



VOLUME 49 NUMBER 10

OCTOBER 1989

Waipio, Oahu, Christmas Bird Count — 1988

David Bremer

Just 41 species and 5853 individual birds were recorded in the December 26, 1988, Waipio Christmas Bird Count (CBC). With West Pond nearly dry, fewer waterbirds were present on Waipio peninsula this year. A lower than average forest bird count probably was due to high winds on mountain trails rather than to any real change in status of native bird populations. Less thorough coverage of suburban areas this year resulted in smaller numbers of some introduced species.

Expansion of the range of the Red-whiskered Bulbul into the Pearl Harbor region was perhaps the major finding in the suburbs. Although two Red-whiskered Bulebuls were reported in upper Pearl City during the first Waipio CBC in 1976, none had been observed anywhere in the circle in subsequent counts. This year's sighting of the species in two separate locations, one bird in upper Pearl City and two in Waipahu, suggests that the species may be becoming established in the area. The Bulebuls were seen clearly by Fox and Rice, the latter being familiar with the bird in Manoa. The Java Sparrow, another recent invader which made its first Waipio CBC appearance in 1983, now seems to be a permanent Central Oahu resident. An estimated 150 Javas were seen at about 0700 hrs. in flocks of 20 to 40 birds departing from a single banyan tree roost in the Seaview community.

Two raptor observations were made this year. Cooper and Leong flushed Barn Owls from a cave near Kunia at around 1000 hrs., and Pyle's party saw an Osprey returning to the Waiawa NWR just as they were leaving the area.

Covering the mountain trails was more difficult than expected. Bussen found the Poamoho jeep road "impassable—even with four-wheel drive; the trail in terrible condition, extremely overgrown, huge mud holes, all torn up by pigs." Hiking up about four miles, they observed 24 'Apapane and 2 'Amakihi. In strong winds that made it difficult to hear bird calls, Conant's party tallied 38 'Apapane and 10 'Amakihi as they cleared Kipapa trail with a machete. An attempt to cover the Schofield-Waikane trail was frustrated when the party did not recognize the trailhead leading off the jeep-access road; however, 19 'Apapane were seen. I drove back up the road with O'Brien late that afternoon and located the trail, which seemed in good shape with 'Apapane much in evidence again at the trailhead. Munns hiked over three miles up the Manana

trail, accompanied by high winds, few birds, and no partners (the rest of his intended party went to Waimano trail by mistake). Rounding out a rather frustrating day for trails, the party scheduled to cover Palehua trail had to cancel their trip due to illness.

Munns did see about 30 small unidentified parrots, flying from the forest at the start of the trail. Pratt (1988) with Engilis had identified "26 Red-crowned Parrots, 1 Blue-fronted Parrot, and 1 Blue-crowned Conure... returning to their roost above Pearl City on 22 June." Since escaped parrots frequently live in gregarious flocks, Audubon policy is not to include sightings in official CBC counts.

SUMMARY DATA

Weather: Mostly clear, high winds in mountains, variable winds in lowlands.

Participants: 21 observers in 9 parties.

Party Hours: 37.25 hr on foot, 23.75 hr by car, 61 hr total.

Party Miles: 30.25 mi on foot, 145 mi by car, 175.25 mi total.

Habitat: 21.6 hr mountain, forest; 9.4 hr lowland woods, scrub; 14 hr agricultural; 13.3 hr parks, residential; 2.5 hr marshes and ponds; .2 hr Pearl Harbor shoreline.

