

Seabirds



Photo: Forest and Kim Starr, USFWS

Christmas Shearwater

Puffinus nativitatis

SPECIES STATUS:

State recognized as Indigenous
NatureServe Heritage Ranking G3/G4 -
Vulnerable/Apparently secure

North American Water Bird Conservation Plan - High concern
Regional Seabird Conservation Plan - USFWS 2005

SPECIES INFORMATION: The Christmas shearwater is a medium-sized, dark-brown shearwater (Family: Procellariidae), with a short, wedge-shaped tail and a shiny, black bill. Adult males and females are entirely dark brown, although underparts are lighter than upperparts. Flight is characterized by fast, stiff wing beats, followed by long glides. Often forages in large, mixed species flocks associated with schools of large predatory fishes which drive prey species to the surface. Christmas shearwaters feed from the surface by seizing prey while sitting on the water or by shallow pursuit plunges; also feeds by dipping or picking prey from the water while on the wing. Diet almost equally split between fish and squid (Ommastrephidae). Like most seabirds, Christmas shearwaters breed in their natal colonies, although colonies are often small, have high site fidelity, lay only one egg per season, and both parents participate in all aspects of raising young. In this species, divorce appears to occur at a higher frequency than in other seabirds. Christmas shearwaters nest in rock crevices or under dense vegetation. In Hawai'i, eggs are laid beginning in February, and nestlings fledge in October or November. No post-fledging care is provided. Based on a small sample, age of first breeding is four years, and the oldest known individual was 17 years old.

DISTRIBUTION: Christmas shearwaters breed throughout NWHI, except for Necker Island and Gardner Pinnacles, and in MHI on offshore islets (e.g., Ka'ula, Lehua, Moku Manu). Outside of Hawai'i, Christmas shearwaters nest on islands throughout the central and eastern Pacific. Non-breeding distribution includes the eastern Pacific Ocean.

ABUNDANCE: In Hawai'i, breeding colonies estimated at less than 3,000 pairs, with largest populations occurring on Laysan (1,500 - 2,000 pairs), Lisianski (400 - 600 pairs), Nihoa (200 - 250 pairs), and Midway Atoll (200 pairs). Worldwide population unknown but likely less than 10,000 breeding pairs.

LOCATION AND CONDITION OF KEY HABITAT: Terrestrial: The Christmas shearwater typically breeds on remote sandy islands in rock crevices or under dense vegetation, such as naupaka (*Scaevola sericea*), bunchgrass (*Eragrostis variabilis*), tree heliotrope (*Tournefortia argentea*), *Lepturus repens*, and beach morning glory (*Ipomea* spp.). Also has been known to nest in wooden debris, under buildings, or in abandoned burrows. Christmas shearwater eggs and young must be shaded to protect them from lethal temperatures. **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.
- Invasive species. On Lisianski and Laysan, rabbits (*Oryctolagus cuniculus*) denuded the island reducing suitable nesting locations. Golden crown-beard (*Verbesina encelioides*) also degrades nesting habitat. Introduced big-headed ants (*Pheidole megacephala*) at Kure may cause nestling mortality, but also facilitate the destruction of native vegetation by a non-native scale insect.

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 Christmas shearwaters should include the following:

- Eradication and control of introduced predators at current and potential nesting sites.
- Eradication and control of invasive species.
- 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 the Christmas shearwater include the following:

- Conduct long-term demographic studies to determine population trends, survival rates, and reproductive success of this poorly known species.
- Updated population estimates.
- Locate foraging areas and determine non-breeding range and model interactions and importance of predatory fish, seabirds, and their prey to determine the long-term effects of overfishing on Christmas shearwater populations.

References:

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