



RWU 4201 Wildlife Ecology in Rocky Mountain Landscapes

Ecology and Movement of Fisher (*Martes pennanti*) in the Bitterroot – Selway Ecosystem Relative to Transportation Corridors

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Problem Statement

The impact of transportation corridors on mid-sized forest carnivores such as Canada lynx (*Lynx canadensis*), wolverine (*Gulo gulo*), and fisher (*Martes pennanti*) is becoming a critical management issue in the western United States. As human population growth increases, there is a greater need for more and wider roads through once wild landscapes, and a marked increase in traffic volume on existing roads.



The fisher may be particularly sensitive to road-building and improvement because its primary habitat in the Rocky Mountains is thought to be the riparian zone -- the same location where most transportation corridors are constructed. This impact is compounded by the fact that fishers prefer late successional forests that were largely altered in the mid part of the 20th century.

The USWS has established that fisher in the Pacific Coast States are “warranted, but precluded” from listing under the Endangered Species Act (2004). Because of the paucity of information on fisher in the Rockies, in 2001 we initiated a study of fisher movement and ecology relative to transportation corridors.

Research Approach

We have been working with the Clearwater National Forest, the Idaho Department of Transportation, and the State of Idaho in studying fisher around Highway 12, which runs from Lolo, Montana (near Missoula) to the Port of Lewiston (Idaho). The study has two major components. First, we have been monitoring movements of 23 fisher using radio-telemetry. These data are allowing us to understand the specific habitat preferences and movement patterns of fisher relative to roads and other landscape features. We are focusing our data collection efforts on the needs of female fisher, whose survival is believed to be the limiting factor in population persistence.

In addition, we are applying novel genetic techniques to examine questions of connectivity across the road corridor. The genetic data will allow us to determine if Highway 12 delineates breeding populations of fisher by acting as a barrier. These genetics data will also be used to assess the degree to which fisher from this area are unique compared to other fisher in the Rockies, and compared to fisher populations around the West. Overall, by obtaining more information about fisher habitat needs and their tolerance to highways we hope to provide management with information they can use to help the recovery of western fisher populations.

Partners

This project is partnership between the USDA FS - Rocky Mountain Research Station, the Idaho Transportation Department, The Northern Region (Region 1) of the USDA Forest Service, the Clearwater National Forest, University of Idaho, Idaho Fish and Game, and the U.S. Fish and Wildlife Service.