

Southern red-backed vole

Myodes gapperi

Class: Mammalia

Order: Rodentia

Review Status: Reviewed (general)

Version Date: 21 September 2020

Conservation Status

NatureServe:

Agency:

G Rank: G5

ADF&G: Species of Greatest Conservation Need

IUCN: Least Concern

Audubon AK:

S Rank: S4S5

USFWS:

BLM:

Final Rank		
Conservation category: V. Orange		
unknown status and either high biological vulnerability or high action need		
<u>Category</u>	<u>Range</u>	<u>Score</u>
Status	-20 to 20	0
Biological	-50 to 50	-28
Action	-40 to 40	32
Higher numerical scores denote greater concern		

Status - variables measure the trend in a taxon's population status or distribution. Higher status scores denote taxa with known declining trends. Status scores range from -20 (increasing) to 20 (decreasing).

	Score
<i>Population Trend in Alaska (-10 to 10)</i> Unknown.	0
<i>Distribution Trend in Alaska (-10 to 10)</i> Unknown.	0
Status Total:	0

Biological - variables measure aspects of a taxon's distribution, abundance and life history. Higher biological scores suggest greater vulnerability to extirpation. Biological scores range from -50 (least vulnerable) to 50 (most vulnerable).

	Score
<i>Population Size in Alaska (-10 to 10)</i> Unknown.	0
<i>Range Size in Alaska (-10 to 10)</i> Restricted to mainland southeast Alaska and some islands of the Alexander Archipelago (MacDonald and Cook 2009). Estimated range size is ~28,200 sq. km, based on range map from ACCS (2017a).	-2
<i>Population Concentration in Alaska (-10 to 10)</i> Does not concentrate.	-10

Reproductive Potential in Alaska

Age of First Reproduction (-5 to 5) -5

Limited information, but likely less than two years. In Manitoba, females reach sexual maturity within their first year (Perrin 1979).

Number of Young (-5 to 5) -1

No data for Alaska. In other parts of its range, females are capable of producing at least two litters a year (Perrin 1979). Litters range in size from two to eight, but are generally five or six (Perrin 1979; Innes and Millar 1981; Innes and Millar 1994). Because this range spans two categories, we rank this question as $0.5 * C + 0.5 * D$.

Ecological Specialization in Alaska

Dietary (-5 to 5) -5

Little data available. It appears to have a broad and flexible diet, which includes fungi, lichen, conifer seeds, leaves, grass, seeds, and invertebrates (Gunther et al. 1983; Hansson 1985). Consistent with general diet across rest of range.

Habitat (-5 to 5) -5

Habitat generalist. Occupies a variety of habitats including shrublands and mixedwood and coniferous forests of various ages, types, canopy cover, and disturbance regimes, from clearcuts to old-growth (Gunther et al. 1983; Smith and Nichols 2004; Smith et al. 2005; MacDonald and Cook 2009).

Biological Total: -28

Action - variables measure current state of knowledge or extent of conservation efforts directed toward a given taxon. Higher action scores denote greater information needs due of lack of knowledge or conservation action. Action scores range from -40 (lower needs) to 40 (greater needs).

Score

Management Plans and Regulations in Alaska (-10 to 10) 10

Considered unclassified game in Alaska with no closed season or bag limits (ADFG 2018c).

Knowledge of Distribution and Habitat in Alaska (-10 to 10) 2

Distribution is known from sampling efforts conducted in southeast Alaska (MacDonald and Cook 2009). To our knowledge, only a few studies have considered habitat associations (Smith and Nichols 2004; Smith et al. 2005; Smith and Fox 2017). These studies were restricted to the same study area (Wrangell Island).

Knowledge of Population Trends in Alaska (-10 to 10) 10

Not currently monitored.

Knowledge of Factors Limiting Populations in Alaska (-10 to 10) 10

Very little is known about the population ecology of this species in Alaska. *M. gapperi* seems to be fairly adaptable to habitat disturbances caused by logging or industrial infrastructure (Gunther et al. 1983; Smith and Nichols 2004; Shonfield and Bayne 2019). Interspecific competition between other small mammal species may influence the behavior, distribution, and abundance of voles (Halliday and Morris 2013; Smith and Fox 2017; Le Borgne et al. 2018). Other potentially limiting factors include food availability, predation, weather, and territoriality, among others (Boonstra and Krebs 2012; Conrod and Reitsma 2015; Fauteux et al. 2015). The generalization of these studies is limited by their weak inference and the varied characteristics of *M. gapperi* populations across its large range.

Action Total: 32

Supplemental Information - variables do not receive numerical scores. Instead, they are used to sort taxa to answer specific biological or management questions.

Harvest:	Not substantial
Seasonal Occurrence:	Year-round
Taxonomic Significance:	Monotypic species
% Global Range in Alaska:	<10%
% Global Population in Alaska:	<25%
Peripheral:	No

References

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