Dark-eyed Junco (oreg anus)

Class: Aves
Order: Passeriformes

Julco hyemalis oreg anus

Note: This assessment refers to this subspecies only. A species level report, which refers to all associated subspecies, is also available.

Review Status: Peer-reviewed
Version Date: 09 May 2019

Conservation Status

NatureServe: ADF&G: Species of Greatest Conservation Need
G Rank: G5T5
S Rank: USFWS:

Final Rank

Conservation category: IX. Blue
low status and low biological vulnerability and action need

<table>
<thead>
<tr>
<th>Category</th>
<th>Range</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>-20 to 20</td>
<td>-6</td>
</tr>
<tr>
<td>Biological</td>
<td>-50 to 50</td>
<td>-20</td>
</tr>
<tr>
<td>Action</td>
<td>-40 to 40</td>
<td>0</td>
</tr>
</tbody>
</table>

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).

Population Trend in Alaska (-10 to 10)

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

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.

Range Size in Alaska (-10 to 10)
Breeds in southeast Alaska north to Yakutat Bay (Gabrielson and Lincoln 1959; Andres et al. 2005). A portion of the breeding population overwinters in southcoastal and southeast Alaska (Nolan et al. 2002; Armstrong 2008), while the rest overwinters further south (Nolan et al. 2002). Breeding range

Score

-6

0

Status Total: -6

NatureServe: Species of Greatest Conservation Need
G Rank: G5T5
S Rank: USFWS:

Audubon AK:

BLM:

USFWS:

IUCN:

NatureServe:

BLM:

USFWS:

is most restricted and is estimated to be ~88,090 sq. km, based on range map from ACCS (2017a).

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

Does not concentrate (Nolan et al. 2002).

**Reproductive Potential in Alaska**

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

Breeds within its first year (Nolan et al. 2002).

**Number of Young (-5 to 5)**

Unknown for Alaska. Elsewhere in North American, clutch size ranges from 3 to 5 per clutch (Nolan et al. 2002). In northern parts of their range, lays only one clutch per year (Nolan et al. 2002).

**Ecological Specialization in Alaska**

**Dietary (-5 to 5)**

Unknown for Alaska. Elsewhere in North America, juncos are omnivorous and consume mainly seeds and invertebrates including spiders, wasps, ants, and beetles (Nolan et al. 2002). The percent of vegetable versus plant matter in their diet appears to change seasonally with availability (Nolan et al. 2002).

**Habitat (-5 to 5)**

Nests on the ground and forages in a variety of forest types, stand ages, and disturbance regimes (Dellasala et al. 1996; Lance and Howell 2000; Cotter and Andres 2000a; Matsuoka et al. 2001). Prefers open canopy forests and tends to avoid areas with a thick shrub understory (Matsuoka et al. 2001; Matsuoka and Handel 2007); however, this species is occasionally detected in tall shrub habitat (Spindler and Kessel 1980; Kessler and Kogut 1985; Cotter and Andres 2000a).

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

Commonly detected during multi-species surveys in southeast and southcoastal Alaska, with knowledge of habitat associations (e.g. Kessler and Kogut 1985; Dellasala et al. 1996; Willson and Gende 2000; Johnson et al. 2008b).

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

Few studies have considered the population dynamics of J. hyemalis in Alaska or elsewhere. Some factors have been proposed, including nest predation and weather, but limiting factors have not been identified. In southcentral Alaska, Matsuoka and Handel (2007) found that predation was the main cause of nest failure. Predation was mediated by spruce bark beetle infestations. Nest success was lowest in forest stands that were least affected by spruce bark beetle (Matsuoka and Handel 2007).
Alaska Species Ranking System - Dark-eyed Junco (oceanus)

They attributed this difference to the higher rates of nest predation by red squirrels, which are closely associated with intact spruce forests (Matsuoka et al. 2001; Matsuoka and Handel 2007). Spruce bark beetle and other disturbances such as logging may also increase local abundances of dark-eyed juncos, which prefer open canopy forests (Dellasala et al. 1996; Lance and Howell 2000). Willson and Gende (2000) reported high rates of nesting success in southeast Alaska, but did not identify factors that may influence reproductive success. Inclement weather on overwintering grounds can lead to annual fluctuations in population size (reviewed in Nolan et al. 2002). In Alaska, climate change may affect timing of arrival on breeding grounds (Mizel et al. 2017) and may increase suitable habitat if the treeline moves further north or higher up, as predicted by climate models (Marcot et al. 2015; Mizel et al. 2016). Studies elsewhere in this species' range have reported geographic differences in reproductive parameters across elevational gradients, potentially resulting from differences in the length of the breeding season and in food availability (Bears et al. 2009; LaBarbera and Lacey 2018). In Alberta's Rocky Mountains, dark-eyed juncos breeding at higher elevations had lower reproductive success, but produced higher-quality offspring (Bears et al. 2009). Timing of snowmelt, which also exhibits an elevational gradient, may also affect clutch size and phenology (Smith and Andersen 1985; DeSante 1990). It is unknown whether similar differences in reproductive parameters exist across latitudinal gradients, though Nolan et al. (2002) documented that double-brooding only occurs in southern parts of their global range.

Supplemental Information - variables do not receive numerical scores. Instead, they are used to sort taxa to answer specific biological or management questions.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvest</td>
<td>None or Prohibited</td>
</tr>
<tr>
<td>Seasonal Occurrence</td>
<td>Year-round</td>
</tr>
<tr>
<td>Taxonomic Significance</td>
<td>Subspecies</td>
</tr>
<tr>
<td>% Global Range in Alaska</td>
<td>&gt;10%</td>
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<tr>
<td>% Global Population in Alaska</td>
<td>25-74%</td>
</tr>
<tr>
<td>Peripheral</td>
<td>No</td>
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</table>

References


