Cascadia Wild
Wolverine Tracking Project
2015-6 Season Report

The Wolverine Tracking Project is a grassroots citizen science project in which trained volunteers conduct surveys for rare carnivores while at the same time teaching animal tracking and other naturalist skills to participants. The project has three objectives - to collect data on the occurrence of target rare carnivore species in the Mt Hood National Forest, to get people involved in their local national forest, and to teach participants about the natural world. Snow tracking surveys are carried out during the winter, and camera surveys are year-round. This report documents the 2015-6 winter tracking season and camera surveys from the spring of 2015 until the end of winter season in 2016.

Project Description

This project is a continuation from the previous year. Primary target species are wolverine and wolves. These species are not known to currently exist around Mt Hood but have a high likelihood of dispersing in, and this project provides a monitoring system to be able to detect their presence. A third target species is montane red fox, to assist a regional study on their population dynamics. Information is also collected on all mammals present, with emphasis on carnivore species. The project follows the same protocol as previous years; more detail is given in Appendix A.

2015-6 Season Results

Tracking Surveys

Snow conditions were good this year, and all trips were able to go out as scheduled. Tracking surveys covered 60 miles. Surveys were done in similar spots to previous years. No tracks from any target species were seen, however, many non-target species were documented, including coyote, bobcat, weasel, and bear. Survey locations are shown in Figure 1 and results presented in Table 1.

Camera Surveys

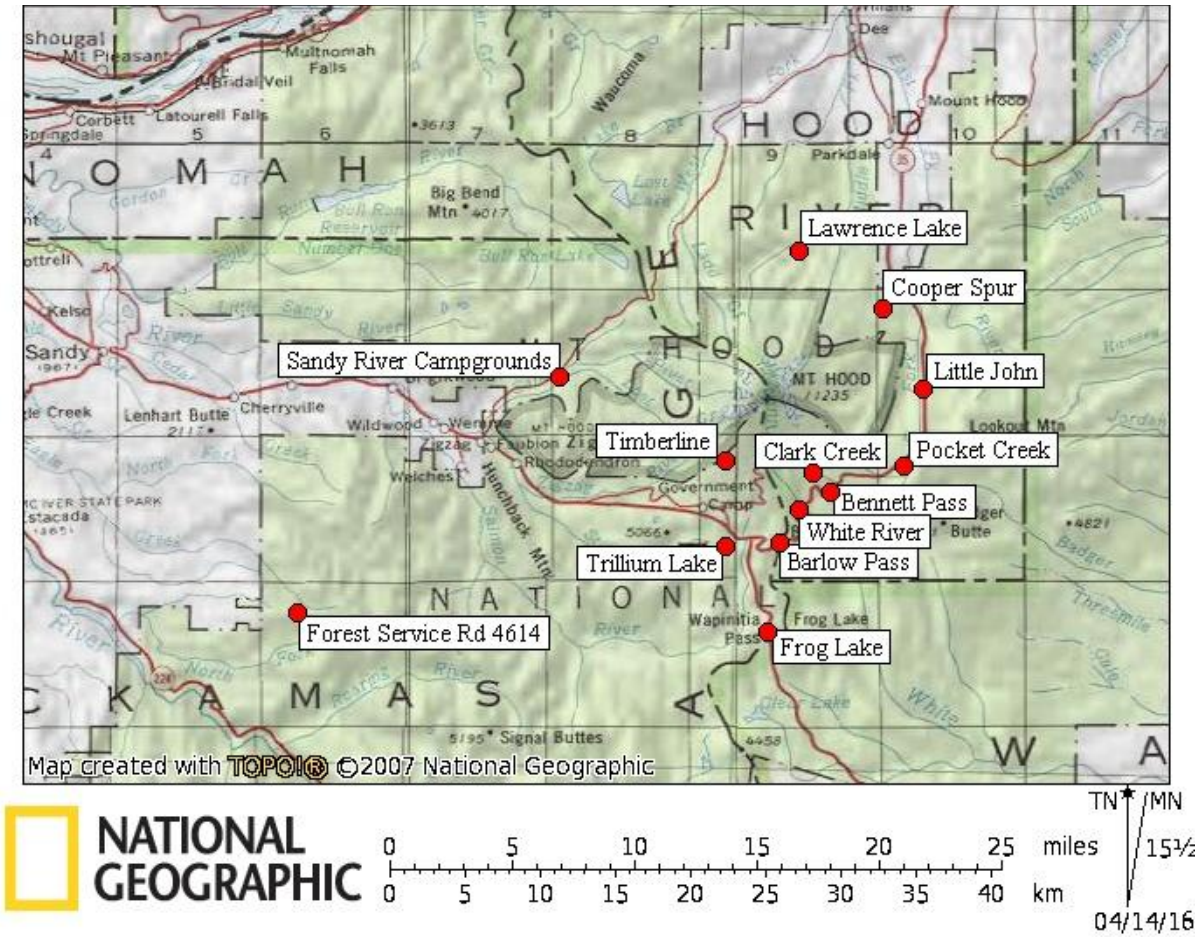
This year we had from three to six cameras operating at a given time, plus one to three personal cameras owned and operated by two separate volunteers. The majority of the cameras targeted montane red fox. Two cameras were placed at high elevations on Mt Hood, to finish a systematic survey of the area that, in the past couple years, has documented their presence in the alpine and subalpine areas of the mountain. We are now starting to survey other areas of the National Forest that are above 4000 ft elevation, but not supporting the extensive alpine vegetation that this subspecies is thought to be associated with. As expected, no fox were detected at these sites. The remaining cameras were placed on the eastern side of the forest, targeting wolves, which were not detected. Camera survey locations are given in Figure 2 and results presented in Tables 2 and 3.

