

Black-footed Albatross

Phoebastria nigripes

Class: Aves

Order: Procellariiformes

Review Status: Peer-reviewed

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Conservation Status

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

Organization	Rank
NatureServe	G3G4/S3S4N
ADF&G	Species of Greatest Conservation Need
IUCN	Near Threatened
USFWS	Bird of Conservation Concern

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	-14
Action	-40 to 40	8

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 the late 19th and early 20th centuries, black-footed albatross experienced serious declines from overharvesting. The population has rebounded since this historic low, but current trends are uncertain and remain controversial (reviewed in USFWS 2011b). Counts at breeding colonies can vary greatly between years, and trends are variable across colonies (Arata et al. 2009; USFWS 2011b). While some studies suggest an overall stable or increasing trend, others point to more dramatic declines (reviewed in USFWS 2011b). We tentatively rank this question as 0.5 * C- Past declines + 0.5 * B- Suspected declines. This ranking should be revised as new data become available.

Score: 4

Distribution Trend in Alaska (-10 to 10)

Breeding range historically contracted due to large population declines; however, range size is increasing as the population recovers (Arata et al. 2009). Black-footed albatrosses have become more common on non-breeding grounds in the Bering Sea over the past 30-40 years (Kuletz et al. 2014).

Score: 2

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)

Unknown, but suspected large given the number of birds in the Northwestern Hawaiian Islands that are likely to enter Alaskan waters (Arata et al. 2009).

Score: -6

Range Size in Alaska (-10 to 10)

During the non-breeding season, occurs in the Gulf of Alaska and the Bering Sea (Awkerman et al. 2008; Suryan and Fischer 2010). Estimated range is >400,000 sq. km, based on satellite data from Suryan and Fischer (2010).

Score: -10

Population Concentration in Alaska (-10 to 10)

Nests in colonies in breeding range but does not concentrate in Alaska (Awkerman et al. 2008).

Score: -10

Reproductive Potential in Alaska

Age of First Reproduction (-5 to 5)

Age of first breeding for females has a mode of 7 and a mean of 8.6 years (Awkerman et al. 2008).

Score: 5

Number of Young (-5 to 5)

Lays a single egg per clutch per year, however, approximately 30% of the population skips breeding in any given year; this number varies among years and colonies (Awkerman et al. 2008; Arata et al. 2009). Given the high proportion of individuals that skip breeding, we rank this question as A- <1 offspring.

Score: 5

Ecological Specialization in Alaska

Dietary (-5 to 5)

Thought to consume mostly squid (*Gonatidae*, *Cranchiidae*), eggs of flying fish (*Exocoetidae*), as well as other marine invertebrates and fishes (Awkerman et al. 2008; Suryan and Fischer 2010; USFWS 2011b). Also scavenges mammalian and fish discards from fishing boats (USFWS 2011b).

Score: 1

Habitat (-5 to 5)

In Alaska, occurs in offshore marine waters, often in shelf areas with high prey concentrations. These areas are typically associated with specific oceanographic features including upwellings and submarine canyons (Suryan and Fischer 2010; Kuletz et al. 2014).

Score: 1

Biological Total: -14

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).

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)

Some knowledge of distribution and habitat associations in the Bering Sea and the Gulf of Alaska (Fischer et al. 2009; Kuletz et al. 2014). Additional research is needed to determine migratory patterns and breeding grounds.

Score: 2

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

Reproductive success and population trends have been monitored on several breeding colonies; however, overall population trends are hard to estimate because of high interannual and intercolony variation (Naughton et al. 2007; Arata et al. 2009). In Alaska, researchers have used long-term datasets to compare distribution and densities over time (Kuletz et al. 2014). The Alaskan population has not been surveyed across their entire Alaskan range or consistently over time, and there is little knowledge of where these birds breed.

