Arctic Warbler

Phylloscopus borealis

Class: Aves
Order: Passeriformes

Review Status: Reviewed (Alaska) **Version Date:** 15 February 2021

Conservation Status

NatureServe:	*Agency:*		
G Rank: G5	ADF&G: Species of Greatest Conservation Need	IUCN: Least Concern	Audubon AK:
S Rank: S5B	USFWS:	BLM:	

Final Rank

Conservation category: **V. Orange**

unknown status and either high biological vulnerability or high action need

Category	Range	Score
Status	-20 to 20	0
Biological	-50 to 50	-32
Action	-40 to 40	24

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) -10

PIF (2019) estimates that Alaska population to be >25,000.

Range Size in Alaska (-10 to 10) -10

Breeds in western Alaska and in the mountains of central Alaska from the Alaska Range north to Wainwright; largely absent from the non-mountainous interior and eastern parts of the state (Benson et al. 2000; Lowther and Sharbaugh 2020). Estimated range is ~630,000 sq. km, based on range map from ACCS (2017a).

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

Does not concentrate (Lowther and Sharbaugh 2020).

Reproductive Potential in Alaska

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

Unknown, but suspected to be one year (Lowther and Sharbaugh 2020).

Number of Young (-5 to 5) 1

Females lay one brood per year, which typically ranges from 5 to 7 eggs (Price and Beck 1989; Ring et al. 2005; Lowther and Sharbaugh 2020). Ring et al. (2005) reported an average clutch size of 5.9 eggs for a study population in the eastern Alaska Range.

Ecological Specialization in Alaska

Dietary (-5 to 5) 1

Consumes a variety of insects that are either captured in-flight or by gleaning from shrubs; prey items include mosquitoes, moths, ants, and small beetles (Ring et al. 2005; Lowther and Sharbaugh 2020). Because invertebrates are an ephemeral and potentially unpredictable food source, we rank this question as B- Moderately adaptable.

Habitat (-5 to 5) 1

Associated with shrub habitats. In Alaska, typically found in shrub thickets near riparian zones or at shrubline in high-elevation areas; shrub species are usually Salix or Betula (Price and Beck 1989; Cotter and Andres 2000a; Hagelin et al. 2010). Also occurs in spruce or mixedwood forests with shrubby understories (Petersen et al. 1991; Cotter and Andres 2000a). In interior Alaska, densities are higher in open shrub compared to dense shrub habitats (Hagelin et al. 2010); the opposite appears to be true in western Alaska (Cotter and Andres 2000a). Nests are constructed on the ground in grass or moss near or underneath shrubs of various heights (Price and Beck 1989; Hagelin et al. 2010; Lowther and Sharbaugh 2020).

Biological Total: -32

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 associations and range generally understood from multi-species bird surveys (e.g. Petersen et al. 1991; Cotter and Andres 2000a; Thompson et al. 2016; Phillips et al. 2017) and species-specific studies (Ring et al. 2005; Hagelin et al. 2010).

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

Not currently monitored.

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

Factors that limit populations in Alaska remain speculative. Some studies have been conducted but it is uncertain to what extent results are generalizable to the larger population. Rates of nest predation appear to be low (Price and Beck 1989; Ring et al. 2005). Habitat quality may influence nest success: Hagelin et al. (2010) reported higher nest success in open shrub than in closed shrub habitats, but this relationship was not consistent across years. The researchers also noted high levels of blowfly parasitism; while they did not observe an effect of parasitism on nest success, additional studies on this topic might be warranted. Additional information is needed to understand how this species will response to climate change in Alaska. There is some evidence to suggest that this species' distribution has shifted since the 1990s in response to climate change and shrub expansion into

alpine areas (Mizel et al. 2016). Unlike other subarctic passerines that breed in Denali National Park, Arctic Warblers do not appear to shift their arrival times on breeding grounds in response to changes in environmental conditions (Mizel et al. 2017). The taxonomy of this species has been well-studied in recent years (Alström et al. 2011; Saitoh et al. 2012; Withrow et al. 2016); additional research is needed to determine the range of Phylloscopus examinandus in Alaska.

Action Total: 24

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:	Monotypic species
% Global Range in Alaska:	<10%
% Global Population in Alaska:	<25%
Peripheral:	No

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