

Long-billed Dowitcher

Limnodromus scolopaceus

Class: Aves
Order: Charadriiformes

Review Status: Peer-reviewed

Version Date: 07 March 2019

Conservation Status

NatureServe: Agency:

G Rank: G5 ADF&G: Species of Greatest Conservation Need IUCN: Least Concern Audubon AK:

S Rank: S5B USFWS: BLM:

Final Rank		
Conservation category: V. Orange		
unknown status and either high biological vulnerability or high action need		
Category	Range	Score
Status	-20 to 20	0
Biological	-50 to 50	-36
Action	-40 to 40	12
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).

Score

Population Trend in Alaska (-10 to 10)

0

Unknown (Andres et al. 2012a; ASG 2019).

Distribution Trend in Alaska (-10 to 10)

0

Unknown.

Status Total: 0

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).

Score

Population Size in Alaska (-10 to 10)

-10

There are an estimated 490,000 breeding birds in Alaska (ASG 2019).

Range Size in Alaska (-10 to 10)

-8

Breeds on the Arctic Coastal Plain from the Canadian border west to Utqiagvik and south along the western coast to Hooper Bay (Yukon-Kuskokwim Delta; Takekawa and Warnock 2000). Breeding range is ~262,000 sq. km., calculated in GIS and based on range map from ACCS (2017a). Does not overwinter in Alaska. Wintering range is not well-known, but is thought to extend along the eastern Pacific coast from southern British Columbia to Central America (Takekawa and Warnock 2000).

Population Concentration in Alaska (-10 to 10)

-10

The Teshekpuk Lake Special Area supports >32,000 individuals during the breeding season (Andres

et al. 2012b). Flocks of hundreds to thousands of individuals have also been noted during migration. Important sites include: the Sitkine River Delta (Johnson et al. 2008b), Yakutat (Andres and Browne 1998), Prince William Sound (Isleib and Kessel 1973; Warnock et al. 2001), Cook Inlet (Gill and Tibbitts 1999), and Bristol Bay (Gill et al. 1981). Other sites supporting very large numbers of individuals have not been reported, and we therefore assume that number of sites >250.

Reproductive Potential in Alaska

Age of First Reproduction (-5 to 5)

-5

Unknown, but probably between 1 and 2 years old, as assumed for the short-billed dowitcher (Jehl et al. 2001).

Number of Young (-5 to 5)

1

Lays a single clutch per year with 3 to 4 eggs (Kessel 1989; Takekawa and Warnock 2000). Sexually mature females may not breed every year.

Ecological Specialization in Alaska

Dietary (-5 to 5)

1

Few data available. On breeding grounds, feeds primarily on chironomid larvae (Takekawa and Warnock 2000). To a lesser extent, feeds on other terrestrial invertebrates such as beetles and worms, and plant matter (Takekawa and Warnock 2000). During migration, likely consumes marine invertebrates such as bivalves, crustaceans, and larval insects (Takekawa and Warnock 2000).

Habitat (-5 to 5)

-5

Nests in tundra habitats spanning a range of elevation and distances from the coast (Cotter and Andres 2000b; Andres et al. 2012b; Saalfeld et al. 2013b). Appears to prefer wetter habitats such as lowland wet meadows and marshes (Taylor et al. 2010; Cunningham et al. 2016), though it has also been observed nesting at high densities in dry habitats (Cotter and Andres 2000b; Liebezeit et al. 2011). During migration, found in coastal and estuary habitats of various types e.g. mudflats, beaches, rocky shorelines, and marshes (Isleib and Kessel 1973; Gill et al. 1981; Kessel 1989; Johnson et al. 2008b).

 Biological Total: -36

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).

Score

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

-10

Protected under the Migratory Bird Treaty Act (MBTA 1918). Closed to recreational harvest (ADFG 2018e). Subsistence harvest is permitted, but is subject to closed seasons (AMBCC 2018).

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

2

Habitat associations and distribution are known through multi-species bird surveys, mostly conducted on the Arctic Coastal Plain (e.g. Brown et al. 2007; Johnson et al. 2007a; references in Habitat section). However, relatively little is known of its distribution in western Alaska (but see Kessel 1989). Though this species is often detected during migration surveys (refs. in Population Concentration section), additional work is needed to determine key stop-over sites and migration routes, especially for birds that migrate through interior Alaska (Takekawa and Warnock 2000; Warnock et al. 2001).

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

10

There is currently no monitoring program in place in Alaska that can provide data on population

trends. Recent efforts such as PRISM surveys in western and northern Alaska are promising (Bart et al. 2012; McCaffery et al. 2012), but this program is still in its infancy and multi-year data are not available. PRISM surveys have been used to obtain initial estimates of local population sizes (Bart et al. 2012; McCaffery et al. 2012). However, aspects of this species' biology make it difficult to obtain reliable estimates (Bart et al. 2012) and plots would have to be revisited in order to obtain trend data. Across North America, trends are difficult to determine because of high variation between counts and the difficulty of differentiating between short-billed and long-billed dowitchers (Andres et al. 2012a).

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

10

Little is known about the factors affecting long-billed dowitchers. Weiser et al. (2018b) documented low rates of nest survival, but limiting factors are not well-understood. Weiser et al. (2018b) found that survival rates were unrelated to the abundance of predators or of arvicoline rodents. In contrast, Saalfeld and Lanctot (2015) found that nest densities were higher in years of high lemming abundance, which would lend support to the alternative prey hypothesis. Mercury levels of breeding birds near Utqiagvik may be negatively affecting reproductive success (Perkins et al. 2016), but additional data are needed. Data on harvest rates are very limited. In Alaska, harvest surveys do not differentiate between the long-billed dowitcher and other small shorebirds (Naves 2015). Given the dowitcher's large population size and low harvest estimates, the impact of Alaskan subsistence harvest is likely low, but harvest rates on overwintering grounds are unknown.

Additional research is also needed to determine the impacts of climate change. On the Yukon-Kuskokwim Delta, long-billed dowitchers exhibited some flexibility in the timing of their arrival on breeding grounds, which was partially explained by variations in the timing of snowmelt and the extent of snow cover (Ely et al. 2018). However, weather variables had no effect on clutch size or daily survival rates (Weiser et al. 2018b). On overwintering grounds in California, there is some concern that climate change and anthropogenic activities may lead to a loss of wetland habitats (Barbaree et al. 2016; 2018), but the predicted effects of climate change on breeding habitat are equivocal (Marcot et al. 2015; Wauchope et al. 2017).

Action Total: 12

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

Harvest:	Not substantial
Seasonal Occurrence:	Breeding
Taxonomic Significance:	Monotypic species
% Global Range in Alaska:	>10%
% Global Population in Alaska:	Unknown
Peripheral:	No

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