OBSERVERS

Party A: Robert Pyle, W. Michael Ord, Brian McAllister

Party B: Earl Fox, Hal Rice

Party C: Virginia Norwood, Maurice Schaeffer

Party D: David and Leah Bremer, Mary Ellen Talmadge

Party E: R. Jay Munns

Party F: Patrick Conant, Stephanie Nagata, Robert Burkhardt

Party G: John O'Brien, Shannon Dart, Larry Steingarten

Party H: Joe Bussen, Mike Moyer

Party I: David Cooper, Robin Leong

Party J: John O'Brien, David and Leah Bremer

SECTORS COVERED

1-A: **Waipio Peninsula, Honouliuli NWR, Waiawa NWR:** Party A

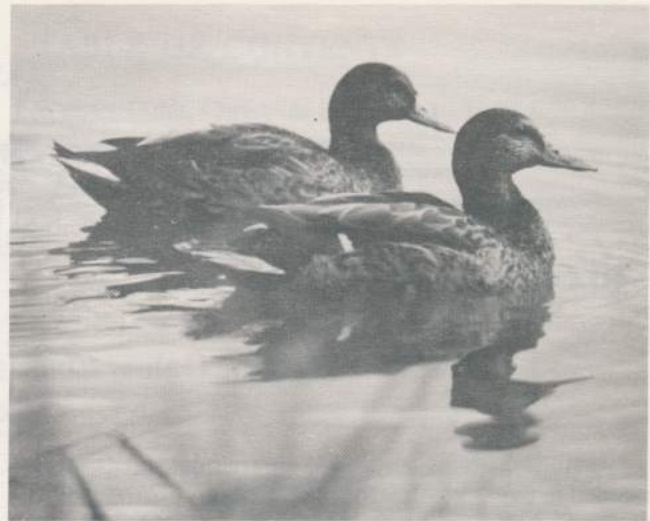
2-A: **Waipahu:** Party A

2-B: **Pearlridge, Pearl City, Waipahu:** Party B

2-C: **Pearl City (Palisades, Manana, Waimano):** Party C

2-D: **Seaview Crestview, Waipio Gentry, Waikele:** Party D

- 3-A: Manana Trail: Party E
 3-B: Kipapa Trail: Party F
 3-C: Schofield-Waikane Trail: Party G
 3-D: Poamoho Trail: Party H
 4-A: Mililani, Mililani Cemetery Road: Party D
 4-B: Mililani, Waipio, Schofield East Range: Party J
 4-C: Wahiawa, Leilehua Golf Course: Party G
 4-D: Pineapple field access to Poamoho Trail: Party H
 4-E: Agricultural fields north of Wahiawa: Party I
 5-A: Schofield, Kolekole Pass, Wheeler AFB: Party I
 6-A: Kunia: Party I



Koloa (Hawaiian Duck.)

Photo by G. Vaughn

Table 1 1988 Waipio CBC Sector Counts

Species	SECTOR					
	1	2	3	4	5	6
Cattle Egret	79	47	—	32	2	1
Snowy or Little Egret	—	—	—	—	—	—
Black-crowned Night-Heron	5	—	—	—	—	—
White-faced Ibis	—	—	—	—	—	—
Green-winged (Am.) Teal	3	—	—	—	—	—
teal, sp.	—	—	—	—	—	—
Mallard	10	1	—	—	—	—
Hawaiian Duck (Koloa)	10	—	—	—	—	—
Northern Pintail	10	—	—	—	—	—
Northern Shoveler	36	—	—	—	—	—
Eurasian Wigeon	—	—	—	—	—	—
American Wigeon	—	—	—	—	—	—
Ring-necked Duck	—	—	—	—	—	—
Lesser Scaup	—	—	—	—	—	—
scaup, sp.	—	—	—	—	—	—
duck, sp.	—	—	—	—	—	—
Osprey	1	—	—	—	—	—
Erckel Francolin	—	—	—	—	1	—
Ring-necked Pheasant	1	—	—	—	—	—
Common (Haw'n) Moorhen	—	—	—	—	—	—
American (Haw'n) Coot	35	5	—	—	—	—
Black-bellied Plover	—	—	—	—	—	—
Lesser Golden Plover	113	97	5	148	100	12
Semipalmated Plover	—	—	—	—	—	—
Black-necked (Haw'n) Stilt	82	—	—	—	—	—
Lesser Yellowlegs	—	—	—	—	—	—
Wandering Tattler	5	1	—	—	—	—
Ruddy Turnstone	15	—	—	—	—	—
Sanderling	32	—	—	—	—	—
Western Sandpiper	—	—	—	—	—	—
sandpaper, sp.	—	—	—	—	—	—
(Least Sandpiper or Long-toed Stint)	—	—	—	—	—	—
Pectoral Sandpiper	—	—	—	—	—	—
Sharp-tailed Sandpiper	—	—	—	—	—	—
Dunlin	2	—	—	—	—	—
sandpiper, sp.	—	—	—	—	—	—
Long-billed Dowitcher	—	—	—	—	—	—

Species	SECTOR					
	1	2	3	4	5	6
dowitcher, sp.	6	—	—	—	—	—
Ruff	—	—	—	—	—	—
Common Tern	—	—	—	—	—	—
Rock Dove	—	47	—	22	—	—
Spotted Dove	30	136	26	82	19	33
Zebra Dove	186	139	29	192	42	45
Common Barn-Owl	—	—	—	—	—	2
Short-eared (Haw'n) Owl	—	—	—	—	—	—
Eurasian Skylark	11	3	—	8	25	—
Red-vented Bulbul	112	137	36	62	8	52
Red-whiskered Bulbul	—	3	—	—	—	—
Japanese Bush Warbler	1	—	5	16	14	15
(Oahu) 'Elepaio	—	—	—	—	—	—
White-rumped Shama	3	3	14	15	1	—
Gray-sided Laughing Thrush	—	—	—	—	—	—
Melodious Laughing Thrush	—	—	—	—	—	—
Red-billed Leiothrix	—	—	—	—	—	—
Northern Mockingbird	—	—	—	—	—	1
Common Myna	21	278	5	251	211	138
Japanese White-eye	12	47	149	32	—	13
Northern Cardinal	25	18	11	1	6	3
Red-crested Cardinal	7	57	7	52	16	7
Great-tailed Grackle	—	—	—	—	—	—
House Finch	12	53	49	22	25	5
Common (Oahu) 'Amakihi	—	—	12	—	—	—
Oahu Creeper	—	—	—	—	—	—
'Iwi	—	—	—	—	—	—
'Apapane	—	—	81	—	—	—
House Sparrow	20	254	19	193	60	54
Common Waxbill	163	14	—	—	5	2
Red Avadavat	32	10	—	25	2	48
Nutmeg Mannikin	16	99	6	24	8	—
Chestnut Mannikin	159	81	—	110	11	51
Java Sparrow	—	271	—	18	—	—
Yellow-faced Grassquit	—	—	—	—	—	—
TOTALS:						
Individuals	1255	1801	454	1305	556	482
Species	33	23	15	19	18	17

Table 2 Waipio CBC Annual Totals for 1988-1983

Species	1988	1987	1986	1985	1984	1983
Cattle Egret	161	334	386	163	285	215
Snowy or Little Egret	—	—	—	—	—	1
Black-crowned Night-Heron	5	14	14	5	22	25
White-faced Ibis	—	—	—	—	1	1
Green-winged (Am.) Teal	3	—	3	—	3	5
teal, sp.	—	—	4	—	—	—
Mallard	11	3	—	—	3	5
Hawaiian Duck (Koloa)	10	21	9	18	20	8
Northern Pintail	10	10	4	3	6	12
Northern Shoveler	36	42	19	28	46	51
Eurasian Wigeon	—	—	—	—	—	2
American Wigeon	—	—	—	—	—	2
Ring-necked Duck	—	1	—	—	—	—
Lesser Scaup	—	2	2	—	—	—
scaup, sp.	—	—	—	1	—	—
duck, sp.	—	—	—	—	—	4
Osprey	1	—	—	1	—	1
Erckel Francolin	1	—	5	1	6	—
Ring-necked Pheasant	1	4	5	1	1	1
Common (Haw'n) Moorhen	—	—	—	3	6	3
American (Haw'n) Coot	40	45	31	21	61	118
Black-bellied Plover	—	—	—	—	2	—
Lesser Golden Plover	475	678	466	451	508	416
Semipalmated Plover	—	—	—	1	—	—
Black-necked (Haw'n) Stilt	82	111	128	45	173	191
Lesser Yellowlegs	—	—	2	2	—	—
Wandering Tattler	6	24	15	14	14	9
Ruddy Turnstone	15	62	55	68	74	30
Sanderling	32	22	89	97	74	57
Western Sandpiper	—	1	—	—	—	—
Sandpiper, sp.	—	—	—	—	—	—
(Least Sandpiper or Long-toed Stint)	—	3	—	—	2	1
Pectoral Sandpiper	—	—	1	1	2	—
Sharp-tailed Sandpiper	—	—	—	—	2	—
Dunlin	2	1	1	4	2	4
sandpiper, sp.	—	—	—	—	1	—
Long-billed Dowitcher	—	—	—	—	—	6
dowitcher, sp.	6	6	5	6	4	—
Ruff	—	—	—	—	2	—
Common Tern	—	1	—	—	—	—

Species	1988	1987	1986	1985	1984	1983
Rock Dove	63	121	6	116	104	73
Spotted Dove	326	384	413	402	447	444
Zebra Dove	633	778	539	646	1054	875
Common Barn-Owl	2	1	4	1	—	4
Short-eared (Haw'n) Owl	—	—	3	—	2	1
Eurasian Skylark	47	54	25	50	38	18
Red-vented Bulbul	407	352	536	541	467	409
Red-whiskered Bulbul	3	—	—	—	—	—
Japanese Bush Warbler	51	31	47	53	29	17
(Oahu) 'Elepaio	—	—	5	—	8	4
White-rumped Shama	36	31	80	78	78	88
Gray-sided Laughing Thrush	—	—	2	—	—	—
Melodious Laughing Thrush	—	—	—	1	—	—
Red-billed Leiothrix	—	—	—	1	2	—
Northern Mockingbird	1	6	5	23	7	2
Common Myna	904	1268	1053	1234	1475	1333
Japanese White-eye	253	273	492	633	657	606
Northern Cardinal	64	94	105	144	124	144
Red-crested Cardinal	146	318	193	254	285	268
Great-tailed Grackle	—	—	—	—	—	1
House Finch	166	297	424	382	484	209
Common (Oahu) 'Amakihi	12	—	38	14	59	15
Oahu Creeper	—	—	—	2	—	—
'Iiwi	—	—	1	—	—	—
'Apapane	81	—	159	83	114	116
House Sparrow	600	1154	593	1385	1419	1208
Common Waxbill	184	823	240	199	56	18
Red Avadavat	117	315	173	58	67	58
Nutmeg Mannikin	153	389	105	304	131	163
Chestnut Mannikin	412	5052	767	962	94	364
Java Sparrow	289	243	33	194	68	5
Yellow-faced Grassquit	—	—	—	5	—	5
TOTALS:						
Individuals	5835	13369	7285	8699	7612	2305
Species	41	40	45	47	48	49
Cumulative Species	80	80	77	76	75	75
Party Hours	61.0	31.0	47.0	56.0	49.0	46.0
HABITAT COVERAGE, HOURS:						
Mountain, forest	21.6	3.5	13.3	15.1	15.2	10.6
Lowland woods, scrub	9.4	3.8	7.0	16.8	7.3	4.1
Wetlands	2.7	7.0	6.5	5.1	5.4	11.5
Agricultural	14.0	4.7	3.8	3.9	2.5	1.9
Parks, suburbs	13.3	15.0	17.4	15.1	18.6	17.9



Japanese White-eye.

Photo by R. J. Shallenberger

LITERATURE CITED

Pratt, T. 1988. Recent Observations: June and July 1988. 'Elepaio 48 (12):113-114.

94-265 Ihuanu Place
Mililani, Hawaii 96789

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 Kealahou 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 descending 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.

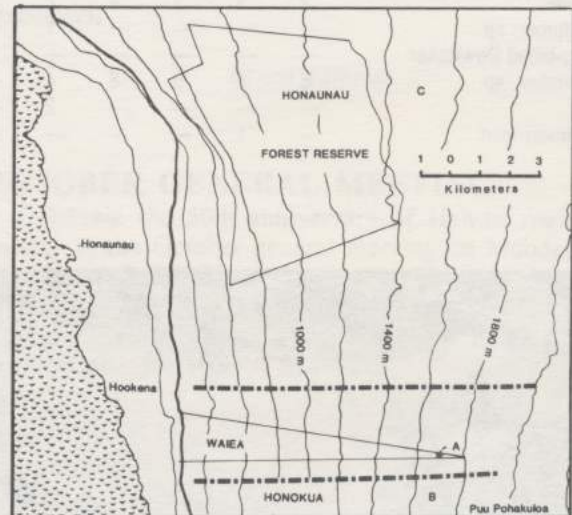


Figure 1 Recent sightings of 'Akepa in central Kona, Hawai'i Island. A: 1988 detections by the authors. B: 1978 detection by H. Sakai. C: 1978 by J. Jacobi. Dashed lines show locations of USFWS transects.

Editor's Note: Last month's (Vol. 49, No. 9) lead article was pasted up incorrectly, such that paragraphs were out of order. The Editors are republishing the article in its entirety. Our apologies to the authors and readers.

Notice of Erratum

Editor's note: The following paragraph was inadvertently omitted from the bottom of the second column on the first page of the August 1989 (Vol. 49, No. 8) issue. Readers may clip and paste this correction into the blank space. Our apologies to the author and subscribers.

Unlike Stanley's communication, this entry is not in quotes. By all authors who have cited it, it has been attributed to Vigors, who was then secretary to the Zoological Society of London. This must be considered the original citation for the specific name of the Nene, which fortunately, does not change in spelling or in authorship. In the format of Peters' Check-list (Johnsgard 1979) the citation should appear thus:

GREENPRINT

AUDUBON HAWAII CONSERVATION NEWS

VOL. 1, NO. 3

OCTOBER 1989

Audubon Recommends State Management of Kawai Nui Marsh

Kawai Nui Marsh in Kailua, O`ahu is the largest remaining freshwater marsh in the state of Hawaii. This 750 acre wetland is a year-round home to Hawaii's four endangered waterbirds: Ae`o (Hawaiian Stilt), `Alae ke`o ke`o (Hawaiian Coot), `Alae `Ula (Hawaiian Gallinule), and Koloa maoli (Hawaiian Duck).

Improving the natural wetland qualities of Kawai Nui is a major goal of the Conservation Campaign of the Audubon Society in Hawaii. Effective management of Kawai Nui's wetlands by the State Department of Land & Natural Resources is supported by the Audubon Society.

Audubon leaders are also sensitive that any wetland enhancements contribute positively to flood control. In July, Audubon leaders attended an informational meeting conducted by the City's Department of Public Works. Government officials and their consultants described a flood control proposal. While thorough analysis will have to await the publication of the Draft Environmental Impact Statement, Audubon's wetland experts believe that flood control AND wetland enhancement can be complementary.

This article looks at past uses of Kawai Nui, the history of citizen action for the marsh, and the present government stalemate over management responsibility.

A HISTORY OF HUMAN USE

contributed to their decline.

Increasing urbanization followed World War II and frequent floods plagued the Coconut Grove area of Kailua. As part of the Kawai Nui Marsh Flood Control Project of 1950, the City of Honolulu became responsible for maintaining 3,000 acre feet of flood storage capacity in the marsh. (An acre-foot is the amount of water needed to cover one acre to the depth of one foot.) Meanwhile, sedimentation and steadily-accumulating growth of introduced plants continued to reduce the marsh's ability to store flood waters resulting in periodic flooding.



Harvey



Representative Ed Bybee visits Kawai Nui Marsh

During the 1950s and early 1960s, filling of Kawai Nui wetlands for auto-wrecking, quarry operations and a sanitary landfill occurred along the western margin of the marsh. Unfortunately, this coincided with dramatic losses of waterbird habitat occurring elsewhere on O'ahu, such as the construction of Enchanted Lakes and Hawaii Kai housing developments. Combined with other land use changes, such as abandonment of traditional taro farming areas, these wetlands losses led to federal recognition that the Hawaiian stilt, coot, gallinule, and duck were in danger of extinction.

In the 1960s the idea of a Kawai Nui Marsh regional park gained public support and a park proposal was included in the Kailua General Plan. In 1964, a residential and recreational development threatened the marsh. But the City's promises to provide a public park and flood protection for Kailua residents led to the city's purchase of 749 acres of privately-owned marsh. In keeping with the Kailua General Plan, the Department of Parks developed a series of regional park development master plans in the late 1960s and early 1970s for a 1,000 acre multi-purpose park and flood control area.

CITIZENS ACT TO PROTECT KAWAI NUI

In the early 1970s Castle Estate proposed to develop a 63 acre shopping center in a portion of Kawai Nui which the City intended to acquire. Their plan was met by widespread opposition from community groups and individuals. A massive petition and public education campaign launched in 1974 by a newly formed group - The Ad Hoc Committee for Kawai Nui (later to become Kawai Nui Heritage Foundation) - resulted in the withdrawal of the shopping center plan and widespread support for a regional park.

The Ad Hoc Committee was concerned about certain aspects of the emerging City regional park plan, such as a proposal to fill 100 acres with garbage. They commissioned a series of "Citizens Directional Park Plans" by architect/planner R. A. Herlinger in 1975. During 1975-1976, The Ad Hoc Committee promoted their Directional Plan to the City and lobbied for support of necessary

Kawai Nui Marsh is known to have supported one of the largest settlements of native Hawaiians and some of the oldest known archaeological sites are from the vicinity of the marsh. The stream-fed lagoon developed into 250 acres of taro ponds by native Hawaiians and a 450 acre fish pond drained via mile-long Kawai Nui Stream into nearby Ka'eiepulu fish pond, now Enchanted Lake.

When the native Hawaiian population declined, taro farming decreased and silt and vegetation encroached into the abandoned areas. From the 1850s to the 1920s more than 300 acres of Kawai Nui marsh were converted to rice cultivation. From about 1920 to 1950, draining of the Kawai Nui fish pond and diversion of Maunawili Stream for cane irrigation and to create pasture took place. Streams sediments and discharge from new sewage treatment plants operating between the mid-sixties and 1987 caused rapid plant growth and created more dry land. The loss of areas of open water favored by native waterbirds

Make your voice count for Kawai Nui Marsh!

The Audubon Society would like the City & County of Honolulu to give the state clear responsibility for the natural resources of Kawai Nui Marsh. The state has the funds and expertise to begin this all-important task. As master planning for the marsh progresses, Audubon urges consideration of the directional planning recommendations of the Kawai Nui Heritage Foundation. For example, clearing overgrown vegetation to create more open water in the marsh is critical for endangered waterbird populations AND contributes to the critical goal of flood protection for Kailua residents.

Your letters to Governor Waihee and Mayor Fasi supporting state management of Kawai Nui wetlands can help. Ask them to transfer natural resource management responsibility at Kawai Nui to the state, and to quickly reach agreement on whether the city or the state will be ultimately responsible for flood control improvements and their long-term maintenance.

Governor John Waihee	Mayor Frank Fasi
State Capitol	City Hall
Honolulu, HI 96813	City & County of Honolulu
	Honolulu, HI 96813

CONSERVATIONISTS CALL ON AKAKA

During the dog days of summer, Washington D.C. virtually closes down, as lawmakers and their staffs escape the heat during congressional recess. Typically, legislators use this time to visit with the folks back home. Hawaii's congressional delegation is no exception. Senator Daniel Inouye conducted field hearings on Hawaiian rights. Congresswoman Pat Saiki sent out field staff to meet with constituent interest groups on a number of issues (see the next issue of **Greenprint**) and personally appeared at a fundraiser. And Congressman Daniel Akaka met with an ad hoc group of Hawaii's conservationists in his Federal Building Offices, and listened with patience and concern to an impressive agenda.

In attendance were Debra Shiraishi of the Sierra Club, Hawaii Chapter; Dana Kokubun, director of the National Audubon Society's Hawaii State Office, Marjorie Ziegler of the Sierra Club Legal

Defense Fund; and Steve Montgomery, representative of the Conservation Council of Hawaii.

The Congressman received thanks from the group for his co-sponsorship of legislation to reauthorize the Clean Air Act and encouragement to prevent drilling for oil and gas in the Arctic National Wildlife Refuge.

Congressman Akaka was asked to support immediate action by the U.S. Fish & Wildlife Service to recover the endangered 'Alala or Hawaiian Crow (See **Greenprint** August 1989). The Fish & Wildlife Service is currently working with the State of Hawaii to achieve access to 'Alala habitat from a private landowner on the Big Island.

The group advocated federal funding to expand a research unit for fisheries and wildlife at the University of Hawaii. Earlier this year, the State of Hawaii approved funding to help with expansion of the research unit. Akaka expressed his support for the expansion, but said that federal administration constraints might prevent an appropriation from being made in the near term.

The Congressman heard about the urgent need for greater administrative support for the local office of the United States Fish & Wildlife Service. Given the agency's large responsibilities to protect endangered species and the overwhelming number of threatened and endangered Hawaiian species, the group agreed that the Service in Hawaii needs more federal funds, particularly to correct chronic staff shortages.

In Washington D.C. and at home, Akaka has been a vocal proponent for increased attention to Hawaii's problems in preserving its biological diversity. In January, he co-sponsored a congressional hearing on biodiversity in Honolulu with Rep. James Scheuer (D-NY). Akaka co-authored legislation that would establish "The National Biological Diversity Conservation and Environmental Research Act."

Kawai Nui Cont'd...

environmental studies. However, the City did not adopt the plan and the necessary studies were not completed. The City soon withdrew from Kawai Nui park planning.

In the late 1970s a federal grant allowed the state to convene the Kawai Nui Technical and Policy Advisory Committee. In 1983 the Governor approved the Resources Management Plan for Kawai Nui Marsh, the result of three years of work and studies commissioned by this multidisciplinary group. Many of the plan's recommendations were based on the earlier citizen's directional plans. The state's plan proposed creating more open

WHO WILL MANAGE THE MARSH?

Following the New Year's Eve flood, discussions originated some five years earlier over the proposed transfer of management responsibility for Kawai Nui from the City to the state were re-initiated. The surrounding lands and historic sites would be managed by the state as a park and the marsh as a wildlife sanctuary. Some City officials would also like flood control responsibility transferred to the state. Whether the state will or can assume flood control responsibility is unclear. Recently, a cabinet-level state task force on intergovernmental affairs issued a



Volunteer Activism

The most useful thing any concerned citizen can do for a particular cause is to get involved and be committed. Commitment can seem quite a task, especially when so many other responsibilities make worthwhile intentions take a back seat to day to day realities. Yet surprisingly, there are a number of easy ways for anyone to commit themselves to causes they deem important and receive personal satisfaction for a job well done.

Here at Audubon we are often asked, "How can I get involved in conservation and wildlife preservation efforts with a minimum amount of time and commitment?" One of the most simple answers to that question is: LETTERS. Your letters, whether short or long, can and do make a difference. A letter is a practical and easy way to make a statement to your state or federal representative as well as a great way to participate as an active and committed Audubon member.

Listed below are names and address of your Hawaii state and federal representatives. Please show your support for Audubon issues by writing to these individuals:

Governor John Waihee
State Capitol
Honolulu, Hawaii 96813

(Your State Legislator)
State Capitol
Honolulu, Hawaii 96813

Senator Daniel K. Inouye
722 Hart Senate Office Bldg.
Washington, D.C. 20510

Senator Spark M. Matsunaga
109 Hart Senate Office Bldg.
Washington, D.C. 20510

Rep. Daniel K. Akaka
1609 Longworth House
Office Building
Washington, D.C. 20515

Rep. Patricia Saiki
2301 Rayburn House
Office Building
Washington, D.C. 20515

report recommending transfer of marsh management to the state. But, according to Representative Ed Bybee (D-Kailua, Mokapu), a flood control proponent and environmentalist, the report was signed by the Governor, but leaves unanswered the critical question as to whether flood control responsibility is included in the transfer. Bybee says he intends to introduce legislation assigning flood control in Kawai Nui to the state in the 1990 session.

If natural resource management is given to the state, the Department of Land and Natural Resources (DLNR) has pledged to develop a Kawai Nui Marsh wildlife sanctuary.

Kawai Nui Marsh is considered the highest priority of all the Capital Improvement Projects within DLNR's Division of Forestry & Wildlife. Last session, the state legislature approved \$370,000 to begin sanctuary development.

Information for this article was partially obtained from:

Drigot, D.C., Educating About Kawai Nui, A Multi-Media Educational Guide, 1982. University of Hawaii, Pres. Ed. Improve. Fund.

water areas for wildlife, developing public interpretive centers, and allowing recreational uses compatible with the marsh's historical and cultural values.

FLOOD DISASTER IN COCONUT GROVE

During the 1987 New Year's Eve flood, millions of dollars in damages were sustained by hundreds of Coconut Grove residents. Numerous lawsuits claiming the City was negligent in not maintaining flood storage capacity are currently pending resolution. Last fall, plans to excavate a drainage channel through Kawai Nui Marsh as an emergency action met strong public opposition and were withdrawn. Soon after, the City retained M & E Pacific to prepare a draft Environmental Impact Statement (EIS). A precursor to the EIS -- an Environmental Assessment -- is now available for review at public libraries.

Dense mats of vegetation hamper water flow out of the marsh into the artificial drainage, Oneawa Channel. On New Year's Eve 1987, flood waters were trapped by the unnatural plant growth. Water continued to build in the southwestern portion of the marsh until being released in a flood. Last winter the City sprayed herbicide in two swaths through the marsh in an attempt to promote drainage, but they have stopped short of controlled burning of the dead plants, a controversial method.

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.

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).

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.

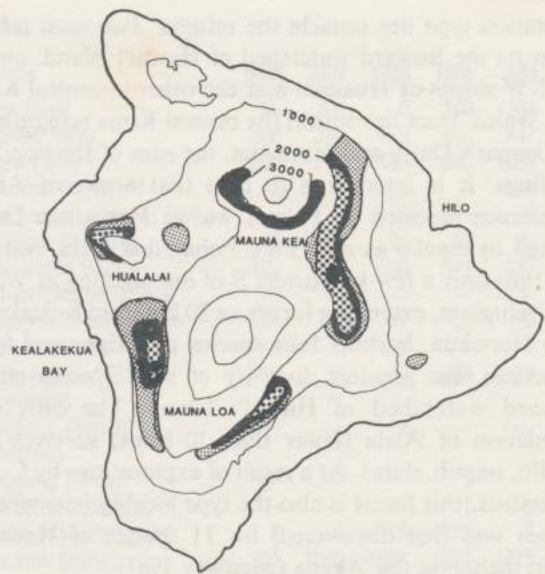


Figure 2 Generalized distribution of endangered forest bird species richness on Hawai'i. Light dots represent one endangered species present; medium dots, two species; squares, three species; and dots and squares, four species. Adapted from figure 338, Scott et al. 1986.

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 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.

