

## **Project Summary**

### **Rocky Mountains Cooperative Ecosystem Studies Unit**

**Project Title:** Temporal dynamics of snowshoe hares in Yellowstone National Park,

**Type of Project:** Research

**Funding Agency:** National Park Service

**Other Partners/Cooperators:** University of Montana

**Effective Dates:** 9/1/2004 - 9/30/07

**Funding Amount:** \$20,000

**Investigators and Agency Representative:**

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#### **Project Abstract:**

The objective is to resurvey snowshoe hare abundance at several sites Yellowstone forest to address the relationship between population dynamics and vegetation structure.

Two survey methods will be used. At three sites, one each in major forested habitat types within the park hares were live-trapped in 2002-2003, and then resurveyed in 2004 and 2005 to obtain mark-recapture estimates of snowshoe hare numbers. Second, investigators will count fecal pellets of snowshoe hares on ~40 other forest sites, including four that burned in the 2003 East fire that were surveyed prior to fire, to obtain relative density information and quickly classify sites as poor, medium, or high quality. A final report will be ready for review in late 2006.

For all sites, investigators will collect information on vegetation composition. Vegetation surveys will include information on overstory structure (tree density, size, and species), understory structure (species, size, understory cover), and downed woody debris. These detailed surveys will allow for evaluation of features that are most related to snowshoe hare abundance. Pis will work with Yellowstone NP researchers to overlay GIS vegetation layers with snowshoe hare abundances and lynx data obtained in recent Yellowstone surveys.

#### **Outcomes with Completion Dates:**

List of Products:

This work will result in the following:

- (1) Evaluation of the temporal variation in snowshoe dynamics on study sites that have been monitored for three previous years
- (2) Dissemination of the results via publications, final reports, and conference presentations
- (3) Final Report due December 30, 2006

**Keywords:** snowshoe hares, abundance, habitat, Canada lynx, Yellowstone National Park, University of Montana

#### **For Administrative Use Only:**

Date Annual Report Received:

Date Final Report Received:

Publications, etc. on file: