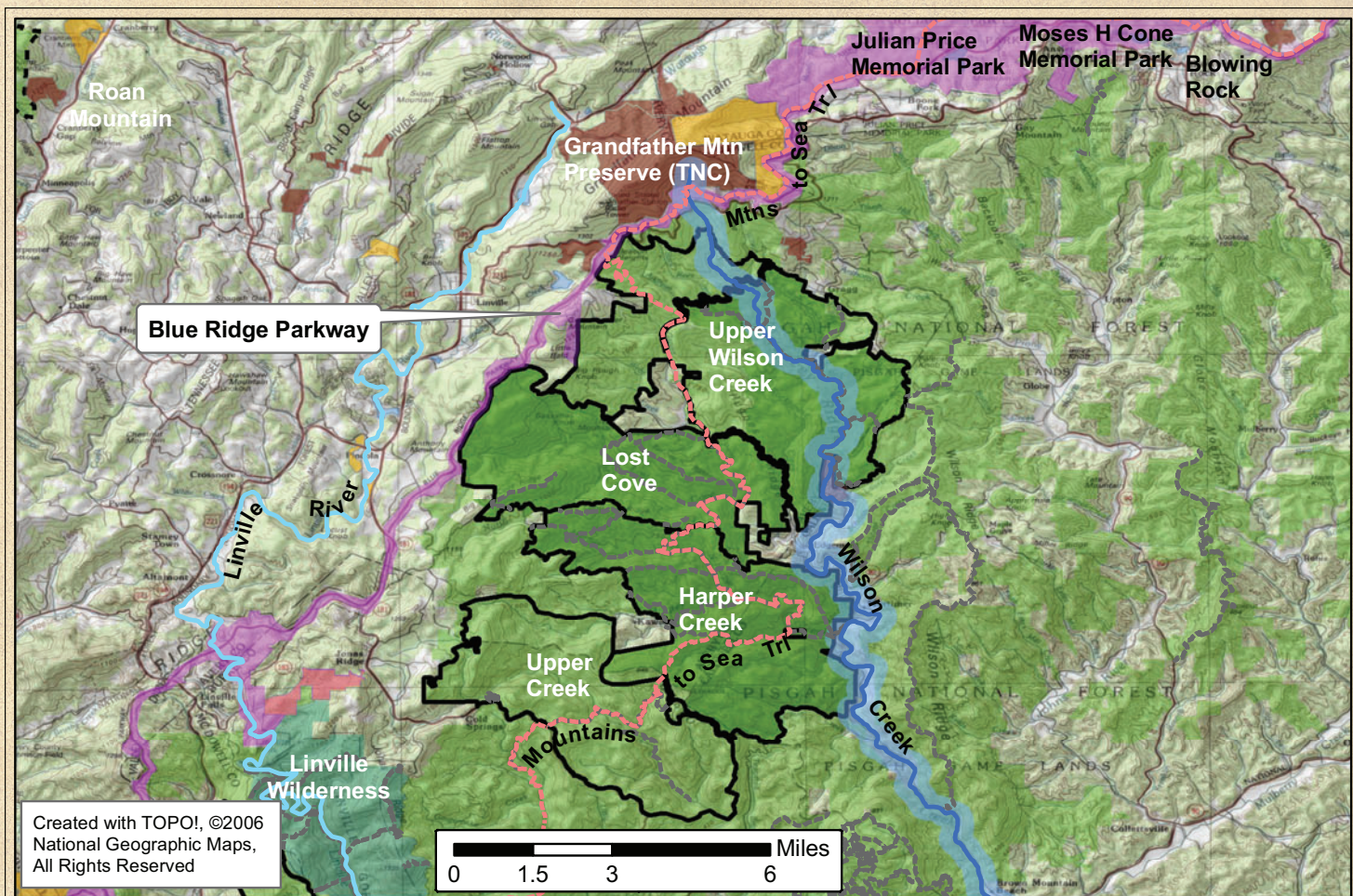
Harper Creek, another wilderness study area that the Forest Service recommended in the 1994 Forest Plan for designation, lies just south of Lost Cove. The prime attractions of Harper Creek and its neighbors are their streams, full of trout and waterfalls large and small. North Harper Creek Falls and South Harper Creek Falls are two of the most impressive.

The trail system here, as in Lost Cove, is well developed and very popular, offering a fine variety of loops for camping and backpacking. The Mountains-to-Sea Trail runs through both wild areas.

Sugar Knob is best thought of as an extension of Harper Creek to the south. The Forest Service affords it no special status other than having identified it in the 1994 Forest Plan to be managed as a "Semi-Primitive Non-Motorized" area.



Wild raspberries are abundant in many of the deep, lush mountainsides of the Blue Ridge Escarpment.



Sub-cluster map including the Upper Wilson Creek, Lost Cove, Harper Creek and Upper Creek area

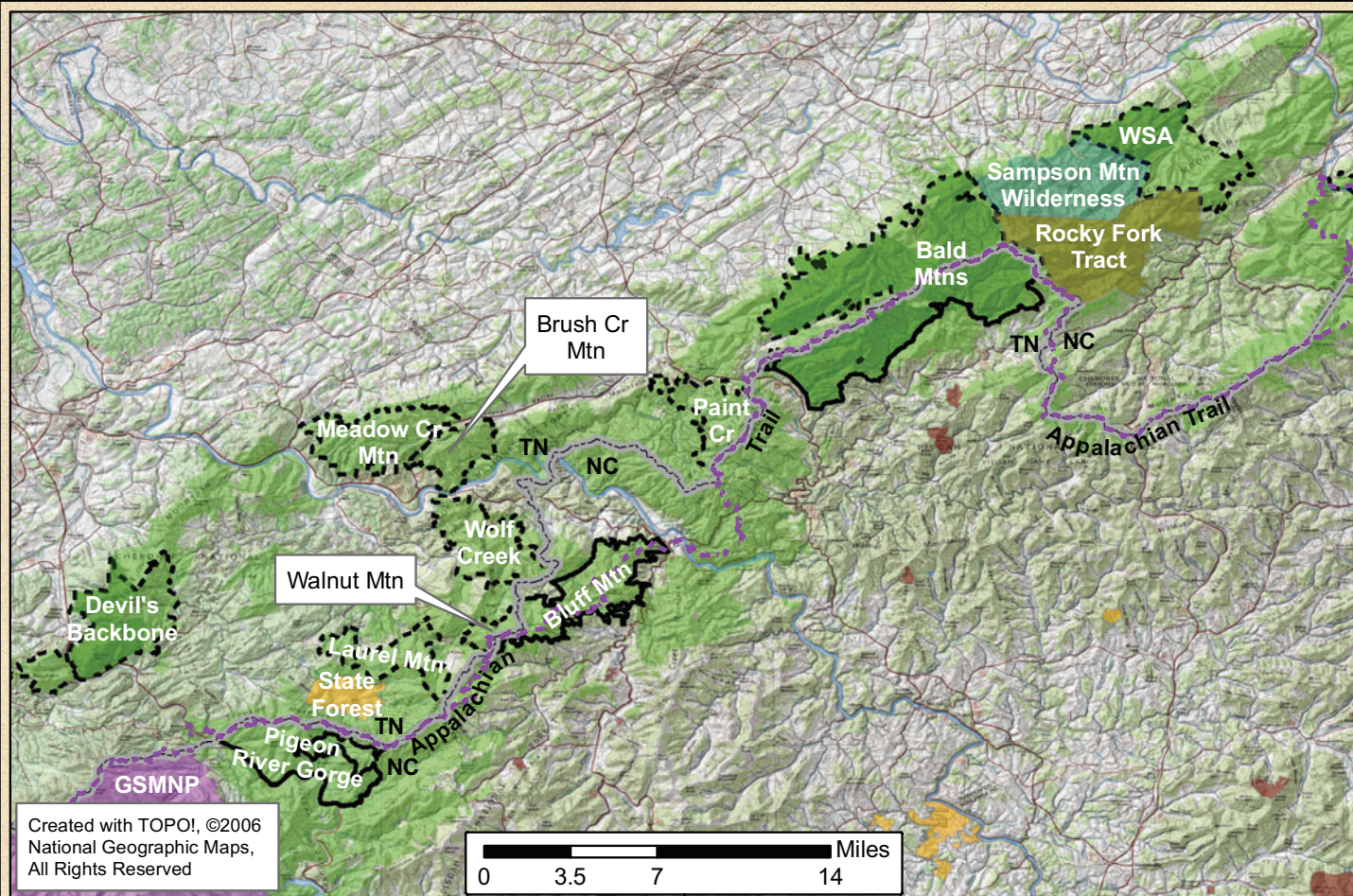


Volunteers Danielle Bouchonnet and Ben Prater survey the Tuckasegee River to monitor declining hellbender populations. Hellbenders are indicators of healthy, clean waters. They can grow to be up to 29 inches long from nose to tail and are the third largest aquatic salamander in the world.



The hellbender (*Cryptobranchus alleganiensis*) is a giant salamander which inhabits large, fast-flowing streams with rocky bottoms. It is native to North America.

Bald Mountains Conservation Area



Bald Mountains Conservation Area

Bald Mountains
Bluff Mountain
Pigeon River Gorge

Bald Mountains is the name of both an individual Mountain Treasure and of the larger conservation area it anchors. Both the conservation area and the Mountain Treasure lie on both sides of the ridge that separates Tennessee and North Carolina. This region forms part of the western flank of the southern Blue Ridge that runs northeast from the Smoky Mountains. The Bald Mountains are made up of

ridges that trend from the southwest to the northeast.

Taken together, North Carolina's Pisgah National Forest and Tennessee's Cherokee account for more than 200,000 acres in the conservation area. While public ownership is fairly well consolidated at the southwestern end of the Balds, ownerships are more fractured on the northeast.

There are three distinct North Carolina wildlands areas in this larger conservation area: Bluff Mountain, the Bald Mountains and the Pigeon River Gorge. But it is important to remember that nearly every wild area on the North Carolina side is matched by one on the Tennessee side. In a perfect—or even sensible—world, they would be dealt with as what they are: contiguous, continuous wild areas, regardless of jurisdic-



1833 McRae Map of western North Carolina

tional boundaries.

The potential for landscape-level conservation in the Bald Mountains is exceptional. It is also vital. The area constitutes the main corridor connecting wildlife populations in the Smoky Mountains to those further north. Black bears in particular benefit by these connections. Operating against that connectivity today are an interstate highway and assorted land ownerships. Neither problem is insoluble. Careful acquisition of critical private lands can reduce the fragmentation; wildlife overpasses, underpasses or both can encourage crossing by wildlife and avert the carnage that now often results.

At least 22 biological hotspots of various sizes dot the Bald Mountains Conservation Area. Smaller ones support important localized populations, larger ones a variety of species in a variety of habitat types. Several rare species of both plants and animals benefit from these habitats, including the peregrine falcon.

There are no designated wilderness areas on the North Carolina side of the Bald Mountains, but the Sampson Mountain Wilderness in Tennessee could be connected to a number of other wild areas on both sides of the state line through protection of several Mountain Treasures.

