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OBSERVATIONS OF HAWAIIAN AVIFAUNA DURING COOK'S EXPEDITIONS

by Erika Wilson

In January 1778, two British vessels, the Resolution and the Discovery, commanded by Captain James Cook, anchored off the coast of Kaua'i. This voyage, the third Cook led to the Pacific, gave the western world its first written records of Hawai'i's avifauna. An initial two-week visit to Kaua'i was followed by a four-month visit during the winter of 1778-1779 which included a month at Kealakekua Bay, Hawai'i.

Cook was obliged to keep a complete journal for the Admiralty. He had learned during past voyages that an overall report was best written at regular intervals during an expedition; therefore, he kept a daily log from which he wrote a running journal. Cook also incorporated in his journal notes and reports of other members of the expedition, such as those of the surgeon/naturalist William Anderson (Beaglehole 1955-69: clxxi-clxxvi). The official, published report of the expedition, "A Voyage to the Pacific Ocean," co-authored by Captains Cook and King (1784), reflects this process of assimilation of material from various sources. For example, in a log fragment dated Dec. 23, 1778, Cook (MSa) wrote: "...And a goose about the size of a Muscovey duck; it['s] plumage was dark grey and the bill and legs were black." This entry was modified and written into the journal (Cook MSb:602) thus: "We got out of one Canoe a goose, which was about the size of a Muscovey duck, its plumage was dark grey and the bill and legs black." And, in Cook and King (1784: II, 541) one reads: "Out of one canoe we got a goose; which was about the size of a Muscovey duck. Its plumage was dark grey, and the bill and legs black."

OBSERVATIONS ON KAUAI

Although there are no specific references to Kaua'i's birds in Cook's journal, a number of comments can be found in Cook and King (1784). These comments undoubtedly came from the notes of Wm. Anderson, who, unfortunately, died of tuberculosis between the two visits to the Hawaiian Islands. The last portion of Anderson's journal, which covered the visit to Kaua'i, has since disappeared. His natural history notes are still extant, but they are all in Latin, which I am unable to read. However, Stresemann (1950) has gone over these notes to establish which species of birds were collected on this expedition.

I have been fortunate in having access to the original manuscripts held by the British Library and the British Museum (Natural History). Beaglehole (1955-69) reproduces Cook's original manuscripts, with extensive annotations. In addition, Beaglehole printed extracts from the journals of others, but not all the material available appears in his volumes. Three men published their own accounts of the expedition between their return and the publication of the official volumes by Cook and King (1784). From the published sources, original manuscripts, and Stresemann's article, there emerges a sketchy picture of the Hawaiian avifauna in the late 1770's.

Everyone was impressed with the magnificent featherwork cloaks, tippets, and helmets of the Hawaiians; they are mentioned in each of the journals. Cook wrote:

> "We were at a loss to guess from whence they could get such a quantity of these beautiful feathers; but were soon in-

formed, as to one sort; for they afterward brought great numbers of skins of small red birds for sale, which were often tied up in bunches of twenty or more, or had a small wooden skewer run through their nostrils." (Cook and King 1784:II, 207).

Some of these "small red birds" found their way back to Great Britain outside the collections made by Anderson and Ellis, and formed the basis for the first published description of a Hawaiian bird, 'I'iwi (*Vestiaria coccinea*) by George Forster in 1780 (Lyaght 1959:352).

In Cook and King (1784:II, 207; 227-8; 219), descriptions of Kaua'i's avifauna are limited to the following passages:

"The red-bird of our island, was judged by Mr. Anderson to be a species of *merops*, about the size of a sparrow; of a beautiful scarlet colour, with a black tail and wings; and an arched bill, twice the length of the head, which, with the feet, was also of a reddish colour.

"The scarlet birds, already described, which were brought for sale, were never met with alive; but we saw a single small one, about the size of a canary-bird, of a deep crimson colour; a large owl; two large brown hawks, or kites; and a wild duck. The natives mentioned the names of several other birds; amongst which we knew the *otoo*, or bluish hereon; and the *torata*, a sort of whimbrel, which are known by the same names at Otaheite [Tahiti-Ed.]; and it is probable, that there are a great many sorts, judging by the quantity of fine yellow, green, and very small, velvet-like black feathers used upon the cloaks, and other ornaments, worn by the inhabitants.

"A particular veneration seemed to be paid here to owls, which they have very tame;..."

The most intriguing part of these notes is the reference to "two large brown hawks, or kites" seen in Kaua'i. Were these 'Io, or Hawaiian Hawk (*Buteo solitarius*), or vagrants from the mainland of North America? "*Otoo*" probably refers to the Black-crowned Night Heron 'Auku'u, (*Nytiorax nycticorax*) [the blue heron of Tahiti is the 'Otu'u, or Reef Heron (*Egretta sacra*) and perhaps once occurred on Hawaii-Ed.] However, what is a "*torata*"? [The Golden Plover is known in Tahiti as Torea.-Ed.] I think it likely that the "red-bird" was an 'I'iwi, while the scarlet bird was an 'Apapane (*Himatione sanguinea*), and the owl a Pueo (*Asio flammeus sandwichensis*), but I think the "wild duck" must remain open to conjecture, considering the time of year (January), when any ducks could have been wintering birds.

