

REPORT

Project: Idaho Winter Recreation Research Project Wolverine (*Gulo gulo*) Study Animals 2012-2013

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On February 28, 2012 we received hair and tissue samples from six wolverines live-captured in the Stanley Study Area in Idaho (Table 1). On May 6, 2013 we received hair and tissue from three wolverines also captured in the Stanley study area (Table 1). Genetic analysis was requested on these nine individuals for comparisons to the DNA database for wolverines.

Table 1. Wolverine study animal tissues from 2012 and 2013

Date Collected	Animal ID	Location	Nickname	Processing Comments
1/16/2012	M6	Pole Crk. Trap, Stanley SA	Stan	New animal; earpunch tissue; adult male
1/16/2012	M7	Lower Baker, Stanley SA	Buster	New animal; earpunch tissue; subadult male
1/16/2012	M8	Mays Crk., Stanley SA	Duke	New animal; earpunch tissue; adult male
2/5/2012	F7	Cherry Crk., Stanley SA	Luna	New animal; earpunch tissue; adult female
2/8/2012	F8	4th of July, Stanley SA	Julia	New animal; earpunch tissue; adult female
2/10/2012	F9	Beaver Crk., Stanley SA	Maggie	New animal; earpunch tissue; adult female
1/22/2013	M9	CHERRY CR.	TITUS	New animal; earpunch tissue; subadult male
2/13/2013	F10	POLE CR.	OLIVE	New animal; earpunch tissue; subadult female
4/4/2013	?	CHERRY CR.	ORION/STANLEY	tissue; possibly M7 (e-mail 5/1/13)

We obtained DNA for individual identification from all nine of the tissue samples. The sample from the male Orion captured in the Stanley SA is a re-captured of male M7_Buster. The other eight individuals represent new wolverines to the DNA database. As per your request, we also evaluated potential parent-offspring relationships between specific individuals. We have provided these results (Table 2) as either genetically consistent or not with a parent-offspring relationship. We encourage you to bring to bear your knowledge from the field as to whether these relationships are indeed possible. The subadult female F10_Olive who was captured in Stanley but who later moved to the McCall study area is consistent with being the offspring of adult animals in Stanley (M7, F7 and F8). The subadult M9 is also consistent with being an offspring of adults M7 and F8. Male M7 is not an offspring of M8.

Table 2. DNA results for tissue samples submitted 2012-2013

Animal ID	Location	Nickname	Processing Comments	DNA Result
M6	Pole Crk. Trap, Stanley SA	Stan	New animal; earpunch tissue; adult male	Consistent with p/o relationship with M7, F7 and F8
M7	Lower Baker, Stanley SA	Buster	New animal; earpunch tissue; subadult male	Consistent with p/o relationship with M6, M9, F2, F8 and F10. Is not the offspring of M8
M8	Mays Crk., Stanley SA	Duke	New animal; earpunch tissue; adult male	Is consistent with p/o relationship with F9-kit2012 and IDFG-10-R3M-T4
F7	Cherry Crk., Stanley SA	Luna	New animal; earpunch tissue; adult female	Consistent with p/o relationship with M6, M7, F2, F8 and F10

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F8	4th of July, Stanley SA	Julia	New animal; earpunch tissue; adult female	Consistent with p/o relationship with M6, M9, F7 and F10
F9	Beaver Crk., Stanley SA	Maggie	New animal; earpunch tissue; adult female	Is consistent with p/o relationship with F9-kit2012 and IDFG-10-R3M-T4
M9	CHERRY CR.	TITUS	New animal; earpunch tissue; subadult male	Consistent with p/o relationship with M7, F8 and F10.
F10	POLE CR.	OLIVE	New animal; earpunch tissue; subadult female	Consistent with p/o relationship with M7, M9, F7 and F8.
?	CHERRY CR.	ORION/STANLEY	tissue; possibly M7 (e-mail 5/1/13)	Matches M7_Buster

Please contact us if you have any questions. We look forward to working with you in the future.

Appendix

We compared 22 individuals associated with your study since 2010 (9 male study animals, 10 female study animals plus 3 individuals detected from scat and hair) for parent-offspring relationships. The table below has all pair-wise comparisons and whether this relationship is genetically consistent (y) or not (n). Again, we recommend you bring your knowledge from the field and information on location, age class etc. of individuals when using this information.

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Appendix. Table comparing all individuals for a parent-offspring relationship.

	M1- Larry	M2- -Sid	M3- Mo	M4- Mason	M5- Sergio	M6- Stan	M7- Buster	M8- Duke	M9- Titus	F9- kit2012- 28F	2010_ Scat 4M	IDFG- 10- R3M-T- 4F	F1- Lily	F2- Lucy	F3- Bella	F4- Jenny	F5- Tess	F6- Penne	F7- Luna	F8- Julia	F9- Maggie	F10- Olive
M1-Larry	*																					
M2-Sid	y	*																				
M3-Mo	n	n	*																			
M4-Mason	n	n	n	*																		
M5-Sergio	y	n	n	n	*																	
M6-Stan	n	n	n	n	n	*																
M7-Buster	n	n	n	n	n	y	*															
M8-Duke	n	n	n	n	n	n	n	*														
M9-Titus	n	n	n	n	n	n	y	n	*													
F9-kit2012- 28F	n	n	n	n	n	n	n	y	n	*												
2010_Scat4M	n	n	n	n	n	n	n	n	n	n	*											
IDFG-10-R3M- T-4F	y	y	n	n	y	n	n	y	n	y	y	*										
F1-Lily	y	y	n	n	n	n	n	n	n	n	n	n	*									
F2-Lucy	y	n	n	y	y	n	y	n	n	n	n	n	y	*								
F3-Bella	n	n	n	n	n	n	n	n	n	n	y	y	n	n	*							
F4-Jenny	y	y	n	y	n	n	n	n	n	n	n	n	y	y	n	*						
F5-Tess	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	*					
F6-Penne	n	n	n	y	n	n	n	n	n	n	n	n	n	y	n	n	n	*				
F7-Luna	n	n	n	n	n	y	y	n	n	n	n	n	n	y	n	n	n	n	*			
F8-Julia	n	n	n	n	n	y	n	n	y	n	n	n	n	n	n	n	n	n	y	*		
F9-Maggie	n	n	n	n	n	n	n	n	n	y	n	y	n	n	n	n	n	n	n	n	*	
F10-Olive	n	n	n	n	n	n	y	n	y	n	n	n	n	n	n	n	n	n	y	y	n	*