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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³Olinda Endangered Species Propagation Facility
Hawaii Division of Forestry & Wildlife
535 Olinda Road
Makawao, Hawaii 96768

HAS OCTOBER FIELD TRIP

The next HAS field trip will be a visit to the James Campbell National Wildlife Refuge on Sunday, 16 October. Participants will be able to observe migratory shorebirds as they pass from their summer breeding grounds in North America and Asia through the Hawaiian Islands. The possibility of seeing Bristle-thighed Curlews, Dowitchers, Sharp-tailed and Pectoral Sandpipers, Dunlins, and who knows what other species is good. The resident endangered Hawaiian waterbirds, along with the four species of migratory shorebirds that regularly winter in Hawaii, are sure to be encountered. Bring along lunch, water, binoculars, field guides and sunscreen. Meet at the State library on Punchbowl Street at 7:30 a.m. or at the Kahuku Sugar Mill parking lot at 8:45 a.m. Call Bruce Eilerts at 599-4795 for further information. Be sure to bring along binoculars!

Bruce Eilerts

OCTOBER GENERAL MEETING

Celebrate the 50th anniversary of Hawaii Audubon Society at the October general meeting on Monday, 17 October at 7:30 PM at B.P. Bishop Museum Atherton Halau. Awards, special videos and HAS memorabilia will highlight the evening. If you have photos and/or recollections you would like to share, join us in the celebration.

PLEASE KOKUA

We need a four drawer filing cabinet. An anonymous donor has generously given us a four drawer filing cabinet. However, we need another one to store our records. If you can donate one (new or used, with or without a lock) please call the office at 528-1432. All donations are tax deductible to the extent permitted by law.

HAWAII AUDUBON SOCIETY FUND RAISING COMMITTEE MEETS 11 OCTOBER

The Fund Raising Committee will meet on Wednesday, 11 October, at 6:30 PM at the office. We need dedicated volunteers to generate new fund raising ideas, work on a phonathon, and write and help with mailings. This year we have successfully run an annual fund drive, a phonathon, and a birdathon, which has netted over \$5400 to date. If you would like to join this committee, or share some ideas, come to the meeting or call Lynne Matusow at 531-4260. Please note that the building door is locked at 6:00 PM. A person will be posted at the Merchant Street door to let you in. If you are going to be late, please call 528-1432 so we can have someone let you in.

HELP NEEDED FOR NOVEMBER MAILING

At the end of November we will once again be mailing ballots, dues renewals and our annual fund appeal to over 2,000 members. We need help in stamping, addressing, and stuffing the mailing. If you can give us some time, an hour or more, please call 528-1432 and leave a message on the tape. We will get back to you.

This is a great way to meet new people and have fun while helping Audubon get the work done. We don't have a specific date yet, but it will be the last week of November. Refreshments will be served.

NEW EDITION OF HAWAII'S BIRDS NOW AVAILABLE

It's hot off the press! Bigger and better than ever. The fourth edition of *Hawaii's Birds* has 16 more pages with more species in greater detail, than its predecessor, plus over 150 color photos and illustrations. To receive your copy, send a check for \$10.20 per copy (\$8.95 plus \$1.25 postage), payable to Hawaii Audubon Society, 212 Merchant Street, Suite 320, Honolulu, Hawaii 96813.

HAS GENERAL MEETING REPORTS

At the July HAS general meeting Mrs. Peggy Hodge gave a delightful insight into Brazil. Travelling inland on the Amazon, Mrs. Hodge encountered an array of wildlife which included manatees, ocelots, piranha, turtles, anaconda, and many birds, most of these were too fast to photograph. To name a few birds, there were kingfishers, egrets, flycatchers, hummingbirds, woodpeckers, owls, macaws, tanagers, and hornbills. Unusual gourmet features for local people included roast monkeys and termites. Mrs. Hodge also gave tips on travelling in the area.

For the August general meeting Dr. John Bardach of the University of Hawaii spoke on global climate changes and their effect on Hawaii. Low lying coastal areas would be most affected by the melting of the ice caps, and by the year 2050 it is predicted that the seas will have risen fifty to sixty centimeters (twenty to twenty-four inches). With this increase, areas such as the reef runway and French Frigate Shoals would be inundated. Some of these occurrences could be accelerated if the level of carbon dioxide continues to increase.

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 forests.

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.

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CALENDAR OF EVENTS

- Oct.9 (Mon.) Board Meeting at HAS office at 7:00 PM.
Call Bruce Eilerts for details at 599-4795.
- Oct.11 (Wed.) Fund Raising Committee meeting.
- Oct.15 (Sun.) Field trip to James Campbell National
Wildlife Refuge. For details see pg.64.
- Oct. 16 (Mon) General Meeting: HAS 50th anniversary
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