

Northern Shrike

Lanius borealis

Class: Aves

Order: Passeriformes

Review Status: Peer-reviewed

Version Date: 31 August 2020

Note: Previously known as *Lanius excubitor*.

Conservation Status

Table 1 Conservation status according to state, national, and international organizations and agencies.

Organization	Rank
NatureServe	G5/S4BS4N
ADF&G	Species of Greatest Conservation Need
IUCN	Least Concern
Audubon AK	Watch

Final Rank

Conservation Category: **II. Red**

High status and either high biological vulnerability or high action need

Table 2 ASRS categorical scores. Higher numerical scores denote greater concern.

Category	Range	Score
Status	-20 to 20	6
Biological	-50 to 50	-26
Action	-40 to 40	16

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).

Population Trend in Alaska (-10 to 10)

Across the U.S., Northern Shrike populations are estimated to have declined by 14% from 1970-2014 (Warnock 2017c). According to Sauer et al. (2017), the population in Alaska is experiencing a non-significant decline of -2.1% per year (95% CI: -6.7, 3.3); it is considered poorly monitored. We tentatively score this question as B- Suspected declines.

Score: 6

Distribution Trend in Alaska (-10 to 10)

Unknown.

Score: 0

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).

Population Size in Alaska (-10 to 10)

Unknown. PIF (2019) does not include an estimate of population size in its most recent database, likely because such data are unavailable.

Score: 0

Range Size in Alaska (-10 to 10)

Breeds throughout Alaska except for most areas north of the Brooks Range (Paruk et al. 2020). Winter range is more restricted and includes Southeast and southcentral Alaska west to the central Aleutian Islands (Paruk et al. 2020). Size of winter range is 145,000 sq. km, estimated in GIS and based on range map from ACCS (2017a).

Score: -8

Population Concentration in Alaska (-10 to 10)

Does not concentrate.

Score: -10

Reproductive Potential in Alaska

Age of First Reproduction (-5 to 5)

Unknown for Alaska. Elsewhere in their range, Northern Shrike breed within their first year (Paruk et al. 2020).

Score: -5

Number of Young (-5 to 5)

Few data available. In arctic Alaska, clutch size ranged from 6-9 eggs, with a mean of 7.6 (n=23; Cade and Swem 1995, qtd. In Paruk et al. 2020). Elsewhere in North America, a clutch of 4 eggs seems more common (Paruk et al. 2020). Lays a single brood, though renesting attempts are possible in the event of clutch failure (Paruk et al. 2020).

Score: 1

Ecological Specialization in Alaska

Dietary (-5 to 5)

In the summer, consumes a variety of arthropods and insect larvae including spiders, grasshoppers, beetles, true flies, and hymenopterans (Paruk et al. 2020). In the winter, consumes small birds and mammals (Paruk et al. 2020). Because invertebrates are an ephemeral and potentially unpredictable food source (Nebel et al. 2010), we rank this question as B- Moderately adaptable with key requirements common.

Score: 1

Habitat (-5 to 5)

Breeds in taiga and taiga-tundra transitional zones; within these broad habitat types, Northern Shrike inhabit shrub thickets, open forests (coniferous or mixedwood), wetlands, and forest edges (Isleib and Kessel 1973; Johnson and Herter 1989; Kessel 1989; Paruk et al. 2020). Nests are built on branches of trees and shrubs (Paruk et al. 2020). Winter habitat in Alaska is not well-documented.

Score: -5

Biological Total: -26

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 to lack of knowledge or conservation action. Action scores range from -40 (lower needs) to 40 (greater needs).

Management Plans and Regulations in Alaska (-10 to 10)

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

Score: 2

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

Breeding range is captured during multi-species bird surveys (Isleib and Kessel 1973; Tibbitts et al. 2006; Phillips et al. 2017; Savage et al. 2018; Amundson et al. 2018), however, this species is rarely detected, which precludes a robust understanding of habitat associations. Little is known about winter range and habitat associations in particular.

Score: 2

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

Although detected during Breeding Bird Surveys, this species is considered "poorly monitored" in Alaska and data are inadequate for estimating statewide population trends (Sauer et al. 2017).

Score: 2

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

Little is known about the factors that limit the population size and distribution of Northern Shrikes in Alaska. Few data are available elsewhere in their range; however, some researchers have suggested that population densities are affected by winter survival as mediated through food availability and weather (Paruk et al. 2020). Additional research is needed to identify major limiting factors and understand how they affect population dynamics, including the cyclical or irruptive patterns that have been observed in some populations (Paruk et al. 2020).

Score: 10

Action Total: 16

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: Year-round

Taxonomic Significance: Monotypic species

% Global Range in Alaska: >10%

% Global Population in Alaska: 25-74%

Peripheral: No

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