

Photo

Forest Birds

‘Akohekohe

Palmeria dolei

SPECIES STATUS:

Federally Listed as Endangered

State Listed as Endangered

State recognized as endemic

Hawaii Natural Heritage Ranking G1—Critically imperiled

SPECIES INFORMATION: ‘Akohekohe, or crested honeycreepers, have a plume or “crest” of white feathers that curl over their bills. They are large, primarily nectarivorous Hawaiian honeycreepers endemic to Maui Nui. ‘Akohekohe forage primarily in ‘ohi‘a (*Metrosideros polymorpha*), but are also known to take nectar from several understory species. Small invertebrates are also part of the diet: these are mostly gleaned from ‘ohi‘a foliage. Apparently monogamous across breeding seasons, ‘Akohekohe aggressively defend feeding and nesting territories year-around. Females build open cup nests in branches below the terminal foliage in ‘ohi‘a. Clutch size is one or two. Chicks forage independently after 10 – 14 days, and some pairs have produced three successful broods in a season.

DISTRIBUTION: ‘Akohekohe are currently found in wet and mesic montane forest between 1100 and 2300 meters (3600 – 7550’) on the northeast slope of Haleakala on Maui. This area is 5% of the estimated historical range, which included the western slopes of Kula and forests on Moloka‘i. Subfossil evidence indicates the species once occurred in low dry forests on Maui.

Distribution map

ABUNDANCE: The Hawaiian Forest Bird Survey estimated 3800 ± 700 ‘Akohekohe (95% CI) in 1980 (Scott et al. 1986). Surveys in 1992 and 1995-97 indicate similar densities across the same range.

LOCATION AND CONDITION OF KEY HABITAT: ‘Akohekohe are currently limited to a 58 square kilometer swath of wet and mesic montane forest on the northeast slope of Haleakala. This habitat is dominated by ‘ohi‘a (*Metrosideros polymorpha*) and ‘olapa (*Cheirodendron trigynum*), and to a lesser extent, koa (*Acacia koa*) and kawa‘u (*Ilex anomala*). Nearly all the birds are found between 1500 and 2100 meters (5000 – 6000’) in rugged, steep terrain with dense epiphytic understory. Their range includes state Forest Reserve and Natural Area Reserve as well as National Park lands between Waikamoi Drainage and Kipahulu Valley. They also occur southeast of Kuiki to Manawainui Valley. Except for the possible spread of avian disease and its vectors with global warming, these areas are considered stable.

THREATS: 'Akohekohe are subject to the same threats as other native Hawaiian forest birds. Of particular concern for this species are the following:

- Avian disease may be especially limiting for 'akohekohe as they migrate altitudinally in response to 'ohi'a flowering. This may increase their exposure to disease-carrying mosquitoes at lower elevations.
- Habitat degradation, particularly damage to understory vegetation by feral pigs, may limit nectar resources when 'ohi'a are not flowering.

CONSERVATION ACTIONS: 'Akohekohe have benefited from past management actions undertaken in their range including forest bird population surveys, fencing and ungulate removal. Additional necessary actions include the following:

- Establishment of a second population of 'akohekohe is important to minimize the threats that could eliminate the single extant population. This may require control of mosquitoes and their breeding sites as potential recolonization sites include forests at lower elevations in West Maui and Moloka'i.
- Attempts at captive propagation of 'Akohekohe have been unsuccessful due to the aggressive nature of the birds. Future efforts to develop this technique could become necessary if translocations of wild birds are unsuccessful.
- Habitat protection in current range including continued efforts to control feral pigs.
- Forest restoration through fencing and ungulate control might improve the quality of the understory and thus the potential habitat for range expansion on leeward Haleakala.
- Public outreach and education**.

MONITORING:

- Continue population and habitat quality surveys to assess efficacy of habitat management efforts.

RESEARCH PRIORITIES:

- Response of birds to habitat management (forest restoration) efforts.
- Identification of disease resistant individuals, if they exist. This would aid in establishing a second population.

References:

U.S. Fish and Wildlife Service. 2003. Draft Revised Recovery Plan for Hawaiian Forest Birds. Region 1, Portland, OR. 428pp.

Berlin, K. E., and E. M. VanGelder. 1999. 'Akohekohe (*Palmeria dolei*). In *The Birds of North America, Inc.*, Philadelphia, PA.

Scott, J. M., S. Mountainspring, F. L. Ramsey, and C. B. Kepler 1986. *Forest bird communities of the Hawaiian islands: their dynamics, ecology and conservation.* Cooper Ornithological Society, Lawrence, Kansas.