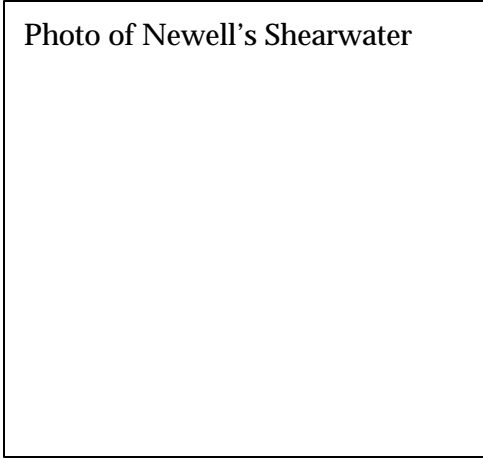


Photo of Newell's Shearwater



Seabirds

**'A' o o r**  
**Newell's Shearwater**  
*Puffinus auricularis newelli*

**SPECIES STATUS:**

Federally Listed as Threatened

State Listed as Threatened

State recognized as indigenous

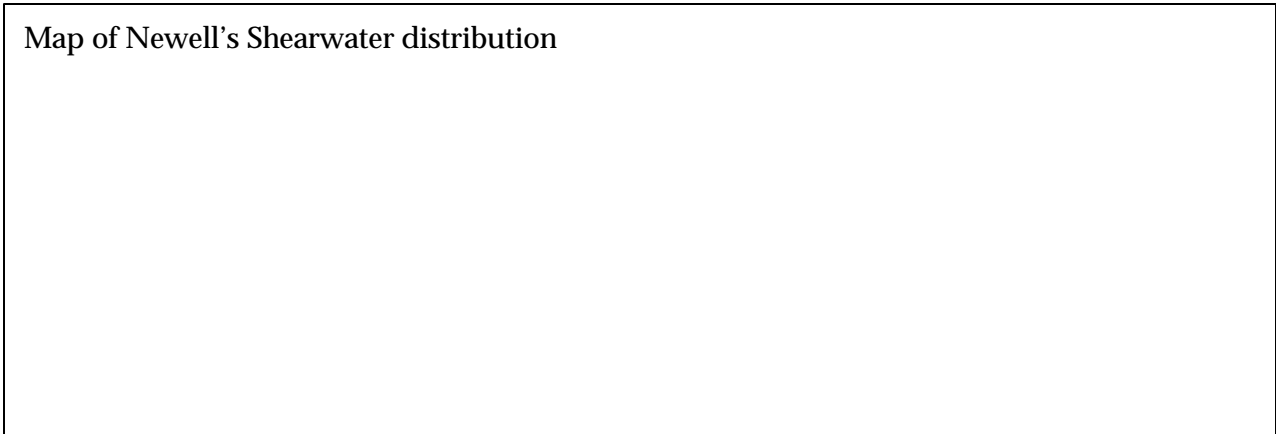
Hawai'i Natural Heritage Ranking G2-Imperiled Globally

IUCN Red List Ranking-Endangered

**SPECIES INFORMATION:** Endemic to the Hawaiian Islands and highly pelagic year-round, this species nests in the Hawaiian Islands. Breeding season begins in April with both sexes incubating the egg and fledglings appearing in October and November. Feed on squid and fish (e.g. tuna) and forage over deep waters east and south of Hawai'i. Sexual maturity is reached at six years of age.

**DISTRIBUTION:** Found on Kaua'i, Hawai'i, Moloka'i, with unconfirmed nesting on O'ahu, Maui, and La-na'i. Nesting sites were also recently discovered on Lehua, an offshore island near Ni'ihau.

Map of Newell's Shearwater distribution



**ABUNDANCE:** Historically abundant prior to the arrival of Polynesians, current population estimates for the state of Hawai'i is 84,000 birds with 75% occurring on Kaua'i (only island free from mongoose).

