

Song Sparrow

Melospiza melodia

Class: Aves
Order: Passeriformes

Review Status: Peer-reviewed

Version Date: 28 March 2019

Conservation Status

NatureServe:

Agency:

G Rank: G5

ADF&G: Species of Greatest Conservation Need

IUCN: Least Concern

Audubon AK:

S Rank: S5

USFWS:

BLM:

| Final Rank | | |
|---|--------------|--------------|
| Conservation category: IX. Blue | | |
| low status and low biological vulnerability and action need | | |
| <u>Category</u> | <u>Range</u> | <u>Score</u> |
| Status | -20 to 20 | -6 |
| Biological | -50 to 50 | -36 |
| Action | -40 to 40 | -4 |
| 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)

-6

Data are limited and only available from Alaska Landbird Monitoring Surveys and Breeding Bird Surveys. Analysis of long-term data from the latter surveys (1993 to 2015) suggest a stable trend (Handel and Sauer 2017; Table S02 in Sauer et al. 2017).

Distribution Trend in Alaska (-10 to 10)

0

Unknown.

Status Total: -6

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)

-10

Partners in Flight (2019) estimates an Alaskan population size of 910,000 individuals, with high uncertainty (95% CI: 460,000 - 1,500,000). We assume that there is >25,000 individuals in the state.

Range Size in Alaska (-10 to 10)

-8

Found year-round along the coastlines of the Alaska Peninsula, south to southeast Alaska and west to the western Aleutian Islands (Arcese et al. 2002; Ruthrauff et al. 2007). Potentially found as far north Kagati Lake on the Togiak National Wildlife Refuge (Petersen et al. 1991). Wintering range is most restricted and its estimated area is ~217,066 sq. km, calculated in GIS and based on a range

| | |
|--|--------------|
| map from ACCS (2017a). | |
| <i>Population Concentration in Alaska (-10 to 10)</i> | -10 |
| Does not concentrate (Arcese et al. 2002). | |
| <i>Reproductive Potential in Alaska</i> | |
| <u>Age of First Reproduction (-5 to 5)</u> | -5 |
| Undocumented for Alaska, but elsewhere in North America, females breed at 1 year old (Hochachka 1990; Arcese et al. 2002). | |
| <u>Number of Young (-5 to 5)</u> | 1 |
| 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). | |
| <i>Ecological Specialization in Alaska</i> | |
| <u>Dietary (-5 to 5)</u> | -5 |
| 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). | |
| <u>Habitat (-5 to 5)</u> | 1 |
| 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: | -36 |
| <hr/> | |
| 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 |
| <hr/> | |
| <i>Management Plans and Regulations in Alaska (-10 to 10)</i> | 2 |
| Protected under the Migratory Bird Treaty Act (MBTA 1918). | |
| <i>Knowledge of Distribution and Habitat in Alaska (-10 to 10)</i> | -10 |
| Habitat associations and distribution are known from inventories and multi-species bird surveys throughout its range (e.g. Isleib and Kessel 1973; Gibson and Byrd 2007; Ruthrauff et al. 2007; Johnson et al. 2008b). Additional surveys are needed to determine extent of breeding range at the northern limit of its range in southwest Alaska (Petersen et al. 1991). The range extent and migratory status of subspecies have been described (Patten and Pruett 2009). | |
| <i>Knowledge of Population Trends in Alaska (-10 to 10)</i> | 2 |
| Detected on some Breeding Bird Survey routes, but monitoring is not range-wide and is inadequate to detect trends (Handel and Sauer 2017). | |
| <i>Knowledge of Factors Limiting Populations in Alaska (-10 to 10)</i> | 2 |

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:

 -4

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

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|---------------------------------------|--------------------|
| Harvest: | None or Prohibited |
| Seasonal Occurrence: | Year-round |
| Taxonomic Significance: | Monotypic species |
| % Global Range in Alaska: | <10% |
| % Global Population in Alaska: | <25% |
| Peripheral: | No |

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