
Southern Idaho Ground Squirrel

Spermophilus brunneus endemicus

Mammalia — Rodentia — Sciuridae

CONSERVATION STATUS / CLASSIFICATION

Rangewide: Imperiled subspecies (G2T2)
Statewide: Critically imperiled (S1)
ESA: Candidate
USFS: Region 1: No status; Region 4: Sensitive
BLM: Threatened, Endangered, Proposed, and Candidate (Type 1)
IDFG: Protected nongame

BASIS FOR INCLUSION

Candidate under the U.S. Endangered Species Act; small populations and Idaho endemic.

TAXONOMY

The southern Idaho ground squirrel is 1 of 2 subspecies of the Idaho ground squirrel, which is endemic to Idaho and among the most geographically restricted mammals in North America. Morphological, ecological, and genetic differences suggest that the subspecies may represent a distinct species (Yensen 1991; Gill and Yensen 1992; Gavin et. al 1999).

DISTRIBUTION AND ABUNDANCE

The southern Idaho ground squirrel occurs in an area of about 200 km² in Payette, Gem, and Washington counties. A status survey was conducted during 1984 (Yensen 1985), and the population was estimated to comprise 40,000 individuals. Recent population size has been estimated to be 2000-4500 individuals (Yensen 2001a).

Local population distribution and abundance is incompletely known. At present, most populations are small groups that are discontinuously distributed in the southern part of the former range. New populations have been discovered during recent years, but sampling effort has been uneven.

POPULATION TREND

Approximately 90% of the population was lost since the mid-1980s. The decline may have stabilized during recent years, possibly in response to mild winters and wet springs, but colonies remain small and fragmented. The population has been extirpated or is exceptionally small in the northern portions of the former range. The species is locally abundant near Emmett and Payette, where colonies are associated with anthropogenic habitat, such as agricultural land and golf courses. Populations are sparse and fragmented in formerly occupied native habitat, which is found primarily on public lands.

HABITAT AND ECOLOGY

This species inhabits rolling foothills at elevations between 670-1090 m (2200-3600 ft.). Habitat in this area was originally dominated by big sagebrush, bitterbrush, and native bunchgrasses and forbs. The majority of native shrub and bunchgrass habitat has been replaced with stands of invasive annual plants, such as cheatgrass and medusahead rye. Populations in this altered habitat are usually restricted to the least disturbed or most productive sites (Yensen 2001a).

Individuals hibernate and estivate for 7 to 8 months per year and, depending on winter conditions, are active between January and June. Long periods of inactivity require large energy reserves, and individuals can enter estivation with 40-50% body fat. Breeding occurs immediately after emergence from hibernation, and juveniles appear above ground 6 weeks after conception.

ISSUES

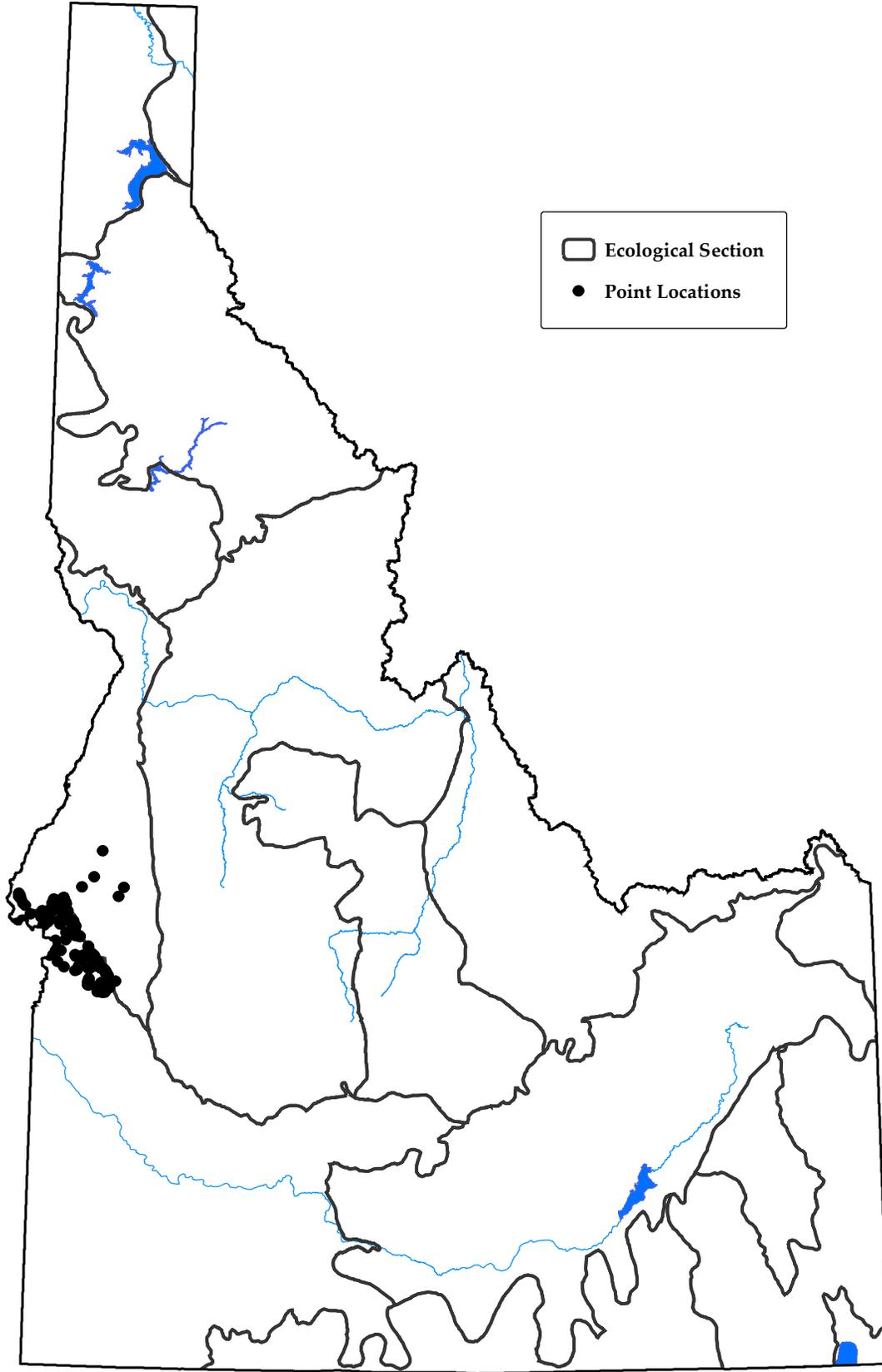
Habitat has been altered through livestock grazing, agricultural development, invasive plants, and a shift of the fire regime to more frequent and severe range fires (Pellant 1989, Whisenant 1990, Knick and Rotenberry 1997, Belsky and Gelbard 2000). An understanding of population trend is currently lacking, as is landscape-scale patterns of distribution and abundance.

RECOMMENDED ACTIONS

Efforts are needed to achieve a comprehensive understanding of local distribution and abundance. The development and implementation of a monitoring program to evaluate population and habitat trends is urgently needed as a basis for appropriate regulatory and management actions. Habitat protection measures are needed throughout the range of this taxon, and restoration projects should be pursued, particularly in the context of improving habitat for core populations and restoring connectivity among fragmented groups.

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Map created on September 23, 2005
and prepared by Idaho Conservation Data Center.
Sources: Point data are from Idaho Conservation Data Center,
Idaho Department of Fish and Game (2005).

