

Song Sparrow, Sooty

Class: Aves
Order: Passeriformes

Melospiza melodia rufina

Note: This assessment refers to this subspecies only. A species level report, which refers to all associated subspecies, is also available.

Review Status: Peer-reviewed

Version Date: 28 March 2019

Conservation Status

NatureServe: Agency:

G Rank: G5T4 ADF&G: Species of Greatest Conservation Need IUCN: Audubon AK: Yellow

S Rank: 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	-20
Action	-40 to 40	8
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> Western islands of the Alexander Archipelago, southeast Alaska (Chichagof, Baranof, Kuiu, Prince of Wales, Dall, Duke, and small adjacent islands; Swarth 1923; Bailey 1927; Webster 1950; Gabrielson and Lincoln 1951; Patten and Pruett 2009; Gibson and Withrow 2015). Also breeds in British Columbia and Queen Charlotte Islands (Patten and Pruett 2009). Estimated 29,000 sq. km (using GoogleMaps). Some portion of this subspecies migrate south for the winter (Patten and Pruett	-2

2009), but destinations are not well documented.

Population Concentration in Alaska (-10 to 10) -10

No subspecies specific information, likely same as species: does not concentrate (Arcese et al. 2002).

Reproductive Potential in Alaska

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

No subspecies specific information, likely same as species: undocumented for Alaska, but elsewhere in North America, females breed at 1 year old (Hochachka 1990; Arcese et al. 2002).

Number of Young (-5 to 5) 1

No subspecies specific information, likely same as species: Johnston (1954) reported an average clutch size of 4.17 eggs for Alaska (n=17) and two clutches per year. Clutch sizes ranged from 3.05 to 3.99 eggs elsewhere along the eastern Pacific coast (Johnston 1954). Multiple broods per year are common in this species (Johnston 1954; Arcese et al. 2002).

Ecological Specialization in Alaska

Dietary (-5 to 5) -5

No subspecies specific information, likely same as species: limited data for Alaska. Elsewhere in its range, this species is omnivorous, consuming terrestrial and aquatic invertebrates, seeds, and berries (reviewed in Arcese et al. 2002). The proportion of plant versus animal material in its diet shifts seasonally with availability (Arcese et al. 2002).

Habitat (-5 to 5) 1

In southeastern Alaska, observed on beaches and a short distance into the woods near the shore (Bailey 1927). Little else known about this subspecies' habitat preferences, may be similar to species: in Alaska, distribution is restricted to coastal areas. Habitat preferences appear to vary by season and by subspecies. During breeding season, it has been reported from a variety of habitats including shrublands, forests, wetlands, and intertidal habitats such as rocky beaches, tidal flats, and coastal graminoid meadows (Isleib and Kessel 1973; Van Hemert et al. 2006; Gibson and Byrd 2007; Johnson et al. 2008b). In the winter, habitat preferences may be narrower: some subspecies appear to be restricted to sheltered or snow- and ice-free sections of the coast (Murie 1959a; Isleib and Kessel 1973; M. Cady, USFWS, pers. comm.). Additional research is needed to determine habitat preferences; for now, we rank this question as B- Moderately adaptable.

Biological Total: -20

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) 2

Protected under the Migratory Bird Treaty Act (MBTA 1918).

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

Distribution and habitat association is somewhat known; knowledge based on limited bird inventories and specimen collection reviews (Swarth 1923; Bailey 1927; Webster 1950; Gabrielson and Lincoln 1951). Range, subspecies overlap, and migration status poorly known.

Knowledge of Population Trends in Alaska (-10 to 10) 2

Captured on Breeding Bird Survey (BBS) and ALMS routes in southeast, but not adequate to detect trends.

Knowledge of Factors Limiting Populations in Alaska (-10 to 10) 2

No subspecies specific information, likely same as species: the population ecology of song sparrows has been extensively studied on Mandarte Island in southern British Columbia and in other parts of its range (reviewed in Arcese et al. 2002; Chase et al. 2005). Winter survival may be negatively affected by adverse weather, limited food availability, and competition with other songbirds for food (Arcese et al. 2002; Johnson et al. 2018c). Meanwhile, reproductive success may be limited by food availability, brood parasitism, territoriality, and weather (Arcese et al. 2002; Chase et al. 2005). For example, a long-term study in Point Reyes, California, found a strong, positive correlation between annual rainfall and metrics of reproductive success (Chase et al. 2005). The importance of any one factor changes over time and space (Arcese et al. 2002; Chase et al. 2005) and studies are largely lacking for Alaska (though the genetics and evolution of Alaskan subspecies have been extensively studied e.g. Pruett and Winker 2005a; Pruett et al. 2008a; 2008b; Pruett and Winker 2010; Zink 2010). Some island populations were strongly affected by introduced predators, which have since been eradicated (Croll et al. 2016). Island populations may also be negatively affected by inbreeding, which reduces female reproductive success (Keller 1998). We rank this question as B until additional data are available for Alaskan populations.

Action Total: 8

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

Harvest:	None or Prohibited
Seasonal Occurrence:	Breeding
Taxonomic Significance:	Subspecies
% Global Range in Alaska:	>10%
% Global Population in Alaska:	≥75%
Peripheral:	No

References

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