



Recent Observations of 'Akepa and Other Endangered Forest Birds in Central Kona, Hawai'i Island

Thane K. Pratt,¹ Jon G. Giffin,² and Fern P. Duvall, III³

Latham (1783) described a 'scarlet finch,' *Fringilla coccinea*, from among birds collected in 1778-1779 during Captain Cook's famous exploratory visit to Hawai'i Island. Taken somewhere inland of Kealakekua Bay, Kona, this bird is now known as the Hawai'i 'Akepa (*Loxops coccineus coccineus*). The species was also found in the Kona districts by the 19th century naturalists Bailleu, Wilson, Palmer, Munro, and Perkins (Banko 1984). At that time, 'Akepa in Kona were restricted to forests above 1,200 m elevation; moreover, the population appeared to be unevenly distributed, for Palmer noted that the species was relatively abundant on Hualalai and in mamane above Honaunau Dairy on Mauna Loa (at Pu'u Pohakuloa), but scarce and with a predominance of males at Pu'u Lehua (Rothschild 1893-1900).

Virtually all observers in the present century have found 'Akepa in Kona on only the N and W slopes of Hualalai. Exceptions (Fig. 1) were Elder, who in 1956 saw the species on Mauna Loa (Alike Tract) above Ohia Mill at 2,040 m on C.Q. Yee Hop Ranch (Banko 1984), and H. Sakai (pers. comm.), who reported hearing several 'Akepa and Hawai'i Creepers (*Oreomystis mana*) in 1978 at McCandless Ranch (Honokua Tract) at 1,522 m elevation. Exhaustive surveys by the U.S. Fish & Wildlife Service in the late 1970s turned up only a single detection of an 'Akepa on the Kona slopes of Mauna Loa—a bird heard by J. Jacobi above Honaunau Forest Reserve (Scott et al. 1986).

In view of the apparent scarcity of 'Akepa in central and southern Kona, we were happy to find a small population of the species at 1,670-1,740 m elevation on the state-owned Waiea Tract, above Ho'okena, South Kona District (Fig. 1), on 29-30 March 1988. In this report, we document the sightings and discuss them in relation to the species' range and the ranges of other endangered forest birds in central Kona.

OBSERVATIONS

'Akepa and other endangered birds were detected by us during an annual survey for 'Alala (*Corvus hawaiiensis*) conducted on the Waiea Tract by the Hawaii Division of Forestry and Wildlife. The 1988 survey was undertaken by us on 29-30 March. On 29 March we split into two parties: one (JG) traversed the northern boundary of this narrow ahupua'a between elevations 1,270 and 1,460 m during 1400-1800 hr; the other party (TKP, FD) walked up the

northern boundary between 1,460 and 1,680 m during 1400-1700 hr and down the southern boundary between 1,680 and 1,428 m at 1700-1830 hr. Observations that day were interrupted by several thundershowers, but otherwise conditions were favorable. Before dawn the following day (0527-0608 hr), FD listened for birds at the 1,440 m road intersection; later, we all surveyed together along the contour at 1,440 m (0630-0730 hr) and along the southern boundary between 1,475-1,680 m (0730-0830 hr and 1020-1130 hr) and throughout the high-elevation section of the tract between 1,680 and 1,740 m (0830-1020 hr). The weather this morning was overcast and still, but without rain.

We found 'Akepa and Hawai'i Creepers only between 1,680 and 1,740 m. The first detection, at 1655 hr on 29 March, was a Hawai'i Creeper heard singing from a tall koa tree overshadowing the contour road at 1,680 m. While searching the tree for this bird, we spotted an adult male 'Akepa foraging among the foliage. Almost immediately, the singing creeper was also observed while it sang and hitched its way along the koa limbs, searching the lichens and bark for arthropods. This creeper was accompanied by another, which appeared to solicit food from it. We searched surrounding trees for birds and found two other, solitary creepers, and we heard a fifth singing from a koa tree below the road. Common 'Amakihi (*Hemignathus virens*) were abundant and singing, enabling us to easily compare the decending trill of the creepers with the monotonous trill of the 'amakihi. A straight bill, whitish throat, small dark mask, and absence of yellow in the plumage were noted for the first singing creeper.

