

Seabirds



Photo: Holly Freinfeld, USFWS

'Ā or Masked Booby

Sula dactylatra

SPECIES STATUS:

State recognized as Indigenous
NatureServe Heritage Ranking G5 - Secure
North American Waterbird Conservation Plan -
Moderate concern
Regional Seabird Conservation Plan - USFWS 2005

SPECIES INFORMATION: The 'ā or masked booby is the largest booby (Family: Sulidae), and like its Hawaiian congeners, has a pantropical distribution. Four 'ā (masked booby) subspecies are recognized, and one (*S. d. personata*) is resident in Hawai'i. Individuals have long, pointed wings and a short, wedge-shaped tail. Adult males and females are overall white, except for a brownish black tail, black trailing wing edges and black facial skin around the bill. Large bill varies in color from yellow to orange and is brighter in males; females are larger than males. Flight is characterized by strong flapping interspersed with gliding, rhythmically ascending with flapping and descending while gliding. 'Ā (masked booby) forage alone or in large, mixed species flocks associated with schools of large predatory fishes which drive prey species to the surface. Forages as far as 150 kilometers (90 miles) from shore, and 'ā (masked booby) captures prey by plunge-diving from up to 30 meters (100 feet) over the water, often diving to a depth of three to four meters (10 - 13 feet). In Hawai'i, diet is comprised almost entirely of fish, primarily flyingfish and jacks. 'Ā (masked booby) breed in dense colonies and most return to their natal colony to breed, and at Kure at least 45 percent of pairs remained together through a second breeding season. Nest on open ground often near a cliff edge or on low sandy beaches; eggs are laid in a shallow scrape. Unlike most seabirds, 'ā (masked boobies) typically lay two eggs per breeding season. The eggs hatch asynchronously, and the first chick to hatch usually pushes the other sibling out of the nest. In Hawai'i, breeding season is synchronous, and eggs are laid between January and July and young fledge five months after eggs are laid. Both parents incubate eggs, and brood and feed chicks. Adults continue to feed young up to six months after fledging. Birds first breed at three to four years of age and the oldest known individual was 20 years old.

DISTRIBUTION: 'Ā (masked booby) breeds mainly in NWHI, but also breeds in MHI on Ka'ula, Lehua, and Moku Manu. Outside of Hawai'i, 'ā (masked booby) breed on islands in the tropical waters of the Pacific and Atlantic oceans and the Red Sea. Outside the breeding season birds are most common near their breeding colonies, but individuals may wander thousands of kilometers from colonies.

ABUNDANCE: In Hawai'i, population estimated at 2,500 breeding pairs with most occurring on NWHI; approximately 450 pairs breed in the MHI. The worldwide population is estimated at several hundred thousand birds.

LOCATION AND CONDITION OF KEY HABITAT: **Terrestrial:** 'Ā (masked boobies) breed on small islands or islets, both on low-lying coralline sand islands and high volcanic islands, nesting in the open on sandy beaches or on cliff ledges. **Marine:** Pelagic.

THREATS:

- Introduced predators. Like all seabirds, adults and nests are susceptible to predation by rats (*Rattus* spp.) and feral cats (*Felis silvestris*). All sites in NWHI are free of rats and cats.
- Non-native plants. Invasive plants, mainly golden crown-beard (*Verbesina encelioides*), has resulted in loss of nesting habitat.
- Human disturbance. Pairs often susceptible to human disturbance.
- Overfishing. Because 'ā (masked booby) rely on predatory fish to drive prey to the surface, overfishing may eventually affect Hawaiian populations.

CONSERVATION ACTIONS: The following management goals are important to Pacific seabird conservation: maintain, protect, and enhance habitat; eradicate or control non-natives; minimize bycatch and other negative effects of fishing; improve the effectiveness of oil spill response efforts; identify contaminants and hazardous substances; and minimize the effects of powerlines, towers, wind turbines and lights (USFWS 2005). The goal of these management actions is not only to protect seabird populations and their breeding colonies, but also to re-establish former breeding colonies thereby reducing the risk of extinction. In addition to these efforts, future management specific to Hawaiian populations of 'ā (masked booby) should include the following:

- Eradication and control of introduced predators at current and potential breeding colonies.
- Eradication of golden crown-beard, especially from Midway Atoll, Kure, and Pearl and Hermes.
- Limit human disturbance to colonies.
- Continue protection and management of wildlife sanctuaries and refuges.

MONITORING: Continue surveys of population and distribution in known and likely habitats.

RESEARCH PRIORITIES: Most research priorities for seabirds are related to determining the most appropriate methods for achieving the above goals. Research priorities specific to 'ā (masked booby) include the following:

- Long-term banding and demographic studies are needed to determine dispersal patterns and demographic parameters.
- Model interactions and importance of predatory fish, seabirds, and their prey to determine the long-term effects of overfishing on to 'ā (masked booby) populations.

References:

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