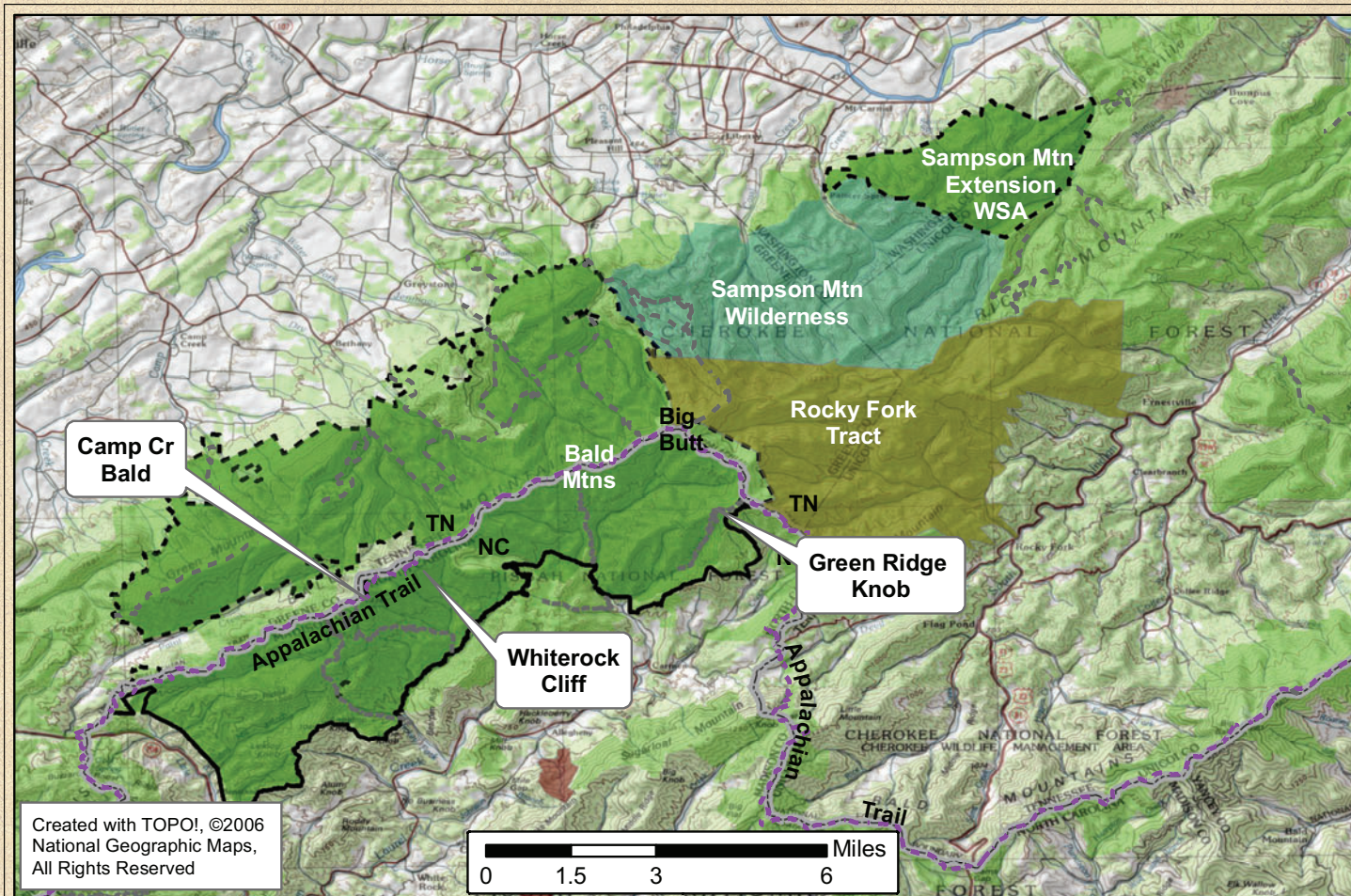
With several areas remaining to be inventoried, 4,300 acres of old-growth forest have been documented on the North Carolina side of the Bald Mountains. Hot spots for old-growth include the Bald Mountain Roadless Area and the Pigeon River Gorge.

The Appalachian Trail winds its way, mostly along the crest of the ridge, along the length of the Bald Mountains. Side trails drop down from the ridge into stream valleys, and a number of loop routes facilitate exploration of the area.



Eastern Bison once lived throughout the Appalachians. They were prized by the Cherokees who used the meat, hides and hair. Like in the West, the bison were indiscriminately slaughtered and wasted.

photo by Lamar Marshall



Bald Mountains

Approximate Size: 11,599 acres

Roadless Acreage: 10,971 acres on the Pisgah National Forest (adjoining 12,017 acres on the Cherokee National Forest)

Old Growth Acreage: 1,323 acres

Location: Madison County, North Carolina, 12 miles north-east of Hot Springs; Pisgah National Forest, French Broad Ranger Station

USGS Topographic Maps: Greystone, Flag Pond, White Rock, Davy Crockett Lake, Hot Springs

This area lies on both sides of the ridge that forms the North Carolina--Tennessee state line. The acreage in both states adds up to make this the largest Mountain Treasure in the two states, and the largest potential wilderness on National Forest lands between the Great Smoky Mountains and the Shenandoah National Parks.

Years ago the flat ridge crest was cleared to provide summer pasture for cattle. Settlers gave these places such colorful names as Ballground. Outlines of the pastures are still identifiable in some places.

There were skirmishes here and in the adjacent valleys during the Civil War, and gravesites of those who lost their lives are still visible.

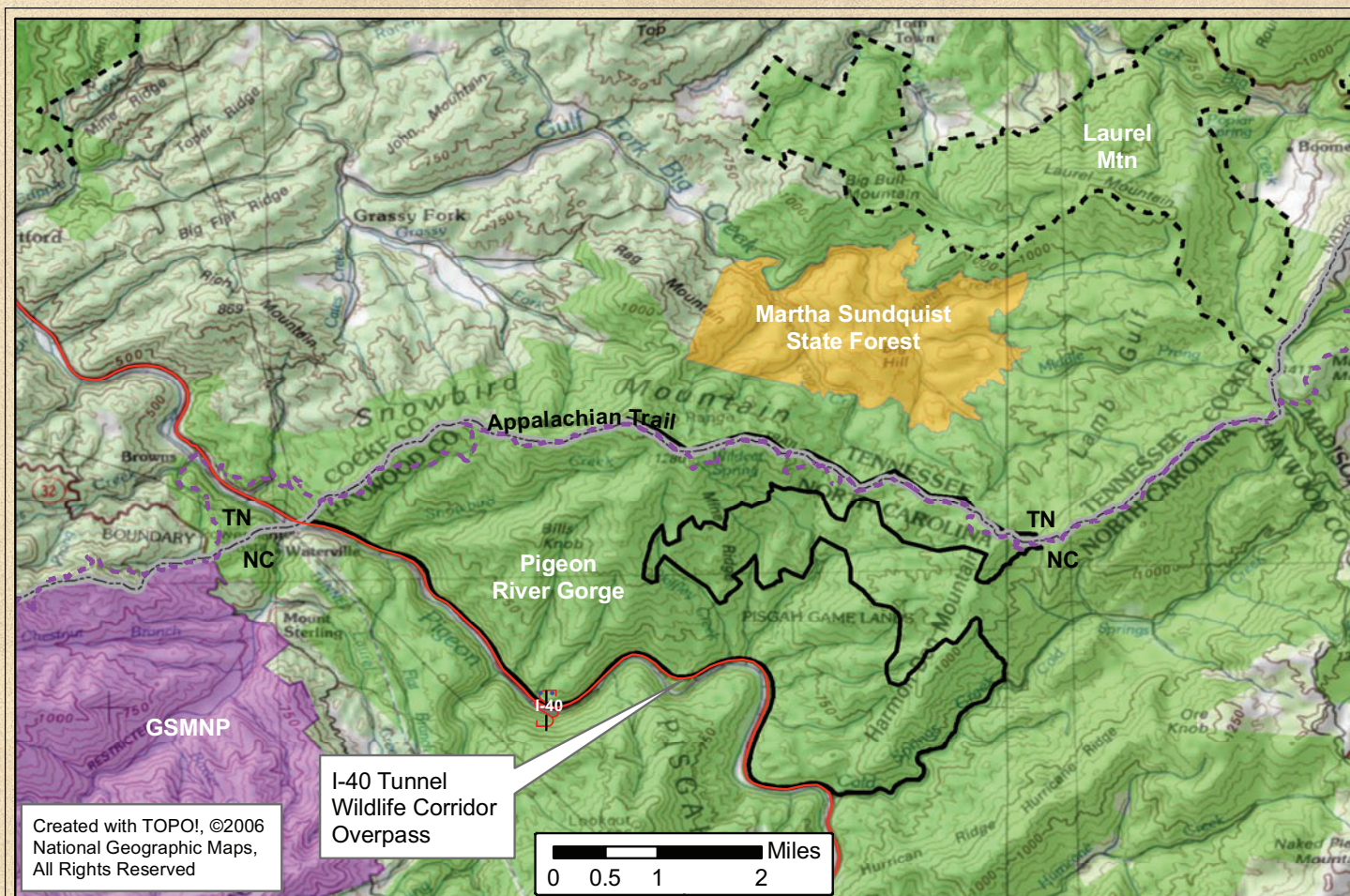
Rock outcrops give expansive views, particularly near Camp Creek Bald and at Big Butt. The hemlock boulderfield between Whiterock and Baxter Cliffs, though declining due to hemlock wooly adelgid, is one of the most spectacular in the region; peregrine falcons nest on the cliffs above.

The Appalachian Trail (AT) follows the ridge crest for over 15 miles, with three shelters along the route. Several side trails provide access to the AT from both North Carolina and Tennessee. One of the most unusual is the trail from Green Ridge Knob down Dry Creek. The eponymous Dry Creek runs underground for long distances.



A buffalo trail crossed the gap between Snake and Rich Mountains north of Boone, NC. Gaps were very important in the development of trails and roads in the Native landscape and early settlement patterns of Europeans.

photo by Lamar Marshall



Pigeon River Gorge

Approximate Size: 7,309 acres

Old Growth Acreage: 991 acres

Location: Haywood County, North Carolina, 20 miles northwest of Canton; Pisgah National Forest, French Broad Ranger District

USGS Topographic Maps: Waterville, Lemon Gap, Cove Creek Gap

This area is the first one a hiker enters after leaving the Smokies, heading north on the Appalachian Trail (AT). The northern boundary is the North Carolina-Tennessee state line, and the AT follows the boundary here. Immediately to the north is the recently acquired Gulf tract, which has potential for addition to this area.

The major creek draining the area is Groundhog Creek, which usually carries a large volume of water.

The southern boundary of the area is I-40, which runs at the bottom of the Pigeon River Gorge. The topography from the ridge down to the river is exceptionally steep. Thanks to this natural protective feature, the lower slopes host a large amount of old growth forest.

There is an AT shelter in this tract. A scenic trail runs south from the shelter along Groundhog Creek, then bears east on an old logging railroad grade to Rube Rock Branch. After

crossing that branch, the trail turns north to rejoin the AT. There is a trailhead on I-40, and this makes a good day-hike loop trip.

Bluff Mountain

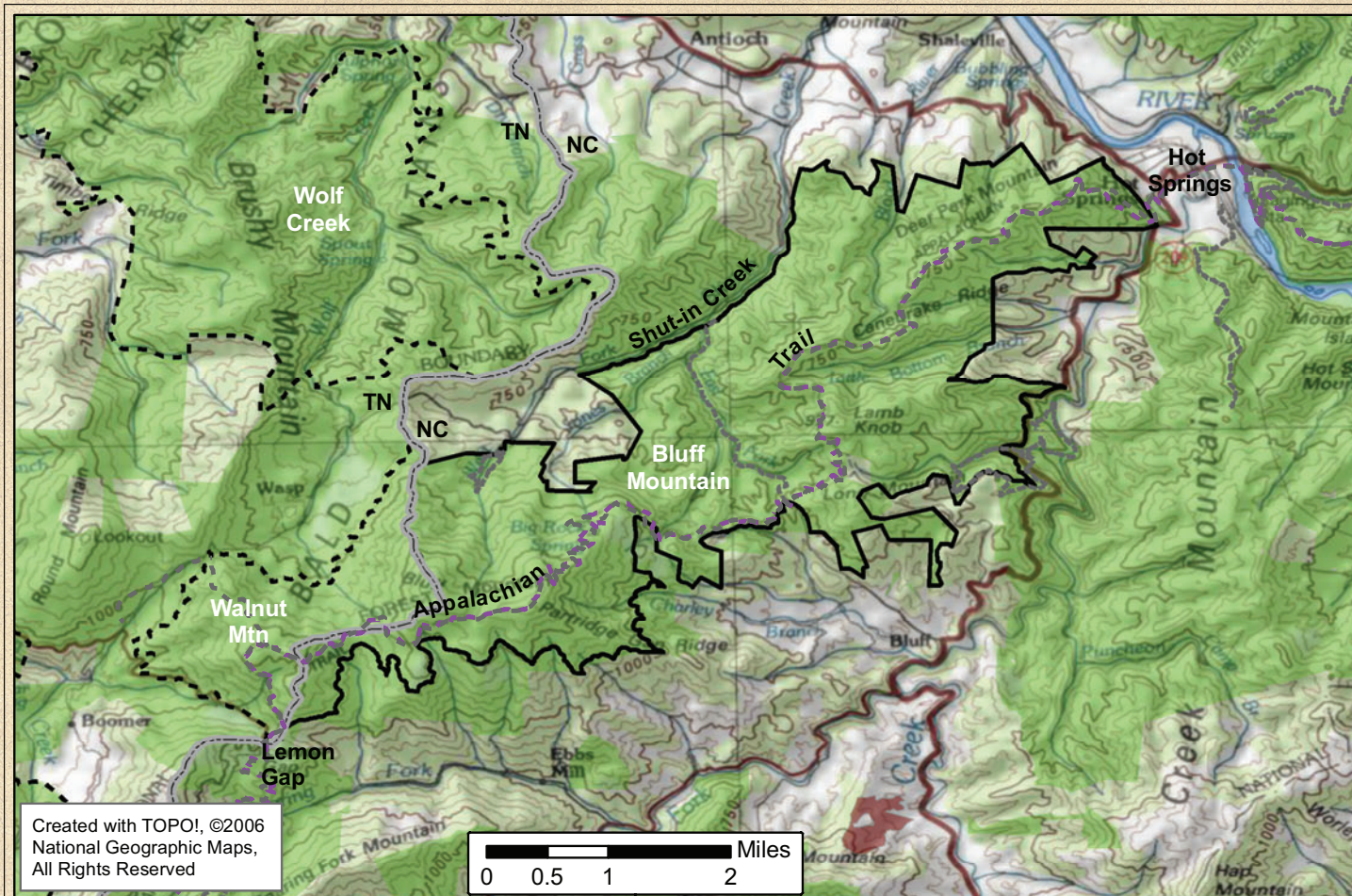
Approximate size: 5,862 acres

Old Growth Acreage: 68 acres

Location: Madison county, North Carolina, extending five miles southwest from Hot Springs; Pisgah National Forest, Appalachian Ranger District; and Coker County, Tennessee. **USGS Topographic Maps:** Lemon Gap, Spring Creek, Paint Rock, Hot Springs