Camera surveys were not as extensive as hoped because of camera difficulties - one camera was stolen, two cameras stopped working, and the remaining three are getting old and had problems with malfunctioning for short periods of time.

Volunteers

Volunteers put in an immense number of hours to make this project successful. A total of 98 people were involved in the project. Twelve trip leaders volunteered 390 hours leading tracking trips and the 58 tracking survey participants put in an additional additional 470 hours of field time. For the camera surveys, volunteers put in an additional 990 hours of field time. Over 100 hours were also put in by various volunteers doing administrative tasks. Participants additionally donated over 12,000 miles of driving. The level of enthusiasm and commitment from volunteers is what continues to make this project a success.

Figure 1: Tracking Survey Locations



Tracking Survey Results 2015-6

Date:	Nov 22	Dec 19	Dec 20	Dec 27	Dec 29	Jan 02	Jan 09	Jan 16	Jan 24	Jan 30	Jan 31	Feb 06	Feb 13	Feb 20	Feb 21	Feb 27	Mar 05	Mar 12	Mar 20	Mar 26
Location:	4614 USFS Rd	Clark Creek	Little John	Cooper Spur	Sandy River Campground	Sandy River Campground	Bennett Pass	Little John	Pocket Creek	Trillium Lake	Barlow Pass	Barlow Pass	Timberline	White River	White River	Clark Creek	Frog Lake	Lawrence Lake	Pocket Creek	Clark Creek
Species:																				
Coyote	7/3*												4			1		1*		
Bobcat	2						2			2								1	1	1
Weasel						15		1				2	3	1	1					
Black bear									2*											
Deer	9/1*																	2*		
Elk				2*					1*										1*	
Snowshoe hare	8	8		6	3	4	17	10	2	5	5	1		4	5/1*	2/1*	7*	3/1*	12	
Douglas squirrel	3	5	25	10	26	27	12	17	6/2*	9	7	6	1	8	14/1*	4/1*	1/13*	8/1*	9	12
Mouse/vole								1			3	1				3		1		
Mountain beaver															2*					
Beaver																		2*		
Pika	1/1*																			
Grouse						4		1												
Flying squirrel														2						
Western gray squirrel			1																	
Snow Quality	1	4	3	2	3	3	3	2	3	3		3	4	3	3	3	1	2	2	4

