

Fox Sparrow, Yukon

Class: Aves
Order: Passeriformes

Passerella iliaca zaboria

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: ADF&G: IUCN: Audubon AK:

S Rank: USFWS: BLM:

Final Rank		
Conservation category: VII. Yellow		
low status and either high biological vulnerability or high action need		
<u>Category</u>	<u>Range</u>	<u>Score</u>
Status	-20 to 20	-10
Biological	-50 to 50	-38
Action	-40 to 40	12
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)

-10

Handel and Sauer (2017) show a positive trend in northwestern interior forest and Schmidt et al. (2013) report an overall 250% increase of population over 15 years (1995-2009) in Denali National Park.

Distribution Trend in Alaska (-10 to 10)

0

Unknown.

Status Total: -10

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

Handel et al. (2009) estimated 183,000 fox sparrows in Yukon-Charley Rivers National Preserve for 1999-2000. More recent population estimates are unknown.

Range Size in Alaska (-10 to 10)

-10

Breeds from the tree limit of northwestern Alaska (Gabrielson and Lincoln 1959) east to the interior (Kessel and Schaller 1960, Phillips et al. 2017), north of the Brooks Range along the Coleville River

(Kessel and Cade 1958, Irving 1960, Hohenberger et al. 1994), the Seward Peninsula (Kessel 1989), the southwest including the Alaska Peninsula (Murie 1959a, Irving 1960, Petersen et al. 1991, Gibson and Withrow 2015), and south-central (Gibson and Withrow 2015). > 400,000 sq. km. Overwinters in Great Plains of the U.S. south to Alabama and Georgia (Weckstein et al. 2002).

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

No subspecies specific information, likely same as species: does not concentrate during breeding and is not known to gather in large flocks during migration (Weckstein et al. 2002).

Reproductive Potential in Alaska

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

No subspecies specific information, likely same as species: unknown, but assumed to be <2 years (Johnson and Anderson 2004).

Number of Young (-5 to 5) 1

3-5 egg clutches (Gabrielson and Lincoln 1959, Petersen et al. 1991)

Ecological Specialization in Alaska

Dietary (-5 to 5) -5

No subspecies specific information, likely same as species: few data available for Alaska. Elsewhere in its range, fox sparrows are omnivorous and their diet changes with availability (reviewed in Weckstein et al. 2002). Consumes a variety of invertebrates (e.g. beetles, millipedes, spiders), seeds, and berries (Weckstein et al. 2002).

Habitat (-5 to 5) 1

Dense brush and thickets (Kessel and Cade 1958; Petersen et al. 1991; Hohenberger et al. 1994). Also tall brush bordering rivers, creeks, and marshy ponds (Kessel and Schaller 1960).

Biological Total: -38

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

Habitat association and distribution broadly known through multi-species bird surveys and observations (Irving 1960; Kessel and Schaller 1960; Kessel 1989; Phillips et al. 2017). Although general distribution is known, range boundaries are poorly understood, especially on the Alaska Peninsula where *P. i. unalaschcensis* also breeds.

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

Monitored in the northwest interior (Handel and Sauer 2017), but not throughout state-wide range.

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

No subspecies specific information, likely same as species: very little is known about the factors that limit its population dynamics in Alaska or elsewhere. Potential factors include heavy snow on breeding grounds, inclement weather during migration or winter, nest predation, and competition (Johnson and Anderson 2004; Johnson et al. 2018c; Visty et al. 2018), but few data exist to support or refute these suggestions. Analyses of long-term data (1995-2013) from Denali National Park found that fox sparrows have expanded their distribution to include both lower and higher elevation

areas (Mizel et al. 2016), which may account for the observed increased in fox sparrow abundance in the park (Schmidt et al. 2013; Mizel et al. 2016). Using a related dataset, Mizel et al. (2017) also noticed that there was less variation between individuals in the timing of arrival on breeding grounds. Additional research is needed to understand what is driving this pattern. One explanation proposed by the authors is that population increases may have intensified competition for breeding territories. Several papers have considered the evolution and genetics of fox sparrow species and subspecies (e.g. Burns and Zink 1990; Zink 1994; Zink and Weckstein 2003).

Action Total: 12

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:	25-74%
Peripheral:	No

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