Most of the journals kept by expedition members were written in leisurely moments, during the long passages between landfalls. After the discovery of the islands, everyone knew that they would return there in the winter, after a season of exploring the western coast of North America. I think this accounts for the scarcity of general comments about Kaua'i. Indeed, after the eventful winter of 1778-9, during which Cook was killed, there are long passages in the journals devoted to the events leading to his death as well as more descriptive passages about the Hawaiian Islands as a group.

OBSERVATIONS ON ISLAND OF HAWAII

From Cook himself there is only one note on the birds of the Big Island--the reference to a Nēnē (*Branta sandvicensis*) acquired along the east coast, as I mentioned above. His journal ends in January 1778 when the ships anchored in Kealakekua Bay. During the one month stay there, at least three parties went inland for several days, returning with specimens and observations. Wm. Ellis (surgeon's 2nd mate) and John Webber (artist) collected birds and made drawings. The first party to go inland included a surgeon's 2nd mate, David Samwell, who wrote (MS, 25 Jan. 1779) on his return:

"The woods are filled with birds of a most beautiful Plumage & some of a very sweet note, we bought many of them alive of the Indians who were employed in catching them with birdlime smeared on the end of a long rod which they thrust between the branches of the Trees. The birdlime is made of bread-fruit and the milky Juice of a small thorny tree which they call Kepaw;..." ["pitch" or "tar" in Hawaiian--derived from several species of plants-Ed.]

A few days later a second group set out; members of the party included Robert Anderson (Marines gunner), George Vancouver (midshipman, later to command a return expedition to Hawai'i), David Nelson (botanist at Kew Gardens), Simeon Woodruff (American, able seaman), and John Ledyard (American, Marines corporal) who organized the excursion with Cook's express knowledge. They were gone for six days, assisted by native guides, in

an attempt to reach Mauna Loa. They did not succeed, but Ledyard (1783:122) reported:

> "Our botanist today met with great success, and we had also shot a number of fine birds of the liveliest and most varigated plumage that any of us had ever met with, but we heard no melody among them. Except these we saw no other kind of birds except the Screach-Owl, neither did we see any kind of quadrupede, but we caught several curious insects."

A third party set out for a short foray of three days before the second party returned. One member of this third party was a surgeon, John Law, whose journal (MS, 29 Jan. 1779) yielded the following:

> "In the morn went on shore...with four others in order to take a walk a little way up the hill for which purpose we hired two Tou Tows to carry water and a little drop of Brandy."

The first mile was fairly easy walking, but later it got more difficult with "thorns and brush". About nine miles inland they stopped for awhile and then:

> "...set off again up the hill accomp. by a few Bird Catchers who were going into the wood to Ensnare the Birds as they all had these small panelu of Bird Lime.
>
> "...one of the Bird Catchers Came to us with a...Red Bird which he had Caught--after we had purchased it he Went Away Again to the Same Sport--...
>
> "The Manner that these Tassirse Boys or Bird Catchers Ensnare the birds is as follows--They generally go two together each provided with the Lime which is got from the Sap of a small broad leafed tree growing in great numbers wild in the woods. When they come to where the birds are greatly numerous they both of them mount a different Tree having that tree on which the Birds may be on, between them. They fix on a High & extreem Branch to place the Lime and stay Hidden in the Leaves whistling in order to decoy the Birds which they commonly do--though at the same time I have seen a great many Boys come home birdless--The trees which they go up are generally the highest as I suppose there they have the best Sport--"

ACCOUNTS WRITTEN LATER

Most of the reports of Hawaiian birds, however, appear in general descriptive passages written after leaving the islands. The relevant statements in Cook and King (1784: III,119-120). are as follows:

> "The birds of these islnds are as beautiful as any we have seen during the voyage, and are numerous, though not various. There are four, which seem to belong to the *trochili*, or honey-suckers of Linnaeus; one of which is something larger than a bullfinch; its colour a fine glossy black, the rump-vent and thighs a deep yellow. It is called by the natives *hoohoo*. Another is of an exceeding bright scarlet colour; the wing black, and edged with white; and the tail black; its native name is *eeeeve*. A third, which seems to be either a young bird or a variety of the foregoing, is variegated with red, brown, and yellow. The fourth is entirely green, with a tinge of yellow and is called *akaiearooa*. There is a species of thrush, with a grey breast; and a small bird of the flycatcher kind; a rail with very short wings and no tail, which, on that account, we named *rallus ecaudotus*. Ravens are found here, but they are very scarce; their colour is dark brown, inclining to black; and their note is different from the European. Here are two small birds, both of one *genus*, that are very common; one is red; and generally seen about the cocoanut trees, particularly when they are in flower, from whence it seems to derive great part of its subsistence; the other is green; the tongues of both are long and ciliated, or fringed at the tip. A bird with a yellow head, which, from the structure of its beak, we called a parroquet, is likewise very common. It, however, by no means belongs to that tribe, but greatly resembles the *lexia flavicans*, or yellowish cross-bill of Linneaus.
>
> "here are also owls, plovers of two sorts, one very like the whistling plover of Europe; a large white pigeon; a bird with a long tail, whose colour is black, the vent and feathers under the wing (which is much longer than is usually seen in the generality of birds, except the birds of paradise) are yellow; and the common water or darker hen."