Score: 2

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

Some knowledge of factors limiting population. Historically, overharvesting and the introduction of non-native predators led to severe local declines and extirpation (Naughton et al. 2007). Adult survival and juvenile survival rates are generally high, though juvenile survival rates and productivity appear to vary more from year to year (Naughton et al. 2007; USFWS 2011b). As with other seabirds, changes in ocean climate patterns, as well as increasing weather

anomalies, may have widespread implications on prey availability and therefore on several aspects of albatross ecology including chick survival and foraging distribution (COSEWIC 2007b). Although data are limited, fisheries bycatch is thought to be one of the most important sources of mortality for black-footed albatross (Naughton et al. 2007; Bakker et al. 2018). In general, changes in policies and fishing gears have helped reduce the number of mortalities, but see Melvin et al. (2019) for a discussion of increasing mortality trends in the last 14 years. Environmental contamination (e.g., organochlorines, heavy metals, plastics) is another source of mortality; additional data are needed to fully understand the scope of the issue and estimate mortality rates and other effects (Naughton et al. 2007).

Score: 2

Action Total: 8

Supplemental Information

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

Harvest: Substantial, regulations

Seasonal Occurrence: Nonbreeding

Taxonomic Significance: Monotypic species

% Global Range in Alaska: >10%

% Global Population in Alaska: 25-74%

Peripheral: No

References

- Arata, J. A., P. R. Sievert, and M. B. Naughton. 2009. Status assessment of Laysan and black-footed albatrosses, North Pacific Ocean, 1923–2005. Scientific Investigations Report 2009-5131, U.S. Geological Survey, Reston, VA, USA.
- Awkerman, J. A., D. J. Anderson, and G. C. Whittow. 2008. Black-footed Albatross (*Phoebastria nigripes*), version 1.0. In Poole, A. F., ed. Birds of the World. Cornell Lab of Ornithology, Ithaca, NY, USA. <https://doi.org/10.2173/bow.bkfalb.01>
- Bakker, V. J., M. E. Finkelstein, D. F. Doak, E. A. VanderWerf, L. C. Young, J. A. Arata, P. R. Sievert, and C. Vanderlip. 2018. The albatross of assessing and managing risk for long-lived pelagic seabirds. *Biological Conservation* 217:83–95.
- COSEWIC. 2007b. COSEWIC Assessment and Status Report on the Black-footed Albatross (*Phoebastria nigripes*) in Canada. Committee on the Status of Endangered Wildlife in Canada, Ottawa, ON, CAN.
- Fischer, J. B., R. A. Stehn, and G. Walters. 2009. Nest population and potential production of geese and Spectacled Eiders on the Yukon- Kuskokwim Delta, Alaska, 2009. U.S. Fish and Wildlife Service, Anchorage and Bethel, AK, USA.
- Kuletz, K. J., M. Renner, E. A. Labunski, and G. L. Hunt. 2014. Changes in the distribution and abundance of albatrosses in the eastern Bering Sea: 1975–2010. *Deep Sea Research Part II: Topical Studies in Oceanography* 109:282–292.
- Migratory Bird Treaty Act (MBTA). 1918. U.S. Code Title 16 §§ 703-712 Migratory Bird Treaty Act.

- Melvin, E. F., K. S. Dietrich, R. M. Suryan, and S. M. Fitzgerald. 2019. Lessons from seabird conservation in Alaskan longline fisheries. *Conservation Biology* 33(4):842–852.
- Naughton, M. B., M. D. Romano, and T. S. Zimmerman. 2007. A Conservation Plan for Black-footed Albatross (*Phoebastria nigripes*) and Laysan Albatross (*P. immutabilis*), version 1.0.
- Suryan, R. M., and K. N. Fischer. 2010. Stable isotope analysis and satellite tracking reveal interspecific resource partitioning of nonbreeding albatrosses off Alaska. *Canadian Journal of Zoology* 88(3):299–305.
- U.S. Fish and Wildlife Service (USFWS). 2011b. Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition to List the Black-footed Albatross as Endangered or Threatened; Proposed Rule. 76 Fed. Reg. 195, 7 October 2011.

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