



Photo: Jack Jeffrey

## Forest Birds

# Maui 'Alauahio or Maui Creeper

*Paroreomyza montana*

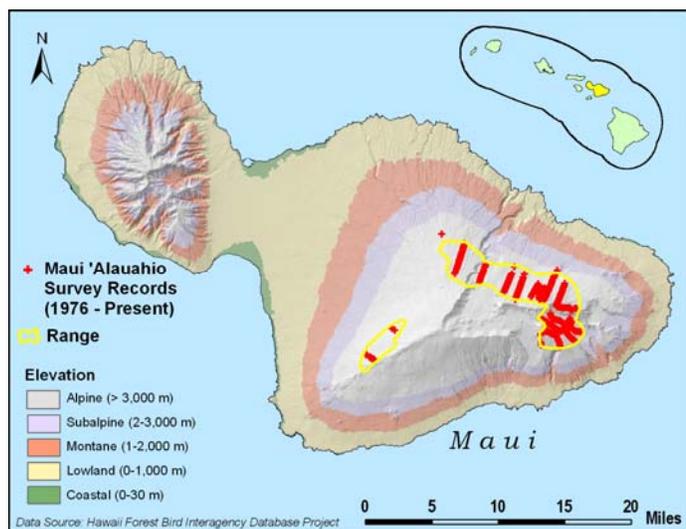
### SPECIES STATUS:

State recognized as Endemic  
NatureServe Heritage Rank G4 – Apparently secure

**SPECIES INFORMATION:** The Maui 'alauahio, or Maui creeper, is a small insectivorous Hawaiian honeycreeper (Family: Fringillidae) endemic to Maui. The species also occurred on Lāna'i but was last seen in 1937 and is presumed extinct. Adult males are predominantly olive-green above and have a bright yellow face, throat, and belly; the amount and intensity of yellow varies among individuals. Adult females are similar, but generally not as bright; both have short, fine straight bills. Males and females do not obtain their adult plumage for several years. The Maui 'alauahio gleans invertebrates from woody and leafy parts of a variety of plants. Males and females defend one to two hectare (2.5 – 5 acre) home ranges against conspecifics year round and will chase 'apapane (*Himantione sanguinea*) and Japanese white-eyes (*Zosterops japonicus*) from the vicinity of their nests. 'Alauahio are socially monogamous and pair for life, although extra-pair copulations have been confirmed through genetic analysis. Females choose the nest site and build open-cup nests. Clutch size is two, and birds will renest after initial failures, although double brooding has not been documented. Only females incubate eggs and brood nestlings. Maui 'alauahio do not breed until their third year, and young birds (i.e., helpers) associate with breeding pairs. Helpers are usually offspring from the previous year and feed the female, nestlings, and fledglings. Fledglings are fed for two to three months, and young remain with their parents in family groups for 18 - 20 months.

**DISTRIBUTION:** Maui 'alauahio occur in three disjunct populations above 900 meters (3,000 feet) elevation on the slopes of Haleakalā. 'Alauahio were historically common in west Maui and on Lāna'i; these populations are now extirpated. Fossil evidence suggests that 'alauahio were common across the south side of the island and their range included lowland forests.

**ABUNDANCE:** The Hawaiian Forest Bird Survey (1980), estimated the 'alauahio population at 35,000 ± 5000 (95% CI) individuals. Surveys conducted during 1995-1997 found



similar numbers, but densities decreased below 1,600 meters (5,250 feet) elevation and the species' range appears to have contracted.

**LOCATION AND CONDITION OF KEY HABITAT:** Maui 'alauahio occur primarily in wet and mesic montane forests dominated by 'ōhi'a (*Metrosideros polymorpha*), although they also occur in subalpine māmane scrub (*Sophora chrysophylla*; e.g., Kahikinui), and in dry and mesic forests dominated by pine (*Pinus* spp.) and eucalyptus (*Eucalyptus* spp.; e.g., Polipoli State Park and Hosmer Grove); all populations occur above 900 meters (2,925 feet) elevation. Habitat conditions vary tremendously across the species' range. The northeastern part of the species' range is actively managed by the State of Hawai'i, (i.e., Forest Reserve and Natural Area Reserve), the National Park Service, and private landowners including the Nature Conservancy. All entities are current members of the East Maui Watershed Partnership. The remainder of the species' range occurs within the boundaries of State and Federally owned lands, but management efforts vary considerably.

**THREATS:** Although Maui 'alauahio 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 Maui 'alauahio populations, the following are of particular concern:

- **Predation.** Rats (*Rattus* spp.) have been observed depredating nests as well as incubating and brooding females. Female behavior of begging near nests may make them particularly susceptible to rats.
- **Disease.** Susceptibility to avian malaria (*Plasmodium relictum*) has been documented, and likely prevents the establishment of populations in lowland areas. In Kahikinui, few individuals show signs of avian pox (*Poxvirus avium*), although it is prevalent in 'amakihi (*Hemignathus virens*) and 'apapane (*Himatione sanguinea*). These data are equivocal, indicating low transmission rates, possible resistance, or very high mortality for this species.
- **Habitat degradation.** Current fencing around protected areas is not effective in excluding axis deer (*Axis axis*). Currently, deer populations on Maui are growing and threaten to further degrade forests occupied by the 'alauahio.

**CONSERVATION ACTIONS:** Maui 'alauahio, likely have benefited from management activities designed to conserve endangered forest bird species on northeastern Haleakalā including fencing, ungulate and small mammal control, forest restoration, habitat monitoring and studies on disease and disease vectors. In addition, ongoing fencing and ungulate control on Department of Hawaiian Home Lands at Kahikinui will likely benefit the small 'alauahio population there, and in general, conservation efforts should also include continued 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 (*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. Research priorities specific to the Maui 'alauahio include the following:

- Develop a translocation protocol that will facilitate the re-introduction of this species into restored high-elevation forests.

**References:**

Baker H, Baker PE. 2000. Maui 'alauahio (*Paroreomyza montana*). In *The Birds of North America*, No. 504 (Poole A, Gill F, editors.). Philadelphia, (PA): The Academy of Natural Sciences; and Washington DC: The American Ornithologists' Union.

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