Bluff Mountain lies along the state line between North Carolina and Tennessee and is a prominent landmark for both Madison County, North Carolina and Coker County, Tennessee. The Appalachian Trail (AT) works its way across the top of Bluff Mountain and descends the mountain into Hot Springs. AT hikers know Bluff Mountain well and refer to it as the "Gardens of Bluff" for its profusion of wildflowers.

The Mountain Treasure area includes most of the mountain in North Carolina. The smaller Walnut Mountain, an adjacent Tennessee Mountain Treasure, includes portions of the western flank of the mountain. There are no roads to the top of Bluff Mountain, and the area never experienced indus-



trial logging so the mountain remains remote and a haven for wildlife. Secluded coves on all sides of the mountain provide rich plant and wildlife habitat.

The mountain features striking rock outcrops, clear pristine streams, and waterfalls that add interesting highlights to the area. Bluff Mountain is very popular with hikers, nature enthusiasts, and hunters.

The area hosts rare species, notably excellent populations of Largeleaf Waterleaf. North Carolina recognizes a Natural Heritage area near Big Rock Springs. Steep slopes and cliff environments on the eastern side of the Mountain Treasure area could support rare plants dependent on this habitat. A verified old-growth site and at least four candidate old-growth sites are within the area. A Forest Service large old-growth patch covers much of the northern sections of the area, and small old growth patches are dispersed throughout the Big Rock Springs area.

The area is rich in trail access with the AT winding from southwest to northeast across the long dimension of the area. Other trails intersect the AT from both directions providing opportunities for shorter hikes.

A large timber sale was proposed in the area in the mid 1990s. The proposal sparked the formation of a broad coalition of groups and individuals who opposed this project under the "Don't Cut Bluff" campaign. As a result of this effort, including a petition, wide press coverage and considerable citizen involvement, the Forest Service drastically revised the

timber sale. In the end, it targeted only 10 acres in the pristine portion of the mountain and the scope of the logging was designed to benefit wildlife and recreation, with a parking area and trailhead to provide better trail access in the Shut-In portion of the area.

The anti-logging campaign also gave rise to what has become an annual event, the Bluff Mountain Music Festival.



Red elder is an uncommon high elevation shrub that grows along the Appalachians. *hoto by Lamar Marshall*



Ethno-habitats

“An ethno-habitat can be defined as the set of cultural, religious, nutritional, educational, psychological and other services provided by intact, functioning ecosystems and landscapes.

An ethno-habitat refers to the cultural survival of a people within its traditional homeland. A healthy ethno-habitat is one that supports its natural plant and animal communities and sustains the biophysical and spiritual health of its native peoples through time...

These lands encompass traditional Indian homelands, places, habitats, resources, ancestral remains, cultural symbols, and cultural heritage. The presence of and access for traditional use to healthy habitats is fundamental to useable and harvestable levels of resources significant to Indian peoples as well as to healthy ecosystems.”

Stuart G. Harris of the Confederated Tribes of the Umatilla Indian Reservation

Cherokee Heritage --

The Cherokee Indians lived in a virtual paradise along the river valleys. Rich flood plains and abundant bear, deer and turkey allowed them to grow, hunt and gather all the food they needed. The early Europeans called the region the "Cherokee Mountains."

The Little Tennessee River watershed was laced with Cherokee trails, most of which closely followed the river and its dozens of tributaries. Numerous fish weirs are yet found in riverbeds and serve as landmarks where fish harvesting and processing camps were located. About nineteen Cherokee towns or settlements were located between the headwaters of the Little Tennessee River near Rabun Gap, GA, to its junction with the Tuckasegee River. This area lies between the Nantahala and Cowee Mountains, the sources of pristine waters. Some of the more important towns were located near Dillard, GA, and near Otto, Franklin, Iotla and Cowee Community in North Carolina. Twenty-eight Cherokee Citizen Reservations were located on the Little Tennessee and tributaries. Names like Yellow Bear, Trout, Little Deer, Whipporwill, and Six Killer were among those who took reserves in 1819.

Sadly, European American settlers forced most of the Cherokees from their lands cession by cession. A remnant of the Eastern Cherokees remained in western North Carolina.



Your Natural and Cultural Heritage

Cultural heritage could be defined as one's inherent right to enjoy and carry on the cultural traditions of their ancestors. This could be defined in terms of "place and/or practice." It is impossible to separate our "natural heritage" from our "cultural heritage" as our ancestors' lifestyles were deeply rooted into the landscape.

Traditional practices that survived for long periods of time without negative impacts to the environment depended on sustainable, perpetual ecosystems whose carrying capacities were not exceeded. The depletion of natural resources and the impairment of natural processes can adversely impact our opportunities to continue cultural traditions. Examples are the overharvesting of fisheries, the loss of wildlife habitat by sprawl, or the polluting of waterways by industrial waste.

An example of cultural ecosystem change is loss of millions of acres of river canebrakes that were important sources of home furnishings and tools for basketry, fishing, and hunting. Rivercane was highly prized by early settlers as food for their cattle and hogs which they "free ranged."

Our public lands and waterways were once known as public "commons." Dating back to the days of ancient England, it was recognized that some elements of the natural world belonged to all people and not a privileged few. The air, the water, and wild game and fish could not be owned by individuals or corporations. The "right of access" became a central inherited tradition and right that belongs to all people.

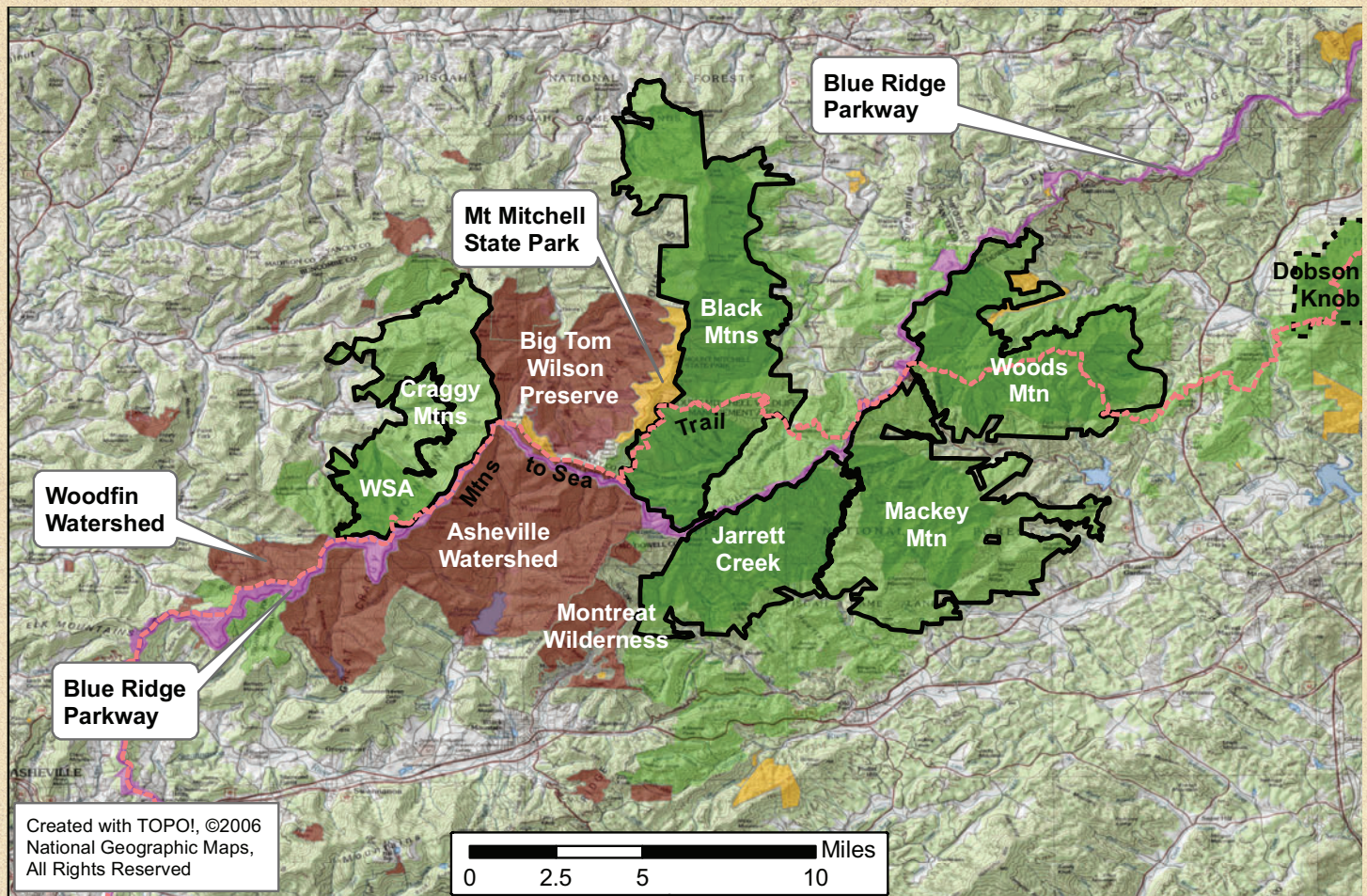
Today, environmental and conservation issues center around our traditional rights to enjoy access to our public lands including public waterways and seashores. These rights must not be diminished by degradation or pollution.

The tradition of wilderness is as old as the world. Only by the protections that come with designated Wilderness can we preserve the last great, wild places of the earth for the future of a very populous planet.



These sketches by wilderness hiker and artist Janice Barrett were drawn to illustrate the life of a Native American called Lojah.

Black Mountains Conservation Area



Black Mountains Conservation Area

Craggy Mountains (Big Ivy)
Black Mountains
Jarrett Creek
Mackey Mountain

Even in the Southern Appalachians, generally regarded as the nation's most biologically significant region, the Black Mountains Conservation Area of western North Carolina stands out as exceptional.

As we define the conservation area, it includes the Black

Mountains themselves, the Craggy Mountains and mountains on the edge of the Blue Ridge Escarpment. The conservation area combines a wealth of unfragmented roadless areas, high peaks and a multitude of clear, pure streams that drain its intersecting ridges. These factors combine to provide a splendid array of habitat types that support black bears and neotropical birds and such a diverse assortment of other plants and animals that the Black Mountain Conservation Area is essentially one big biological hotspot.

High mountain ridges dominate the Black Mountains, making the range the highest east of the Rockies. Mt. Mitchell is the highest peak in the Black Mountains at 6,684 feet, and is

also the highest in the East. Indeed, six Black Mountain peaks rank among the 10 highest peaks east of the Mississippi River. This elevation gives the region a variety of habitats very similar to some that occur hundreds of miles north in Canada.

Its aquatic resources are equally remarkable. The Catawba River rises in the Black Mountains before flowing out onto the Piedmont. The South Toe Critical Aquatic Refuge and the headwaters of the Nolichucky River Aquatic Diversity Area are in the Black Mountains.

