

Glacier National Park Wolverine Population Assessment

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"Glacier Wolverine Project"

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A century ago the wolverine was considered extirpated from the land area of what is now Glacier National Park. Establishment of the park in 1910 and the subsequent protection of its wildlife have been instrumental in the recolonization of the apparently healthy wolverine population that we enjoy today. However, this resurgence took decades to achieve, and now Glacier National Park is the only National Park in the world where a visitor can have a reasonable expectation of actually seeing a wolverine in its native habitat. Glacier National Park is also recognized as a source, or core, population for wolverine dispersal to other parts of Montana, and the Intermountain West.

The wolverine has been precluded from listing under the Endangered Species Act twice within the last 10 years by the U.S. Fish and Wildlife Service due to a lack of information. The difficulty in obtaining information on wolverine, especially in the lower 48 states, is a function of the remote and rugged terrain which they inhabit and the elusive nature, small population size, and uncanny mobility of this landscape level animal. When coupled with the limited areas in which they occur, the logistical

challenges of studying this rare carnivore lead to Glacier National Park as the most logical choice for focusing on this important research.

The Glacier National Park Wolverine Research Study has just completed its third full year of study. During that time, 19 wolverine have been captured and instrumented; DNA has been analyzed for 20 individuals. Home ranges and habitat information have been calculated for several adults, and mortality data have been collected for 5 individuals (juveniles and subadults). Reproductive den sites have been documented for two different females over 3 different denning seasons, representing 50% of the dens ever found in the continental U.S. At these sites, adequate snow depth and presence of decadent whitebark pine were observed as integral components of successful dens. Documentation of additional reproductive den sites is desperately needed to increase sample size to a statistically powerful level for site specific habitat analysis. Also, food habits data and location information have indicated a very close correlation between wolverine and mountain goats, particularly with regard to their common distribution in the alpine ecotone. Dispersal of a subadult male wolverine over 200 km to the northwest of its natal area in 2004 invites further investigation to document other such movements and the connectivity between ecosystems on a landscape level. In addition, a seminal paper authored by Forest Service research scientists, currently in press, on the continental distribution of wolverine and its correlation with the persistence of snow-pack into early summer months provides a landscape scale parameter of wolverine habitat with important future implications, not only in Glacier National Park, but in the Northern Hemisphere.

Over the past 3 years, GPS technology has advanced to the point where it is now feasible to successfully get detailed location data on wolverine without conducting extensive overflights. Glacier National Park's on-going Global-Change Research that has contributed to a workable, ground-truthed, snow-depth model will be integral to den site analysis. A new vegetation map for the park is nearly complete and will be essential to a meaningful analysis of wolverine habitat.

We have proposed continuing this important research for the next 3 years with a primary interest in outfitting study animals with GPS transmitters to obtain detailed location and movement information. This will include information on reproductive den sites, avoidance of or attraction to human use areas, sociality of wolverine, characteristics of travel routes and detailed food habits studies.

Research of this caliber requires funding of approximately \$100,000 per year. The National Park Service was kind enough to provide initial funding for the first 2.5 years of study. Support from the U.S. Forest Service, the Wilburforce Foundation, Earth Friends, The Wolverine Foundation, Inc., private individuals, and the Glacier Fund have made it possible to carry the research another year. At this point, continuation of wolverine research in Glacier National Park depends upon additional funding sources as well as the funding from current partners.

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The Wolverine Foundation, Inc.

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