Captain Charles Clerke, who like Anderson died of tuberculosis before the end of the expedition, kept a journal which is reproduced in Beaglehole's (1955-69:602-3) volumes. It includes the passages just quoted, with the exception of the sentences or phrases listing the native names of the birds. Without these native names to add weight to the

passage, some of the descriptions could be of several different species. For instance, Beaglehole suggests names of species he thinks Clerke is describing, resulting in some discrepancies. For instance, the bird described as "its colour is a fine glossy black, the rump, vent, and thighs deep yellow", Beaglehole says, "This description leaves us a little in doubt as to which particular bird it applies to; but probably Mamo *Drepanis pacifica*...which was collected on the voyage, is the one meant." King, supposedly with all the relevant notes and drawings at hand, inserted (Cook and King 1784) "It is called by the natives *hoohoo*", which then left him without a name for the last bird described, "a bird with a long tail, whose colour is black, the vent and feathers under the wing... yellow", footnoted by Beaglehole as being the Hawai'i 'O'o (*Moho nobilis*). Another problem is King's insertion of "and is called akaiearooa" for the bird described as "entirely green, with a tinge of yellow", which Beaglehole footnotes as being the Amakihi (*Loxops v. virens*). As for the "large whitish Pigeon", Beaglehole (p603) suggests that it was "in all probability the White Tern.... *Gygis alba candida*...", which has often been mistaken for a pigeon... among coconut palms."

ELLIS AND WEBBER'S PAINTINGS

In an attempt to shed some light on these questions, I looked at the original drawings in the British Museum made by Ellis and Webber. Ellis' twelve sketches are delightfully done, and Webber's seven are in a similar style, but suffer from his tendency to elongate the bird's bodies. A clue to the discrepancies came from the Webber drawings, a few of which have penciled remarks such as "hoo-hoo the name given by the natives" (in this case accurately ascribed to the Hawaii 'O'o). It seems that King made an error in assigning "hoo-hoo" to what is a description of the Mamo, but that Beaglehole is incorrect in assigning "Amakihi" to the bird "entirely green with a tinge of yellow", because this accurately describes Webber's 'Akialoa (*Hemignathus*) which is marked "A kee-a roa" on the drawing.

As far as I can tell, none of the water-colors of Hawaiian birds by either Webber or Ellis were published during the period immediately following the voyage, although interested persons had access to them. But later, Wilson and Evans (1890-9) had Ellis' Hawaiian Rail (*Pennula sandwichensis*) engraved for their volume, and Beaglehole (1955-69) included black and white reproductions of Webber's 'Ākepa, (*Loxops c. coccinea*), 'Amakihi, and 'Akialoa. Except for these few instances, these interesting color records of Hawai'i's birds remain unpublished. The species drawn are as follows, with the reference numbers of Webber (W) or Ellis (E) noted: Hawaiian Rail, E-70; Hawaiian Gallinule (*Gallinula chloropus sandvicensis*), E-69; Hawai'i Thrush, 'Oma'o (*Phaeornis o. obscurus*), E-77; 'Elepaio (*Chasiempis s. sandwichensis*), E-87; Hawai'i 'O'o, W-131, E-26; Hawai'i 'Amakihi, W-128, E-31; Hawai'i 'Akepa, W-108, E-85; Hawai'i 'Akialoa, W-130, E-28; 'O'u (*Psittirostra psittacea*), E-79; 'Apapane, W-132, E-29; 'I'iwi, W-133, E-29; and Mamo, W-129, E-27.

Some of Ellis' sketches have detailed drawings of the bill from several angles, and several show the drepanid bushy-tipped tongue in the open beak. Ellis's (1783:143) own account of the expedition is surprisingly meager in its references to the birds he handled and observed:

> "The birds are very numerous, though not various, some of which can vie with those of any country in point of beauty. Five different species may be referred to the *certhia* genus of Linnaeus: one, which from the structure of its beak, was called, by our seamen, a parroquet, is quite an anomalous bird, and probably will afford a new genus. Among the more common ones, are owls, plover, nearly the same as our whistling plover, curlews, and ravens; the former and latter rather scarce. Upon our first arrival at Karacacooah Bay, the natives brought off several geese, which were quite tame; they were not unlike the Chinese geese; they called them Na-na. By what means they procured them, we could not learn. They have ducks, and upon the coast are found a species of tern, two or three species of petrels, and a few gannets."

Ellis (1783:93, 95) makes another reference to one of the inland trips, which he did not join, but described from the accounts of others:

> "On entering the wood, they were entertained with the notes of a variety of birds, which rendered their walk doubly pleasing; and having several boys with them who professed the art of bird-catching, they set to work, and in a short time procured several. They use a kind of a bird-lime for this purpose, and are besides very expert in imitating the different notes of birds. "...and in their way put up several flocks of black and white plover, that were feeding in the plantations."

OTHER ACCOUNTS

Strange as it may seem to those of us interested in birds, some people just don't notice them. The journal of Thomas Edgar (MS) (master), makes no reference to wildlife at all. George Gilbert (MS:245-6) (midshipman) had only a short paragraph:

> "The few Birds they have are small and only remarkable for their plumage, being chiefly of the paroquet kind as at most of the other Tropical Islands; Indeed, there is one sort that is very small and all its feathers are intirely red, which I don't recolect to have met with at any other place."

Captain King's (Beaglehole 1955-69:360) general description of the Hawaiian Islands contains the following comments:

> "...we have seen a greater variety of birds. To the Crimson colour'd one, we had now brought to us a dark green bird of the same size & shape, its bill being black. A black bird, with a bunch of Yellow feathers upon the breast & rump, these are the size of a blackbird [*Turdus merula*], & have a long curv'd bill. A small pale green bird, & another with dirty mixt feathers, both the size of a linnet, with a similar bill. These birds they brought to us alive; we had also brought to us by the Natives a dull & dark green coloured dove; Ravens were also seen, & some of these were kept about their houses, & they had some superstitious notions about them, for they calld one an Eatooa. They had Geese tame, but we suppos'd them taken when young, as we did not ever see them at their houses."

Again Beaglehole (1955-69) has assigned the most likely species to these descriptions; the "dark green coloured dove" did not fit any Hawaiian bird he knew of, and his correspondence with Edwin H. Bryan, Jr. did not solve the identity of this bird. Once more, the lack of precise descriptions make it difficult to be sure which species were seen.

NOTES ON VEGETATION IN COOK'S TIME

Although I was not looking for information about the vegetation of the islands, I did come across several entries in journals which might be of interest for their descriptions of the habitat at that time. In Cook's journal (MSb) for Jan. 19, 1778, he writes about Kaua'i "...we saw no wood but what was up in the interior part of the island and a few trees about the villages..." Samwell (MS:226) remarked that Kaho'olawe "...is a small low island without any trees or any inhabitants upon it, we saw Lava upon it." An entry in Law's journal (MS:24 Feb. 1779) confirms this view. Samwell (MS:26 Feb. 1779) also remarked that Moloka'i "...was much the same appearance with Oranai [Lana'i], no trees to be seen on it...", and that Ni'ihau was an island "...like Morotai [Moloka'i] and Oronai entirely bare of trees...."

I should also mention that the Red Jungle Fowl or Moa (*Gallus gallus*) was commonly seen in and around the Hawaiian villages as were dogs, pigs, and rats. For an account of the bird specimens which reached Great Britain, see the account by Stresemann (1950).

SUMMARY

The visits by the Resolution and Discovery in 1778-9 resulted in the recording of at least twenty-two species of land and water birds in the Hawaiian Islands, twelve of which were drawn in color by expedition members. There is still some question about some of the species, which is hardly surprising when we realize that none of Cook's men were trained ornithologists.

Very little information on Hawai'i's avifauna collected during the next 60 years has survived. I hope to discuss some of the observations that were made in the first few decades after Cook's voyages of discovery in a future paper.

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Greville Ct. #15, Southvale, Harrow, Middlesex, England HA1 3PL

THE BLACK-HEADED MUNIA DISCOVERED ON KAUAI

by H. Douglas Pratt

The Black-headed Munia (*Lonchura malacca*) has been established on Oahu since at least 1960 (A. J. Berger, 1977, The exotic birds of Hawaii, Honolulu, Island Heritage Ltd.). It is now abundant in the vicinity of Pearl Harbor and appears to be expanding its range. I have seen flocks of these birds as far north in Oahu's central valley as the agricultural lands below Poamoho Trail, and a specimen has been taken at Laie on the windward coast (Delwyn Berrett, pers. comm.). But until now the species has not been known to be established on any other of the Hawaiian Islands.

During a brief visit to Poipu Beach on the south coast of Kauai in early August 1976, I saw what I believed to be a flock of Black-headed Munias on the golf course behind the Waiohai Hotel. Since I was not carrying binoculars at the time, I was unable to confirm my tentative identification. Recently, I located a substantial population of this species in the sugarcane lands just north of Poipu Beach. On 16 May 1977, Greg Vaughn and I saw several small flocks of Black- headed Munias around the southern end of Waita Reservoir and another flock at Pia Mill Reservoir, both near the town of Koloa. We again saw birds of this species in the same general area on 18 May. On 22 May, I surveyed the cane roads around Waita Reservoir and found Black-headed Munias to be quite common. I saw many groups of two to seven individuals totaling at least 40 to 50 birds. I found them mostly in the weedy margins of the canefields and on grassy roadsides. The birds were quite wary and would not allow me to approach them closely in a car. I thus failed in my attempt to document their

presence with a photograph. Spotted Munias (*L. punctulata*) were also common in the area, but did not form mixed flocks with the Black-headed Munias. The latter species is easily distinguished in flight by its bright chestnut-red rump and tail.

Clearly, the Black-headed Munia is established on Kauai, and has probably been a part of that island's lowland avifauna for several years. Whether these birds were intentionally introduced or colonized Kauai from Oahu probably cannot be determined.

Museum of Zoology, Louisiana State University, Baton Rouge, Louisiana 70893

GLEANINGS FROM THE TECHNICAL LITERATURE

FURTHER EVIDENCE ON THE ORIGIN OF THE HAWAIIAN HONEYCREEPERS

Pectoral Appendage Myology of the Hawaiian Honeycreepers (Drepanididae), by Robert J. Raikow, The Auk 94:331-342, April 1977.

Dr. Raikow, in looking for possible evolutionary variation in the honeycreepers, considered the variation in wing muscles. He found very little evolutionary change between the 'Amakihi, Kauai 'Akialoa, 'Akiapola'au, Kauai Creeper, Hawaiian Finch (both Laysan and Nihoa), 'O'u, 'Apapane, 'I'iwi, and the Crested Honeycreeper. In a previous study (Raikow 1976; Auk 93:774-92), he had found similar uniformity in the leg muscles. As the author says: "This basic uniformity is remarkable in view of the adaptive radiation of feeding mechanisms [the bill] ...". "This lack of significant variation again attests to the unity of the Drepanididae, and supports the theory that the family evolved from a single ancestral species".

This is a further argument supporting the ideas of many researchers that the family evolved from an ancestral finch to the nectar feeding types so "characteristic" of the honeycreepers today.

-C.J. Ralph

GOATS DON'T BELONG ON KAHOOLAWE

Excerpts from a letter to the Honolulu Star-Bulletin 12 March 1977, by Omer Bussen

The choice of a bunch of baby goats as a symbolic gift of the land [by activists occupying the island-Ed.] is unfortunate.

The kid rescuers apparently do not understand either the horrible impact goats and other introduced animals have had on native Hawaiian ecosystems or the natural regulation of animal populations in the wild.

In his book, "Hawaiian Land Mammals," Raymond J. Kramer lists ten categories of destruction by goats, after a Haleakala study by C. F. Yocum. "Increased erosion has been brought about by:

1. Overgrazing of native plants.
2. Elimination of some native plants, thus eliminating ground cover.
3. Disturbance of the soil by sharp hooves.
4. Complete elimination of plants from saddles, hogback ridges, goat trails, and along the rim of the crater by feeding or loitering herds of goats.
5. Pawing of the ground by billies before lying down.
6. Increased erosion by rainfall of soils disturbed by goats.
7. Increased erosion by wind of soils disturbed by goats.
8. Slides started by grazing goats.
9. Slides started by goats of all ages playing on the exposed cinders and basalt.
10. Slides started by rocks dislodged by feeding goats."

Kramer continues, "Damage to native plant communities also indirectly occurs when goats eat introduced vegetation (such as blackberries) and later defecate the hard-shelled exotic seeds in other areas. When the seeds sprout an unwelcome form of plant competition occurs with unfortunately, the invader often winning."

If Kahoolawe is ever to be restored to anything near its natural condition, the removal of goats from the island must be given the highest priority.

In areas where goats occur naturally, plants have had thousands of years to evolve defenses against them (thorns, foul taste, thick bark, deep roots), and predators keep the goats in check. In Hawaii there is nothing to stop the goats until they eat themselves out of house and home.

A more appropriate gift from Kahoolawe might have been its island flower, *hinahina-ku-kahakai*, if the goats have not eaten it all.

"VOYAGES INTO OCEAN SPACE" A FREE LECTURE SERIES IS PRESENTED

Residents of Honolulu, Hilo, and Kona will have an unusual opportunity to explore the ocean's mysteries. As ocean explorer Jacques Cousteau has noted, "Let the oceans die and mankind will die soon after". "Voyages Into Ocean Space," a summer series of free public lectures on key ocean issues, will offer a chance to learn from experts about the global ocean which is essential to human life, and which man must preserve to survive. Six other cities will also serve as host to the series including San Francisco, San Jose, San Diego, Los Angeles, Seattle, and Portland.

"Voyages Into Ocean Space" attempts to provide the public with clear, simple information about the ocean and ocean technology so that people can learn enough to voice their views and then help shape decisions involving the world's seas. The series will be held in Hilo on Fridays at 8 pm at the University of Hawaii campus theatre; in Kona at the King Kam Hotel ballroom at 8 pm on Saturdays; and in Honolulu at McKinley High School Auditorium at 8 pm on Monday evenings.

The series will not advocate a particular point of view or position. The nine speaker-experts will present balanced information about such subjects as the ocean's effect on climate and weather; the law of the sea; and harvesting the ocean for food without destroying marine species.

The series has been made possible by grants from the National Science Fouccation and the National Sea Grant Program. For information call: Honolulu 948-6676; Hilo 961-9354; or Kona 323-3226.

SCHEDULE OF AUGUST AND SEPTEMBER LECTURES

30 July - 1 August "The Submarine Landscape" by William Dickinson, Professor of Geology, Stanford University.

6-8 August "Harvesting the Sea" by C. P. Idyll, Director, National Ocean Policy Study, National Oceanic and Atmospheric Administration.

13-15 August "The Climate Machine" by W. Lawrence Gates, Chairman, Department of Atmospheric Sciences, Oregon State University.

27-29 August "Treasures of the Seas and Ocean Floor" by K. O. Emery, Henry Bryant Bigelow Oceanographer, Woods Hole Oceanographic Institution.