Unfortunately, very little of the Black Mountain Conservation Area enjoys permanent protection. Mt. Mitchell anchors a state park of around 2,500 acres and Blue Ridge Parkway lands total another 6,631 acres. But both of these are managed for the twin purposes of habitat protection and recreation, not for natural qualities and wildland values. Only within the 1,300 acres of two Forest Service research natural areas does this sort of permanent protection exist on this part of the Pisgah National Forest.

Much qualifies for such protection. Deserving but unprotected wild areas include five Mountain Treasures areas: the Craggy Mountains, 13,000 acres; the Black Mountains, 14,000 acres; Jarrett Creek, 10,000 acres; Mackey Mountain, 14,000 acres; and, Woods Mountain, 11,000 acres. There is a smaller inventoried roadless area within each of the five and the Craggy Mountains unit includes a wilderness study area. The Forest Service has recommended that study area be designated wilderness but Congress has yet to do so.

Conservation easements brighten the picture somewhat. The Asheville watershed, owned by the city of Asheville, extends across 21,000 acres, 17,000 acres of which are covered by a conservation easement. That safeguards water quality, certainly, but also operates to safeguard wildlife habitat and to provide connectivity with adjacent conservation lands.

Insect infestation and acid rain have taken their toll in the region, especially on the spruce and fir stands at higher elevations (which appear black from a distance and give the mountains their name). Still, the conservation area's old growth resources are impressive. The Southern Appalachian Forest Coalition has identified 19,712 acres of old-growth, much of it

in large tracts, several of which exceed 1,000 acres. This ranks the Black Mountains Conservation Area as one of the most significant old-growth reserves in the Southern Appalachians.

The Black Mountains are rooted in both history and prehistory. The Cherokee may have settled the area as long ago as 10,000 years. Some present area residents can trace their lines in this place back many generations. Many continue to use the landscape as their ancestors did, hunting, fishing, and gathering herbs and other plants.



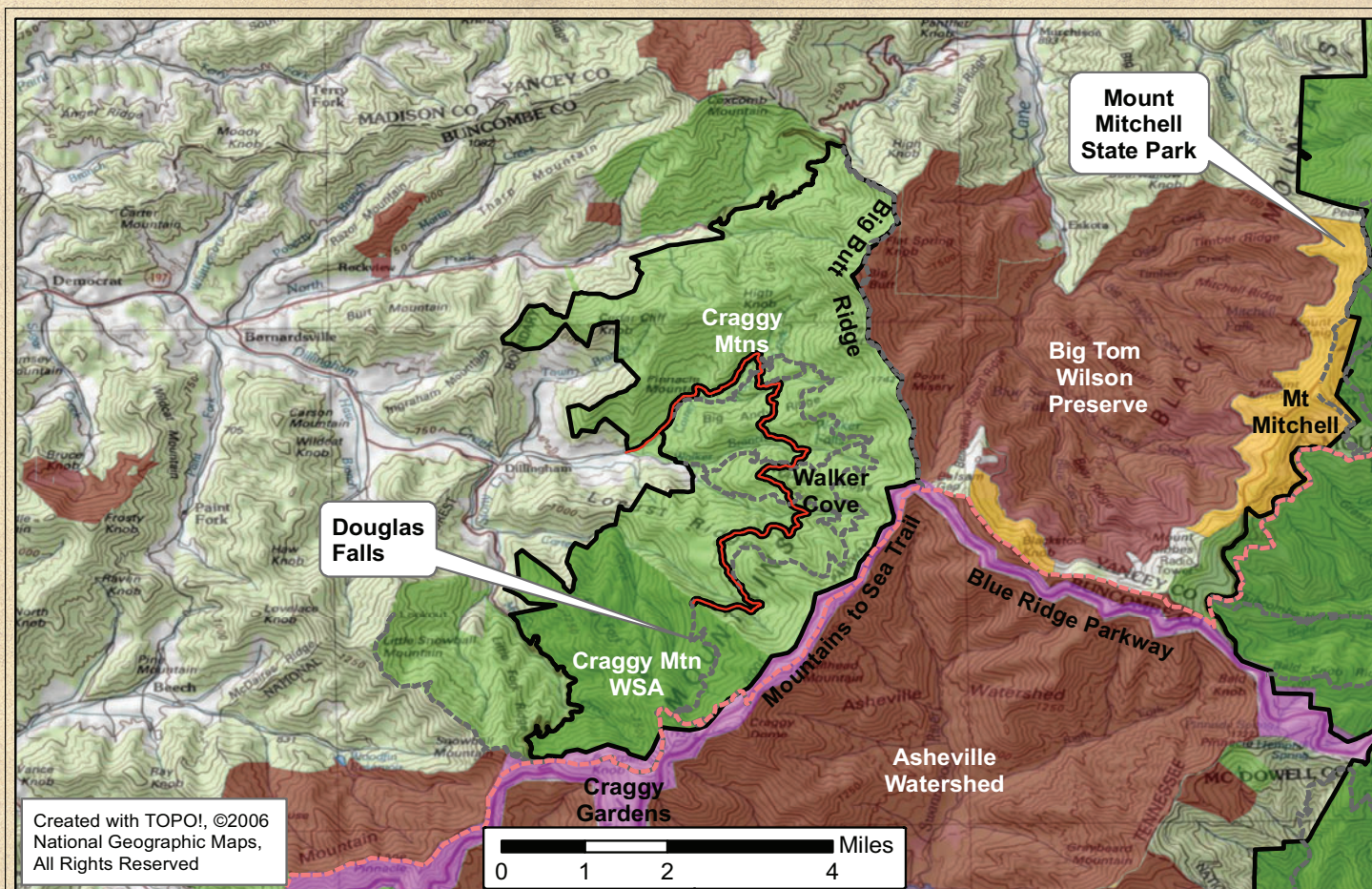
High elevation spruce-fir forest

photo by Lamar Marshall



Appalachian Wilderness Sunset

photo by Lamar Marshall



Craggy Mountains (Big Ivy)

Approximate size: 10,616 acres

Roadless acreage: 2,659 acres

Old growth acreage: 3,691 acres

Location: Buncombe County, NC, 12 miles southwest of Burnsville; Appalachian Ranger District, Pisgah National Forest
USGS Topographic Maps: Mt. Mitchell, Barnardsville, Montreat, Craggy Pinnacle

The Craggy Mountains form the western edge of the larger Black Mountains Conservation Area, extending from the high elevations of the Blue Ridge Parkway at 6,000 feet down to lower elevation rich coves at 3,000 feet.

The area, also known as Big Ivy, which takes its name from the river with headwaters in the area, is extremely important for its biological diversity and scenic and recreational values. It includes the Craggy Mountain Wilderness Study Area, Big Butt Ridge and much of the land in between, including the Walker Cove Natural Area. Although an isolated section of national forest land, it is well connected to the rest of the Black Mountains through protected conservation lands, the Asheville Watershed and the Big Tom Wilson Preserve.

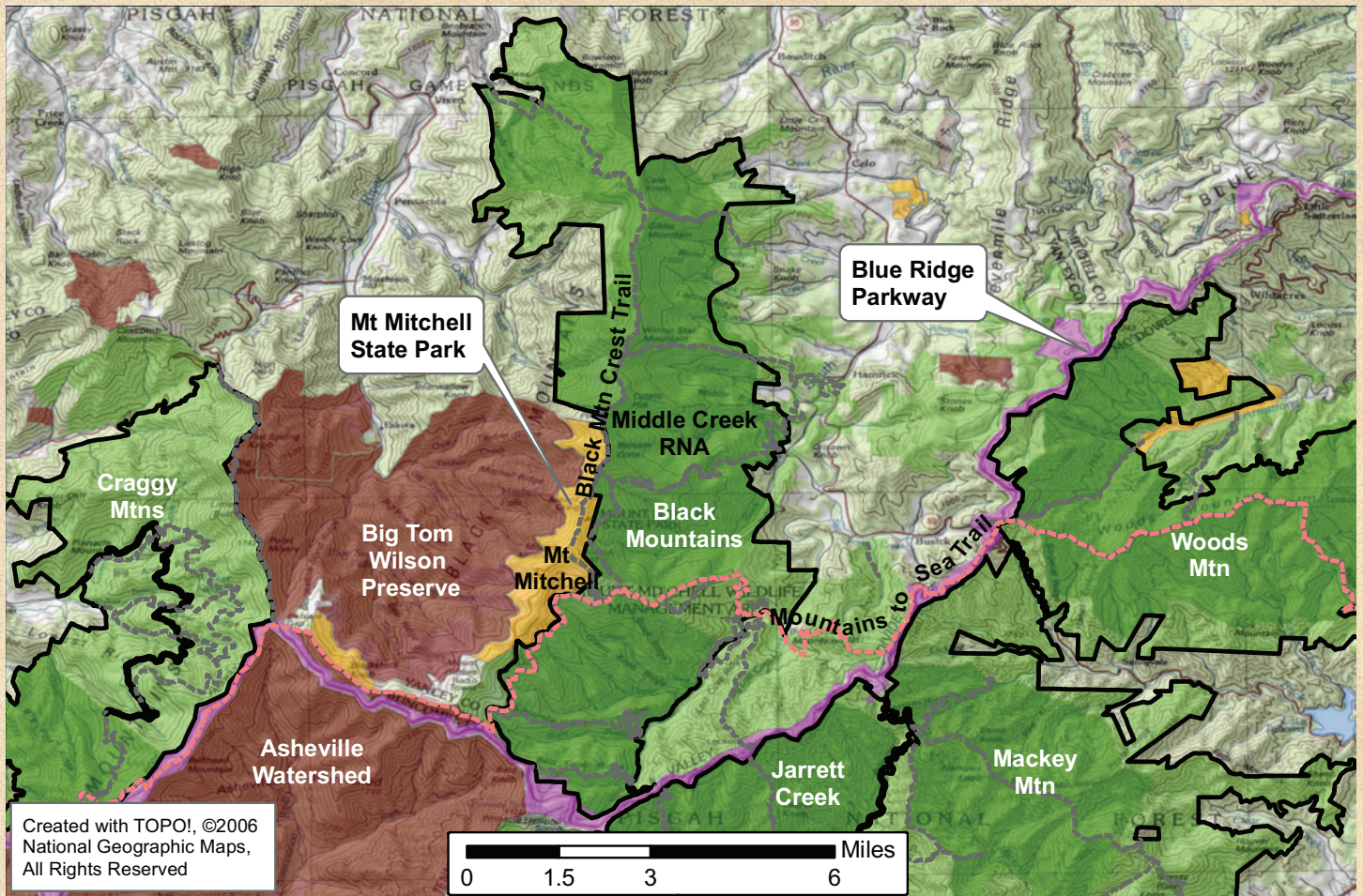
The Craggy Mountains are home to numerous rare species and extensive old growth. The North Carolina Natural Heritage Program (NCNHP) recognizes several Natural Heritage Areas containing significant biological habitat within this

Mountain Treasure. A botanist working with the NCNHP documented 40 locations of 32 rare plant species. A large designated Forest Service old growth patch stands within this area, and there are four verified sites containing 2,857 acres of old growth forest. Most of the old growth sites overlap with areas of significant biological habitat. There remains virgin forest in the Craggy Mountain area: researchers found a 300-year-old sugar maple in an area called Walker Cove and there are very ancient trees on Big Butt Ridge. The combination of extensive old-growth forests, high elevation peaks and the rich soils derived from magnesium-rich mafic rock make the Craggy Mountains an incomparable natural area.

Some of the world's best examples of Rich Cove Forest, Hemlock Forest, Northern Hardwoods Forest, High Elevation Red Oak Forest, Montane Mafic Cliff, Montane Cedar-Hardwood Woodland, and High Elevation Rocky Summit Natural Communities are found in the Craggies. Robust black bear, brook trout, and songbird populations correspond with the fecundity of the vegetation. Hiking in the Craggies brings one into contact with a natural world so diverse and wonderful that one cannot help be awed by the world we inhabit.

Congress designated the 2,380-acre Craggy Mountain Wilderness Study Area in 1984 and the Forest Service recommended it for wilderness designation in 1987. Legislation to designate the area passed the U.S. House of Representatives in 1990, but did not clear the Senate.