Despite the availability of broad bands of suitable habitat at higher elevations along the slopes of Hawai'i's volcanoes, prior to this survey 'Akepa were known to occur in only five discrete populations: Hakalau (W slope of Mauna Kea); N saddle of Mauna Loa; Kilauea Forest Reserve (NE slope of Mauna Loa); Ka'u Forest Reserve (SE slope of Mauna Loa); and NW slope of Hualalai (Figs. 127-129, Scott et al. 1986). Reporting on the extensive, systematic surveys for forest birds conducted by the U.S. Fish & Wildlife Service and cooperators, Scott et al. mention only one detection of an 'Akepa for the Kona watershed south of Hualalai. This bird, heard singing on 2 July 1978 at 1,525 m (transect 62, station 65) near Gaspar's

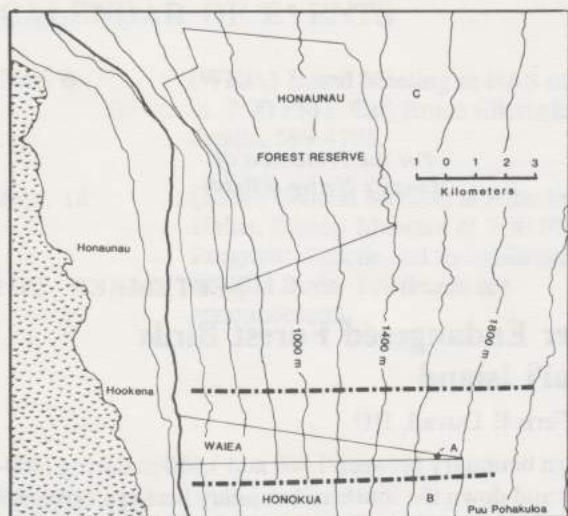


Figure 1 Recent sightings of 'Akepa in central Kona, Hawai'i Island. A: 1988 detections by the authors. B: 1978 detection by H. Sakai. C: 1978 by J. Jacobi. Dashed lines show locations of USFWS transects.

Dairy above Honaunau Forest Reserve, was 15 km N of our sightings at Waiea Tract (Fig. 1) and may represent part of the 'Akepa population reported here. Because two transects lie between and parallel to these two localities, and another lies within 1 km S of Waiea Tract, it is difficult to explain why more 'Akepa were not detected by the USFWS surveys. 'Akepa may have been more vocal during our count in March than during the USFWS surveys in summer. Perhaps the Waiea population is extremely small and restricted in distribution. Sampling error of the USFWS surveys or changes in distribution or abundance may also account for discovery of this 'Akepa population. For instance, logging of forests immediately N or S of the tract may be forcing the birds to concentrate on the tract, which still retains a relatively intact forest canopy. Further surveys should attempt to define the size and range of this 'Akepa population.

Distribution of 'Akepa at Waiea coincides with that of population centers for other endangered forest birds along the Kona watershed (Fig. 2). The surveys of Scott et al. (1986) drew attention to "refugia" for forest birds in Hawai'i; these geographical hot-spots for endangered birds are defined not only by isoclines of species ranges, but also by isoclines of population densities for each species and by the absence of most species outside the refugia (this term does not imply protective status imposed by people, but rather by natural factors, which in Hawai'i are poorly understood). Refugia generally consist of old-growth koa-ohi'a forest at 1200-1800 m, but, curiously, much of this vegetation type lies outside the refugia. Two such refugia occur on the leeward watershed of Hawai'i Island: one on the NW slopes of Hualalai and the other in central Kona. The Waiea Tract lies within the central Kona refugium, as do Gaspar's Dairy and Honokua, the sites of the two 1978

sightings. It is interesting to note that a site of 'Akepa abundance reported by Palmer was at Honaunau Dairy, located by Banko as near Pu'u Pohakuloa (pers. comm.), and thus only a few kilometers S of our sighting at Waiea. This refugium, extending for about 20 km from Kealakekua S to Honokua, harbors four species of endangered forest passerines, the greatest diversity of such species on the leeward watershed of Hawai'i Island. The only wild population of 'Alala (fewer than 10 birds) survives here (Giffin, unpub. data). As a result of explorations by Cook's naturalists, this forest is also the type locality (site where a species was first discovered) for 11 species of Hawaiian birds, including the 'Akepa (Medway 1981).

Apart from the Honaunau Forest Reserve (under private ownership and revokable from protective status), none of the lands within central Kona are set aside for forest protection. Lands outside the forest reserve, though still mostly forested, have been or are being logged for koa and sandalwood and are being developed as ranch land for cattle. These land uses are incompatible with the long-term maintenance of habitat for forest birds.