20-22 August "Man the Voyager" by Willard Bascom, Director, Southern California Coastal Water Research Project.

10-12 September "Images of the Sea" by John Craven, Dean of Marine Sciences, University of Hawaii.

3-5 September "The Search for Ocean Law" by Ann Hollick, Executive Director, School for Advanced International Studies, The Johns Hopkins University.

MINUTES OF THE GENERAL MEETING - May 16, 1977

Call to Order: The meeting was called to order by Presiding Officer, President Robert Pyle at 7:40. Visitors were introduced and there were reports of Field Observations by the members.

Executive Board Meeting: The President reported about the May Executive Board Meeting. The Board is drafting new By-Laws in preparation for applying for chapter status in National Audubon Society. Frank Howarth is putting together a list of concerns that we hope to submit to National Audubon with the new By-Laws. If anyone has special concerns about our becoming a chapter, please get in touch with Frank Howarth.

Editor: Editor Unoyo Kojima is anxious to be relieved of her duties as Editor in the near future. President Pyle said that one person could never do all our present Editor does. A group under the direction of Robert Pyle will take on the tasks of editing, production, and distribution of the 'Elepaio beginning with August 1977 issue.

Conservation: An article about Kalaupapa on Molokai in the March 1977 issue of Audubon Magazine included a paragraph about diversity of fauna and flora in Hawaii which was felt to be strongly counter to the basic principles of protecting and preserving Hawaii's native wildlife. Maile Stemmerman will draft a letter from the Hawaii Audubon Society to the editor of Audubon Magazine which has since been sent.

Program: Program Chairman Rob Shallenberger introduced our speaker, Mr. Ronald Walker. Ron is a Life Member of H.A.S., and is the Chief of the Wildlife Branch, Hawaii Division of Fish and Game. His talk entitled "Feather- ruffling, Bill-passing, and Clutching at Straws (A Review of State Wildlife Program)" was most interesting and timely.

Respectfully submitted,
/s/ Leilani Pyle
Recording Secretary

H.A.S. SUPPORT FOR PARK SERVICE PROPAGATION OF ENDANGERED 'ALALA ON BIG ISLAND

On March 23, 1977, Big Island representative, Mae E. Mull, wrote the Director of the U. S. Fish and Wildlife Service to express the Society's support of a permit application by the National Park Service to keep and propagate 'Alala (Hawaiian Crow) at Hawaii Volcanoes National Park.

Following is the text of Mrs. Mull's letter:

The Hawaiian Audubon Society supports the major goal of the Hawaii Volcanoes National Park Natural Resources Management Plan to re-establish endemic Hawaiian species into their former range in the Park. The endangered 'Alala and Nene are the two bird species for which careful re-introduction programs have a good chance of success.

The Society supports the issuance of a permit to the Park to salvage individual 'Alala from the wild that are unlikely to survive without the direct aid of man.

The Park has already demonstrated success in propagation over the short span of a few seasons in producing free-flying Nene offspring from clipped-wing breeding pairs in native habitat -- thus establishing a small but growing Nene population in former range at lower Park elevations.

The plan for salvaging distressed 'Alala for rearing and potential breeding in Park enclosures appears to be the only hope for restoring this species to the Park. This will not be an untried venture. Biologists at the Park have had the successful experience of rearing to healthy maturity three salvaged 'Alala fledglings over a 3-year period before they were transferred to the State's Pohakuloa station in March 1976. The expertise and Park aviary are available for prompt renewal of this project.

Taking only seriously distressed birds with slight chance for survival would not adversely affect the remnant breeding population in the wild. The Park's plan would complement the State's project for eventual release of captive-bred birds on Hualalai. The Park's plan is for restoration into totally managed and protected former habitat in the Ka'u District on the southern slopes of Mauna Loa. Instead of being a duplication of efforts, the Park's plan would double the potential opportunities for 'Alala restoration into widely separated former ranges.

The findings of 'Alala field investigators indicate that the present adults may be the last generation that are producing young, because no new nesting areas have been discovered and no new breeding pairs found in recent years. There appear to be no new additions to the breeding population in the wild. Those findings point up the urgent need for an 'Alala rearing and propagation project within the Park habitat for this beleagured species -- which otherwise appears doomed to extinction.

- Mae E. Mull

SOCIETY ENCOURAGES INCREASED EFFORT ON MONGOOSE BY FISH AND GAME TO DETERMINE STATUS ON KAUAI

3 March 1977

Dear Mr. Walker:

The Hawaii Audubon Society is concerned about the possibility of the presence of the Small Indian Mongoose (*Herpestes auropunctatus*) on Kauai. We support the suggestions for an intensive trapping program in the area of the December 1976 road kill to determine more fully the island status of this mammal, as was discussed at the Animal Species Advisory Commission meeting of January 21, 1977.

We appreciate that your Division may lack the manpower and funds to properly set up and maintain such a trapping program, but the Society feels that some action must now be undertaken to determine the distribution and abundance of the mongoose on Kauai, before the mammal becomes firmly established on the island.