*denotes sign other than tracks

Figure 2: Camera Survey Locations

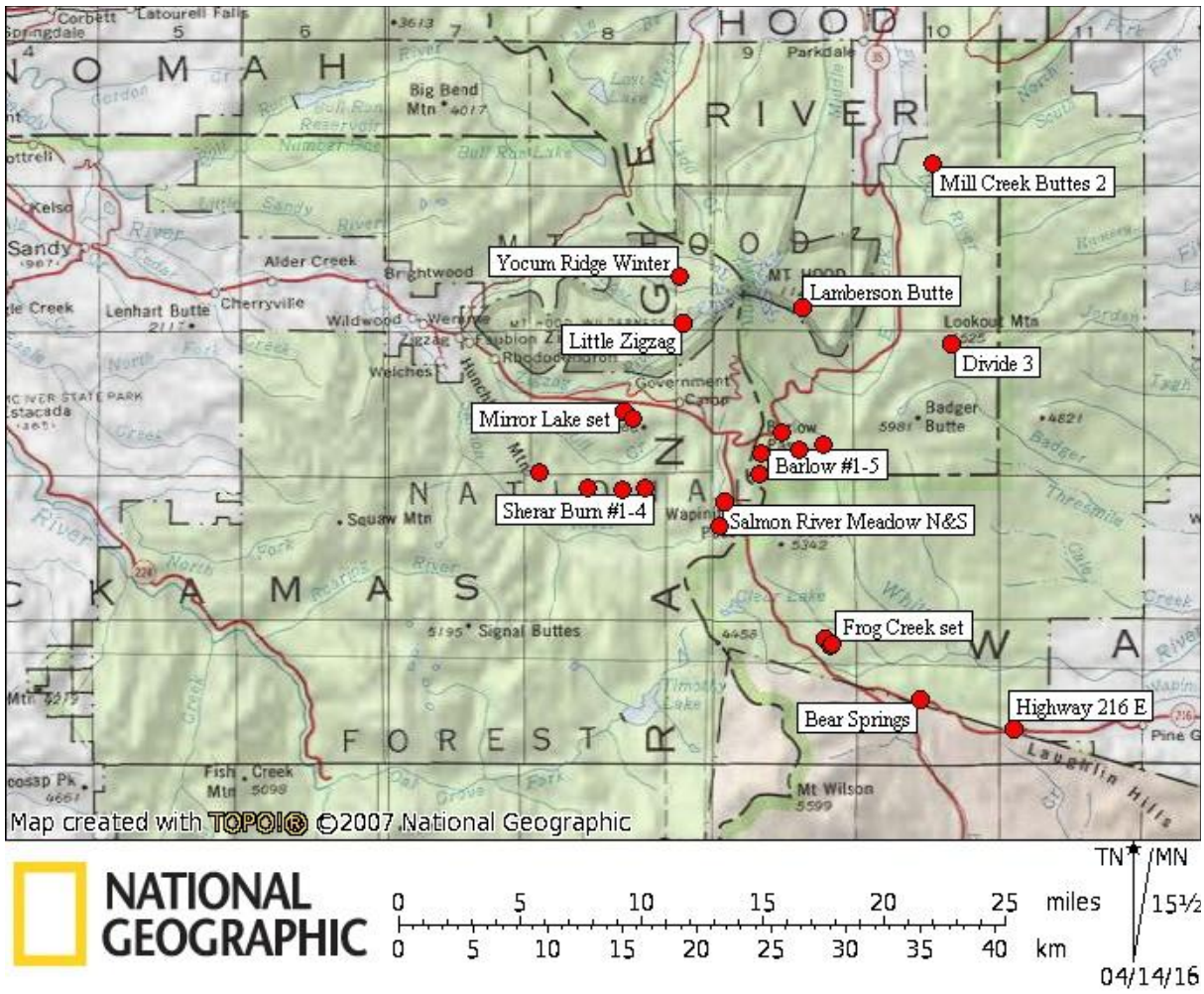


Table 2: Camera survey results

	high elevation				mid elevation														low elevation				
Location	Yocum Ridge Winter	Lamberson Butte	Divide 3	Little ZigZag North	Barlow #1	Barlow #2	Barlow #3	Barlow #4	Barlow #5	Mill Creek Buttes2	Mirror Lake	Mirror Lake Upper	Salmon River Meadow North	Salmon River Meadow South	Sherar Burn #2	Sherar Burn #3	Sherar Burn #4	Sherar Burn #5	Bear Springs	Frog Creek 271	Frog Creek Deer Kill	Frog Creek South	HWY 216 E
End date	06/15/15	05/02/15	04/19/15	03/10/16	pending	pending	pending	01/09/16	pending*	04/15/15	06/06/15*	11/06/15	05/09/15	05/09/15	11/21/15	11/21/15	08/24/15*	11/21/15*	pending	05/09/15	11/06/15*	10/17/15	pending
Start date	10/12/14	11/11/14	10/13/14	02/15/16	11/22/15	11/22/15	11/29/15	11/29/15	01/16/16	10/24/15	10/09/15	09/07/15	12/22/15	12/22/15	06/20/15	06/20/15	05/23/15	06/20/15	04/13/15	03/28/15	10/17/15	08/09/15	03/16/15
Elevation (ft)	5800	6400	6250	5800	4100	3700	4700	3500	3800	4340	4100	4450	3300	3300	4200	4500	4400	4300	3370	3500	3440	3500	3125
Scent lure used?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Meat lure used?	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	Y	N	N
Species found all over:																							
Coyote	X	X			X	X	X			X	X	X	X	X		X			X	X			X
Cougar		X									X	X				X			X				X
Bobcat					X	X				X	X	X	X	X	X	X	X	X	X			X	X
Weasel		X																					
Black bear	X											X	X	X	X	X		X	X	X			X
Striped skunk										X	X								X				X
Deer	X									X		X				X	X	X	X	X	X	X	X
Elk													X						X	X			
Hare/rabbit					X	X					X			X					X	X	X	X	X
Douglas squirrel						X				X	X	X			X			X	X				
Flying Squirrel			X																				
Golden mantled ground squirrel															X								
Chipmunk	X																						
Mouse			X							X													
Species expected only at high elevations:																							
Marten		X		X																			
Species expected only at low elevations:																							
Raccoon													X										
Western gray squirrel																			X				X
California ground squirrel																				X			
Turkey																							X

*denotes camera not functioning for a portion of the time

Discussion

