

Horned Lark

Eremophila alpestris

Class: Aves

Order: Passeriformes

Review Status: Peer-reviewed

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Conservation Status

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

Organization	Rank
NatureServe	G5/S5B
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	-28
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)

Unknown for Alaska but suspected to be declining. Data from Breeding Bird Survey (BBS) suggest that North American populations have declined by 65% from 1970-2014 (Rosenberg et al. 2016a). It is worth noting, however, that BBS trends are from more southern populations that are mostly associated with agricultural areas. Declines in these areas may be driven by factors that do not exist in Alaska or in high-elevation populations. For instance, a well-studied, high-elevation population near Smithers, B.C. has a stable trend (Camfield et al. 2010).

Nevertheless, the Horned Lark is listed as a "Common species suspected to be declining" by Audubon Alaska (Warnock 2017c) and we think that the magnitude of the decline warrants a cautionary rating.

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, but suspected large. Population estimates are large but have high uncertainty as this species is not commonly encountered during surveys. PIF (2019) estimates the Alaska population at 220,000, with high uncertainty (95% CI: 9,600-590,000). Handel et al. (2009) estimated a population size of 93,000 (95% CI: 61,000-141,000) for the Yukon-Charley Rivers National Preserve, which encompasses only a small part of its range in Alaska.

Score: -6

Range Size in Alaska (-10 to 10)

Breeds throughout most of Alaska, from the western Aleutian Islands east to the Canadian border and from southcoastal Alaska north to the Arctic coastal plain (Beason 2020). It is considered common in central Alaska, uncommon in western and northern Alaska, and rare in southwestern and southcoastal Alaska (Armstrong 2008). Estimated range is >400,000 sq. km, based on range map from ACCS (2017a).

Score: -10

Population Concentration in Alaska (-10 to 10)

Does not concentrate.

Score: -10

Reproductive Potential in Alaska

Age of First Reproduction (-5 to 5)

No data on breeding age in Alaska. Elsewhere, thought to begin breeding at 1 year old (Beason 2020).

Score: -5

Number of Young (-5 to 5)

Typically lays a single clutch size ranging from 3-6 eggs (Kessel 1989; Camfield et al. 2010; Gibson 2011). For high-elevation populations near Smithers, B.C., Camfield et al. (2010) noted a mean clutch size of 3.61 (SD = 0.07) and low instances of multiple broods or replacement nests.

Score: 1

Ecological Specialization in Alaska

Dietary (-5 to 5)

Few data available. Adults consume insects, berries, and seeds; the proportion of these items in the diet varies seasonally (Beason 2020). Young feed exclusively on insects (Kessel 1989; Beason 2020). There is some evidence to suggest that individuals may exhibit a narrower dietary niche breadth than the population as a whole (Rotenberry 1980). Until additional information is available, we rank this species as B- Moderately adaptable.

Score: 1

Habitat (-5 to 5)

Specific habitat associations are not well-known. During the breeding season, it occupies dry, dwarf-shrub tundra in subalpine, alpine, and arctic systems (Johnson and Herter 1989; Kessel 1989; Gibson 2011). Associated with barren ground including bare soils and rock (Johnson and Herter 1989; Beason 2020). These habitats are common in Alaska, and we therefore rank this question as B.

Score: 1

Biological Total: -28

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)

Distribution is broadly known from multi-species surveys (e.g., Petersen et al. 1991; Tibbitts et al. 2006; Handel et al. 2009; Amundson et al. 2018). Habitat associations have been briefly described (Johnson and Herter 1989; Kessel 1989; Gibson 2011). Additional research is needed to determine the migratory routes and breeding grounds of the Alaska population.

Score: 2

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

Not currently monitored.

Score: 10

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

Some knowledge of limiting factors. Outside of Alaska, populations increased in the early 20th century in response to humans converting forests to agricultural lands. Over the past 5 decades, however, populations have decreased in some parts of the contiguous U.S. as agricultural lands have been abandoned and subsequently reforested (Beason 2020). Habitat degradation is an unlikely threat for populations in Alaska, where populations occur in remote alpine and tundra habitats. Much of our knowledge about northern and high-elevation populations come from work

on a population near Smithers, B.C. In this population, researchers noted that offspring development was most affected by inclement weather and maternal condition (de Zwaan et al. 2019a; 2020). For example, mass and size traits in nestlings were negatively correlated to extreme cold events and multi-day storms (de Zwaan et al. 2020). Abundant food supply and comparatively low rates of nest depredation may allow high-elevation populations to compensate for the shorter breeding season (Camfield et al. 2010). Finally, flexible migration strategies and spring staging areas may be critical components of the annual life-cycle for this high-elevation population (de Zwaan et al. 2019b); in Alaska, additional research is needed to determine birds' migratory routes and breeding grounds. Potential threats include climate change on wintering grounds and on breeding grounds in Alaska, where tall shrubs are expanding into alpine and tundra habitats.

Score: 2

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: Breeding

Taxonomic Significance: Monotypic species

% Global Range in Alaska: <10%

% Global Population in Alaska: <25%

Peripheral: No

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