It seems significant that in recent times populations of the native endangered species, Dark-rumped Petrel (*Pterodroma phaeopygia sandwichensis*) on Maui and Hawaii, are found generally at high elevations, in habitats devoid of much vegetation cover. It could well be that the introduced mongoose on those islands prevents the establishment of petrel colonies at lower elevations. The present colonies at the upper elevations may still exist because they are above the normal range of this mammal. Apparently, only on Lanai are the Dark-rumped Petrels present at lower elevations in dense vegetation, and only on Lanai is the mongoose not established. It may also be significant to note that of all the main Hawaiian Islands, only on Kauai, which heretofore has not had mongooses, have none of the small native forest bird species yet become extinct.

The mongoose, if it does become established on Kauai, would pose a very serious threat to the native avifauna of the island. Particularly vulnerable would be the ground or burrow nesting species, such as the Newell's

Shearwater (*Puffinus puffinus newelli*) and possibly the Hawaiian Storm-Petrel (*Oceanodroma castro cryptoleucura*) whose nest has yet to be found.

It thus seems imperative that a program of action be implemented as soon as possible. The Society, of course, will do what it can. It will alert its members on Kauai and those making trips there to look for mongooses and report any sightings. Voluntary assistance by Society members in maintaining or checking the traps could possibly be arranged.

Thank you for your time and consideration. Please keep us informed of the efforts of the Division in this matter.

Sincerely yours,
/s/ Robert L. Pyle

VOLUNTEERS NEEDED TO HELP THE SOCIETY

Several volunteers are needed to help with various aspects of the Society's work. If you have some spare time to devote, please contact Bob Pyle (262-4046) or any board member. We need the following:

1. An indexer for the 'Elepaio, a monthly task of a couple of hours.
2. A liaison person with National Audubon (to transmit information on matters of concern to Hawaii).
3. An archivist to help maintain the Society's files at the Bishop Museum.
4. Mailers, staplers, folders, etc. to assist the committee in getting out the 'Elepaio one day a month.

BIRD OBSERVATIONS WANTED FOR AMERICAN BIRDS

Seasonal observations on the status of Hawaiian birds are now being reported in the journal "American Birds" by Audubon members C. J. Ralph and Robert L. Pyle. The journal, edited by the National Audubon Society, includes regional reports from all over the United States and Canada. In the May issue (due out in 4 weeks) the first regional report from Hawaii, covering the winter season, will appear. Observations reported include unusual migrants and changes in status and distribution of native and introduced birds.

Observers should continue to direct all reports of bird observations to Dr. Pyle, as they have in the past (741 N. Kalaheo Ave., Kailua 96734, or telephone: 262-4046). Full details of observations will continue to be published in the 'Elepaio, and the reports summarized for American Birds.

ENDANGERED BIRDS SURVEYS ON BIG ISLAND

BY THE U. S. FISH AND WILDLIFE SERVICE
Excerpts from an article in the Honolulu Star-Bulletin, 18 April 1977

by Harry Whitten

Surveys, started last summer and continuing this summer, are expected to yield more factual data on Hawai'i's endangered birds than have ever been realized before.

Last summer's survey was in the Ka'ū Forest Reserve on the southern slopes of the Big Island's Mauna Loa. This summer's survey, over a wider area, will be in the Hāmākua area, from the northeast side of Mauna Kea to the Hawai'i Volcanoes National Park boundary.

Surveys will be conducted later in other State forests, according to Eugene Kridler, endangered species coordinator of the U. S. Fish and Wildlife Service.

The large amounts of raw data gathered by last summer's survey teams are still being analyzed but detailed results should be available in a few weeks, Kridler said.

He said preliminary results show a larger population of the endangered 'Akepa than expected, probably more Hawaiian Creepers, but fewer 'Akiapōlā'au another endangered bird.

Dr. J. Michael Scott and John Sincock led the Ka'ū survey. Dr. Scott is leading the Hāmākua survey. Both are wildlife biologists of the Fish and Wildlife Service.

Dr. Cameron Kepler, wildlife biologist recently assigned to Maui has joined the team. He had previously studied endangered birds in Puerto Rico and participated in the Smithsonian bird survey in the Central Pacific.

The survey teams collect data on density and distribution of wildlife, especially of birds, and take copious notes on vegetation in order to prepare habitat maps, Kridler said.

Three men [H.A.S. Board Member Dick Davis and members Al Hart and Mark Collins] laid many miles of transect lines in the Hāmākua area during the spring so that the 12 scientific observers could get right to work in mid-May.

The observers will continue work until about mid-August, Kridler said, but their work depends somewhat on the weather. The surveys are a joint project of the Fish and Wildlife Service, State Forestry and Fish and Game Divisions, with help also from the U. S. Forest Service.

LETTER TO THE EDITORS

HAWAIIAN BIRD AND SNAIL SPECIMENS IN SOME EUROPEAN COLLECTIONS

Black Rock
Victoria, Australia
18 May 1977

Dear Editors:

While in Europe last year, I uncovered an unregistered adult male 'I'iwi with a broken beak in the Natural History Museum in Dublin, Eire, collected the last century. There were no Hawaiian bird specimens at The State Museum of Luxembourg when I visited in May 1976.

