



RWU 4201 Wildlife Ecology in Rocky Mountain Landscapes

Determining the Presence / Absence and Connectivity of Fisher in the Rocky Mountains

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Problem Statement

The USFWS has established that fisher in the Pacific Coast States are “warranted, but precluded”



from listing under the Endangered Species Act (2004). Two major scientific findings lead to this result: 1) fisher distributions were more limited than previously suspected, and 2) these populations were shown to be genetically isolated. In the Rocky Mountains fisher habitat may be more contiguous than in the Pacific Coast States, but the presence / absence of fisher on forest lands and their level of connectivity to other fisher populations remains largely unknown.

Research Approach

Using a three tiered approach we hope to increase our understandings of fisher in the Rocky Mountains. First, we are using remote hair-snaring devices, designed and tested by the Pacific Southwest Research Station and the Wildlife Ecology Research Unit’s wildlife genetics laboratory in Missoula, Montana to determine the presence / absence of fisher on several sites throughout Idaho and Montana. These devices are inexpensive tools that locally draw fishers to bait, and non-invasively capture a tuft of hair. Next, DNA is obtained from the hair and a species identification assay is applied to confirm the presence of fisher. The second tier is obtaining individual identification of those hairs determined to be from fisher using genetic techniques. One fisher have been identified to individual we can compare genetic profiles of fisher from various regions to estimate connectivity using population genetic models. Finally, using another assay developed in the Wildlife Ecology Research Unit’s wildlife genetics laboratory we can determine if the fisher that left the hair was from a “native” Rocky Mountain animal or an introduced fisher.



Results

Currently, we have established two test grids to ensure the technology would lure fishers year-round and across broad geographic scales. Both grids have yielded high amounts of hair, and one test-site in the Lochsa River Drainage of Idaho has not only successfully identified fisher, but has determined the presence of known individual from a concurrent radio-telemetry study. Because of the success of these studies, the Idaho Fish and Game and the Coeur D’Alaine Tribes will join our efforts and be implementing similar approach this year.

Partners

This project is a partnership between the USDA FS-RMRS, PNW Research Station, PSW Research Station, the Coeur D’Alaine Tribes, Idaho Department of Transportation, The Northern Region (Region 1) of the USDA Forest Service, the Clearwater and Panhandle National Forests, University of Idaho, Idaho Fish and Game, and Montana Fish Wildlife and Parks.