

Forest Birds

Hawai'i Creeper

Oreomystis mana



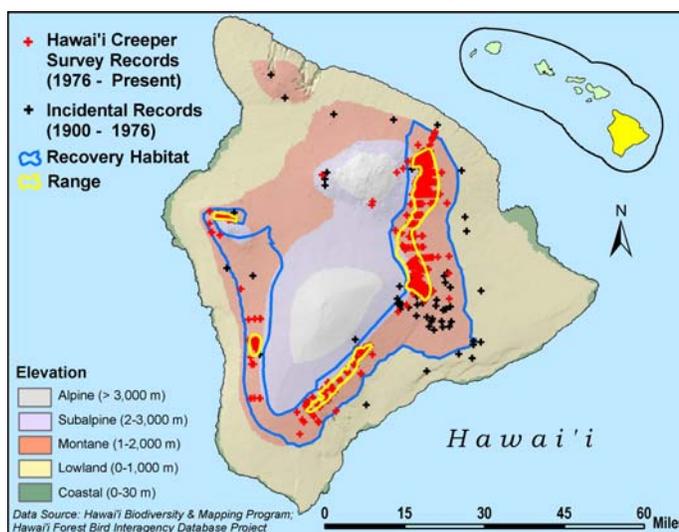
Photo: Jack Jeffrey

SPECIES STATUS:
Federally listed as Endangered
State listed as Endangered
State recognized as Endemic
NatureServe Heritage Ranking G2 – Imperiled
IUCN Red List Ranking – Endangered
Draft Revised Recovery Plan for Hawaiian
Forest Birds – USFWS 2003

SPECIES INFORMATION: The Hawai'i creeper is a small, inconspicuous Hawaiian honeycreeper (Family: Fringillidae) endemic to the island of Hawai'i. Adult males and females are predominately olive-green above, dull buff below, and have a dark gray mask extending around the eyes; males are brighter. Their similarity to Hawai'i 'amakihi (*Hemignathes virens*), Hawai'i 'ākepa (*Loxops coccineus coccineus*), and introduced Japanese white-eyes (*Zosterops japonicus*) complicates field identification. Unlike many Hawaiian forest birds, their life history is well known. Outside the breeding season, the species frequently joins mixed-species foraging flocks and forages over home ranges that average 11 hectares (17.3 acres). The Hawai'i creeper most frequently gleans insects, spiders, and other invertebrates from the branches, trunks, and foliage of live 'ōhi'a (*Metrosideros polymorpha*) and koa (*Acacia koa*) trees. During the breeding season the species' home range averages four to seven hectares (10 – 17 acres) and a 10 – 20 meter (33 – 66 feet) territory around the nest is defended. Most nests are open cup structures, but about 15 percent are placed in cavities or in bark crevices. Females build nests, incubate eggs, and brood nestlings. Males deliver food to the female on and off the nest. Both parents feed the young for approximately one month. Hawai'i creepers re-nest after nest failures and pairs have been documented raising two broods in a season. Nest success of Hawai'i creepers is very low, but adults have high annual survival.

DISTRIBUTION: Hawai'i creepers occur in four disjunct populations above 1,500 meters (5,000 feet) on the windward side of the island of Hawai'i. The Hawai'i creeper historically occurred across the island above 1,070 meters (3,500 feet) elevation.

ABUNDANCE: The Hawaiian Forest Bird Survey (1976-79, 1983), estimated the Hawai'i creeper population at 12,500 ± 2,000 (95% CI) individuals. The largest population consisted of 10,000 ± 1,200 birds.



LOCATION AND CONDITION OF KEY HABITAT: Hawai'i creeper occur most commonly in mesic and wet forests dominated by 'ōhi'a and koa, with a subcanopy of 'ōlapa (*Cheirodendron trigynum*), pūkiawe (*Styphelia tameiameia*), 'ōhelo (*Vaccinium* spp.), 'akala (*Rubus hawaiiensis*), kōlea (*Myrsine* spp.), kāwa'u (*Ilex anomala*), and hapu'u tree ferns (*Cibotium* spp.). Habitat conditions vary across the species' range, with much of the habitat degraded by grazing ungulates, especially feral pigs (*Sus scrofa*). Most of the current range of the Hawai'i creeper is within the boundaries of State and Federally owned lands.

THREATS: Hawai'i creepers 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 Hawai'i creeper populations, the following are of particular concern:

- **Predation.** Nest success of Hawai'i creepers is very low (11 to 50 percent) and rat (*Rattus* spp.) predation may be partially responsible. Hawai'i creepers place their nests near the main trunks of trees which may facilitate predation by rats.
- **Disease.** The Hawai'i creeper's absence from habitats below 1,350 meters (4,500 feet) elevation suggests that it may be particularly susceptible to mosquito-borne avian disease.
- **Habitat loss and degradation.** Logging and grazing ungulates has reduced, degraded, and fragmented suitable forest habitats. Habitat fragmentation may be a dispersal barrier preventing or restricting natural re-colonization of the species' former range.
- **Competition.** It has been suggested that competition with Japanese white-eyes (*Zosterops japonicus*) may negatively affect Hawai'i creepers.

CONSERVATION ACTIONS: Past or ongoing conservation efforts specific to the Hawai'i creeper include the following: studies documenting the species' productivity, recruitment, and survival were completed in 1999, and captive propagation techniques have been developed. In addition, Hawai'i creepers likely have benefited from management activities designed to conserve other endangered forest birds in the Hakalau Forest National Wildlife Refuge, the Kona unit of the Hakalau Forest National Wildlife Refuge, 'Ōla'a/Kīlauea Watershed Partnership, Kapāpala Forest Reserve, and Pu'u Wa'awa'a Wildlife Sanctuary. These efforts include fencing, ungulate and small mammal control, forest restoration, habitat monitoring, and studies of disease and disease vectors. In addition to these efforts, future management specific to the Hawai'i creepers may include the following:

- Re-introduce the Hawai'i creeper to managed areas in their former range (e.g., Mauna Loa strip in Hawai'i Volcanoes National Park).
- Rodent control may enhance nestling and female survival. Aerial broadcast of rodenticides would be the most effective method to treat broad areas.
- Increase public education efforts to engender support for conservation of forest birds.
- 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 Hawai'i creeper include the following:

- Determine efficacy and health implications of broadcast rodenticide.

References:

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