Pribilof Island shrew

Sorex pribilofensis

Class: Mammalia
Order: Eulipotyphla

Review Status: Peer-reviewed **Version Date:** 20 November 2018

Conservation Status

NatureServe:	*Agency:*		
G Rank: G3	ADF&G: Species of Greatest Conservation Need	IUCN: Endangered	Audubon AK:
S Rank: S3	USFWS:	BLM:	

Final Rank

Conservation category: **IV. Orange**

unknown status and high biological vulnerability and action need

Category	Range	Score
Status	-20 to 20	0
Biological	-50 to 50	14
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**

Population Trend in Alaska (-10 to 10) 0

Unknown.

Distribution Trend in Alaska (-10 to 10) 0

Unknown.

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**

Population Size in Alaska (-10 to 10) 0

Unknown. Although the IUCN lists a minimum population size of ~19,000 individuals (Woodman et al. 2008), this estimate is based on extrapolations from field surveys conducted over 25 years ago.

Range Size in Alaska (-10 to 10) 10

Restricted to Saint Paul Island (100 sq. km.; MacDonald and Cook 2009). Older specimens from "Unalaska" likely refer to Saint Paul Island (Hoffmann and Peterson 1967; Rausch and Rausch 1997).

Population Concentration in Alaska (-10 to 10) 10

Only occurs on St. Paul Island (MacDonald and Cook 2009). Older specimens from "Unalaska" likely refer to St. Paul Island (Hoffmann and Peterson 1967; Rausch and Rausch 1997).

Reproductive Potential in Alaska

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

Unknown, but given its very short life expectancy, <2 years. The closely related S. cinereus attains sexual maturity in <2 years (Whitaker 2004).

Number of Young (-5 to 5) -3

Unknown, but the closely related S. cinereus has an average litter size of 7 young and two to three litters per year (Whitaker 2004).

Ecological Specialization in Alaska

Dietary (-5 to 5) 1

Little is known about the diet of S. pribilofensis. Other Alaskan shrew species feed primarily on terrestrial invertebrates (Whitaker 2004; Eckrich et al. 2018; O'Brien et al. 2018). Because invertebrates are an ephemeral and potentially unpredictable food source, we rank this question as B- Moderately adaptable with key requirements common.

Habitat (-5 to 5) 1

Inhabits coastal tundra sites (Byrd and Mendenhall 1986). Preferred habitats have tall vegetation and a well-developed litter layer, and include tall grasses and forbs such as beach rye (Elymus arenarius) and wild celery (Angelica lucida) (Byrd and Mendenhall 1986; Byrd and Norvell 1993). Also reported from the village of St. Paul (Byrd and Mendenhall 1986). Habitat preferences might change with abundance (Byrd and Mendenhall 1986), but this idea has not been investigated.

Biological Total: 14

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

Listed as unclassified game in Alaska with no bag limit and no closed season (ADFG 2018c).

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

Appears to be restricted to St. Paul Island. It has not been found on St. George Island (Byrd and Norvell 1993) and older specimens from "Unalaska" likely refer to St. Paul Island (Hoffmann and Peterson 1967; Rausch and Rausch 1997), though this assumption has not been confirmed through molecular analyses (MacDonald and Cook 2009). Although general habitat associations have been described (Byrd and Mendenhall 1986; Byrd and Norvell 1993), very little is known about distribution and habitat preferences on St. Paul Island (MacDonald and Cook 2009; ARCTOS 2016).

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

Not currently monitored.

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

Little is known about the ecology of S. pribilofensis. Because its range is restricted to a single island, it is vulnerable to stochastic events and disturbances. Moreover, analyses of genetic diversity indicate an almost complete lack of variation, even though this species is locally common (Hope et al., unpubl. data). This lack of variation has potentially important consequences for management and conservation efforts. Endoparasites have been collected (Olsen 1969; Hope et al., unpubl. data), including an association with a trematode (Genus: Maritrema) normally found in shorebirds (Hope et al., unpubl. data). It is unknown how these parasites affect population dynamics. Morphological and molecular analyses indicate strong levels of divergence from other Beringian shrews (Hoffmann and Peterson 1967; van Zyll de Jong 1982; Rausch and Rausch 1997; Demboski and Cook 2003; Hope et

al. 2012).

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:	Endemic
Peripheral:	No

References

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