Returning to the same site the following morning, we had little difficulty locating more 'Akepa and creepers. Searching the tract between 1,680 and 1,740 m, we encountered the following 'Akepa: one adult male; one subadult male (greenish with some dull orange feathering, giving a generally brownish appearance; this bird gave two brief whisper songs between foraging bouts among green koa pods); an inquisitive, grayish green bird; a pair of greenish birds; and a solitary greenish bird. No full songs and only a few call notes were heard from the 'Akepa. Hawai'i Creepers encountered were five solitary birds, three of which we located by their song.

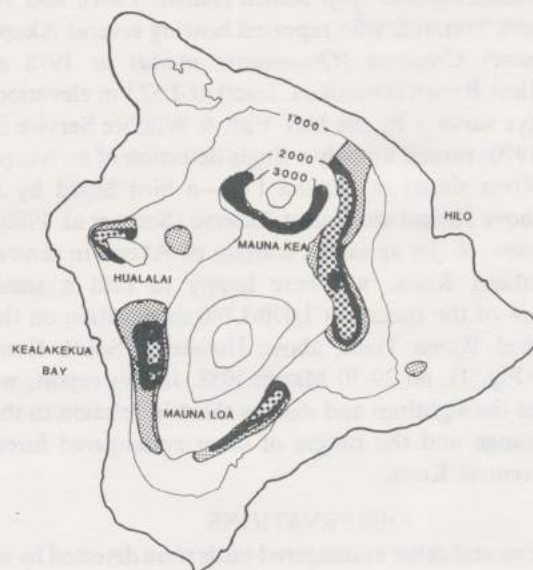


Figure 2 Generalized distribution of endangered forest bird species richness on Hawai'i. Light dots represent one endangered species present; medium dots, two species; squares, three species; and dots and squares, four species. Adapted from figure 338, Scott et al. 1986.

No 'Akiapola'au (*Hemignathus munroi*) were detected this trip, but a single bird of that species was discovered on the Waiea Tract at 1,630 m on 16 April 1985 by JG and FD. On nearby Honokua Tract of McCandless Ranch (1,520 m), JG observed a female 'Akiapola'au with her recently fledged young on April 1978.

An 'Alala was heard calling before dawn on 30 March 1988, below the contour road at 1,440 m. FD heard the bird give a "w-wak" call at 0543 hr and a "wak-wak" call at 0551 hr, after it had apparently moved a short distance. This location was very near the site where a pair of 'Alala were seen on 10 March 1987. That pair, the only 'Alala sighted anywhere in the wild in 1987, included an unbanded female and a male banded in June 1977 at his hatching site 3 km S of Waiea.

Two sightings of a light-phase adult 'Io (*Buteo solitarius*), perhaps the same bird, were made early in the morning of 30 May at 1,475 m and later at 1,680 m.

DISCUSSION

At least six 'Akepa were easily located in an area of roughly 20 ha, suggesting to us that the species inhabits this forest in moderate densities. It seems surprising that such a population would have been missed by previous surveys. However, the birds may have escaped detection primarily because of their restricted distribution, at a high elevation. State surveys for 'Alala in the Waiea Tract typically cover areas between 1,000 and 1,650 m, the principal breeding range of the 'Alala at that location. All 'Akepa observed by us were at higher elevations. Absence of 'Akepa from elevations below 1,680 m is surprising in view of the continuous expanse of old growth koa-ohi'a forest from at least 1,370 m to slightly above 1,680 m. Along this elevational gradient we observed a decrease in forest stature and an increase of xerophytic understory plants. Elsewhere on Hawai'i Island, populations of 'Akepa are now confined to elevations above 1,500 m (Scott et al. 1986).

ACKNOWLEDGMENTS

Many thanks to Paul Banko, Winston Banko, Cameron Kepler, Leonard Freed, and J. Michael Scott for their review of and comments on drafts of this article and to the owners and management of McCandless Ranch for allowing access through their lands.

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North Kona Christmas Bird Count — 1988

Reginald E. David

On 2 January 1989 we held the first North Kona Christmas Bird Count. This new count circle has its center just east of the Moanuaiea radio facility on the slopes of mount Hualalai. The west side of the circle takes in most of the coastline from Kailua to Kiholo Bay, and includes Aimakapa, Kaloko and Opaepa Ponds. The circle is contained to the north by the 1859 lava flow that forms the Puu Anahulu escarpment. To the east it includes the summit of mount Hualalai, at an elevation of 8271' the highest point in the circle. The old Holualoa road marks the southern boundary.

