Short-tailed Albatross

Phoebastria albatrus

Class: Aves

Order: Procellariiformes

Review Status: Peer-reviewed

Version Date: 23 December 2020

Conservation Status

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

Organization	Rank
NatureServe	G1/S1N
IUCN	Vulnerable
Audubon AK	Red
USFWS	Listed Endangered

Final Rank

Conservation Category: **VII. Yellow**

Low 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	4
Biological	-50 to 50	10
Action	-40 to 40	-20

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)

Historically experienced serious declines from overharvesting (USFWS 2020). The population is currently recovering, with the largest breeding colony on Tori-shima Island experiencing a 3-year running average growth rate greater than 6% for the last decade (USFWS 2020).

Score: 2

Distribution Trend in Alaska (-10 to 10)

Range previously contracted due to severe population declines. Currently, 84% of the global population breeds on a single island, Tori-shima (USFWS 2020). While translocation efforts

have been successful, recovery depends upon the establishment of new breeding colonies (USFWS 2020). Short-tailed albatrosses are also beginning to reoccupy their former range in the North Pacific Ocean, including in Alaskan waters (Kuletz et al. 2014; Orben et al. 2018b).

Score: 2

Status Total: 4

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)

Estimated number of breeding pairs is 1,011 (or 2,022 breeding adults) and the total global population is estimated at 7,365 (USFWS 2020). It is likely that >80% of birds, including young of the year and adult birds, visit Alaskan waters each year (Orben et al. 2018; R. Orben, Oregon State University, pers. comm.). Although the population appears to be recovering, current population size is <1% of historical numbers (USFWS 2008). We rank this question as "A" to highlight the extremely small population size relative to its size ~150 years ago.

Score: 10

Range Size in Alaska (-10 to 10)

During its non-breeding season, it occurs along the continental shelves of the North Pacific Ocean and the Sea of Okhotsk. In Alaska, their distribution includes the Gulf of Alaska, the Aleutian Island Chain, and the Bering Sea (Suryan and Fischer 2010; Orben et al. 2018b). Sightings in the Chukchi Sea are very rare (Day et al. 2013). Estimated range in Alaska is >400,000 sq. km, based on satellite telemetry data and distribution maps (Suryan and Fischer 2010; Orben et al. 2018b).

Score: -10

Population Concentration in Alaska (-10 to 10)

Outside of Alaska, 84% of breeding pairs breed on Tiro-shima Island; the remaining pairs breed on one of two island groups (USFWS 2020). In Alaska, Piatt et al. (2006) identified 8 "hotspots" along the Aleutian Islands and near underwater canyons in the Bering Sea where short-tailed albatross predictably and repeatedly aggregated. Notably, researchers in 2004 observed a large flock of ~200 birds observed near St. Matthews Canyon, which would have represented about ~10% of the world's total population at the time (Piatt et al. 2006).

Score: 2

Reproductive Potential in Alaska

Age of First Reproduction (-5 to 5)

Typically begins breeding at 6 years old (USFWS 2008).

Score: 1

Number of Young (-5 to 5)

Lays a single egg per clutch per year, however, as many as 25% of the population may skip breeding in any given year (USFWS 2008). Eggs are not replaced if destroyed.

Score: 5

Ecological Specialization in Alaska

Dietary (-5 to 5)

Most of its diet is comprised of squid from the family *Gonatidae* (Walker et al. 2015). To a lesser extent, eats crustaceans, fish, and fish eggs. Also known to scavenge and consume discarded fish waste from fisheries, similar to other albatrosses (USFWS 2008; Walker et al. 2015).

Score: 1

Habitat (-5 to 5)

At-sea distribution in Alaska changes depending on age (Orben et al. 2018b). In general, though, short-tailed albatross occur along continental shelves and shelf-break regions (Orben et al. 2018b). Within these regions, they seem to aggregate in areas with high prey concentrations, which are typically associated with specific oceanographic features such as passes, upwellings, submarine canyons (Piatt et al. 2006; Kuletz et al. 2014). Juveniles tend to have a broader distribution and exhibit less spatial fidelity than adults (Orben et al. 2018b).

Score: 1

Biological Total: 10

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)

Federally listed as Endangered under the U.S. Endangered Species Act in 2000. A recovery plan was published by the USFWS in 2008. The most recent 5-year review was completed in 2020.

Score: -10

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

In Alaska, at-sea distribution and habitat associations of juveniles and adults are well-known from boat surveys and satellite tracking (e.g., Fischer et al. 2009; Suryan and Fischer 2010; Kuletz et al. 2014; Orben et al. 2018b). Piatt et al. (2006) documented several marine hotspots (i.e., areas where short-tailed albatross predictably and reliably returned to) using survey data gathered over several decades. Suryan et al. (2007) and Orben et al. (2018b; 2021) used satellite telemetry data to study migratory routes and to infer extent of interaction with fisheries.

Score: -10

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

In Alaska, researchers have used long-term datasets to compare distribution and densities over time, however, birds are not surveyed across their entire Alaskan range or consistently over

time (Kuletz et al. 2014; USFWS 2020). Short-tailed albatross are monitored on their breeding grounds in Japan. Monitoring efforts on Tori-shima Island, where 84% of the global population breeds, are adequate for detecting trends and estimating population size (USFWS 2020). Since data on breeding grounds are the basis for determining population recovery, we rank this question as C- Adequate to detect trends.

Score: -2

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

Historically, overharvesting for feathers greatly reduced colony numbers (USFWS 2008). As the population recovered, researchers in recent decades have documented increased sightings in formerly occupied areas like the continental shelf of the eastern Bering Sea and the Sea of Okhotsk (Kuletz et al. 2014; Orben et al. 2018b). This non-breeding distribution likely reflects the availability of marine prey, as movements are associated with highly productive areas like upwellings (Piatt et al. 2006; Kuletz et al. 2014; Orben et al. 2018b). Like other long-lived seabirds, the short-tailed albatross population may be affected by changes in ocean climate patterns and increasing weather anomalies, which have widespread implications on marine food webs. Other potential threats include stochastic events, mortality from fisheries bycatch, and plastic ingestion. Because most of the world's population breed on a single island, Tiro-shima, stochastic events like the eruption of the volcano at Tiro-shima could have a devastating impact on the population; a minor eruption occurred during the post-breeding season in August 2002 (USFWS 2008). Additional research is needed to document mortality rates from interactions with fisheries (USFWS 2020; Orben et al. 2021), and to understand the effects of plastic ingestion on health (Donnelly-Greenan et al. 2018).

Score: 2

Action Total: -20

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: Year-round

Taxonomic Significance: Monotypic species

% Global Range in Alaska: >10%

% Global Population in Alaska: ≥75%

Peripheral: No

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