

Southern Bog Lemming

Synaptomys cooperi

Federal Listing	N/A
State Listing	
Global Rank	G5
State Rank	S4
Regional Status	Very High

Justification (Reason for Concern in NH)

Low trapping success in the White Mountains (Yamasaki 1997) seem to indicate that Southern Bog Lemmings are not common, and they are very locally distributed. They can be more abundant in localized pockets (DeGraaf and Yamasaki 2001).

Distribution

Little is known about the distribution and habitat of this species in New Hampshire. Trapping in the White Mountain National Forest of Maine and New Hampshire varied from 0.03 to 0.69 captures per 100 trap-nights (Yamasaki 1997).

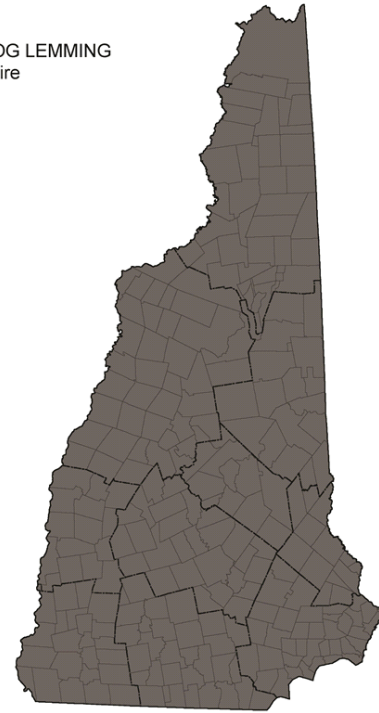
Habitat

The Southern Bog Lemming prefers boggy habitat and can be common in marshes, meadows and upland forests with a thick humus layer (Linzey 1981). Southern Bog Lemmings feed on the tender succulent parts of herbaceous plants and will occasionally eat mosses, fungi, bark, roots and some invertebrates (Linzey 1983). They also develop complex tunnel systems that are deep (6-12 in) below ground for resting, feeding and storing food.

NH Wildlife Action Plan Habitats

- Northern Hardwood-Conifer Forest

Distribution of
SOUTHERN BOG LEMMING
in New Hampshire



Distribution Map

Current Species and Habitat Condition in New Hampshire

There are insufficient data to draw conclusions about the population health or distribution of southern bog lemmings.

Population Management Status

There are no management efforts for southern bog lemmings in New Hampshire.

Regulatory Protection (for explanations, see Appendix I)

None

Quality of Habitat

Southern bog lemmings are likely widely distributed throughout New Hampshire, but with local abundance. Habitat use is also varied and therefore high quality habitat is likely contiguous patches of forested habitat with a thick layer of loose duff. This is likely most abundant in moist deciduous and mixed forests.

Habitat Protection Status

Little is known about the distribution and habitat for Southern Bog lemmings in New Hampshire specifically.

Habitat Management Status

There are no habitat management efforts for Southern bog lemmings.

Threats to this Species or Habitat in NH

Threat rankings were calculated by groups of taxonomic or habitat experts using a multistep process (details in Chapter 4). Each threat was ranked for these factors: Spatial Extent, Severity, Immediacy, Certainty, and Reversibility (ability to address the threat). These combined scores produced one overall threat score. Only threats that received a “medium” or “high” score have accompanying text in this profile. Threats that have a low spatial extent, are unlikely to occur in the next ten years, or there is uncertainty in the data will be ranked lower due to these factors.

There are no threats ranked high or medium for this species.

List of Lower Ranking Threats:

Habitat conversion and impacts from logging that converts mesic to xeric

Actions to benefit this Species or Habitat in NH

Technical assistance and outreach for timber operations in areas likely to have lemmings

Primary Threat Addressed: Habitat conversion and impacts from logging that converts mesic to xeric

Specific Threat (IUCN Threat Levels): Biological Resource Use

Objective:

General Strategy:

Political Location:

Watershed Location:

References, Data Sources and Authors

Data Sources

(DeGraaf and Yamasaki, 2001)

Information on habitat, population distribution, and status was collected from unpublished data, scientific literature, and limited agency data.

Data Quality

With the cooperation of the WMNF, Yamasaki conducted a 3-year systematic survey of small mammals between 1995 and 1997. This survey took place in potential habitats across three levels of vegetation management in the White Mountains region. Out of the 108 study sites surveyed across managed, unmanaged, and remote locations in the forest, Southern Bog lemming captures varied between 0.03 to 0.69 captures per 100 trap-nights (Yamasaki 1997).

There is very little data on the condition of the species and its habitats statewide.

Appendix A: Mammals

2015 Authors:

Jillian Kilborn, NHFG

2005 Authors:

Literature

Linzey, A.V. 1983. *Synaptomys Cooperi*. Mammalian Species. American Soc. of Mammologists. 210:1-5.

DeGraaf R. M. and M. Yamasaki. 2001. New England Wildlife Habitats, Natural History, and Distribution. University Press of New England, Hanover, NH.

Linzey, A.V. 1981. Patterns of coexistence in *Microtus pennsylvanicus* and *Synaptomys cooperi*. Virginia Poly. Inst. and State Univ., unpubl. Ph.D. dissertation, 97 pp.

NatureServe. 2015. NatureServe Explorer: An online encyclopedia of life (web application). NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>.

Yamasaki, M. 1997. White Mountain National Forest Small Mammal Identification and collection Report – 1996. Unpublished report on file. U.S. Department of Agriculture, Forest Service, Northeastern Forest Experiment Station, Durham, NH 38pp.