Habitat types contained within the count circle include coastal scrub, urban areas, grass rangelands, lava fields, and the remnant native forest found on the slopes of mount Hualalai. This varied habitat supports a wide diversity of migrant, exotic and native birdlife.

Under mostly clear skies and light wind, 9 observers in 3 parties counted 2647 individual birds; representing 51 species from 20 families. A total of 24.25 party hours were spent counting: (12 hours on foot and 10.25 by car), covering 156 miles (8 miles on foot and 148 by car). An additional 1 hour each was spent feeder watching and owling. The two most unusual species of the count were 2 Garganey seen at Aimakapa pond and 3 Gadwall seen at Opaepa pond.

SECTORS COVERED:

- 1 **Kona Heights subdivision:** Reggie David, Peter Donaldson
- 2 **Coastal area and shoreline ponds, Kailua dump:** Reggie David, Peter Donaldson, Brien Meilleur
- 3 **Puu Anahulu Flats:** Reggie David, Peter Donaldson, Brien Meilleur
- 4 **Urban areas:** Susan David, Philip Hooper, Robert Pyle, Greg Vaughan, Hunter Vaughan, Benjamin Vaughan

Species	SECTORS						Total
	1	2	3	4	5	6	
Pied-billed Grebe	—	12	—	—	—	—	12
Black-crowned Night Heron	—	3	—	—	—	—	3
Cattle Egret	—	3	—	—	—	—	3
Nene	—	—	1	—	—	—	1
Eurasian Wigeon	—	2	—	—	—	—	2
American Wigeon	—	7	—	—	—	—	7
Gadwall	—	3	—	—	—	—	3
Green-winged Teal	—	3	—	—	—	—	3
Mallard	—	3	—	—	—	—	3
Northern Pintail	—	27	—	—	—	—	27
Garganey	—	2	—	—	—	—	2
Blue-winged Teal	—	2	—	—	—	—	2
Northern Shoveler	—	128	—	—	—	—	128
Lesser Scaup	—	3	—	—	—	—	3
Turkey	—	3	—	18	—	—	21
Black Francolin	—	4	—	—	—	2	6
Erckel's Francolin	—	5	—	—	—	—	5
Grey Francolin	—	9	11	—	—	—	20
Ring-necked Pheasant	—	—	—	—	—	3	3
Common Peafowl	—	—	—	—	—	23	23
Hawaiian Coot	—	82	—	—	—	—	82
Hawaiian Stilt	—	26	—	—	—	—	26
Pacific Golden Plover	—	23	—	—	—	7	30
Semipalmated Plover	—	3	—	—	—	—	3
Wandering Tattler	—	20	—	—	—	—	20
Ruddy Turnstone	—	32	—	—	—	—	32
Long-billed Dowitcher	—	2	—	—	—	—	2
Sanderling	—	2	—	—	—	—	2
Dunlin	—	1	—	—	—	—	1
Rock Dove	—	55	—	—	1	—	56
Spotted Dove	16	32	15	—	1	—	64
Zebra Dove	33	27	19	11	4	4	99
Barn Owl	1	—	—	—	—	—	—
Hawaiian Owl	—	—	—	—	1	—	1
Skylark	—	—	—	—	—	17	17
Japanese White-eye	17	65	32	7	4	—	125
Saffron Finch	—	4	120	4	6	5	139
Yellow-billed Cardinal	3	31	36	—	—	—	70
Cardinal	4	11	5	2	14	4	40
Common Amakihi	—	—	23	—	122	—	145
Apapane	—	—	—	—	204	—	204
'Iwi	—	—	—	—	6	—	6
Yellow-fronted Canary	6	—	150	—	148	—	304
House Finch	12	20	40	3	11	3	89
Lavender Waxbill	1	—	—	—	—	—	1
Red Avadavat	—	—	2	—	—	—	2
Warbling Silverbill	10	12	18	—	14	—	54
Nutmeg Mannikin	20	75	31	2	—	—	128
Java Sparrow	96	—	—	135	—	—	231
House Sparrow	3	36	14	—	12	—	65
Common Myna	22	156	30	58	37	28	331
TOTALS:							
Individuals	244	926	555	222	603	96	2647
Species	14	36	18	8	16	10	51
Party Hours	4.25	9	1	3	5	2	24.25

Habitat coverage (% of party hours): Coastal areas and shoreline ponds 37%, residential 30%, mountain forest 21%, grasslands and pasture 12%.

