



Photo: Ian Jones, USFWS

Seabirds

Tristram's Storm-Petrel

Oceanodroma tristrami

SPECIES STATUS:

State recognized as Indigenous
NatureServe Heritage Rank G3 - Vulnerable
North American Waterbird Conservation Plan -
High concern
IUCN Red List Ranking - Near threatened
Regional Seabird Conservation Plan - USFWS 2005

SPECIES INFORMATION: Tristram's storm-petrel is a large storm-petrel (Family: Hydrobatidae) with long, pointed wings, and a notched tail. Adult males and females are entirely brownish-gray. Flight is typical of storm-petrels, gliding low over water searching for food. Forages alone or with conspecifics, and typically forages at night. Tristram's storm-petrel feeds by dipping prey from the ocean's surface on the wing, often pattering the water with feet. In Hawai'i, diet includes fish, squid, coelenterates, crustaceans, and insects. Tristram's storm-petrels are winter breeders, and are nocturnal at nesting colonies. Nests are placed in recesses in rocks, under piles of mined guano, or burrows that they excavate under vegetation. Eggs are laid between December through February and nestlings fledge by June. Little information on parental care of egg or young. Like most storm petrels, age at first breeding is likely three to five years and individuals likely live between 15 and 20 years.

DISTRIBUTION: Tristram's storm-petrels breed on Nihoa and on all NWHI except for Midway and Kure atolls, although they historically bred on both as well as on MHI. Outside of Hawai'i, breeding colonies only occur on three small Japanese islands. Outside the breeding season, Tristram's storm-petrels range across the subtropical central and western Pacific Ocean.

ABUNDANCE: In Hawai'i, breeding colonies estimated at less than 10,000 pairs, with the largest populations occurring on Nihoa (2,000 - 3,000 pairs), Laysan (500 - 2,000 pairs), and Pearl and Hermes Reef (1,000 - 2,000 pairs). Worldwide population unknown.

LOCATION AND CONDITION OF KEY HABITAT: **Terrestrial:** Islands in Hawai'i and Japan, which include both low-lying coralline sand islands and high volcanic islands. For nesting, prefers recesses in rock scree, under mined guano piles, or burrows excavated under vegetation. **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. Extirpation from Midway and Kure atolls likely the result of the introduction of rats; since the eradication of rats from Midway in 1996, individuals have been mist-netted but nesting has not been documented.

- **Invasive species.** The continued expansion of golden crowned-beard (*Verbesina encelioides*) on Pearl and Hermes Reef and Kure likely will reduce nesting habitat. The effects of big-headed ants (*Pheidole megacephala*), and mice (*Mus musculus*) on Tristram's storm-petrels are unknown.

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 Tristram's storm-petrel should include the following:

- Eradicate golden crown-beard on Pearl and Hermes Reef, Midway, and Kure.
- Eradicate mice from Midway and facilitate recolonization using attraction programs.
- Determine population size, status, and trends in Hawai'i.
- Continue protection and management of existing wildlife sanctuaries and refuges.

MONITORING: Continue surveys of population and distribution in known and likely habitats, particularly for re-colonization of Midway Atoll.

RESEARCH PRIORITIES: Most research priorities for seabirds are related to determining the most appropriate methods for achieving the above goals. Research priorities specific to Tristram's storm-petrel include the following:

- Design a reliable monitoring program.
- Determine the effects of ants on reproductive success.
- Research basic life history traits, demography, and factors limiting populations.

References:

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

Slotterback JW. 2002. Band-rumped Storm-petrel (*Oceandroma castro*). In *The Birds of North America*, No. 673 (Poole A, Gill F, editors.). Philadelphia, (PA): The Academy of Natural Sciences; and Washington DC: The American Ornithologists' Union.

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