

Forest Birds

Kaua'i Nuku Pu'u

Hemignathus lucidus hanapepe



Picture: Rothschild Collection

SPECIES STATUS:
Federally listed as Endangered
State listed as Endangered
State recognized as Endemic
NatureServe Heritage Rank G1 – Critically imperiled
IUCN Red List Ranking – Critically endangered
Draft Revised Recovery Plan for Hawaiian
Forest Birds – USFWS 2003

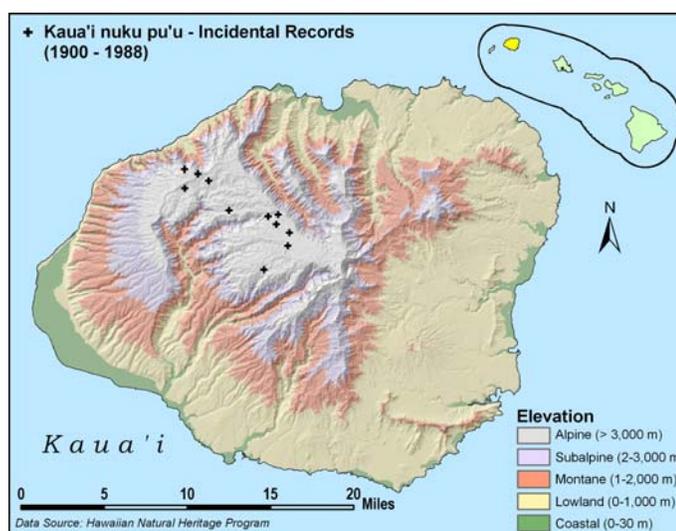
SPECIES INFORMATION: The Kaua'i nuku pu'u is a large, short-tailed Hawaiian honeycreeper (Family: Fringillidae) with a long, thin decurved bill; the lower mandible is half the length of the upper mandible. Nuku pu'u also are known from O'ahu (*H. l. lucidus*) and Maui (*H. l. affinis*); the O'ahu subspecies is certainly extinct. Currently, all nuku pu'u are considered one species, however, ongoing research suggests that populations occurring on the three islands are distinct species. Adult males are olive green with a yellow head, throat, and breast and have a small black mask; females are grayish green above and whitish below. Little is known about the species' life history. Often joins mixed species foraging flocks, especially those with 'akikiki (*Oreomystis bairdi*). Apparently would creep along tree trunks, especially those of ōhi'a (*Metrosideros polymorpha*) and koa (*Koa acacia*) trees, searching the bark and dead wood for arthropod prey; also may have taken nectar. Accounts vary regarding bill use. Either hammered surfaces, similar to its congener the 'akiapōlā'au (*H. munroi*), or used its upper mandible to fish out prey from crevices, catching them with its tongue and lower mandible. No information on the species' breeding biology, but likely is similar to the 'akiapōlā'au.

DISTRIBUTION: Unknown. Probably extinct. All recent Kaua'i nuku pu'u sightings are from a small area of southwestern Kaua'i between 610 and 1,220 meters (2,000–4,000 feet) elevation. The species' historic range also appeared very restricted.

ABUNDANCE: Unknown. Probably extinct. There are fewer than a dozen historical records of the Kaua'i nuku pu'u. Extensive surveys in 1989, 1994, 1996, and 2000 did not detect the species.

LOCATION AND CONDITION OF

KEY HABITAT: Kaua'i nuku pu'u occur in mesic and wet montane forests. Habitat conditions



of the species' historic range vary and all presumably support populations of *Culex* mosquitoes. Areas where Kaua'i nuku pu'u have most recently been observed are managed by the State of Hawai'i.

THREATS: Unknown. However, the Kaua'i nuku pu'u likely was susceptible to the same factors that threaten other native Hawaiian forest birds including: loss and degradation of habitat, predation by introduced mammals, and disease. For Kaua'i nuku pu'u populations, the following likely was of particular concern:

- Disease. The precipitous decline of all nuku pu'u taxa suggests that mosquito-borne diseases played an important role in the species' demise.

CONSERVATION ACTIONS: If the species persists, it likely benefits from management activities designed to conserve other endangered forest birds on Kaua'i, including the establishment of the Alaka'i Wilderness Preserve, regular surveys of forest bird populations, monitoring of habitat conditions, studies of disease and disease vectors, control of feral ungulates through public hunting, and public education efforts featuring Kauai's endangered forest birds. Should this species be rediscovered, the Rare Bird Recovery Protocol outlined in the USFWS Draft Revised Recovery Plan for Hawaiian Forest Birds would be implemented, and management in anticipation of that possibility should include:

- Continue protection and management of wildlife sanctuaries and refuges.

MONITORING: Continue forest bird surveys and habitat monitoring. This information is needed to assess the efficacy of habitat management efforts.

RESEARCH PRIORITIES: Research priorities for most Hawaiian forest birds include developing improved methods for controlling rats (*Rattus* spp.) and feral cats (*Felis silvestris*) in native forests, determining the ecological requirements of *Culex* mosquitoes at mid- and high-elevation forests, and developing methods to control mosquito populations. Given that this species is likely extinct, there are no research priorities specific to Kaua'i nuku pu'u.

References:

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- Pratt TK, Fancy SG, Ralph CJ. 2001 'Akiapola'au (*Hemignathus munroi*) and nukupu'u (*Hemignathus lucidus*). In *The Birds of North America*, No. 600 (Poole A, Gill F, editors.). Philadelphia, (PA): The Academy of Natural Sciences; and Washington DC: The American Ornithologists' Union.
- Scott JM, Mountainspring S, Ramsey FL, Kepler CB. 1986. Forest bird communities of the Hawaiian islands: their dynamics, ecology and conservation. Lawrence, (KS): Cooper Ornithological Society.
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