- 5 **Mount Hualalai:** Susan David, Philip Hooper, Robert Pyle, Greg Vaughan, Hunter Vaughan, Benjamin Vaughan
- 6 **Grasslands along Highway 190:** Susan David, Philip Hooper, Robert Pyle, Greg Vaughan, Hunter Vaughan, Benjamin Vaughan

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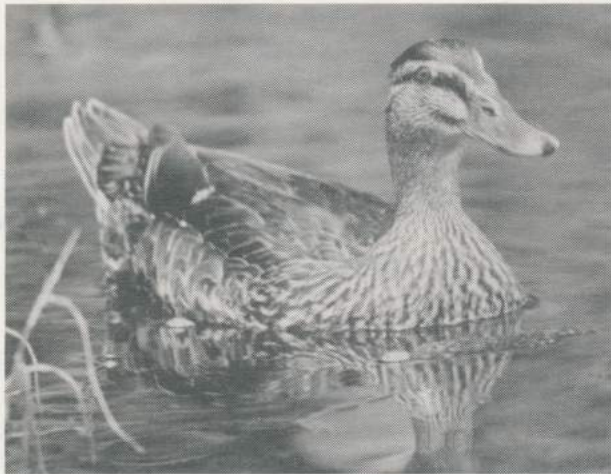
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HAS SEPTEMBER PROGRAM

A panel with representatives from City and County, State and Federal agencies and from the private sector will discuss the rescue and rehabilitation of wild birds: who to contact for assistance; the laws and legal requirements applying to wild birds; care, management and the release of rehabilitated birds. The program will be at the HAS regular meeting, Monday, 18 September at 7:30 PM at B. P. Bishop Museum Atherton Halau.



Mallard. Mohouli Pond, Hilo, Hawaii, September 1977.

Photo by Greg Vaughn.

NEW HAWAIIAN BIRD VIDEO

"HAWAII'S BIRDS: VANISHING TREASURERS"

This new locally funded, written, directed, and produced, half-hour show on Hawaii's native birds will air FRIDAY, 22 SEPTEMBER 1989 at 9:30 PM on KHET. The program features excellent footage of native birds with descriptions of their origins, evolution and conservation. The video was produced in cooperation with the Hawaii Audubon Society on the occasion of its 50th Anniversary. Don't miss it!

HAS SEPTEMBER FIELD TRIP

No field trips have been scheduled for the month of September.

NOMINATING COMMITTEE

President Bruce Eilerts announced the members of the Nominating Committee at the August Board Meeting. They are as follows:

- Chair Bruce Eilerts
- Members Sheila Conant
- Fern Duvall
- Marie Morin

HAS members are invited to submit nominations for 1990 Board of Directors positions. Nominations should be submitted to the nominating committee by 30 September 1989. Nominations must be accompanied by the written consent of each nominee.

BEQUESTS

A bequest to Hawaii Audubon Society is an excellent way to help in our conservation efforts. George Munro, tireless and enthusiastic field ornithologist and naturalist provided for a fund to be used exclusively for the protection of native dry forests. Today, the George C. Munro fund provides monies for research projects on dry forest.

Although an attorney should be consulted in the drafting of your will, a model clause for bequests is set forth below.

"I hereby, give, devise and bequeath to the Hawaii Audubon Society, Honolulu, Hawaii, the sum of _____ dollars (or set forth a description of the property), to be used for the general purpose of said organization."

For more information and assistance, contact Hawaii Audubon Society, 212 Merchant Street, Suite 320, Honolulu, Hawaii 96813.



'Elepaio paste-up about ten years ago. From left: Peter Galloway, Karen Henthorne and Norris Henthorne appear to be working hard and having fun. Photographer unknown, probably C. J. and Carol Ralph.

CALENDAR OF EVENTS

- Sept. 6 (WED.) Board Meeting at HAS office at 7:00 PM . Call Bruce Eilerts for details, 599-4795.
- Sept. 18 (Mon.) General Meeting at Atherton Halau, Bishop Museum at 7:30 PM. Program: Rescue and Rehabilitation of Wild Birds. For details see announcement.

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'ELEPAIO

The 'Elepaio is the monthly journal of the Hawaii Audubon Society. It publishes both scientific and popular articles and announcements of interest to members.

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