The area contains spectacular trails including those lead-



ing from the popular Craggy Gardens Visitor Center through virgin stands of hemlock and oak to the lovely Douglas Falls and Carter Falls. Although the Craggy Mountain Wilderness Study Area itself is protected, most of the rest of the area is open to logging and road building.

Black Mountains

Approximate size: 17,906 acres

Roadless acreage: 14,779 acres (10,663-Balsam Cone; 4,116-Bearwallow)

Old growth acreage: 3,063 acres

Location: Yancey County, NC, 10 miles southeast of Burnsville; Appalachian Ranger District, Pisgah National Forest
USGS Topographic Maps: Mt. Mitchell, Celo, Montreat, Old Fort

The Black Mountains area is one of the premier wild expanses in North Carolina. Forming the eastern flank of Mt. Mitchell and the Black Mountains Range, the area is considered part of the Black Mountains Conservation Area, which includes several roadless areas, Mountain Treasure areas and other public lands. The nearby Asheville Watershed and the Cane River Hunt Club lands add to the wildness of the surrounding area.

Within the area are 14,779 acres inventoried as roadless. The area is adjacent to Mount Mitchell State Park which

includes another 630 acres of inventoried roadless area. The Black Mountains have long been considered a prime candidate for protection. A measure of their beauty and richness is the fact that they were part of a larger area proposed for national park status in the early 1970s. But because of political obstacles and local community concerns, mostly based on misinformation, the area has remained largely unprotected. Fortunately, much of it is classified as unsuitable for timber management. The Black Mountain (Middle Creek) Research Natural Area protects 1,711 acres in two tracts.

Part of the South Toe River basin, the area has unique high-elevation communities including virgin spruce-fir forest at upper elevations. The State of North Carolina has identified three Natural Heritage areas within the Black Mountains area. Numerous rare species occur, including disjunct species typically found hundreds of miles further north. These species include mountain paper birch, the Appalachian cottontail (once called the New England cottontail, the species has been reclassified in the Southern Appalachians), and arctic bentgrass, all very unusual in this portion of the Southern Appalachians. UNESCO recently designated the adjacent Mount Mitchell State Park, which has similar rare species and communities, a biosphere reserve to recognize and protect these unique values.

The Black Mountain range is the highest and one of the most impressive--perhaps even unique--mountain massifs in the Eastern United States. Mt. Mitchell is the highest point in



View from Mount Mitchell looking northeast along the Blacks

photo by Lamar Marshall

the U.S. east of the Mississippi River at 6,684 feet above sea level. Seven main peaks (16 if you count subpeaks) are over 6,000 feet in elevation along the Black Mountain Ridge, and the ridge drops below 5,800 feet only once along its 12-mile length. The challenging Black Mountain Crest Trail traversing the crest of this ridge is the highest trail in the entire Appalachian Mountains.



Above: Elk roamed the Appalachian Mountains and were extirpated by over-hunting and loss of habitat.

Right: Goldenseal, known as the "Queen of Herbs," was revered by the Cherokees and white settlers. It is scarce and grows in deep, moist mountain soils.

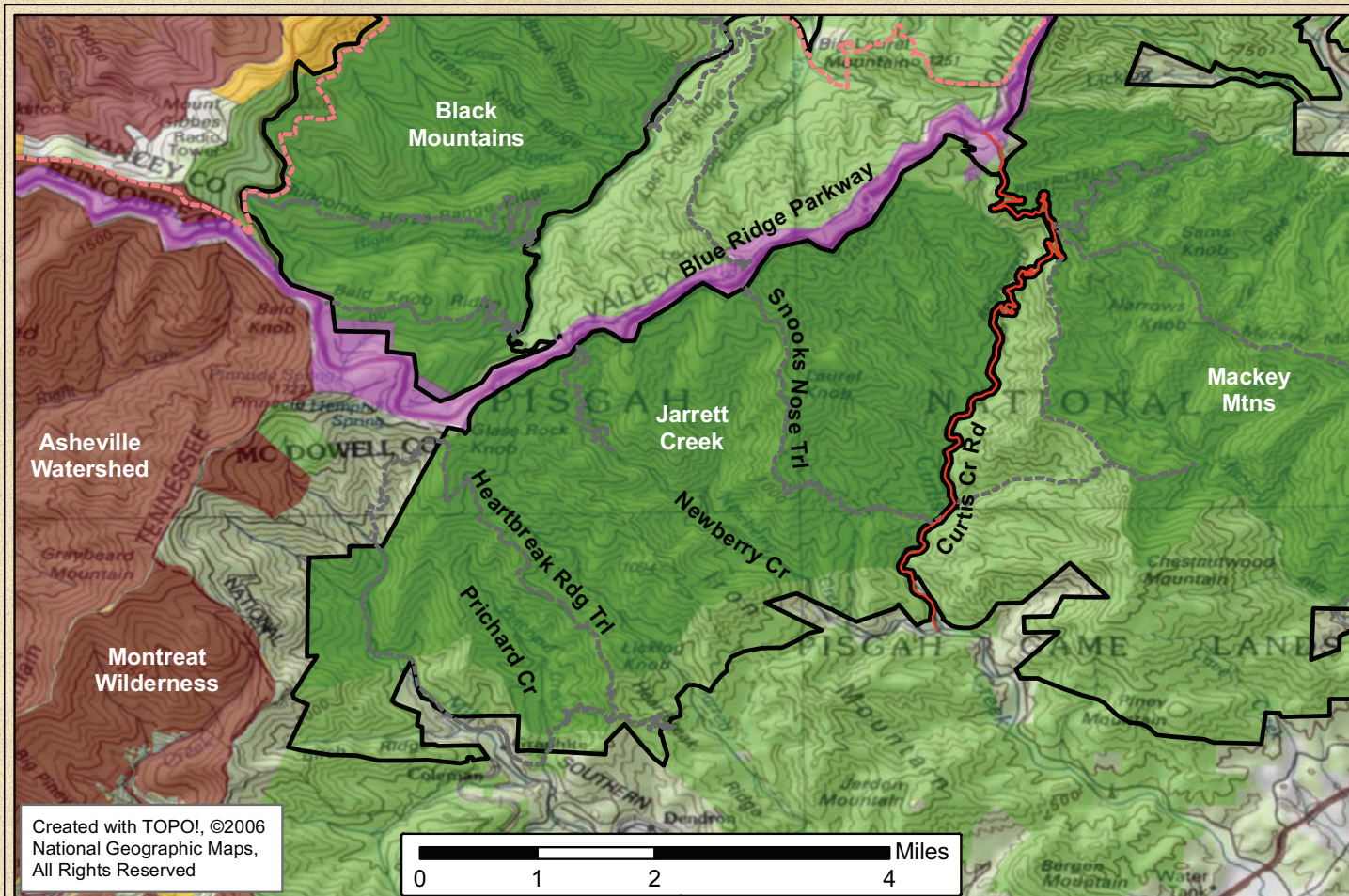
photo by Lamar Marshall



Fraser fir

photo by Lamar Marshall





Jarrett Creek

Approximate size: 8,975 acres

Roadless acreage: 7,500 acres

Old growth acreage: 4,180 acres

Location: McDowell County, NC, 5 miles northeast of Montreat; Grandfather Ranger District, Pisgah National Forest,

USGS Topographic Maps: Old Fort, Montreat

The beauty of Jarrett Creek places it in the top 10 of all creeks on the Pisgah/Nantahala National Forest. The entire watershed is protected. In times of high water a hiker may have some difficulty crossing, but usually a little exploring will turn up a fallen tree to bridge the stream.

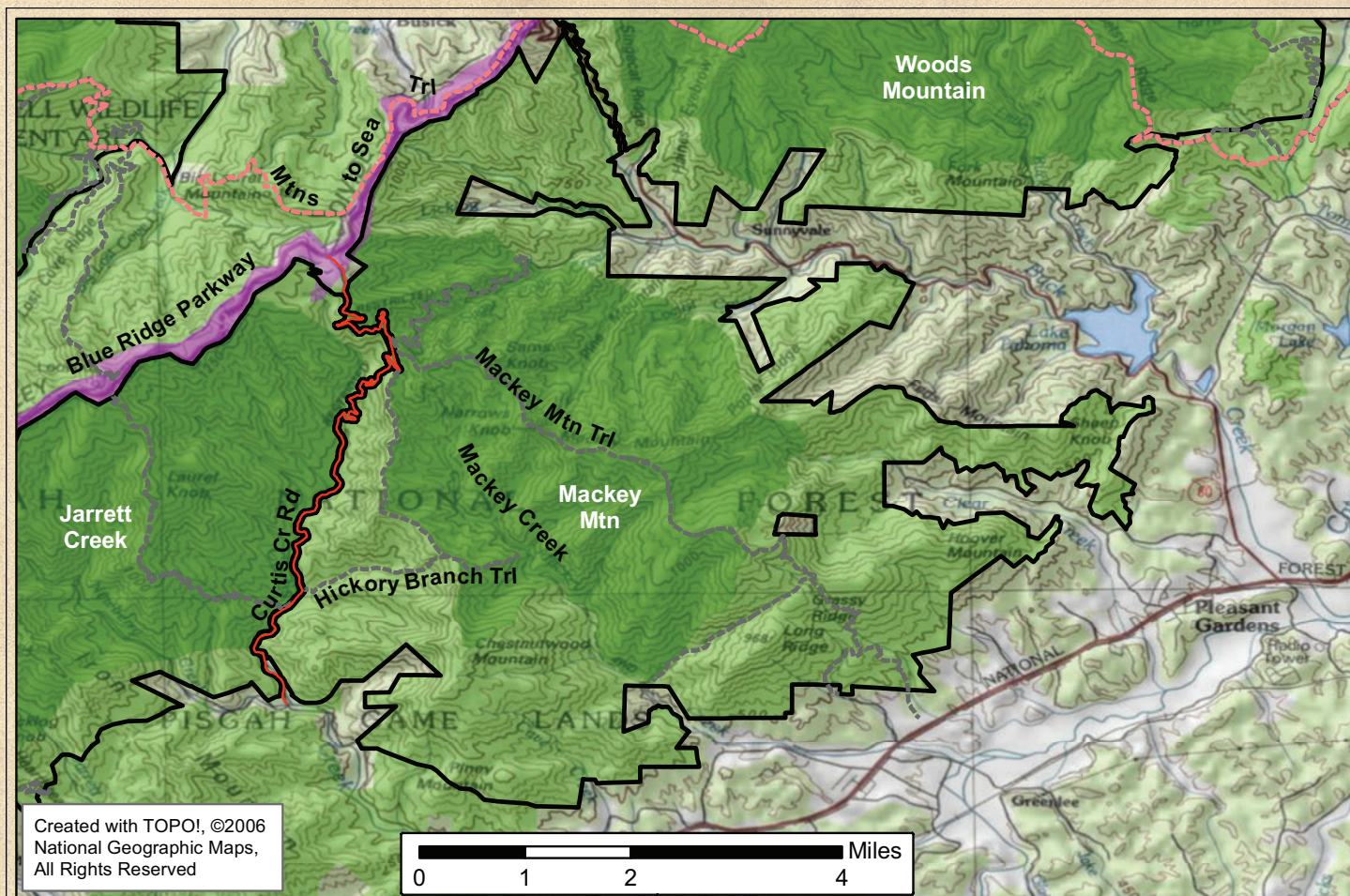
In the remote and steeper northeastern part of this area, the creeks are much more difficult to reach, and course down over low falls and cascades. Many of the high coves have old-growth stands of timber, bypassed because of the steep topography. In fact, the largest known tree on Pisgah National Forest, a yellow poplar 18 feet around and 122 feet tall, grows on an unnamed stream on the slopes of Laurel Knob. Other important biological resources include Carolina Hemlock Bluffs, extensive Table Mountain pine stands, and high quality cove forests.

Trails once crisscrossed the area. They followed gentle gradients and opened the area to full exploration. Regrettably,

the Forest Service has abandoned most of them. This is an ideal place for volunteer maintenance crews to restore the old trails. The usual route into Jarrett Creek is by a trail that leads east from the Heartbreak Ridge Trail. After crossing a timber harvest road it deteriorates badly. Beyond Jarrett Creek, this now-unmaintained trail leads up a beautiful hollow to Star Gap, and from there down to Newberry Creek.

The most-used trail here is the Heartbreak Ridge Trail which follows a long ridge from the Blue Ridge Parkway to a turn onto 21 switchbacks that lead down to Pritchard Creek and out to a road on Mill Creek. The steepest trail is that up Snooks Nose, which leads from the Curtis Creek Campground to the Blue Ridge Parkway and across to the fire tower on Green Knob. Another abandoned trail leads from upper Newberry Creek through ancient forest to the Parkway.





