

White Tern

Gygis alba rothschildi

Hawaiian: Manu-o-ku

Other: Fairy Tern

Family: Laridae; Subfamily: Sterninae

Identification

The delicate White Tern is a medium-sized, all white bird. The sexes are indistinguishable with no seasonal changes in plumage. Their eyes are dark and narrow, appearing larger due to a dark eye-ring and their sharp, black bill is blue at the base. They have a slightly notched tail with outer rectrices slightly longer than inner ones. Their legs and feet are slate blue with yellow to whitish webbing.

The White Tern is very distinct, but may be confused with the smaller Blue-gray Noddy (*Procelsterna cerulean*), which may appear white in bright sunlight.

Survival and Lifespan

The oldest bird recorded is 36 years old, on Midway Atoll. No data on adult survivorship is available.

Distribution

Breeding (Dec-May, but year-round possible)

White Terns are pantropical in distribution breeding on islands throughout tropical Pacific, Indian, and South Atlantic oceans between 30° N and 30° S of the equator. In Hawaii, White Terns breed on all the Northwest Hawaiian Islands as well as on the main Islands (Kaula Rock, Niihau, and Honolulu, Oahu).

Marine

Movements away from breeding sites are largely unknown. Most individuals depart nesting islands and stay at sea for several months between breeding periods, but some remain year-round. In Hawaii, most birds depart mid-October through November.

Breeding Ecology

White Terns are not as colonial or social as most other terns, preferring to nest in loosely associated groups or singly. Breeding adults remain paired for several seasons and often return to the same nest site year after year. White Terns are unique in that they build no nest and will lay their single egg on almost any substrate where it can be balanced, often precariously. In Hawaii, this species breeds year-round, but most eggs are laid between February and June in the main islands and December through May in the Northwest Hawaiian Islands. Pairs will replace an egg after initial nest failure, and some successfully raise two or three broods per year. Both parents incubate the egg and brood and feed the chick. Incubation period averages 36 days with chicks fledging after an average of 49 days. Parents continue to feed their chicks for an average of 48 days thereafter for a combined incubation, fledging, and post-fledging period of 133 days at French Frigate Shoals and 126 days on Oahu. Birds first breed at 4 - 5 years of age.

Feeding and Prey

- Feeding guild – TUNA BIRD
- Food capture – White Terns feed primarily by air dipping; snatching fish either from the surface or in midair as the prey jumps out of the water to escape predatory fish. They also surface dive to catch prey, but do not submerge.
- Foraging Distribution – Breeding adults remain close to nest sites and forage in inshore areas such as shoals and banks with occasional forays into offshore waters.

- **Microhabitat for foraging** – Little is known. White Terns are commonly found in feeding flocks with other species (shearwaters [Procellariidae], Boobies [*Sula* spp.], Sooty Terns [*Sterna fuscata*] and Noddies [*Anous* spp.]). These flocks frequently feed over predatory fish (jacks [Carangidae] or tuna [Scombridae]) that drive smaller fish to the surface. They may depend on larger fish to make food available to them.
- **Diet** – Their diet varies significantly between seasons and locations, suggesting that White Terns take prey opportunistically. They appear to take any species of appropriate size that is available in surface waters. Diet samples from birds in the Northwest Hawaiian Islands consist of 88% fish, 12% squid, and 0.4% crustaceans by volume. Although 33 fish families were identified, Goatfishes (Mullidae) and Flying Fishes (Exocoetidae) were dominant. Other fishes commonly taken were Needlefishes (Belonidae), Halfbeaks (Hemiramphidae), Dolphinfishes (Coryphaenidae), Silversides (Atherinidae), and Comb-toothed Blennies (Blenniidae). Two species of Ommastrephidae squid have also been documented: *Symplectoteuthis oualaniensis* and *Hyaloteuthi pelagicus*.

Threats and Status

No data is available on historical distribution due to the remoteness of nesting islands, but introduced predators likely reduced breeding numbers. The population on Midway has increased greatly in the past five decades due to the introduction of ironwood trees (*Casurina* sp.) and construction of buildings, which provided nesting habitat. On Oahu, birds were not recorded nesting until 1961 when one pair was reported at Koko Head. Since then the population has expanded to 250 pairs. The Hawaiian population is estimated at 15,000 breeding pairs, with largest populations occurring on Midway (7,500 pairs), Nihoa (5,000 pairs), and Laysan (1,000 pairs).

Main threats to the species include:

- **Predation** – Like all seabirds, adults and nests are susceptible to predation by introduced mammals. Although all major predators have been removed from the Northwest Hawaiian Islands, introduced mammals pose a significant threat in the main Islands. Rats (*Rattus* sp.), cats (*Felis sylvestris*), and dogs (*Canis familiaris*) likely have a strong negative effect on White Tern populations. Eggs are also depredated by Common Mynahs (*Acridotheres tristis*), and eggs and chicks are taken by Cattle Egrets (*Bulbulcus Ibis*). Introduced ants have been recorded attacking incubating adults, chicks and pipping eggs.
- **Fisheries** – In Hawaii, overfishing may directly or indirectly harm seabird populations; harvest of Skipjack and Yellowfin Tuna (*Thunnus albacares*) could eliminate predatory fish needed to drive prey species to surface. Also, live bait needed for the fishery could potentially decrease prey items. Development of a squid fishery could also impact White Terns.

Selected Readings

<http://www.birdinghawaii.co.uk/wheretowatchmidway2.htm>

Division of Forestry and Wildlife (DOFAW). 2005. Hawaii's Comprehensive Wildlife Conservation Strategy. Div. Of Forestry and Wildlife, Dept. of Land and Natural Resources, Honolulu, HI. www.state.hi.us/dlnr/dofaw/cwcs/process_strategy.htm

Niethammer, K.R. and Patrick, L.B. 1998. White Tern (*Gygis alba*). In *The Birds of North America*, No. 371 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, PA, and The American Ornithologists' Union, Washington, D.C.

Harrison, C.S. 1990. *Seabirds of Hawaii*. Cornell University Press, Ithaca, NY.

Video clip: A juvenile perching on a sign. Bird Island, Seychelles: <http://www.hbw.com/ibc/phtml/votacio.phtml?idVideo=213&tipus=0>

Video clip: An adult with a young chick. Cousin, Seychelles:

<http://www.hbw.com/ibc/phtml/votacio.phtml?idVideo=2773&tipus=0>