**LOCATION AND CONDITION OF KEY HABITAT:** On Kaua'i most nests are found at high elevations (160-1,200 m or 525-3,936 ft) on steep, densely vegetated mountains; however birds are also found nesting in dry sparsely vegetated cliffs on the Na Pali coast and on Lehua. On the island of Hawai'i in the Puna District, they nest on forested cinder cones. Nests are found in

burrows (usually at the base of trees) with adults returning in April to renovate or dig new ones. Colonies are normally located in areas of open native forest dominated by 'ohi'a with a dense understory of 'uluhe fern.

**THREATS:** Historical threats included subsistence hunting by Polynesians and predation by rats, dogs, and pigs. More recently Hurricane Iniki greatly affected fledgling survival rates and increased habitat degradation. Population numbers have been steadily declining (ornithological radar data between 1993-2001 reflect a 62% decline) and populations in 2000 were 21% of what was found in 1987. Current threats include artificial lights (e.g. street and resort lights) along the coast that blind and disorient fledglings. Once on the ground, these fledglings are unable to fly and thousands are killed each year by cars, cats, and dogs. In addition, adults collide with utility wires and current proposed construction of a powerplant and associated lines are in the direct path of known Newell's flight corridors. Additional threats are the loss and degradation of forested habitat on Kaua'i. Hurricane Iniki was one cause, but degradation is caused by introduced plants and herbivores (e.g. feral ungulates and pigs). Invasive nonnative plants such as *Rhodomlyrtus tomentosa* have transformed habitat at the Kaluahonu colony causing decline and possibly abandonment of area. Cinder mining has also caused habitat loss for colonies in Pu'ulena and Heiheiuhulu in Puna on the island of Hawai'i. Other predators are rats, cats, pigs, mongoose, and other introduced mammals. The barn owl also is a predator of adults. Fishery interactions and disease may also play a role in population declines.

**CONSERVATION ACTIONS:** The goals of conservation actions are to not only protect current populations, but to also establish further populations to reduce the risk of extinction. Past actions include rescue and rehabilitation of downed fledglings, shading lamps at resorts, and hoods on streetlights. In addition to common state-wide and island conservation actions, specific actions include:

- Eradicate and/or control mammalian predators as well as invasive plants from current and potential habitat areas such as Lehua;
- Prioritize restoration projects based on estimated probability of increasing productivity and survival using GIS database of locational data;
- Continue predator control efforts at key colonies on Kaua'i, Hawai'i, and Lehua;
- Identify fallout areas and work with utilities companies and resorts to minimize effects of powerlines and artificial lights;
- Continue to support efforts of Save Our Shearwater Program and particularly its outreach initiatives concerning raising public awareness of light fallout and rescue and rehabilitation program;
- Develop partnerships with private landowners to assist conservation measures;
- Consider introduction of a light pollution ordinance

**MONITORING:**

- Continue surveys of population and distribution in known and likely habitats with an eye toward establishing a standardized monitoring protocol;
- Survey for presence of mammalian predators, particularly as it relates to assessment of control methods in place;
- Select and monitor at least two colonies to determine effectiveness of conservation measures

**RESEARCH PRIORITIES:**

- Expand radar studies to monitor population trends, locate colonies, investigate behavior, determine geographic variability in threats, and understand efficacy of conservation measures;
- Better understand light attraction qualities to minimize effects;
- Data on the length of incubation and visitation rate of individuals in colonies;
- Better understand the affect of urbanization on population declines;
- Increase understanding of the degree of predation by cats as an overall population limiting factor

**References:**

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, Oregon.

Newell's Shearwater Working Group. Draft Newell's Shearwater Five-year Workplan, December 2004.

IUCN Red List of Threatened Species. <http://www.redlist.org/search/details.php?species=18862>

Ainley, David G., Thomas C. Telfer, and Michelle H. Reynolds. 1997. Newell's Shearwater (*Puffinus auricularis*). In the Birds of North America, No. 297 (A. Poole and F. Gill, eds). The Academy of Natural Sciences, Philadelphia, PA and The American Ornithologists' Union, Washington, D.C.