Mackey Mountain

Approximate size: 15,095 acres

Roadless acreage: 5,934 acres

Old growth acreage: 5,476 acres

Location: McDowell County, NC, 15 miles west of Marion;
Grandfather Ranger District, Pisgah National Forest,
USGS Topographic Maps: Old Fort, Marion West

Mackey Mountain and the valley of Mackey Creek contains the largest unbroken tract of old-growth forest on the Pisgah National Forest. This forest is difficult to visit because there is no trail down the central part of the upper valley. Many of the ridges hold fragments of old-growth hardwood forest and some of these are accessible by trail. There are two stands of Carolina hemlock here, one of which is a North Carolina Natural Heritage site. The Clear Creek drainage provides water for the town of Marion and also grows some of the largest trees on Mackey Mountain. Most of the old-growth is in dry, non-productive forest types that were not attractive, nor accessible, to loggers. Additionally, the 1912 purchase date of the Burke-McDowell Tract, the first parcel of national forest in the Eastern U.S., saved thousands of acres of old-growth here and in the nearby Jarrett Creek area.

A major portion of the area is protected bear habitat. It sustains a large population of black bear and hikers often see

well-worn bear trails and trees marked by clawing.

An extensive system of trails once existed in the area, but about half of the trails have been abandoned. The loss of major lateral connectors makes longer loops impractical. Hikers can only cross the private property on the south and east where there is public access.

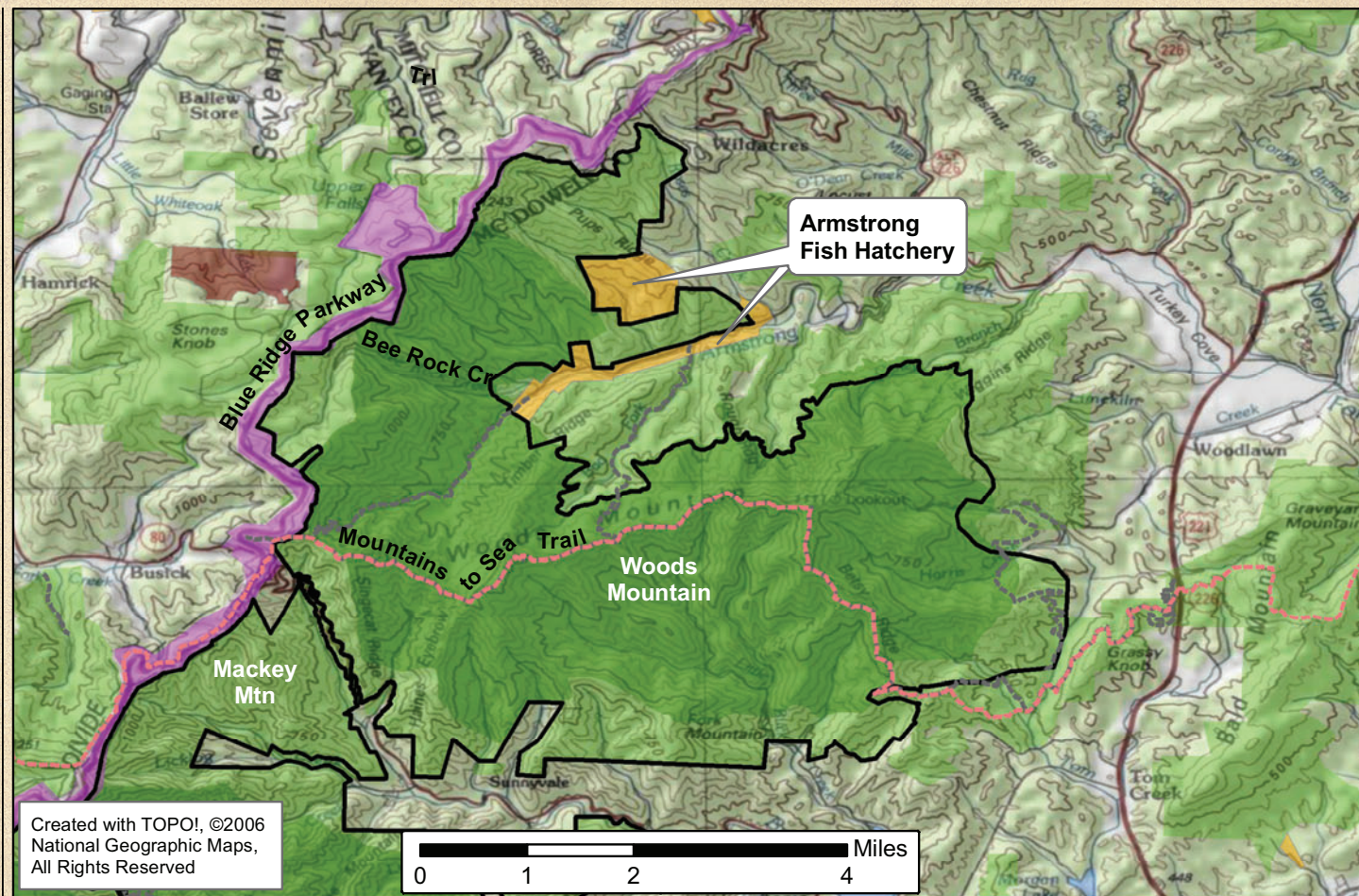
The Mackey Mountain area lies immediately adjacent to the Curtis Creek Campground. The Hickory Branch Trail leads out of the campground up to the ridge overlooking the Mackey Creek valley. From that ridge a trail leads down to the creek, and a side trail leads to the top of Chestnutwood Mountain. Another main trail leads along the ridge defining the east side of the Mackey Creek drainage.

The Southern Appalachian Forest Coalition has published an excellent trail guide to Mackey Mountain.



American chestnut

photo by Lamar Marshall



Woods Mountain

Approximate size: 12,676 acres

Roadless acreage: 9,606 acres

Old growth acreage: 1,726 acres

Location: McDowell County, NC, 10 miles northwest of Marion; Grandfather Ranger District, Pisgah National Forest

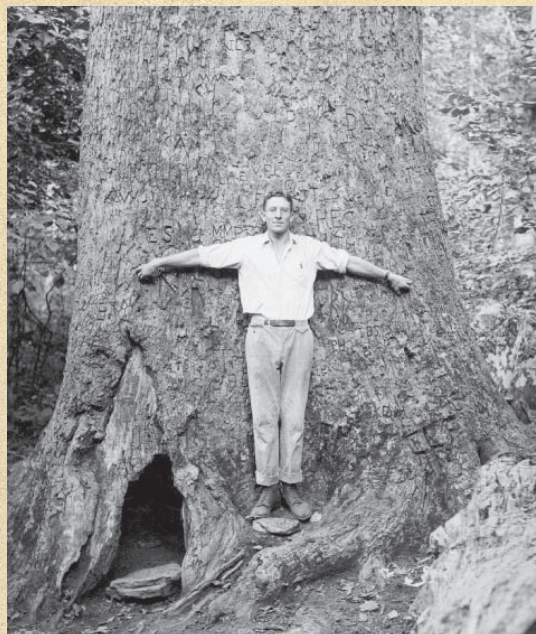
USGS Topographic Maps: Celo, Little Switzerland, Marion West, Old Fort

This is a major roadless area, giving protection to a long segment of the Blue Ridge Parkway and its viewshed. Many of the steep, narrow valleys contain old-growth forest. The high percentage of untouched forest makes hikes here a pleasant experience. The rare turkey beard and the unusual chinquapin are common in the area. Woods Mountain has the only population of mountain golden heather outside of Linville Gorge. This species is islanded on treeless, rocky summits that are maintained by fire. Other areas of botanical interest include the rich cove forests at Bee Rock Creek and "Nettle Patch."

The main trail through the area is a segment of the North Carolina Mountains-to-Sea Trail. It follows a high ridge to a point near the top of Woods Mountain itself, from which there is a side trail to an old tower site. The trail then descends to a crossing of U.S. 221 near the Woodlawn Work Center.

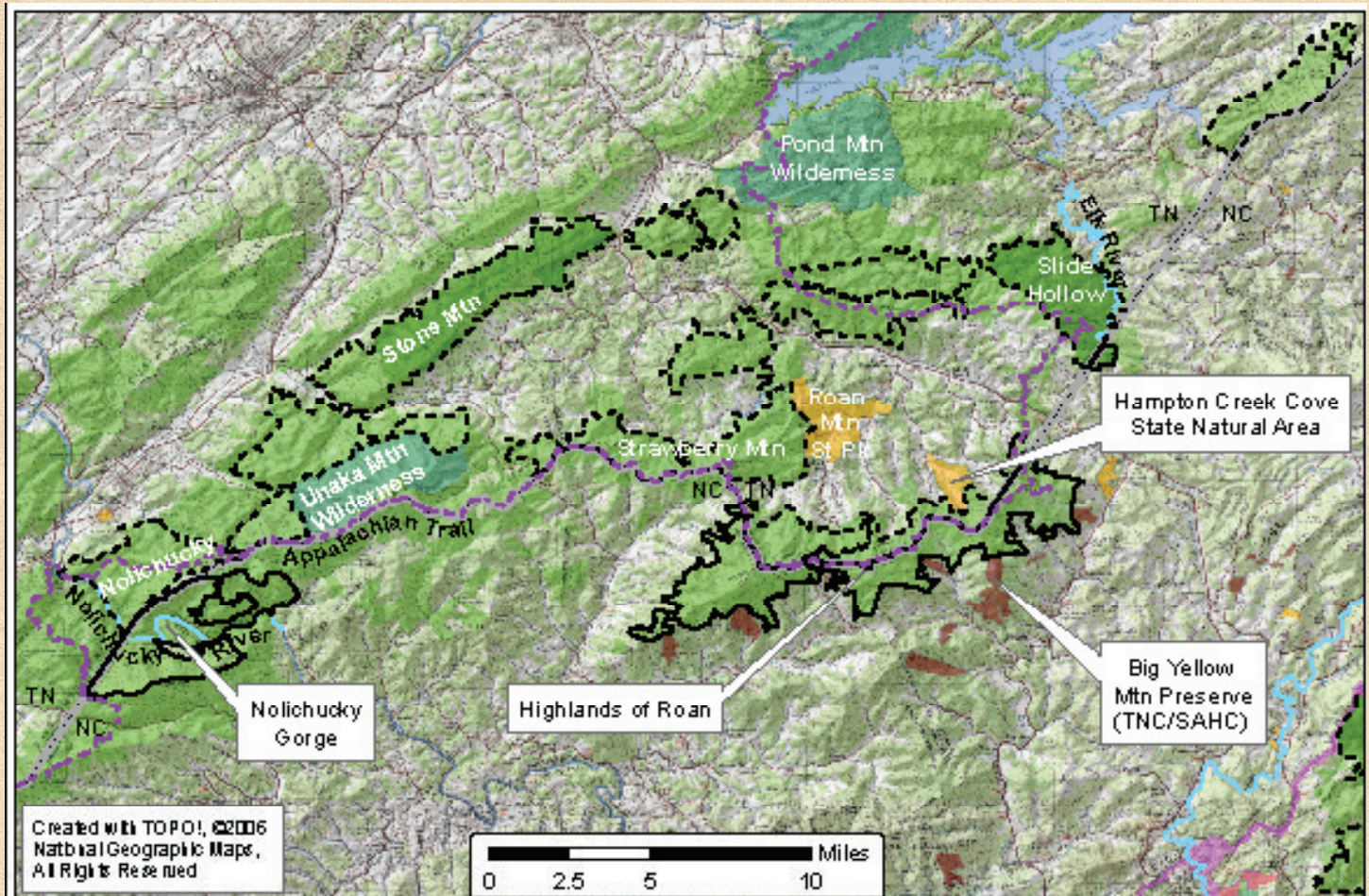
As in so many other areas, the Forest Service has aban-

doned a large percentage of the trails here. Hikers have lost the Armstrong Creek Trail and a return trail to the ridge, the Singecat Creek Trail. Neglect has claimed many other significant trails. Woods Mountain provides high quality black bear habitat and is prized by local hunters.



Numerous historical accounts describe the great trees of the Southern Appalachians. This is a tulip poplar on Reems Creek from the early twentieth century.