At the end of March I saw a collection of Hawaiian molluscs dustily displayed in the Museo Paleontologico, Calle del Almudin, Valencia, Spain. There were six species of the genus *Laminella;* five species of the genera Achatinellastrum [a subgenus of *Achatinella* -Ed.], *Partulina,* and *Auriculella;* four species of *Amastra;* at least two species of *Newcombia;* two species of *Achatinella* and *Perdicella;* and a species each of the genera *Melampus, Olpeas,* Bulimella [a subgenus of *Achatinella*-Ed.], Apex [a nickname for the obese-looking shells of *Achatinella*-Ed.], *Samprostoma* [*] and *Intundibulum* [*]. This collection was made before the first World War and probably some of these generic names have been altered or synonymized since then.

/s/ Rhys Walkley

[Ed. Note: We appreciate Al Hart bringing the above genera up to date. He states that: "The last two genera listed (*) are unknown to me and may not be Hawaiian".]

ALOHA TO NEW MEMBERS

The Society welcomes the following new members: Aaron Francis Brown (Junior Member) and Sharmon Jean Brown, Makawao, Maui; Ms. B. G. W. Donnelly, Honolulu; Peter Galloway, Honolulu; Roger D. Harris, Oakland, California; W. H. Heaney, Honolulu; Charles McNally, Stockton, California; Ms. Robin T. Santos, Santa Cruz, California; James C. Tahan, Los Angeles, California; Ms. Kathleen Tracey, San Mateo, California; and Freda Welles, Honolulu.

MAHALO NUI LOA FOR DONATIONS

Donations to help the work of the Society gratefully received from Messrs. W. H. Heaney and William Perreira.

ALOHA--UNOYO AND CHARLOTTA

Last month Miss Unoyo Kojima, a "temporary" editor of 'Elepaio since 1962, retired from the post, turning the job over to a five-member committee whose work begins with this issue. Co-editor Miss Charlotta Hoskins will also retire after long service.

With characteristic enthusiasm, Unoyo has indispensably served both the Hawaii Audubon Society and its journal for the many years since their inception in 1939. It is impossible, and would be distasteful to Unoyo, to try to enumerate her many contributions to the Society. Those who have known her concur on one thing about Unoyo that will be most sorely missed: her contagious and imperturbable love of nature, which has expressed itself in all her work. Mahalo nui loa and aloha 'oe to Co-editors Unoyo Kojima and Charlotta Hoskins.

PUBLICATIONS OF THE SOCIETY

HAWAII'S BIRDS by the Society (1975). This is the best field guide to our birds, and includes colored illustrations of all native and well-established exotic species.
(Postpaid, add 32¢ for airmail) $3.25

FIELD CHECK-LIST OF BIRDS OF HAWAII by R. L. Pyle (1976). A pocket-size field card listing the species recorded in Hawaii with space for notes of field trips.
(Postpaid). 25
(ten or more, 10¢ per copy)

GUIDE TO HAWAIIAN BIRDING by members of Society and edited by C. J. Ralph (1977). Where to go and some idea of what you are likely to see. For the islands of Hawaii, Maui, Molokai, Lanai, Oahu, and Kauai.
(Postpaid). 50

PRELIMINARY LIST OF THE BIRDS OF HAWAII by R. L. Pyle (1977). An authoritative compilation of all species naturally occurring in Hawaii as well as those introduced by man currently established as viable populations. Gives an excellent summary of each species' status.
(Postpaid). $1.00

POSTER: "We care about Hawaiian Wildlife Habitat". A joint effort of H.A.S. and other conservation groups, this colorful poster illustrates native waterbirds overlaid on a map of the island chain.
(Postpaid) 50

HAWAII AUDUBON SCHEDULE OF EVENTS

Aug. 8. No board meeting scheduled this month.

Aug. 14. Field trip to Manana (Rabbit) Island. Reservations should be made with Omer Bussen (262-5506) two weeks prior to the trip. Cost of the boat will be $3 per person, paid at dockside. Meet at the Makai Range Pier, near Sea Life Park, at 7 a.m. Limit of 24 persons, members given preference. Swimming ability required as participants must climb in and out of the boat in chest-deep swells.

August 15. General membership meeting. "Birds of Fiji". Doug Pratt, always an interesting speaker, will talk about his recent survey trip to Fiji and present slides of the wildlife and places that he visited. All welcome.

Sept. 11. Field trip to waterbird localities. As migrants begin to arrive, Dr. Robert Pyle (262-4046) will lead a trip to various areas, especially around Pearl Harbor to observe water and shore birds. Meet at the State Library on Punchbowl St., at 7 a.m. Bring binoculars and telescope (if available), lunch, water, and, if possible, your car. Transportation cost ($1) to be paid to drivers.

Sept. 12. Board meeting at Waikiki Aquarium Auditorium, 7 p.m. Members welcome.

IF NOT A MEMBER, PLEASE JOIN US.

Regular Member	$ 3.00
Junior Member (18 and under)	1.00
Life Member.	100.00
(Payable in $25 annual installments)	

HAWAII AUDUBON SOCIETY
P. O. Box 22832
HONOLULU, HAWAII 96822

George G. Campbell
1717 Ala Wai Blvd, #2303
Honolulu, Hawaii 96815