# **Bohemian Waxwing**

Bombycilla garrulus

Class: Aves

Order: Passeriformes

Review Status: Peer-reviewed

Version Date: 31 August 2020

## **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                         |  |

## **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)

Data from the Breeding Bird Survey (BBS) for Alaska suggest a decline of -0.6% per year, with high uncertainty (95% CI: -4.5, +4.5). Long-term trends for the core BBS region also indicate possible declines (Sauer et al. 2017).

Score: 6

Distribution Trend in Alaska (-10 to 10) Unknown.

> Score: 0 Status Total: 6

Score: -8

Score: -10

Score: -3

Score: 1

### Ecological Specialization in Alaska

#### Dietary (-5 to 5)

Feeds primarily on sugary fruits including berries from ornamental trees, mountain ash, juniper, and ericaceous shrubs such as highbush cranberries (Witmer 2020; Gibson 2011). Diet changes seasonally to include tree sap in the spring and insects in the summer (Witmer 2020).

Ranges from 2-6 eggs, with 4 or 5 being the most common (Witmer 2020). Can lay a

Score: 1

#### Habitat (-5 to 5)

During the breeding season, associated with open coniferous and mixedwood forests (Cotter and Andres 2000a; Gibson 2011; Witmer 2020). An abundance of berry-producing plants (e.g., dwarf shrubs) is likely an important habitat component (Spindler and Kessel 1980; Witmer

## **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)

PIF (2019) estimates the Alaska population to be 540,000 (95% CI: 270,000-920,000).

#### Range Size in Alaska (-10 to 10) During breeding, occurs from southcentral Alaska and the Alaska Peninsula east to Canada and

north to the southern end of the Seward Peninsula (Witmer 2020). Winter range is more restricted. It includes Southeast Alaska north to Southcentral Alaska and parts of central Alaska (Witmer 2020). Estimated size of winter range is 187,500 sq. km, based on range map from ACCS (2017a).

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

Often seen in large flocks during the non-breeding season (Gibson 2011), however, individuals do not concentrate at specific or predictable sites. Given population size, number of sites is likely >250 at any point in time. We therefore rank this question as D- Does not concentrate.

**Reproductive Potential in Alaska** 

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

Number of Young (-5 to 5)

Little data available but thought to start at 2 years old (Witmer 2020).

replacement clutch if the first one is lost (Gibson 2011).

2020). Habitat associations are more specific during the breeding season than during the nonbreeding season (Witmer 2020).

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).

<u>Management Plans and Regulations in Alaska (-10 to 10)</u> Protected under the Migratory Bird Treaty Act (MBTA 1918).

Score: 2

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

Habitat associations and range distribution broadly known through multi-species surveys and descriptions (Petersen et al. 1991; Tibbitts et al. 2006; Hannah et al. 2003; Phillips et al. 2017. Specific habitat requirements for Alaska are not well-known.

Score: 2

Knowledge of Population Trends in Alaska (-10 to 10) Detected during the Breeding Bird Survey, however, data do not cover its entire range and are

inadequate for detecting statewide 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 distribution or abundance in Alaska or elsewhere. Additional research is needed e.g., to determine specific habitat requirements, mortality factors, availability of key dietary items, and effects of weather and climate change.

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

## References

- Alaska Center for Conservation Science (ACCS). 2017a. Wildlife Data Portal. University of Alaska Anchorage. Available online: http://aknhp.uaa.alaska.edu/apps/wildlife
- Cotter, P. A., and B. A. Andres. 2000a. Breeding bird habitat associations on the Alaska breeding bird survey. Information and Technology Report USGS/BRD/ITR- 2000-0010, Biological Resource Division, U.S. Geological Survey, Springfield, VA, USA.
- Gibson, D. D. 2011. Nesting shorebirds and landbirds of interior Alaska. U.S. Geological Survey Contract Order No. G10PX02562. Prepared by AVESALASKA, Ester, AK, USA. DOI: 10.3996/062017-JFWM-050.S11
- Hannah, K. C., A. R. Ajmi, and T. R. Walker. 2003. Distribution and abundance of landbirds in the Tanana Valley State Forest, Alaska 2002-2003. Alaska Bird Observatory, Fairbanks, AK, USA.
- Migratory Bird Treaty Act (MBTA). 1918. U.S. Code Title 16 §§ 703-712 Migratory Bird Treaty Act.
- Petersen, M. R., D. N. Weir, and M. H. Dick. 1991. Birds of the Kilbuck and Ahklun Mountain region, Alaska. North American Fauna 76:1-158.
- Phillips, L. M., C. L. McIntyre, J. D. Mizel, E. J. Williams, and G. M. Colligan. 2017. Monitoring passerine birds in the Central Alaska Network. Report NPS/CAKN/NRRS—2017/1478, National Park Service, Fort Collins, CO, USA.
- Partners in Flight (PIF). 2019. Population Estimates Database, version 3.0. Available online: http://pif.birdconservancy.org/PopEstimates. Accessed 09-April-2019.
- Sauer, J. R., D. K. Niven, K. L. Pardieck, D. J. Ziolkowski, and W. A. Link. 2017. Expanding the North American Breeding Bird Survey analysis to include additional species and regions. Journal of Fish and Wildlife Management 8(1):154–172. DOI: 10.3996/102015-JFWM-109
- Spindler, M. A., and B. Kessel. 1980. Avian populations and habitat use in interior Alaska taiga. Final report, University of Alaska Museum, Fairbanks, AK, USA.
- Tibbitts, T. L., D. R. Ruthrauff, R. E. Gill, Jr., and C. M. Handel. 2006. Inventory of montanenesting birds in the Arctic Network of National Parks, Alaska. Report NPS/AKARCN/NRTR-2006/02/, Arctic Network Inventory and Monitoring Program, National Park Service, Alaska Region, Fairbanks, AK, USA.
- Witmer, M. C. 2020. Bohemian Waxwing (*Bombycilla garrulus*), version 1.0. In Billerman, S. M., ed. Birds of the World. Cornell Lab of Ornithology, Ithaca, NY, USA. https://doi.org/10.2173/bow.bohwax.01

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