
Objectives

To use radio-collaring and GIS modeling techniques to aid in the translocation success of Fisher (*Martes pennanti*). Viable Fisher populations have been extirpated from most of the province, except for two isolated areas. Reintroduction efforts are an attempt to link these two productive areas and increase fisher levels throughout Nova Scotia.

Description

Fishers are being used as an indicator species for the presence of several prey species within a mature forest. This study involves the use of fishers to assess the utility of habitat models and the response of carnivores to landscape structure. Fur harvest location data collected since the early seventies are being cross-referenced with GIS based habitat models to establish preferred habitat areas within the province.

A habitat model will be created using winter harvest location data from the Nova Scotia Trappers Association and Arc/Info GIS forest and topographic layers from the Nova Scotia Department of Natural Resources. Regression analysis will be performed relating harvest data to stand level attributes (forest type, slope and aspect) and raster cell attributes (proportion of coniferous forest, total length of stream, topography). Location data for summer habitat use will be collected from following 12 radio collared Fishers from May through August 1999.

Thirty animals area scheduled for relocation. In each of three areas that are determined to be optimal habitat, five animals will be released and in each of three areas determined to be sub-optimal habitat, five animals will also be released. The animals movement after being release will be monitored from both the air and the ground.

Results

This experiment will examine how the Fisher's initial response to relocation varies between optimal and non-optimal habitats. By comparing the animals' home range selection in the optimal and sub-optimal habitats and by monitoring their movements within these sites researchers hope to gain further understanding of relocated Fisher movements. This would be beneficial in further efforts to locate Fisher throughout Nova Scotia.

Implications

The results of this study will provide insight into the use of Fisher as an indicator species with respect to forest habitat and forest management practices as well as GIS based models for habitat ranking when relocating wildlife. It is hoped that relocation efforts will lead to the spread of animals to other parts of the province, eventually restoring Fisher numbers to sustainable levels in its former range.

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