Many species were documented during both the snow tracking and the camera surveys. Wide ranging carnivores such as coyote and bobcat were found all over. Lack of montane red fox detections at the mid elevation cameras supported expectations that they only use higher elevation, alpine and sub-alpine habitat. Lack of marten sightings during the tracking surveys was unexpected, and is probably due to poor snow conditions during the surveys. One somewhat unusual sighting this year was western gray squirrel tracks at an elevation that is higher than usual for this animal. These squirrels are primarily associated with oak woodlands, but this one was found at an elevation of 3600 ft in grand fir/mixed conifer forest, an unusual, though not unheard of, habitat.

Acknowledgments

Cascadia Wild would like to thank the Mt Hood National Forest for their ongoing funding and support.

Appendix A: Project Description

Snow tracking surveys were carried out on snowshoes, most weekends from mid December through March. Trips were lead by trained volunteer trip leaders, who were responsible for both collecting data and for mentoring survey participants. Wildlife cameras were maintained year round. Target species were wolverine, wolves, montane red fox, porcupine, and marten.

Survey locations: Surveys were done on the Mt Hood National Forest. Locations were chosen based on accessibility during the winter and lower human use, trying to cover as many different areas in the forest as possible. Surveys were generally conducted along recreational trails or closed roads, with the exact routes determined by the trip leader on the day of the trip. Trip dates were decided at the beginning of the season and could not be timed to coincide with good snow conditions for tracking.

Tracking data collection: Every animal trail that crossed the survey path was recorded. A GPS waypoint and additional documentation were also taken for all carnivores. Snow quality (the ability of the snow to record clear tracks) and habitat information were also collected.

Participant involvement: Tracking surveys were done in groups of up to 10 people, including two trip leaders. Before going on a survey trip, participants had to attend a two-part training. Four sets of trainings were offered, from October to December. On the trips, participants were given instruction in animal tracking, related natural history topics, awareness activities, and primitive survival. The aim of this blend of topics is to increase not only participant's knowledge, but also their feelings of being connected to their local area. Second year participants were invited to carry out camera surveys.