

Laysan Albatross

Phoebastria immutabilis

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	G3/S3N
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	4
Biological	-50 to 50	-14
Action	-40 to 40	4

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 early and mid-20th century, colonies experienced serious declines from overharvesting and military activity, but have since recovered (Awkerman et al. 2009). In Alaska, Kuletz et al. (2014) documented increased population densities in its non-breeding range based on data from 1975 to 2010.

Score: 2

Distribution Trend in Alaska (-10 to 10)

Range previously contracted due to population declines, though recent trends indicate increases in breeding range due to population recovery (Arata et al. 2009). In Alaska, Kuletz et al (2014) documented increases in its non-breeding range.

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)

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; R. Orben, Oregon State University, pers. comm.).

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. 2009; 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)

During the non-breeding season in Alaska, Laysan albatross concentrate in the western Aleutians and slope waters of the Bering Sea, however, number of sites is >250 (Kuletz et al. 2014).

Score: -10

Reproductive Potential in Alaska

Age of First Reproduction (-5 to 5)

Average age of first breeding for females is 8.9 years (Awkerman et al. 2009).

Score: 5

Number of Young (-5 to 5)

Lays a single egg per clutch per year, however, between 25-35% of the population skips breeding in any given year, although this number varies among years and colonies (Arata et al. 2009; Awkerman et al. 2009; VanderWerf and Young 2011).

Score: 5

Ecological Specialization in Alaska

Dietary (-5 to 5)

Thought to consume mostly squid, as well as other marine invertebrates and fish (Awkerman et al. 2009; Suryan and Fischer 2010), however, stable isotope analyses suggest that foraging strategies - and therefore diet - vary depending on season, breeding status, and other considerations (Suryan and Fischer 2010; Edwards et al. 2015). We rank this question as "Moderately adaptable" until more data are available.

Score: 1

Habitat (-5 to 5)

In Alaska, occurs in offshore marine waters, often in areas with high prey concentrations. These areas are typically associated with specific oceanographic features (e.g., upwellings, canyons) (Kuletz et al. 2014). In the eastern Bering Sea, for example, the preferred marine habitat of Laysan Albatross is the outermost portion of the continental shelf's outer domain (100-170 m depth) and the shelf slope, particularly at the heads of major submarine canyons (Kuletz et al. 2014). Unlike other albatross species in Alaska, Laysan Albatross also spend a considerable amount of time in oceanic waters beyond the continental shelf (Fischer et al. 2009; Suryan and Fischer 2010).

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)

Distribution and habitat associations are known in the Bering Sea through surveys and satellite tracking (Fischer et al. 2009; Suryan and Fischer 2010; Kuletz et al. 2014), however, distribution is not as well-known in the Gulf of Alaska.

Score: 2

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

On non-breeding grounds in Alaska, Laysan albatross are detected during multi-species boat surveys in the Bering Sea; data can be used to detect changes in distribution and density but are not conducted annually and do not cover their entire Alaskan range (Kuletz et al. 2014). Monitoring also occurs on breeding colonies, and data have been used to estimate colony size and demographic parameters (Arata et al. 2009; VanderWerf and Young 2011; Holthuijzen 2019).

Score: -2

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

Historically, overharvesting for feathers greatly reduced colony numbers. At least some colonies have recovered and even increased beyond historical levels (Awkerman et al. 2009). Possible limiting factors include food availability, incidental take, and ingestion of plastics (Arata et al. 2009; Awkerman et al. 2009; Krieger et al. 2019). On some breeding grounds, non-native species have had negative impacts on both adult and juvenile mortality (Awkerman et al. 2009).

Score: 2

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: Not substantial

Seasonal Occurrence: Nonbreeding

Taxonomic Significance: Monotypic species

% Global Range in Alaska: >10%

% Global Population in Alaska: 25-74%

Peripheral: No

References

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