



Sea Birds

IMPORTANCE

Seabirds are becoming increasingly threatened at a faster rate globally than all other species-groups of birds. Oil or chemical pollution, changes in food availability and abundance, climate change, and human disturbance are just some of the threats facing seabirds today.

The Channel Islands are home to the largest seabird colonies in southern California, providing essential nesting and feeding grounds for 99% of seabirds in the region. The islands host half of the world's population of ash storm-petrels and western gulls (*Larus occidentalis*) and 80% of the nation's breeding population of Xantus's murrelets (*Synthliboramphus hypoleucus*). In addition, the islands are home to the only major breeding population of California brown pelicans (*Pelecanus occidentalis californicus*) in the western United States.

Of the eleven species that nest at Channel Islands National Park, only six can be reasonably monitored – double-crested (*Phalacrocorax auritus*) and pelagic (*Phalacrocorax pelagicus*) cormorants, California brown pelicans, western gulls, Xantus' murrelets, and Cassin's auklets (*Ptychoramphus aleuticus*). Nest inaccessibility, nocturnal behavior and variable breeding sites prohibit monitoring of the other five species. The six selected species to be monitored are diverse and provide broad geographic coverage for the park's monitoring program.

OBJECTIVES

- Detect changes in abundance and distribution of six breeding seabird species in the Channel Islands over time.
- Where feasible, use productivity, survivorship, food habits and growth rates as indicators of change.



Xantus' murrelets are the most southerly living of all the auk species. A large breeding colony can be found on Santa Barbara Island. (NOAA)



The only breeding colonies of brown pelicans (*Pelecanus occidentalis californicus*) in California occur on the Channel Islands.

MONITORING EFFORTS

For practical reasons, not all the recommended parameters are measured for each species.

- Counts of incubating birds, pairs at nest sites, young at nest sites and number of nests are used to measure abundance.
- Reproductive success is determined through counts of chicks and brood size.
- Direct observation or dates based on the age of the young is used to estimate phenology.
- Counts of individuals based on plumage and band sightings are used to determine the population age structure.

MANAGEMENT IMPLICATIONS

- Following the removal of black rats from Anacapa Island, an increase in Xantus's murrelet breeding populations has been observed.
- Though DDT continues to persist at levels higher than anticipated in several seabird populations, California brown pelican populations have successfully improved and have been delisted from Endangered status.
- The removal of non-native plants, restoration of native vegetation and construction of "nest boxes" have improved nesting habitat for Xantus's murrelets and Cassin's auklets on Santa Barbara Island, as well as seabirds on Santa Cruz Island.

For more information:

Laurie Harvey, laurie_harvey@nps.gov