

Common Raven (*principalis*)

Class: Aves
Order: Passeriformes

Corvus corax principalis

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: 06 February 2019

Conservation Status

NatureServe: Agency:

G Rank: ADF&G:

IUCN:

Audubon AK:

S Rank: USFWS:

BLM:

Final Rank		
Conservation category: IX. Blue		
low status and low biological vulnerability and action need		
<u>Category</u>	<u>Range</u>	<u>Score</u>
Status	-20 to 20	-11
Biological	-50 to 50	-36
Action	-40 to 40	-4
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)

-6

Both short-term and long-term trends indicate populations are stable in interior Alaska and increasing in southeast Alaska (Handel and Sauer 2017). Appears to have increased on the Arctic Coastal Plain in recent years (2003-2012; Stehn et al. 2013).

Distribution Trend in Alaska (-10 to 10)

-5

Industrial activity on the North Slope led to the erection of tall structures in the 1970s, which created suitable nesting habitat and an increase in the northern distribution of the Common Raven (Powell and Backensto 2009). Trends elsewhere in the state are unknown, but likely stable or increasing in response to human activity.

Status Total: -11

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

Unknown at subspecies level, but subspecies *C. c. principalis* is common and widely distributed in Alaska. PIF (2019) estimates that there are 430,000 common ravens in Alaska (95% CI: 320,000 - 570,000). We therefore assume population size of *C. c. principalis* is >25,000.

<i>Range Size in Alaska (-10 to 10)</i>	-10
<p>>400,000 sq. km. Found throughout Alaska from the North Slope to southeast Alaska, and from the Canadian border west to western Alaska (Gibson and Withrow 2015; ACCS 2017a).</p>	
<i>Population Concentration in Alaska (-10 to 10)</i>	-10
<p>Does not concentrate.</p>	
<i>Reproductive Potential in Alaska</i>	
<u>Age of First Reproduction (-5 to 5)</u>	-3
<p>Unknown, but likely between 2-4 years (Jollie 1976, qtd. in Boarman and Heinrich 1999).</p>	
<u>Number of Young (-5 to 5)</u>	1
<p>On the North Slope, average clutch size was 3.9 ± 1.4 young, with a range from 0 to 7 (Backensto 2010). Common ravens typically lay a single clutch per year, though replacement clutches are possible (Boarman and Heinrich 1999; Backensto 2010).</p>	
<i>Ecological Specialization in Alaska</i>	
<u>Dietary (-5 to 5)</u>	-5
<p>Generalist omnivore and scavenger (Kessel 1989). Common ravens on the North Slope and in western Alaska consume plant matter, small mammals (lemmings, voles), birds and eggs, fish, insects, and human food (Temple 1974; Kessel 1989; Powell and Backensto 2009; Lafferty et al. 2016). This varied diet is consistent with what has been documented elsewhere in the species' range (Boarman and Heinrich 1999).</p>	
<u>Habitat (-5 to 5)</u>	1
<p>Found in a variety of habitats including coniferous and deciduous forests, shrubland, tundra, coastlines, cities, and mountains (Boarman and Heinrich 1999; Cotter and Andres 2000a; Ruthrauff et al. 2007). Some habitat specialization as ravens require tall structures for nesting. Nests in trees and cliffs, as well as on anthropogenic structures such as telephone poles, buildings, and bridges (Kessel 1989; Boarman and Heinrich 1999; Gibson and Byrd 2007; Backensto 2010). The availability of nest sites is believed to have limited the distribution of Common Ravens on the North Slope prior to industrial development (Powell and Backensto 2009).</p>	
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

<i>Management Plans and Regulations in Alaska (-10 to 10)</i>	2
<p>Protected under the Migratory Bird Treaty Act (MBTA 1918).</p>	
<i>Knowledge of Distribution and Habitat in Alaska (-10 to 10)</i>	-10
<p>Regularly detected by multi-species surveys throughout Alaska, often with descriptions of habitat associations (e.g. White and Cade 1975; Van Hemert et al. 2006; Ruthrauff et al. 2007; Saracco et al. 2007; Booms et al. 2010b; Stehn et al. 2013; Handel and Sauer 2017). White and Cade (1971) and Backensto (2010) described nest site characteristics on the North Slope, while Baltensperger et al. (2013) built seasonal occupancy models to examine relationships between occurrence and human activities in Fairbanks.</p>	
<i>Knowledge of Population Trends in Alaska (-10 to 10)</i>	2
<p>Local population trends are captured by multi-species monitoring surveys such as Breeding Bird Survey (Handel and Sauer 2017), the Alaska Landbird Monitoring Survey, and waterfowl surveys on</p>	

the Arctic Coastal Plain (Stehn et al. 2013). Monitoring of raven nests was conducted on the North Slope from 2004-2011 (<http://nssi-test.gina.alaska.edu/catalog/entries/1158-bpxa-long-term-monitoring-raven>). However, given the raven's widespread distribution in Alaska, most of its range is not encompassed by these surveys.

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

2

On Alaska's North Slope, industrial development may have contributed to population increases by creating suitable nest sites (tall structures) and increasing food availability (Powell and Backensto 2009). Other researchers have noted similar increases in local abundance in response to increased food availability (e.g. landfills, roadkill) in human-occupied areas (White 2006; Baltensperger et al. 2013). The availability of human food may benefit populations by increasing juvenile (Webb et al. 2004; Kristan and Boarman 2007) or overwinter survival (Preston 2005; Peebles and Conover 2017). At the same time, these "food bonanzas" can be detrimental to a population if they are monopolized by non-breeding individuals (Heinrich 1988; Bijlsma and ten Seldam 2013 and references therein). Little is known about factors that limit raven populations in remote areas with little human influence.

Action Total: -4

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:	Subspecies
% Global Range in Alaska:	>10%
% Global Population in Alaska:	<25%
Peripheral:	No

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