Photo: David Leonard, USFWS

Seabirds

Manu-o-Kū or White (Fairy) Tern

Gygis alba

SPECIES STATUS:
State listed as Threatened
State recognized as Indigenous
NatureServe Heritage Rank G4 - Apparently secure
North American Waterbird Conservation Plan – Moderate concern
Regional Seabird Conservation Plan - USFWS 2005

SPECIES INFORMATION: The manu-o-Kū or white tern is a small, entirely white tern (Family: Laridae) with a pantropical distribution. Individuals have dark eyes and a thick, sharply pointed black bill with an electric blue base. Adult males and females are identical and there are no seasonal changes in plumage. Flight is buoyant and characterized by erratic changes in direction and speed. Manu-o-Kū (white tern) feed by dipping the surface or surface diving. Often joins mixed species feeding flocks and usually preys on fish driven to the surface by large, predatory fish. In Hawai'i, the diet of white terns consists mostly of juvenile goatfish and flying fish. Breeding adults remain close to nest sites and forage in inshore areas such as shoals and banks with occasional forays into offshore waters. Not as colonial or social as most other terns, preferring to nest in loosely associated groups or singly. Manu-o-Kū (white tern) remain paired for several seasons and often return to the same nest site year after year. No nest is constructed; a single egg is laid wherever a suitable depression is found. Most nests are on tree branches, buildings, or other man-made structures, rock ledges, or on the ground. In Hawai'i, manu-o-Kū or (white tern) breeds year-round, but most eggs are laid between February and June. Pairs will replace an egg after initial nest failure, and some successfully raise two or three broods per year. Both parents incubate egg and brood and feed the chick. Fledglings are dependent on adults for up to two months. Birds first breed at five years of age, and the oldest known individual was 42 years old.

DISTRIBUTION: Manu-o-Kū (white tern) breed throughout the NWHI and on the island of O'ahu. Outside of Hawai'i, manu-o-Kū (white tern) breeds on islands throughout subtropical and tropical oceans, although breeding in the southern Atlantic Ocean is limited. Non-breeding distribution is unknown. Manu-o-Kū (white tern) typically remain near their breeding colonies year-round, seldom venturing far from shore.

ABUNDANCE: In the Hawaiian Archipelago, population estimated at 15,000 breeding pairs, with largest populations occurring on Midway (7,500 pairs), Nihoa (5,000 pairs), and Laysan (1,000 pairs). On O'ahu, the number of pairs has increased from one to greater than 250 between 1961 and 2005. Worldwide population unknown but likely exceeds 100,000 breeding pairs.

LOCATION AND CONDITION OF KEY HABITAT: Terrestrial: Manu-o-Kū (white tern) breed on oceanic islands, both on low-lying coralline sand islands and high volcanic islands. Nests are not built, eggs are laid on whatever suitable depression is found. Nest sites include volcanic pinnacles, cliffs, rocky slopes, large bushes or trees, and man-made structures. **Marine**: Nearshore waters.

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. However, given the remote nature of nesting sites (e.g., cliffs), manu-o-Kū (white terns) are less vulnerable to predation than many other seabirds. Historically, rats likely preyed on eggs, young and adults on Midway.
- Introduced insects. On Midway, big-headed ants (*Pheidole megacephala*) have been observed attacking pipped eggs and incubating adults. On Kure, introduced scale insects are killing native vegetation, but the effects on manu-o-Kū (white tern) are unknown.
- Overfishing. Because manu-o-Kū (white tern) 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 contaminates 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 Hawai'i, currently there are no ongoing management actions specific to manu-o-Kū (white tern).

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 the manu-o-Kū (white tern) include the following:

- Determine the effect of introduced invertebrates on nesting habitat and their potential for limiting populations.

References:

NatureServe. 2003. Downloadable animal data sets. NatureServe Central Databases. Available at: http://www.natureserve.org/getData/vertinvertdata.jsp (March 10, 2005).

Niethammer KR, Patrick-Castilaw LB. 1998. White tern (*Gygis alba*). *In* The Birds of North America, No. 371 (Poole A, Gill F, editors.). Philadelphia, (PA): The Academy of Natural Sciences; and Washington DC: The American Ornithologists' Union.

U.S. Fish and Wildlife Service. 2005. Regional seabird conservation plan, Pacific Region. U.S. Fish and Wildlife Service, Migratory Birds and Habitat Programs, Pacific Region. Portland, (OR): U.S. Fish and Wildlife Service.