



Photo: Eric VanderWerf

Forest Birds

O'ahu 'Amakihi

Hemignathus flavus

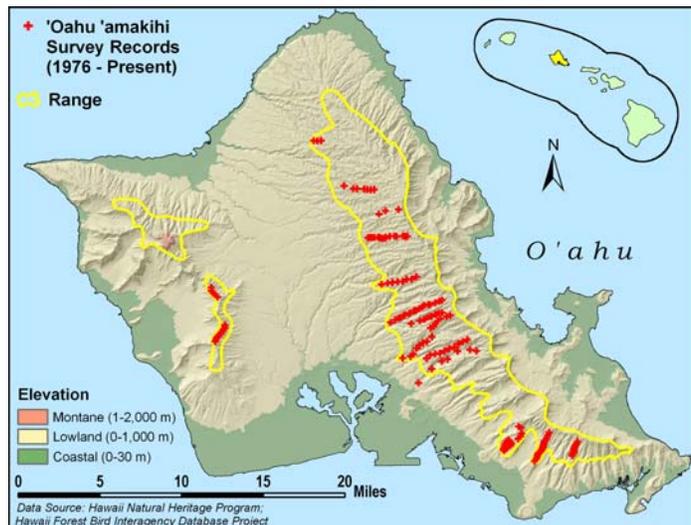
SPECIES STATUS:

State recognized as Endemic
 NatureServe Heritage Rank G3 – Vulnerable
 IUCN Red List Ranking – Vulnerable

SPECIES INFORMATION: The O'ahu 'amakihi is a small, generalist Hawaiian honeycreeper (Family: Fringillidae) endemic to the island of O'ahu. Until 1995, the O'ahu 'amakihi, and the Hawai'i (*H. virens*) and Kaua'i amakihi (*H. kauaiensis*) were considered a single species: the common 'amakihi (*H. virens*). Plumage of all species is similar; males are yellow-green to olive with black lores. Females are similar, but duller. All have decurved bills. The plumage of some male O'ahu amakihi is variable in having yellow above eyes and more yellow breasts, and compared to the other species, female O'ahu 'amakihi have two dull wing bars. The O'ahu 'amakihi is brighter and smaller than the Kaua'i 'amakihi. O'ahu 'amakihi are generalized foragers that take arthropods from a variety of trees and substrates. The species often gleans arthropods from leaves and twigs, less frequently from larger branches and trunks. Feeds on nectar and fruit from a variety of native and non-native plants and has been observed eating sap from koa (*Acacia koa*) trees. Only three nests have been found; thus, the species' reproductive biology is poorly known, but is likely similar to Hawai'i 'amakihi.

DISTRIBUTION: O'ahu 'amakihi occur in two disjunct populations between 50 and 300 meters (180 – 1,000 feet) elevation, although the species is most numerous above 200 meters (650 feet). In recent years, range has increased to include some residential areas. Original range likely included all forested regions of O'ahu.

ABUNDANCE: A 1991 survey conducted by the State of Hawai'i Division of Forestry and Wildlife estimated the O'ahu 'amakihi population at between 20,000 and 60,000 individuals. Audubon Christmas bird counts from 1958-1985 documented a decrease in detections. Despite this, populations may be increasing in some areas.



LOCATION AND CONDITION OF KEY HABITAT: O'ahu 'amakihi occur in a variety of habitats from very wet forests in the Ko'olau Mountains to dry forests in the Wai'anai Mountains. They are more common in sheltered forests in valleys at middle elevations. Unlike, other Hawaiian passerines, the range of the O'ahu 'amakihi extends to low-elevation forest dominated by non-native plant species. Among introduced forests, 'amakihi are most abundant in areas dominated by guava (*Psidium guajava*) or kukui (*Aleurites moluccana*). Most of the species' range is managed by the U.S. Fish and Wildlife Service, U. S. Army, and the State of Hawai'i.

THREATS: Although O'ahu 'amakihi populations appear stable, they are likely 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 O'ahu 'amakihi populations, the following are of particular concern:

- **Fire.** Non-native plants and military training activities often results in wildfires that threaten O'ahu 'amakihi habitat on military lands.

CONSERVATION ACTIONS: O'ahu 'amakihi likely have benefited from management activities designed to conserve other endangered forest birds including the establishment of the O'ahu Forest National Wildlife Refuge in the Ko'olau mountains, rat control directed at protecting nesting O'ahu 'elepaio (*Chasiempis sandwichensis ibidis*), fencing and ungulate control, forest restoration, habitat monitoring, and studies of disease and disease vectors. In addition to these efforts, future management specific to the O'ahu 'amakihi may include the following:

- Public outreach and education.
- Continued protection and management of wildlife sanctuaries and refuges.

MONITORING: Initiate regular forest bird surveys on O'ahu 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. Because the O'ahu 'amakihi appears to be surviving and possibly thriving in disturbed habitat and at elevations below the point where mosquitoes commonly occur they provide a number of potentially important research opportunities. Research priorities specific to the O'ahu 'amakihi include the following:

- Conduct life history studies to quantify the population structure, dispersal patterns, survivorship, nesting phenology and success. Studies comparing life history characteristics between native and non-native habitats would be particularly useful.
- Identify and study disease resistant populations, focusing on the genetic basis of resistance.

References:

Lindsey GD, VanderWerf EA, Baker H, Baker PE. 1998. Hawai'i (*Hemignathus virens*), Kaua'i (*Hemignathus kauaiensis*), O'ahu (*Hemignathus chloris*) and greater 'amakihi (*Hemignathus sagittirostris*). In *The Birds of North America*, No. 360 (Poole A, Gill F, editors.). Philadelphia, (PA): The Academy of Natural Sciences; and Washington DC: The American Ornithologists' Union.