

Photo

Forest Birds

'Akikiki

Oreomystis bairdi

SPECIES STATUS:

Federal Candidate for Listing

State recognized as endemic

Hawaii Natural Heritage Ranking G1—Critically imperiled

SPECIES INFORMATION: The 'akikiki, or Kaua'i creeper, is a small Hawaiian honeycreeper endemic to the island of Kaua'i. 'Akikiki, like the creeper species known from other Hawaiian islands, generally forage on trunks, branches and twigs of live and dead 'ohi'a (*Metrosideros polymorpha*). Their diet consists primarily of small invertebrates that they glean from bark. They are usually found in pairs, family groups or small flocks. Only seven nests have been found, so our understanding of 'akikiki breeding biology is limited. Males and females build open-cup nests. Presumed clutch size (one), incubation (16-18 days) and nestling period (17-19 days) are based on traits observed in the closely related Hawai'i creeper and O'ahu 'alauahio. A long period of parental dependency probably makes double broods unlikely. 'Akikiki join in mixed-species foraging flocks during the non-breeding season.

DISTRIBUTION: 'Akikiki populations are restricted to the Sincok's Bog area of the southeastern Alaka'i Swamp. Its historic range included both high- and low-elevation forests, though by the 1960's it was most common above 1140 meters (3750'). Subfossil remains have been found at sea-level in Makawehi, suggesting a prehistoric island-wide distribution.

Map

ABUNDANCE: The Kaua'i Forest Bird Survey in 2000 estimated a population of 2448 ± 1200 (s.e.) birds. Sincok estimated 6832 ± 966 birds in a survey conducted from 1968-1973, 2300 ± 700 of which were in the same core area as the 2000 survey. Both density and range of this species have contracted in recent decades.

LOCATION AND CONDITION OF KEY HABITAT: 'Akikiki inhabit mesic and wet forests from 600 to 1600 meters (2000 – 5300'). There is a rainfall gradient across the known range of the species of over 10,000 millimeters/year (450 inches/year), which, along with the steep topography, makes the habitat quite variable. These montane forests are dominated by 'ohi'a (*Metrosideros polymorpha*). The subcanopy is primarily 'olapa or lapalapa (*Cheirodendron* spp.) and 'ohi'a ha (*Syzygium sandwicensis*). Common understory species include 'ohelo (*Vaccinium*

calycinum), kanawao (*Broussaisia arguta*), 'oha wai (*Clermontia* spp.), kawa'u (*Ilex anomala*), kolea (*Myrsine lessertiana*), na'ena'e (*Dubautia* spp.) and pukiawe (*Styphelia tameiameia* ??). In low elevations across its range, the habitat has been drastically altered by feral ungulates and introduced weeds. All remaining known habitat is either state Forest Reserve or Wilderness Preserve so management and condition are mostly stable.

THREATS: 'Akikiki are subject to the same threats as other native Hawaiian forest birds. Of particular concern for this species are the following:

- Avian disease is likely to occur at all elevations on Kaua'i. Ten 'akikiki have been tested for presence of disease; none had active infections or antibodies. This could indicate either low transmission rates or very high mortality for this species.
- Habitat degradation from feral pigs and goats followed by invasions of alien weeds has changed the forest structure. Hurricanes in 1982 and 1992 also severely disrupted portions of native forest.
- Competition with Japanese white-eye (*Zosterops japonicus*) may negatively impact 'akikiki. Alien invertebrates may compete with prey of 'akikiki, or they may themselves be prey; their role in native forest ecosystems is unclear.
- Predation by introduced rats may negatively affect this species. Predation on 'akikiki nests has not been documented, but rats and cats are present throughout 'akikiki habitat and are potential predators on roosting or incubating birds.

CONSERVATION ACTIONS: 'Akikiki may have benefitted from habitat conservation efforts in the Alaka'i including establishment of the Alaka'i Wilderness Preserve, regular surveys of forest bird populations and habitat conditions, control of feral ungulates through public hunting, public education efforts featuring Kaua'i's endangered forest birds, and studies of disease and disease vectors in the Alaka'i. In addition to these efforts, specific actions targeted for the 'akikiki include the following:

- Ongoing ecological studies will produce a current population and range estimate for 'akikiki, an analysis of population trends in the core of its habitat, and a habitat suitability map to guide possible re-colonization efforts.
- Captive propagation techniques are being developed for *Oreomystis* species at Keauhou Bird Conservation Center on Hawai'i island.
- Forest restoration through fencing and more aggressive ungulate control might improve the quality of 'akikiki habitat and potential habitat. Control of noxious weed plants must also be part of forest restoration efforts.
- Development and application of toxicants for rats and feral cats for use across landscapes.
- Prevent introduction of the mongoose (*Herpestes auropunctatus*) and other possible predators to Kaua'i.
- Public outreach and education**.

MONITORING:

- Continue population and habitat quality surveys to assess efficacy of habitat management efforts.

RESEARCH PRIORITIES:

- Intensive demographic study to determine key aspects of 'akikiki life history.
- Identification of disease resistance, which may aid in establishing additional populations.

References:

U.S. Fish and Wildlife Service. 2003. Draft Revised Recovery Plan for Hawaiian Forest Birds. Region 1, Portland, OR. 428pp.

Foster, J. T., J. M. Scott, and P. W. Sykes, Jr. 2000. 'Akikiki (*Oreomystis bairdi*). In The Birds of North America, No. 552 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, PA.