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# Wallowa Wolverine Persistence Project

Progress Report - November 2019 to March 2020

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*Monitoring the presence of wolverines in Northeast Oregon.*

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# OREGON WILDLIFE FOUNDATION

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From 2010-2012, an extensive survey for wolverine, *Gulo gulo*, on the Wallowa Whitman National Forest detected three individuals in the area, two individual males and one individual that could not be conclusively sexed (Magoun 2013). This study verified the presence of wolverine in the area for the first time since the species' extirpation from much of the American West by the early 1900's (Aubry et al. 2007). One of these wolverines, an adult male nicknamed "Stormy", was detected in 7 of 9 years by limited remote camera monitoring since the initiation of the original study. The other two individuals have not been detected again. (ODFW, unpublished data. Magoun, unpublished data). No other wolverines are known to exist in the state of Oregon.



Figure 1. Skiing along a ridge in the Eagle Cap Wilderness with the iconic Eagle Cap peak in the background. January 30th, 2020

Wolverines have large spatial requirements and occupy montane forests, northern tundra, and subalpine/alpine ecosystems (Aubry et al. 2007, Magoun 1985, Copeland 1996, Inman 2012a). They naturally exist at low densities, particularly so in the western United States where their average distribution is estimated to be near 3.5/1000km (Inman et al. 2012b). The wolverine is listed as threatened under Oregon's State Endangered Species Act, designated as an Oregon Conservation Strategy species, and is currently proposed as threatened under the federal Endangered Species Act. Despite this conservation concern, there has been a lack of comprehensive wolverine surveys in Northeast Oregon since the conclusion of the 2012 study. Our research aims to survey the Eagle Cap Wilderness for wolverines, reevaluating their status in the area. Utilizing proven non-invasive survey methods, we aim to determine if female wolverines are present in the Wallowa Mountains

that may have gone undetected in previous years—due to a lack of detection devices in more concentrated core areas near putative reproductive habitat (Magoun and Copeland 1998) of higher elevations that were not accessed in the 2012 study. Furthermore, we aim to identify and collect genetic information from any additional wolverines in the study area and gain better understanding of Stormy’s use of the Eagle Cap Wilderness.

### Station Deployment - November 2019

Our study area comprises the 1,418-km<sup>2</sup> Eagle Cap Wilderness (ECW) and adjacent forest in Wallowa-Whitman National Forest of northeastern Oregon, USA (Figure 2). In November 2019, our team established 8 baited, remote camera monitoring stations in the ECW, utilizing a run pole sampling method to collect genetic and demographic data on wolverines, as described by Magoun et al. 2011. We considered the following when selecting monitoring sites; a) drainages with previously confirmed wolverine occurrence from camera detections or putative track reports, b) geographic features that may funnel or facilitate wolverine movement, such as mountain passes, c) vicinity of potentially important winter food resources, such as mountain goats, d) even distribution of camera sites across study area, and e) level of exposure of avalanche hazards to the field crew when servicing stations during winter months. The distance between two adjacent monitoring stations is approximately 10-15km. Each monitoring station has a model of Reconyx® Hyperfire camera and was deployed with an elk head donated by ODFW. Three camera stations were set as “overwinter” sites that would not be serviced until avalanche risk had decreased in late spring or early summer. To increase the long-term effectiveness of the overwinter sites, we added a femur bone and scent lure dispenser programmed to dispense 3ml of scent lure every seven days. Monitoring stations are located between 6,509’ and 8,009’ elevation.

Figure 2. The study area, including the Eagle Cap Wilderness (ECW) and the surrounding forest-land on the Wallowa-Whitman National Forest.



### Station Services - January 18th to March 9th, 2020

Of the eight camera stations deployed, four have been serviced once and two have been serviced twice. Services involved downloading photos, collecting genetic samples from run pole hair-snagging clips, changing camera batteries, and reapplying meat bait and scent lure. Favorable snow conditions allowed us to service one camera station originally designated as an overwinter station. This station, WW08, was checked on January 30th and collected photos of Stormy over a 3 minute visit on December 24th, 2019 (Figure 3). This is the only station to detect a wolverine thus far.



Figure 3. Resident male wolverine "Stormy", photographed in 2012 (left) and most recently in December 2019 (right). He is identified by unique ventral (chest) markings and his right paw, which is missing two toes.

In conjunction with servicing monitoring stations, we conducted two, 3-day overnight trips to carry out snow-tracking surveys in portions of the Lakes Basin Management Area (LBMA) of the ECW, where wolverine tracks had been previously photographed in late January, 2019. These informal searches occurred on January 30th, 2020 and March 5th, 2020 and involved scanning slopes and distant terrain through binoculars as we skied across the high-elevation lakes. While snow conditions and stable temperatures before both tracking trips were favorable for preserving tracks made in the previous days, we were unable to locate any. We received photographs of possible wolverine tracks taken at the end of January near the northeastern boundary of the ECW (Figure 4).



Figure 4. (above) Possible wolverine tracks photographed January 2020 near the Northeast boundary of the Eagle Cap Wilderness.

So far, we have collected over 150,000 photos, detecting three carnivore species, three small mammal species, and three bird species. American pine marten, *Martes americana*, have been detected at all six monitoring stations (Figure 6) and Rocky Mountain red fox, *Vulpes vulpes macroura*, have been detected at two monitoring stations (Figure 7). Additionally, we have intercepted North American river otter, *Lontra canadensis*, tracks in two locations above 7,000' in the ECW (Figure 5).



Figure 5. (right) River otter tracks near Douglas Lake in the Eagle Cap Wilderness.

Figure 6. American pine marten, *Martes americana*, were detected at all wolverine monitoring stations serviced.



Figure 7. Rocky Mountain red fox, *Vulpes vulpes macroura*, visits a wolverine camera monitoring station.



### Upcoming spring camera checks

Our stations will be serviced once more in early April, after which they will not be revisited until the end of May, or when safe access allows. Spring marks the most important operational period for our wolverine monitoring stations. Late winter and early spring is the average peak period for exploratory movements of young dispersing wolverines, as well as the period when female wolverines that are rearing kits display enlarged teats, which would be visible if photographed at a monitoring station (Inman et al. 2013, Magoun et al. 2011). In the coming months, we hope to detect any additional resident wolverines, reproductive females showing signs of lactation, or any new individuals dispersing from adjacent breeding populations in Idaho.

As threats like climate change and human development continue to fragment wolverine habitat in the lower 48 United States, the exchange of genetic material throughout wolverine subpopulations will be critical to the species' long term viability in the Western states. While the Wallowa Mountains represent a small block of wolverine habitat, their ability to maintain a wolverine presence or develop a breeding population may speak to the health and productivity of the greater metapopulation of wolverines in the Intermountain West, through the successful dispersal of new individuals to a more isolated habitat.

We are fortunate to be collaborating with TLP Media, <https://tlpmediafilms.com/>, to bring wolverine conservation in Oregon to a broader audience through the development of a short film on our efforts. Additionally, we intend to organize a talk to present our findings to the local community in Wallowa County once our field season is complete.



**We thank you for your interest and support in our efforts to monitor wolverine presence in Northeast Oregon! More photos from the field are included in the following pages.**



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