

Seabirds



Photo: Eric VanderWerf

Koa'e kea or White-tailed Tropicbird

Phaethon lepturus

SPECIES STATUS:

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

SPECIES INFORMATION: The koa'e kea or white-tailed tropicbird is a showy, white seabird (Family: Phaethontidae), related to boobies and frigatebirds. Six koa'e kea (white-tailed tropicbird) subspecies are recognized; only one (*P. l. dorothea*) breeds in Hawai'i. Adult male and females are mostly white, although sometimes with pale pinkish wash, except for a narrow black eye patch, black streak on upper wings, and black on the leading edge of the outer primaries; both sexes have long, narrow, white central tail feathers. Large yellow-green bill; legs and feet are very small. Flight is characterized by rapid wing beats, interspersed with brief periods of gliding. Koa'e kea (white-tailed tropicbird) usually forage alone, but occasional with conspecifics, most often far from land; often will follow ships. Koa'e kea (white-tailed tropicbird) captures prey by plunge diving from 15 to 20 meters (50 - 65 feet) above the water. Diet is poorly known, but includes flyingfish and is likely similar to koa'e ula or red-tailed tropicbird (*P. rubricauda*). Koa'e kea (white-tailed tropicbird) breed in colonies and pairs remain together for years. At the beginning of the breeding season, pairs engage in complex aerial displays. Nests are placed in hard to reach locations on cliffs as well as in caves and tree hollows; nests have little if any material. In Hawai'i, breeding occurs March through October and a single egg is laid per season. Both parents incubate the egg, and brood and fed the chick. No post-fledging care is provided. Based on few data, age at first breeding is likely after fourth year; no data on longevity.

DISTRIBUTION: Koa'e kea (white-tailed tropicbird) breed on Midway Atoll and in the MHI at the following locations: Waimea Canyon, Kilauea Point National Wildlife Refuge, and the Nā Pali Coast on Kaua'i; Pelekunu Valley, Waikolu, and windward sea cliffs on Moloka'i; Kaholo Pali, Maunalei Gulch, Hauola Gulch on Lāna'i ; Kilauea Crater and windward coast on the island of Hawai'i, and the offshore islet Mokolii. A few pairs nest on southeastern O'ahu. Outside of Hawai'i, koa'e kea (white-tailed tropicbird) breed on oceanic islands throughout the Atlantic, Indian, and Pacific oceans as well as the Caribbean. Outside the breeding season, adults are solitary and pelagic, and their range is poorly known.

ABUNDANCE: In Hawai'i, population estimated at 1,800 breeding pairs with most occurring in the MHI. The worldwide population is estimated at less than 200,000 breeding pairs.

LOCATION AND CONDITION OF KEY HABITAT: Terrestrial: Koa'e kea (white-tailed tropicbird) breeds mainly on oceanic islands. Frequently nests in inaccessible crevices or ledges on cliff walls, outside of Hawai'i the species is known to nest in a variety of sites including caves, tree hollows, and in closed-canopy rain forests. **Marine:** Pelagic and nearshore.

THREATS:

- Introduced predators. Like all seabirds, adults and nests susceptible to predation by rats (*Rattus* spp.) and feral cats (*Felis silvestris*).

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 koa'e kea (white-tailed tropicbird) should include the following:

- Eradication and control of introduced predators at current and potential breeding colonies.
- Continued protection and management of existing 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 koa'e kea (white-tailed tropicbird) include the following:

- Conduct long-term demographic studies to determine population trends, philopatry to nest colonies and nest sites, survival rates, and reproductive success.
- Develop survey protocol to assess population status and monitor trends.

References:

- Kushlan JA, et al. 2002. Waterbird Conservation for the Americas: The North American waterbird conservation plan, Version 1 Waterbird Conservation for the Americas, Washington, DC. 78pp. Available at: www.waterbirdconservation.org.
- Lee DS, Walsh-McGehee M. 1998. White-tailed tropicbird (*Phaeton lepturus*). In *The Birds of North America*, No. 353 (Poole A, Gill F, editors). Philadelphia, (PA): The Academy of Natural Sciences; and Washington DC: The American Ornithologists' Union.
- NatureServe. 2003. Downloadable animal data sets. NatureServe Central Databases. Available at: <http://www.natureserve.org/getData/vertinvertdata.jsp> (March 10, 2005).
- 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.