



Photo: Forest and Kim Starr, USFWS

Seabirds

'Ua'u kani or Wedge-tailed Shearwater *Puffinus pacificus*

SPECIES STATUS:

State recognized as Indigenous
NatureServe Heritage Ranking G4/G5 - Apparently secure/Secure
North American Waterbird Conservation Plan - Low concern
Regional Seabird Conservation Plan - USFWS 2005

SPECIES INFORMATION: The 'ua'u kani or wedge-tailed shearwater is a large, abundant seabird (Family: Procellariidae) that produces a variety of wails and moans that surely inspired the Hawaiian name of this bird which means "calling or moaning petrel." Individuals have long thin wings, a wedge-shaped tail, and a hooked bill. 'Ua'u kani (wedge-tailed shearwater) are polymorphic, having two color phases, dark or light, and sexes are similar. Light-phase adults are grayish brown above with white underparts except for dark trailing edges of wings and tail. Dark-phase adults are uniformly sooty brown. Flight is similar to that of albatross but flaps wings with greater frequency. Often forages in large, mixed species flocks associated with schools of large predatory fishes which drive prey species to the surface. 'Ua'u kani (wedge-tailed shearwater) use a variety of foraging techniques, most frequently plunges head into water while on the wing, also seizes prey while sitting on the water; often follows fishing vessels. In Hawai'i, diet primarily consists of larval goatfish, flyingfish, squirrelfish, and flying squid. Like most seabirds 'ua'u kani (wedge-tailed shearwater) breed in their natal colonies, form long-term pair bonds (although breeding failure in this species may result in divorce), have high site fidelity, lay only one egg per season, and both parents participate in all aspects of raising young. 'Ua'u kani (wedge-tailed shearwater) excavate burrows or nest in rock crevices. In Hawai'i, breeding is very synchronous, and most eggs are laid in June with most young fledging in November. Birds first breed at four years of age, and the oldest known individual was 29 years old.

DISTRIBUTION: 'Ua'u kani (wedge-tailed shearwater) breed throughout the NHHI and on offshore islets of most of the MHI. Outside of Hawai'i, 'ua'u kani (wedge-tailed shearwater) breeds on islands throughout the tropical and subtropical Indian and Pacific oceans. Outside the breeding season, 'ua'u kani (wedge-tailed shearwater) migrate to the eastern Pacific.

ABUNDANCE: In Hawai'i, population estimated at 270,000 breeding pairs with the largest colonies occurring on Laysan (125,000 - 175,000 pairs), Nihoa (30,000 - 40,000 pairs), and Lisianski (10,000 - 30,000 pairs). The population in the MHI is estimated at between 40,000 and 60,000 breeding pairs with the largest colonies occurring on the offshore islands of Mānana (10,000 - 20,000 pairs), Moku Loa (10,000 - 20,000 pairs), Lehua (23,000 pairs), and Ka'ula (1,500 - 2,500 pairs). Smaller populations occur on Moku Manu, Moku'auia, Kāpapa, Molokini,

Mōkapu Peninsula, Ka'ena Point Natural Area Reserve on O'ahu, and Kilauea Point National Wildlife Refuge on Kaua'i. Worldwide population is estimated at over one million breeding pairs.

LOCATION AND CONDITION OF KEY HABITAT: **Terrestrial:** 'Ua'u kani (wedge-tailed shearwater) breed on low, flat islands and sand spits with little or no vegetation, but also excavate burrows on the slopes of extinct volcanoes and in old volcanic craters. Burrows require firm soil or plant roots to stabilize loose soil, generally nesting habitat is devoid of tall woody plants. In locations where nest sites are scarce or the ground is too hard to excavate burrows individuals will nest in rock crevices or above ground. **Marine:** Pelagic.

THREATS:

- **Introduced predators.** Like all seabirds, adults and nests are susceptible to mammal predation by pigs (*Sus scrofa*), rats (*Rattus* spp.), feral cats (*Felis silvestris*), and the small Indian mongoose (*Herpestes auropunctatus*).
- **Human disturbance.** Laysan (*Telespiza cantans*) and Nihoa (*T. ultima*) finches will depredate eggs left unattended because of human disturbance. Trampling by humans will collapse burrows.
- **Artificial lighting.** Street and resort lights, especially in coastal regions, disorient fledglings causing them to eventually fall to the ground exhausted or increasing their chance of collision with artificial structures (i.e. fallout). Once on the ground, fledglings are unable to fly and are killed by cars, cats, and dogs or die because of starvation or dehydration.
- **Overfishing.** Because 'ua'u kani (wedge-tailed shearwater) rely on predatory fish to drive prey to the surface, overfishing may eventually affect Hawaiian populations.
- **Contaminants.** Mercury, lead, and organochlorines have been detected in Hawaiian birds.
- **Disease.** Pox-like lesions have been observed on birds breeding on Maui and Moloka'i.

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 'ua'u kani (wedge-tailed shearwater) populations should include the following:

- Continue eradication and control of introduced predators at current and potential nesting sites on MHI.
- Eradicate rabbits from Lehua Island.
- Limit human access to colonies.
- Continue to support efforts of Save Our Shearwater Program, particularly its outreach initiatives concerning raising public awareness of light fallout and rescue and rehabilitation program, and establish similar programs on other islands where appropriate.
- Continue protection and management of 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 'ua'u kani (wedge-tailed shearwater) include the following:

- Monitor contaminant levels, their effects, and investigate potential sources.
- Investigate the cause and effect of pox-like lesions in populations on Maui and Molokini.
- Model interactions and importance of predatory fish, seabirds, and their prey to determine the long-term effects of overfishing on 'ua'u kani (wedge-tailed shearwater) populations.

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