Highlands of Roan/Unaka Mountains Conservation Area



Highlands of Roan/Unaka Mountains Conservation Area

Nolichucky Gorge Highlands of Roan

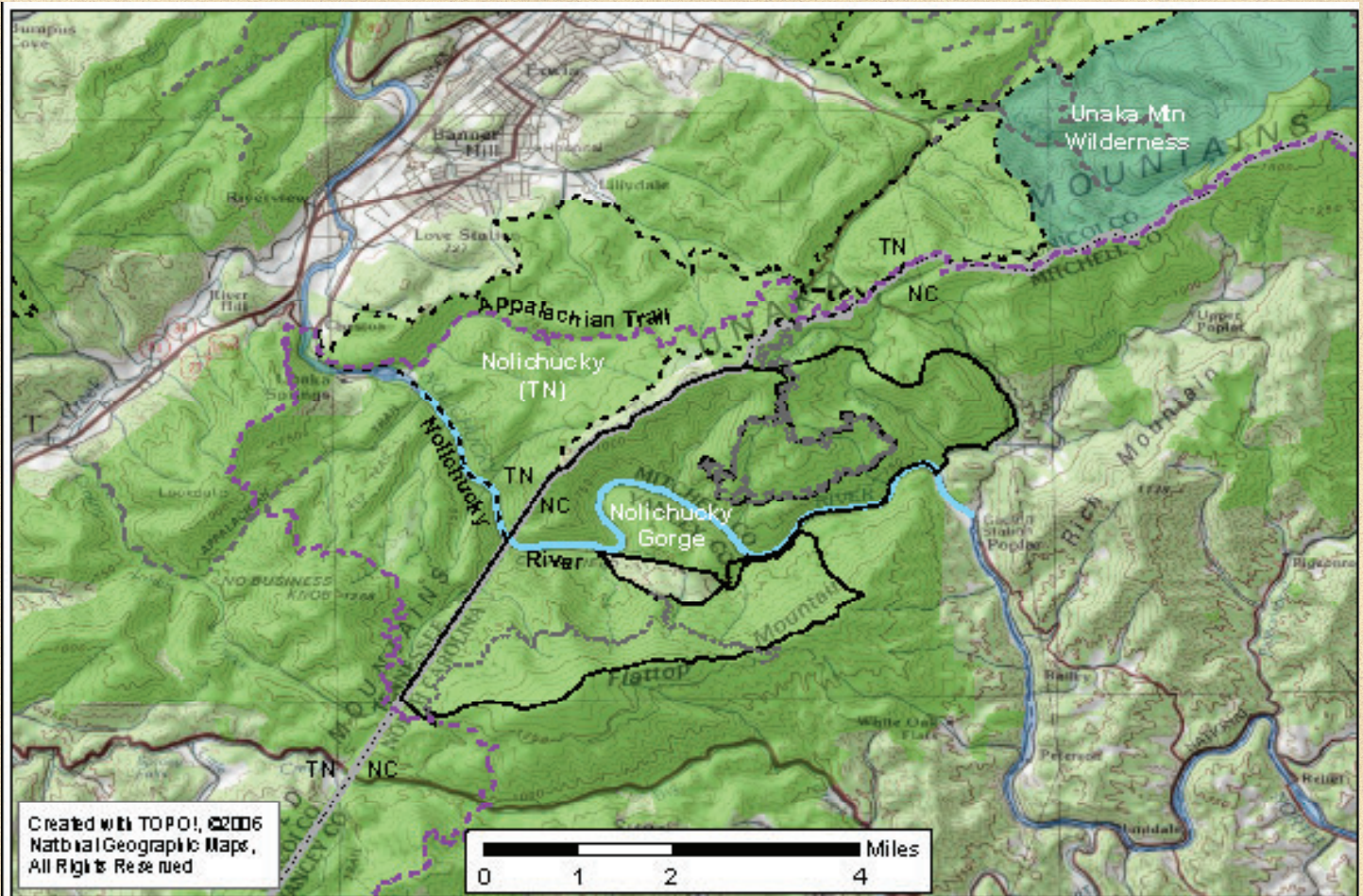
Like so many other special places in the Southern Appalachians, the Highlands of Roan/Unaka Mountains Conservation Area is astonishingly rich in biological values, partly because it is so varied in its geology and topography. And it offers a wealth of recreational opportunities, from the simple enjoyment of its spectacular scenery to white water sports and hiking. The Appalachian Trail enters the

Tennessee side of the Nolichucky and travels the length of this conservation area, traversing the main ridge of the Highlands of Roan and providing an excellent way to see Roan Highlands as well as other portions of the Highlands of Roan/Unaka Area.

The conservation area ranges from high grassy balds in the highlands to the sometimes placid, sometimes roaring Nolichucky River in its deep gorge.

The Highlands of Roan/Unaka Mountains Conservation Area lies to the east of the Bald Mountains Conservation Area and also it straddles the North Carolina-Tennessee border. And, as in the Bald Mountain area, there is a Tennessee counterpart for nearly every North Carolina wild area.

The gorge of the Nolichucky River, which spills from North



Carolina into Tennessee, is the northern boundary of the Bald Mountains Conservation area. The gorge itself provides a unifying theme for the Mountain Treasure area in North Carolina and its adjacent companion area in Tennessee. A North Carolina Natural Heritage area designation extends over most of the gorge, reaching to the rim.

The U.S. Forest Service reckons that Roan Mountain holds between 1,000 and 2,000 acres of grassy balds or subalpine meadows. The Appalachian Trail traverses the longest stretch of balds in the Southern Appalachians as it runs for 14 miles along Roan Mountain's crest.

Gradually, trees and brushy vegetation are encroaching on the balds, making them what some ecologists term an endangered ecosystem. Because of funding and staff limitations, the Forest Service is focusing its attention on only two of Roan Mountain's balds and is using a novel tool in the process: a small herd of domestic goats. The grazing project will help agency scientists understand the impact of grazing on the balds and help identify ways to preserve their openness. The hope is that goats may help restore what is rapidly becoming a blueberry community to the system of grasses and sedges that it once was.

To some ecologists, the remarkably high species diversity in the Roan Mountain balds suggests that they may be the oldest in the Southern Appalachians.

Nolichucky Gorge

Approximate Size: 5,644 acres

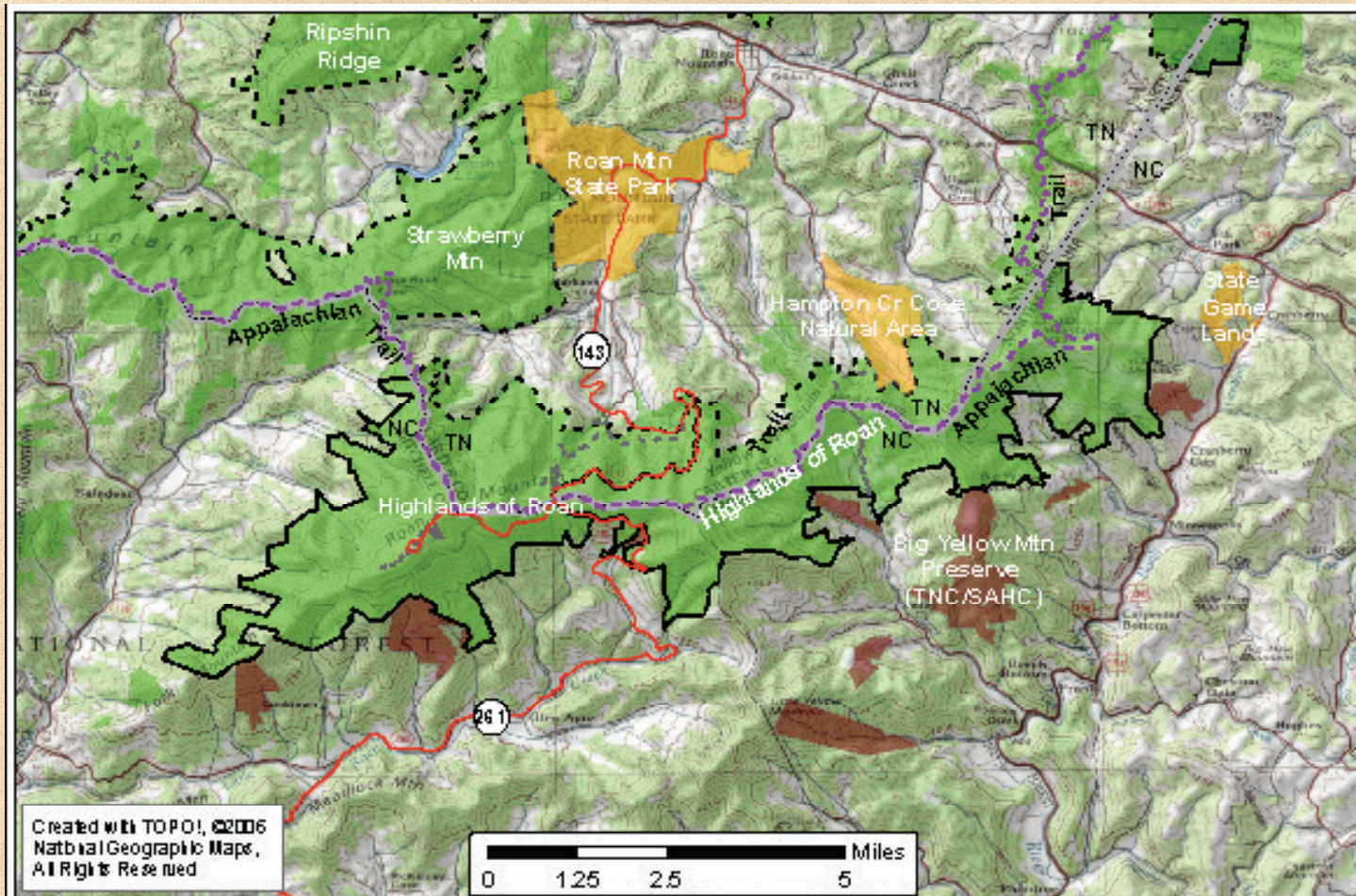
Old Growth Acreage: 745 acres

Location: Mitchell and Yancey counties, North Carolina, 25 miles northwest of Burnsville; Pisgah National Forest, Toecane Ranger District

USGS Topographic Maps: Chestoa, Hunt Dale

The Nolichucky Gorge Mountain Treasure lies within the steep, scenic gorge along both sides of the Nolichucky River as it winds from North Carolina into Tennessee. A companion Mountain Treasure area is in Tennessee, with the Nolichucky Gorge forming the boundary of this area. A North Carolina Natural Heritage area includes most of the gorge and extends to the rim. This wildland area is home to the very rare Virginia spiraea, a federally listed threatened plant, as well as other unusual plants such as necklace sedge and rock skullcap. A large area of verified old-growth (460 acres) stands on the slopes of the north side of the gorge and numerous candidate sites await further investigation. The Forest Service recognizes almost the entire area as a large old-growth patch.

A railroad line runs along the river in the gorge. The best form of protection is probably National Wild and Scenic River designation in combination with protection for the upper slopes of the gorge. The Nolichucky River through the gorge in North Carolina and Tennessee is very popular for rafting,



kayaking, and other white water sports. The Forest Service recommended National Wild and Scenic River designation in March of 1994.

Surrounding lands outside the wild and scenic study corridor complement the lands closer to the Nolichucky River. Some of these lands have been logged in the past, but are contiguous to the core wild area and deserve protection. The Appalachian Trail runs through the Tennessee portion of the Nolichucky Gorge area.

Highlands of Roan

Approximate Size: 9,356 acres

Location: Mitchell and Avery counties, North Carolina (Carter county Tennessee), 15 miles northwest of Spruce Pine; Pisgah National Forest, Appalachian Ranger District
USGS Topographic Maps: Carvers Gap, Bakersville, and White Rocks

The Highlands of Roan are biologically, geologically and geographically unique. Old Growth is known in the area but specific surveys are lacking. Great extensive natural balds, expanses of spruce-fir forest, high elevation seeps, rock outcrop communities, dwarfed northern hardwood forest, and extensive rhododendron gardens comprise some of the exceptional mix of unique habitats on the Highlands of Roan.

