

Hoary Redpoll

Acanthis hornemanni

Class: Aves

Order: Passeriformes

Review Status: Peer-reviewed

Version Date: 24 June 2020

Conservation Status

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

Organization	Rank
NatureServe	G5/S5
ADF&G	Species of Greatest Conservation Need

Final Rank

Conservation Category: **VI. Yellow**

Low status and high biological vulnerability and 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	-38
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)

In Alaska, estimated to be increasing by 25.2% per year (95% CI = 8.3%, 51.7%) (Sauer et al. 2017, Table S2). The credibility score associated with these estimates is "P" = "poorly monitored". To account for this uncertainty, we rank this question as D- Suspected to be increasing.

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)

Uncertain, but likely >25,000 given its widespread distribution, relative commonness in many parts of its range, and the sighting of large groups of individuals (Cotter and Andres 2000a; Knox and Lowther 2000a; Tibbitts et al. 2006; Amundson et al. 2018).

Score: -10

Range Size in Alaska (-10 to 10)

Breeds on the Arctic Coastal Plain (Knox and Lowther 2000a), along Alaska's western coast south to the Alaska Peninsula (Saracco et al. 2007; Amundson et al. 2018), and on the Aleutian Islands (Gibson and Byrd 2007). Breeders on the Arctic Coastal Plain migrate south to the coast or to interior Alaska (Irving 1960; Knox and Lowther 2000a). Breeding range is >400,000 sq. km, estimated in a GIS and based on a range map from ACCS (2017a).

Score: -10

Population Concentration in Alaska (-10 to 10)

Can form small flocks but does not concentrate at specific spatial locations (Knox and Lowther 2000a).

Score: -10

Reproductive Potential in Alaska

Age of First Reproduction (-5 to 5)

Can breed at 1 year (Troy and Shields 1979; Knox and Lowther 2000a).

Score: -5

Number of Young (-5 to 5)

3-5 eggs per clutch (Maher 1959; Troy and Shields 1979; Kessel 1989). There is some evidence to suggest that females can produce two broods during a summer, but additional data are needed to confirm this idea and determine its frequency (Maher 1959; Riggenberg and Winker 2015; but see Troy and Shields 1979).

Score: 1

Ecological Specialization in Alaska

Dietary (-5 to 5)

Feeds predominantly on seeds from a variety of plants including birch (*Betula sp.*), alder (*Alnus sp.*), spruce (*Picea sp.*), fireweed (*Chamerion angustifolium*), goosefoot (*Chenopodium sp.*), and graminoids (White and West 1977; Kessel 1989; Knox and Lowther 2000a). In the summer, about 20-25% of its diet is comprised of invertebrates such as flies, caterpillars, and spiders (White and West 1977; Knox and Lowther 2000a).

Score: -5

Habitat (-5 to 5)

In Alaska, typically breeds in low and tall shrub habitats, especially willow and alder, within tundra, forests, and coastal areas (Troy and Shields 1979; Petersen et al. 1991; Knox and Lowther 2000a). Has been reported from a range of elevations up to 1300 m (Knox and Lowther 2000a). Nests are placed on low branches of shrubs or on the ground within the shrub (Maher 1959; Kessel 1989). Foraging and non-breeding habitat is more general and includes meadows, open forests, and urban areas (Kessel 1989; Knox and Lowther 2000a; Gibson and Byrd 2007).

Score: 1

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).

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)

Broad range and habitat associations are known through multi-species bird surveys (Tibbitts et al. 2006; Saracco et al. 2007; Phillips et al. 2017; Amundson et al. 2018). However, its range is not well-defined because it is difficult to distinguish between the common and hoary redpoll.

Score: 2

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

Monitored in parts of its range through the Breeding Bird Survey, though it is considered to be "poorly monitored" in Alaska (Sauer et al. 2017). Reliable assessments of population trends are further complicated by the facts that common and hoary redpolls can be difficult to distinguish in the field, and both can exhibit irruptive movement patterns (Troy 1983; Knox and Lowther 2000a). To account for these uncertainties, we rank this question as B- Statewide monitoring inadequate to detect trend.

Score: 2

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

Little is known about the factors that limit this species' population in Alaska or elsewhere. Seed abundance may influence certain aspects of redpoll ecology e.g., by contributing to irruptive movement patterns (Troy 1983; Knox and Lowther 2000a). In contrast, a study in Fairbanks by Ringgenberg and Winker (2015) found no relationship between the production of young and last year's seed crop. Additional studies are also needed to determine the effects of climate change, which is expected to decrease habitat slightly by 2100 (Marcot et al. 2015).

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%

Peripheral: No

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