

## Forest Birds

# Kaua'i 'amakihi

*Hemignathus kauaiensis*



Photo: Jim Denny

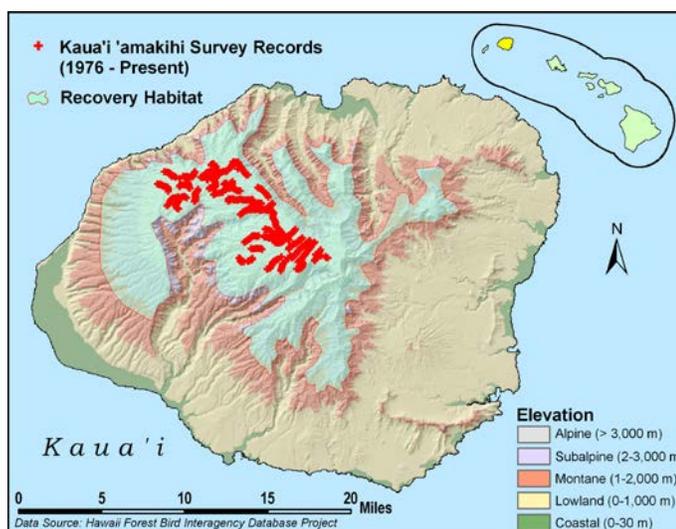
### SPECIES STATUS:

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, Hawai'i (*H. virens*), and O'ahu 'amakihi (*H. fulvus*) 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 the duller of the three species, is larger and has a longer, heavier and more decurved bill than the other species. They glean 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. 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:** Occurs above 600 meters (2,000 feet) in the forests of Waimea Canyon, Nā Pali Plateau, the Alaka'i Swamp, and Makaleha Mountains. Original range likely included all forested areas of Kaua'i.

**ABUNDANCE:** In the early 1970s the population was estimated at  $10,743 \pm 970$  (SE) birds. A survey in the late 1980s estimated 15,000 to 20,000 birds. 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 birds and reported a significant population increase between 1981 and 2000. However, data from the Alakai Plateau suggest a general decline and possible range constriction since 2008.



**LOCATION AND CONDITION OF KEY HABITAT:** Wet and mesic montane forests above 600 meters (2,000 feet) 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 accessible areas of the species' range, it is not effective in preventing 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 populations appear stable, they are likely susceptible to the same factors that threaten other native Hawaiian forest birds, including habitat loss and degradation, predation by introduced mammals, and disease.

**CONSERVATION ACTIONS:** Kaua'i 'amakihi likely benefit from actions to conserve other endangered forest birds including establishment of the Alaka'i Wilderness Preserve, regular surveys of forest bird populations, habitat monitoring, studies of disease and disease vectors, control of feral ungulates through public hunting, and education about Kauai's endangered forest birds. Future management specific to the Kaua'i 'amakihi may include the following:

- Aggressively control ungulates to improve habitat quality.
- Control non-native plants that degrade native habitat.
- Eradicate 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 auropunctatus*) and other non-native predators.
- Conduct public outreach and education.
- Continue protection and management of wildlife sanctuaries and refuges.

**MONITORING:** Continue forest bird surveys and habitat monitoring.

**RESEARCH PRIORITIES:** Research priorities for most Hawaiian forest birds include improving methods for controlling rats and feral cats in native forests, determining ecological requirements of *Culex* mosquitoes at mid- and high-elevation forests, and developing methods to control mosquitoes. Research priorities specific to the Kaua'i 'amakihi 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 and avian pox.
- 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 'amakihi species.

**References:**

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