Title: Conduct Fisher Survey in Glacier National Park

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Background: Fishers (*Martes pennanti*) are a large mustelid native to Glacier National Park. Considered extirpated in Montana by the 1930's, they were reintroduced to various mountain ranges in northwestern Montana (Purcells, Swans, Pintlars, and Cabinets) in the later half of the 20th century. Currently, fishers are a Montana state species of concern, are state listed endangered in Washington, and southern Sierra Nevada populations have been proposed for ESA listing. The U.S. Fish and Wildlife Service is currently conducting a status review to determine if the fisher qualifies for listing under the endangered species act. There are numerous unverified sightings and track records of fishers in Glacier National Park.

Purpose and Need: While thought to occur in Glacier National Park, observers may easily confuse fishers with their smaller relative, the pine marten (*Martes americana*), thus their status and distribution in the park is unknown. There are no verified records of fishers from within Glacier National Park. Glacier is famous for having a complete suite of native carnivores, and was established, in part, to protect this resource. Fishers are part of this suite of species, and are rare to extirpated in other portions of their historic range. Other than anecdotal sighting and track reports, we have no current information about the status of fishers in the park. Furthermore, its primary prey, porcupines, have also become rare. Interestingly, recent genetic work has found that there may be some native stock extant in northwestern Montana. Since Glacier has been protected from hunting and trapping for 100 years (early predator control actions not withstanding), it is possible that remnant native haplotypes may persist in the park. This project seeks to establish the distribution and lineage of fisher in Glacier National Park using remote cameras and DNA taken from hair captured in specially designed 'hair traps'. Preliminary ad hoc hair trapping conducted during the past 4 years has failed to detect any fishers. These surveys will address a serious knowledge gap in our current management. Project results will either allay fears regarding the status of fishers in Glacier National Park, or indicate that a problem exists, thus facilitating our resource stewardship activities.

Methods: Recent advances in DNA technology allow signifcant information to be garnered from small biological samples. When combined with probability sampling designs, we can derive credible estimates of distribution and abundance. This project will sample likely areas of fisher occurrence across the park in order to obtain photographs of fishers, as well as hair and DNA. This sampling will inform us as to the occurrence, distribution, relative abundance, and lineage (native or introduced) of fishers in Glacier National Park.

Cost: $50,000/yr x 3 yrs = $150,000