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Forest Birds

Kaua'i 'Elepaio

Chasiempis sandwichensis sclateri

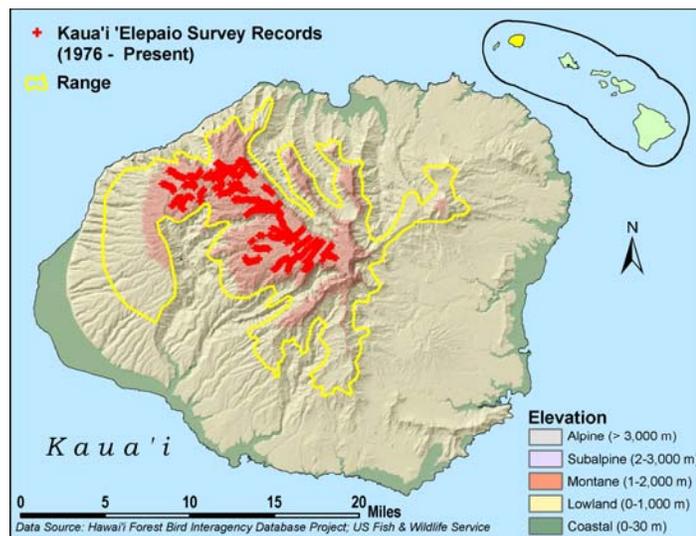
SPECIES STATUS:

State recognized as Endemic
 NatureServe Heritage Rank G3/T2 – Rare with restricted range/Subspecies imperiled globally
 IUCN Red List Ranking – Endangered

SPECIES INFORMATION: The Kaua'i 'elepaio is a small, adaptable monarch flycatcher (Family: Monarchiade) endemic to the island of Kaua'i at the subspecies level. 'Elepaio also occur on the islands of Hawai'i (*C. s. sandwichensis*) and O'ahu (*C. s. ibidis*); the latter subspecies is Federally listed as endangered. Adult males and females have a dark grayish brown crown and back and white underparts with a rusty wash on the upper breast. The bird's name is derived from its primary song which is a shrill whistle given only by males. Little detailed life history information is available from Kaua'i. On the islands of Hawai'i and O'ahu, 'elepaio use virtually all available substrates for foraging, including the ground, logs, rock crevices, snags, and all parts of tress. Equally diverse in the use of foraging maneuvers, 'elepaio capture a wide range of arthropod prey by flycatching, gleaning while perched or hovering, and direct pursuit; foraging maneuvers vary depending on plant species from which prey is being captured and habitat type. For Kaua'i, there is no information on plant species used, although 'ohi'a (*Metrodiseros polymorpha*) is likely. On the island of Hawai'i, pairs remain together throughout the year and long-term pair bonds are common. Unlike Hawaiian honeycreepers, both males and females participate almost equally in all aspects of rearing. Finely woven, cup nests are built in a variety of native and non-native trees. Clutch size is usually two and second nests are attempted, often while fledglings from first are still being fed. Young are fed by parents for at least a month, but remain on their natal territory for up to ten months, which may allow young birds to hone their foraging skills.

DISTRIBUTION: Kaua'i 'elepaio are widely distributed above 600 meters (2,000 feet) elevation, but are most common above 1,100 meters (3,600 feet) elevation on the Alaka'i Plateau. Original range likely included all forested regions of Kaua'i.

ABUNDANCE: In 1984, the island-wide population was estimated at 40,000 individuals. The 2000 Kaua'i Forest Bird Survey estimated the population in the Alaka'i and Kōke'e region at nearly 25,000 individuals,



and reported no change in the population since 1973. 'Elepaio densities peak in 'ōhi'a forest between 1,300 and 1,500 meters (4,500 - 5,000 feet).

LOCATION AND CONDITION OF KEY HABITAT: Kaua'i 'elepaio are most common in dense wet 'ōhi'a forests above 1,100 meters (3,600 feet) elevation; uncommon in the drier forests of Waimea Canyon, the Nā Pali coast, and the wet bogs of Wai'ale'ale. 'Elepaio are found in some low elevation valleys with a mix of native and non-native tree species. Common non-native trees in this habitat include Java plum (*Syzygium cumini*), coffee (*Coffea arabica*), kukui (*Aleurites moluccana*), and *Albizia lebeck*. The quality of these habitats varies considerably. The core of their range, the Alaka'i Plateau and Kōke'e State Park, is managed by the State of Hawai'i as Forest Reserve, Wilderness Preserve, and State Park lands.

THREATS: Kaua'i 'elepaio 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 Kaua'i 'elepaio populations, the following are of particular concern:

- **Disease.** Avian pox (*Poxvirus avium*) is known to reduce both nesting success and adult survival. On O'ahu, annual survival and reproductive success of birds with active pox lesions are lower compared to healthy birds; no information on the effect of avian malaria (*Plasmodium relictum*).
- **Predation.** On O'ahu, predation by black rats (*Rattus rattus*) have been implicated in the loss of nests and death of adult females. Rat control in these populations resulted in large increases in nest success and in the survival of adult females. Other predators, including cats (*Felis silvestris*), Pueo (*Asio flammeus sandwichensis*), and barn owls (*Tyto alba*), occur throughout the forests of Kaua'i.

CONSERVATION ACTIONS: Kaua'i 'elepaio likely have benefited from management activities designed to conserve other endangered forest birds including the establishment of the Alaka'i Wilderness Preserve, regular surveys of forest bird populations, monitoring of habitat conditions, studies of disease and disease vectors, and public education efforts featuring Kauai's endangered forest birds. In addition to these efforts, future management specific to the Kaua'i 'elepaio may include the following:

- Eradication or control of rats, feral cats, and barn owls in the Alaka'i Wilderness Preserve.
- Prevent the introduction of the small Indian mongoose (*Herpestes auropunctatus*) and other possible predators.
- Public outreach and education.
- 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 Kaua'i 'elepaio include the following:

- Conduct life history studies to quantify the population structure, dispersal patterns, survivorship, nesting phenology and success of this poorly known subspecies.

References:

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