



Photo: DOFAW

## Forest Birds

# Po'ouli

*Melamprosops phaeosoma*

### SPECIES STATUS:

Federally Listed as Endangered

State Listed as Endangered

State Recognized as Endemic

NatureServe Heritage Rank: G1 - Critically Imperiled

IUCN Red List Ranking: Critically Endangered

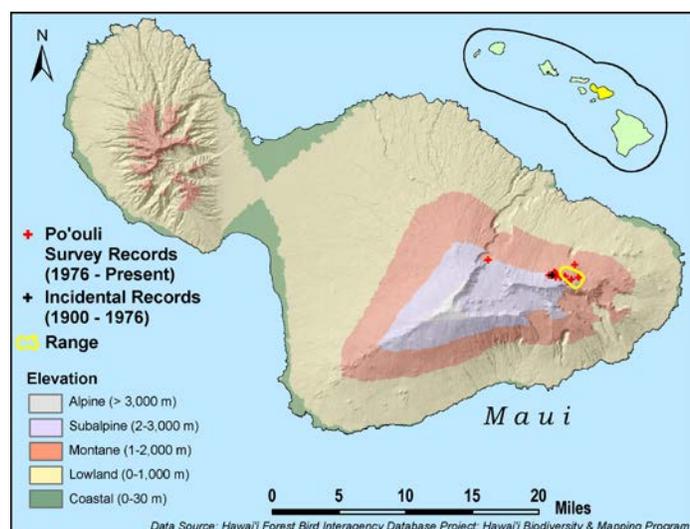
(Potentially Extinct)

Recovery Plan for Hawaiian Forest Birds - USFWS 2006

**SPECIES INFORMATION:** The po'ouli is a stocky Hawaiian honeycreeper (Family: Fringillidae) endemic to Maui that was not discovered until 1973. Po'ouli have short wings and tail, a finch-like bill, and distinctive plumage. Aptly named "black-faced" in Hawaiian, po'ouli have a large black face mask, white cheeks, throat, and underparts and brown wings and back; no other Hawaiian forest bird is similarly colored. Although not well-studied, males and females are similar, although females have a grayish throat and breast. Little is known of the species' life history. Po'ouli often join mixed species foraging flocks. Forages primarily in the subcanopy and understory on tree branches of native shrubs and trees where they search moss, lichens, and bark for snails and arthropods. Breeding biology is based on observations from a single nesting pair and may be biased because of extremely low population density. For example, territorial behavior has not been observed. Nests are similar to those of other Hawaiian honeycreepers and are placed in 'ohi'a (*Metrosideros polymorpha*) trees. Only the female incubates eggs and broods nestlings; male feeds the female on and off the nest.

**DISTRIBUTION:** Likely restricted to a 1,300 hectare (3,200 acre) area between 1,440 and 2,100 meters (4,750 - 7,000 feet) elevation on the northeastern slope of Haleakalā on Maui. No historical data on range, although fossil evidence indicates that po'ouli once occurred over a wider geographic range.

**ABUNDANCE:** The Hawaiian Forest Bird Survey (1980) estimated the population at  $140 \pm 280$  (95% confidence interval) individuals. As of 2003 there were three known individuals. One captured and brought into captivity in 2004 died in November of that year and the remaining two birds have not been seen since January 2004. The species' poor detectability



has hampered attempts to locate additional individuals or estimate population size. The species is potentially extinct.

**LOCATION AND CONDITION OF KEY HABITAT:** Mixed shrub montane wet forest dominated by 'ōhi'a, with an understory dominated by a diversity of small trees and shrubs, many of which are used as foraging substrates (e.g., kanawao [*Broussaisia arguta*], kawa'u [*Ilex anomala*]). Habitat conditions in areas occupied by po'ouli are variable, but improving. All known individuals occur (red) in the Hanawī Natural Area Reserve which is managed by the State of Hawai'i.

**THREATS:** Unknown. However, po'ouli is likely susceptible to the same factors that threaten other native Hawaiian forest birds, including habitat loss and degradation, predation by introduced mammals, and disease. For po'ouli, the following are likely of particular concern:

- Habitat degradation. The species appears to prefer areas with low levels of soil and vegetation disturbance and therefore may be particularly sensitive to understory and ground cover damage by feral pigs (*Sus scrofa*).
- Predation. Rats (*Rattus* spp.) are abundant in po'ouli habitat and may depredate adults and nests.
- Competition. In addition to direct predation on adults and nests, rats also may compete with po'ouli for food resources, especially snails. Also, the non-native garlic snail (*Oxychilus alliarius*) is abundant and preys on native snails.

**CONSERVATION ACTIONS:** Major efforts to conserve po'ouli include the establishment of the 3,000 hectares (7,500 acres) Hanawī Natural Area Reserve in 1986 to protect the species' entire known range, and fencing and pig removal has facilitated recovery of the understory. In 1995, the Maui Forest Bird Recovery Project was created to research and protect native Hawaiian forest birds, including the po'ouli. Activities to date include small mammal control, research on optimizing rodent control methods, surveys for native land snails, and banding and collecting blood samples to monitor demography and disease prevalence. In 2002, the team successfully translocated a female po'ouli to the home range of the male, however, she quickly returned to her own home range. In September 2004, one po'ouli was captured in an attempt to establish a captive population but it died in November of the same year. The Hawai'i Department of Land and Natural Resources and the U.S. Geological Survey continue to search Hanawī and adjacent habitats for additional birds. In addition, po'ouli populations likely have benefited from management efforts to conserve other endangered forest birds on northeastern Haleakalā including fencing, ungulate and small mammal control, forest restoration, habitat monitoring, and studies on disease and disease vectors. In addition to these efforts, future management specific to the po'ouli may include the following:

- Continue pig and small mammal control efforts.
- Continue efforts to locate and capture the two known individuals and additional birds.
- Conduct public outreach about the importance of pig and rodent control to the remaining forest bird populations on Maui.
- 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 the

ecological requirements of *Culex* mosquitoes at mid- and high-elevation forests, and developing methods to control mosquito populations. In addition to the ongoing research on po'ouli outlined above, additional priorities specific to po'ouli include the following:

- Determine the distribution and abundance of the species' prey base to determine if food resource is a limiting factor.

**References:**

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Pratt TK, Kepler CB, Casey TLC. 1997. Po'ouli (*Melamprosops phaesoma*). In *The Birds of North America*, No. 272 (Poole A, Gill F, editors). Philadelphia, (PA): The Academy of Natural Sciences; and Washington DC: The American Ornithologists' Union.

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