

Forest Birds

Kaua'i 'Amakihi

Hemignathus kauaiensis



Photo: Jim Denny

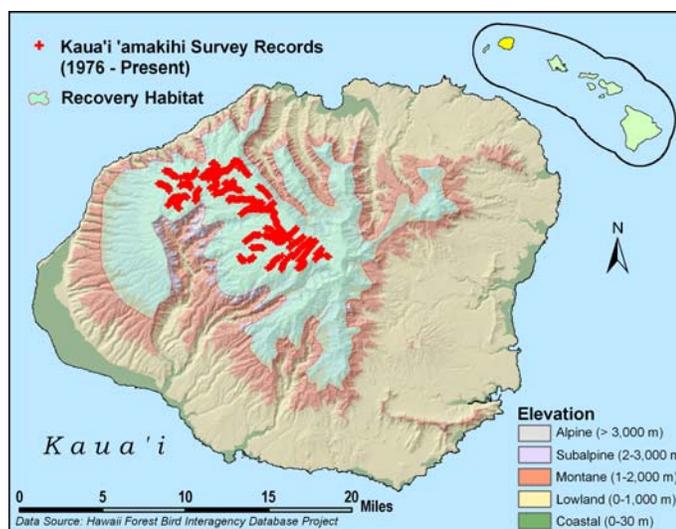
SPECIES STATUS:

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

SPECIES INFORMATION: The Kaua'i 'amakihi is a small, generalist Hawaiian honeycreeper (Family: Fringillidae) endemic to the island of Kaua'i. Until 1995, the Kaua'i 'amakihi, and the Hawai'i (*H. virens*) and O'ahu 'amakihi (*H. falvus*) were considered a single species: common amakihi (*H. virens*). The plumage of all species is similar; males are yellow-green to olive with black lores. Females are generally similar, but duller. All have decurved bills. The Kaua'i 'amakihi, is perhaps the duller of the three species, is somewhat larger and has a longer, heavier and more decurved bill than the other species. The species often gleans arthropods from branches and trunks as well as leaves, often hanging upside down to examine the underside of branches. Also probes bark crevices for food items, pierces the bases of 'ōhi'a (*Metrosideros polymorpha*) flowers for nectar, and feeds on the fruit of native and non-native plants. The species' reproductive biology is poorly known, however males display (i.e., rapidly move around the female and sing), chase, and feed females prior to breeding. Both sexes build the nest, typically in a non-blooming 'ōhi'a tree, although the female does most of the construction while the male sings in adjacent trees. Females incubate a clutch of three eggs and brood nestlings at night and during inclement weather. Both parents feed nestlings. Fledglings are accomplished fliers. No information on post-fledgling behavior or parental dependency. Although weather has been implicated in nest failure, nest success is high.

DISTRIBUTION: Kaua'i 'amakihi occur above 600 meters (2,000 feet) elevation in the forests of Waimea Canyon, Nā Pali Plateau, the Alaka'i Swamp and Makaleha Mountains. Original range likely included all forested regions of Kaua'i.

ABUNDANCE: In the early 1970s the island-wide Kaua'i 'amakihi population was estimated at 10,743 ± 970 (SE) individuals. A survey in the late 1980s estimated the population at 15,000 to 20,000 individuals. The Kaua'i Forest Bird Survey (2000) estimated the population in the Alaka'i Swamp and Kōke'e State Park area at greater than 40,000 individuals, and reported a significant population increase between 1981 and 2000.



LOCATION AND CONDITION OF KEY HABITAT: Kaua'i 'amakihī occur in wet and mesic montane forests above 600 meters (2,000 feet) elevation dominated by 'ōhi'a, koa (*Acacia koa*), 'ōlapa (*Cheirodendron trigynum*), and lapalapa (*C. platyphyllum*). At lower elevations, where the species historically occurred, native habitats are severely degraded. Although public hunting reduces the number of feral ungulates in the most accessible parts of the species' range, hunting is not an effective method to prevent habitat degradation. Occupied habitats above Waimea Canyon, in and west of the Alaka'i swamp are managed by the State of Hawai'i.

THREATS: Although Kaua'i 'amakihī 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.

CONSERVATION ACTIONS: Kaua'i 'amakihī likely have benefited from management activities designed to conserve other endangered forest birds 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. In addition to these efforts, future management specific to the Kaua'i 'amakihī may include the following:

- Aggressive ungulate control would likely improve the quality of Kaua'i 'amakihī habitat and facilitate the recovery of degraded, but potential habitat.
- Control of non-native plants that degrade native habitat.
- Eradication of rats (*Rattus* spp.), feral cats (*Felis silvestris*), and barn owls (*Tyto alba*) from the Alaka'i Wilderness Preserve.
- Prevent the introduction of the small Indian mongoose (*Herpestes auro-punctatus*) and other non-native predators.
- Public outreach and education.
- 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 and feral cats in native forests, determining the ecological requirements of *Culex* mosquitoes at mid- and high-elevation forests, and developing methods to control mosquito populations. Research priorities specific to the Kaua'i 'amakihī include the following:

- Conduct life history studies to quantify the population structure, dispersal patterns, survivorship, nesting phenology and success of this poorly known species.
- Determine the species' susceptibility to avian malaria (*Plasmodium relictum*) and avian pox (*Poxvirus avium*).
- Determine the effects of recently established non-native insects on native arthropods, especially those that are part of the species' diet.
- Determine the status of populations outside of the greater Alaka'i swamp region.
- Conduct phylogenetic analyses to determine the relationship to other 'amakihī species.

References:

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