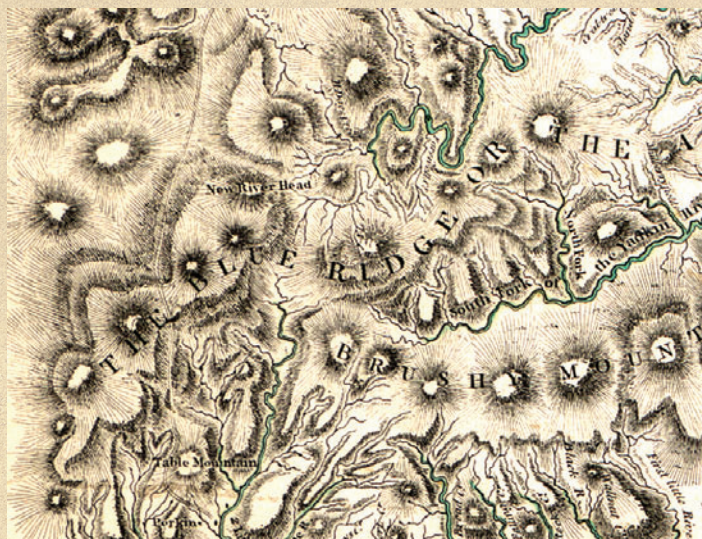
The balds themselves lie between 5,400 feet and 6,100 feet in elevation and cover hundreds of acres. Vegetation includes sedges, grasses, and wildflowers, many of which are globally rare or endemic species. Heath shrubs, including flame azaleas and Catawba rhododendron, cover the margins of the balds. Atop massive 6,285-foot Roan Mountain, rhododendron gardens cover an area of 600 acres in three natural masses. The display of blooming Catawba rhododendron in this area is the finest and most extensive in the world.

The Highlands of Roan are world renowned for their biotic diversity. The area is listed as a biological hotspot and North Carolina includes the entire Mountain Treasure as a state Natural Heritage area. Over 800 species of plants grow here. More nationally or regionally ranked plant species are found on Roan Mountain than on any other site in the mountains of the Southern Appalachians. And between them, North Carolina and Tennessee recognize as rare 250 species of plants found on the Highlands.

Rare animal species here include Appalachian cottontail, Southern Appalachian saw-whet owl, alder flycatcher, hermit thrush, least weasel, and Carolina northern flying squirrel. Many of the plants and animals are disjunct species whose typical range is hundreds of miles to the north up the Appalachian chain. This highlights the important role Roan Mountain has played as a refuge for plants and animals. The forests around the bald are also unique. Northern hard-

wood communities reach possibly their best expression of any in the Southern Appalachians in the forests on the slopes of Roan Mountain, where old-growth stands also occur on the mountain. The slopes around the balds are recognized in a Forest Service old-growth patch. Forests around the edge of the bald contain dwarfed beeches 250 years old but only a scant 12 inches in diameter.

The Appalachian Trail climbs over the steep and beautiful mountains of this wildland for over 19 miles. Scenic North Carolina Route 261 (Tennessee Route 143) crosses the area at Carver's Gap, where the Appalachian Trail also crosses the area. A Forest Service road takes visitors to the nearby rhododendron gardens.



Roan area on an old map from about 1770

“The Lands Nobody Wanted”

At the turn of the 20th century, the lands that now make up the Nantahala-Pisgah National Forest had been largely cut down by timber companies and left in a poor and degraded condition. Unlike the American West, the East had no National Forest system, as it lacked a large public land base to draw from to create such a system. National Forests in the West were created from lands that the U.S. government had been systematically disposing of to speculators, railroad companies, and individuals for many years, a system that changed only after the prospect of a “timber famine.” The movement to create National Forests in the East was related, but resulted largely from the problems that cut-over timber land were creating for neighboring communities from wildfires, erosion, and flooding.

The passage of the Weeks Act in 1911 allowed the U.S. Forest Service to begin the process of acquiring land in the East, and the creation of the Cherokee Purchase Unit in 1912 (from which the Nantahala-Pisgah would be birthed) resulted in one of the first National Forest land purchases in the East, the 8,000-acre Curtis Creek tract near Old Fort in the Black Mountains. At this time, the forests of western North Carolina had been mainly cut over by large timber companies such as Champion Fiber, Ritter Lumber, Gennett Lumber, Whiting Manufacturing, and others, and many of these companies were more than willing to sell these “lands nobody wanted,” as they were referred to at the time, to the U.S. Forest Service for somewhere between three and ten dollars an acre, depending on the condition of the land.

The movement for such a forest in western North Carolina had begun over a decade earlier. In 1892, Charles S. Sargent, director of the first forest census of the United States, published a plan for a Southern Appalachian forest reserve in the influential journal, *Garden and Forest*. During that same

period Joseph A. Holmes, State Geologist of North Carolina, recommended the establishment of a forest reserve in the North Carolina mountains. Also significant during this time were the North Carolina General Assembly and the North Carolina Press Association, which began to emerge as supporters of a national park in the western part of the state. In 1894 the press association petitioned Congress for the establishment of such a park.

In 1899, former Secretary of State William R. Day of Ohio was on a fishing trip in western North Carolina with his friend, Asheville physician Dr. Chase P. Ambler. At Ambler's urging, a Parks and Forestry Committee was organized by the Asheville Board of Trade. In November of 1899 a meeting was held at the old Battery Park Hotel in Asheville where the group was renamed the Appalachian National Park Association. Ambler, to whom credit is given for subsequent accomplishments of the group, was named secretary. In 1900 there followed a joint survey by the U.S. Bureau of Forestry and the Geological Survey of about 9,600,000 acres of forest land to determine its suitability as a national forest reserve. In 1903 the Appalachian National Park Association was renamed the Appalachian National Forest Reserve Association. Within two years the association had disbanded, but in 1905 the notion of a national park and the effort to establish forest reserves in the East and in the Appalachian region was taken up by the American Forestry Association (AFA).

Acquisitions began in earnest following the establishment of the Nantahala-Pisgah, and after Curtis Creek several large acquisitions were made. In 1915 nearly 87,000 acres were sold by Edith Vanderbilt to the National Forest Service following the early death of her husband. This became the core of the emerging Pisgah National Forest. Twenty-four thousand acres of land on Big Snowbird, West Buffalo, and Big and Little San-



The first eastern National Forest tract

photo: courtesy of the Curtis collection

teetlah Creeks known as the Olmsted Tracts were seized from the Olmsted family by the Federal Government for back taxes. Ritter Lumber sold thousands of acres they owned in the area, now known as Rainbow Springs and Standing Indian in the Nantahala National Forest, as did Gennett Lumber. Champion Lumber sold thousands of clear-cut acres, some of what is now the Shining Rock and Middle Prong Wilderness areas.

Thousands more acres were bought throughout the thirties and forties, but acquisitions slowed following World War II. The Forest Service became less concerned with acquisitions, and more concerned with providing timber for a rapidly expanding American economy. Not until legislation was passed for the Land and Water Conservation Fund during the Kennedy administration did the Forest Service receive appropriation dollars for National Forest acquisitions.

Land and Water Conservation Fund (LWCF)

When most of us here in western North Carolina go for a hike on the Appalachian Trail, hunt or fish in the National Forest, enjoy a scenic drive along the Blue Ridge Parkway, or visit the Carl Sandburg Home, we do not normally stop to think about how such opportunities were created or paid for. Though much of our National Forest land here in North Carolina was acquired in the early twentieth century in order to restore forest land and watersheds, in the decade of suburban expansion following World War II it became quickly apparent to many that land was a finite resource and further action was necessary. It was not immediate, but on Valentine's Day in 1963 President John F. Kennedy proposed legislation that would give birth to the Land and Water Conservation

Fund (LWCF), which passed in September of that year.

There was strong bi-partisan support for the bill and its passage established a fund that received about \$100 million a year during the sixties, an amount that was quickly realized as inadequate. Growing demands on the fund led to the need for new sources of money for it, which resulted in funding eventually coming from the Federal Government's offshore oil and mineral leases. Legislation was passed in 1977 that increased the fund to \$900 million per year, but it was 1998 before LWCF received full funding. Congress simply used the allocated money for other purposes. The fund spiked again in 2001 to \$1.0 billion, but since then it has been reduced dramatically every year, with LWCF receiving only \$86 million in 2007.

This extremely important source of funding has protected a total of 4.7 million American acres since its inception, including tens of thousands of acres to create and protect the Appalachian Trail, stretching from Maine to Georgia. Here in North Carolina, it has provided more than \$63 million in funding for the protection of more than 37,000 acres and over 800 state and local park projects. Most recently, LWCF provided \$4 million in 2001 for a key 3,000-acre addition to Lake James State Park as well as over half a million dollars for the creation of Blair Point Park in Morehead City. Blair Point Park was funded through the state matching grants program, often referred to as the "stateside" program, which provides federal funds to states and localities to assist in the planning and acquisition of open space such as greenways and local recreation facilities.

In 2008, the president's budget included a meager \$59 million for LWCF nationwide and proposed to eliminate the



In the early Twentieth Century timber companies clearcut vast areas of the Southeastern forests including the Appalachians. The Forest Service purchased many of these degraded lands for watershed protection and forest restoration. photo courtesy of U.S. Forest Service

stateside grant program altogether. (For perspective, the state of North Carolina's recent purchase of the 996-acre Chimney Rock Park in Rutherford County came with a price of \$24 million). Perhaps most startling was that the administration's budget recommendations include no funding for projects in our region whatsoever. It also called for a massive sell off of 300,000 acres of National Forest lands and 500,000 acres of Bureau of Land Management lands. This included 5,685 acres of National Forest land in North Carolina with the vast majority of it lying within the Nantahala and Pisgah National Forests. Given that we live in one of the fastest growing regions in the nation, and, according to Forest Service statistics, have lost over six million acres to development between 1982 and 1997, this cannot be ignored.

Since 2008, LWCF has made a comeback as a result of a new Congress and Administration. In fact, the Congress increased the FY10 budget for LWCF by 78 percent to \$306 million, a far cry from the previous Administration's efforts to defund the program. As a result of this strengthened commitment the Forest Service in our region has identified key tracts for land conservation from willing sellers, mainly along the Appalachian Trail, with needs of over \$15 million dollars in order to acquire them. This includes a key parcel in western North Carolina on Wesser Bald, as well as the 10,000-acre Rocky Fork tract in Tennessee, which runs along the western North

Carolina border near the Roan Highlands. The Rocky Fork tract is one of the largest unprotected tracts left in the southern Appalachian mountains, and in addition to being adjacent to the Appalachian Trail, it is adjacent to more than 22,000 acres of wilderness and potential wilderness lands protected by the U.S. Forest Service in North Carolina and Tennessee. Although it was being marketed for second and primary home development, the owner had shown interest in protecting the property and in the winter of 2008, the Conservation Fund was able to purchase Rocky Fork with the intention of selling it back to the Forest Service. To date, because of Rocky Fork's national significance and strong local congressional leadership, the project has received \$9 million over the past two budget cycles.

With a newly enhanced Land and Water Conservation Fund, a North Carolina project called the Catawba Falls Access Land will receive monies in FY10 for the first time in nearly a decade. For FY11 the Forest Service in North Carolina has identified and will be proposing a modest \$4 million worth of land acquisition projects in North Carolina alone. The future of LWCF does look bright, with the President's recent commitment to fully fund the LWCF by 2014 and two bills in the House and Senate that have been introduced to fully and permanently fund the Land and Water Conservation Fund.

The following organizations support and endorse the protection of North Carolina's Mountain Treasures:

Carolina Mountain Club
Jackson- Macon Conservation Alliance
Fox Mountain Guides and Climbing School
On The Fly Guide Service
Hunter Banks Company
Mast General Store
Camp Mondamin
Southern Appalachian Forest Coalition
Four Circles Recovery Center
Rockbrook Camp
North Carolina Sierra Club
Carolina Mountain Land Conservancy
North Carolina Wildlife Federation
Blue Ridge Forever
Highlands Biological Station
Southern Environmental Law Center
Conservation Trust for North Carolina
Falling Creek Camp
Camp-Ton-A-Wandah
Jackson-Macon Alliance
High Country Conservancy
Western North Carolina Alliance
Wild South
Southern Appalachian Highlands Conservancy
Wildlaw
Mountains-to-Sea Ecological, Inc.
North Carolina Bartram Trail Society
Yadkin Valley Outfitters
Friends of the Mountains to Sea Trail
Adventurous Fast Rivers Rafting
Tumbling Waters Trout Farm and Campground
Blue Ridge Cozy Cabins
Headwaters Outfitters
Nantahala Hiking Club
The Wilderness Society

WILD SOUTH





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