'ELEPAIO

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For the Protection of Hawaii's Native Wildlife

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POSSIBLE DARK-RUMPED PETREL COLONY ON LANAI, HAWAII

by Lawarence T. Hirai

The Dark-rumped Petrel *(Pterodroma phaeopygia)* is found only in the Galapagos and Hawaiian Islands. The Hawaiian subspecies *(P. p. sandwichensis)*, or 'Ua'u, formerly nested on most of the main islands, but is now considered restricted to Maui and Hawaii (Berger 1972). The population on Lanai nested on the ridges on the north side of the mountain and in the dry forest on the northwest end of the island (Munro 1944), presumably Kanepuu. Pigs and cats are believed responsible for extirpating this species on Lanai (Munro 1960). However, remains of petrel wings were found along a valley trail in 1926 (Munro, *in* Gregory 1927), and on 26 October 1973 a Dark-rumped Petrel, possibly a juvenile, was caught at night along the Munro Trail above Kaiholena Gulch, when it was attracted to the area by the light of a coleman lantern (Shallenberger 1974).

More recently, night field work in 1976 by myself accompanied by others confirmed the presence of the 'Ua'u on Lanai. On 23 June 1976, Dr. Roy Cunningham (Entomologist, U.S.D.A. Hawaiian Fruit Flies Laboratory), located a possible colony at Kumoa Gulch. I made five further night trips to the mountain in June, two each in July and August, and one each in September and October. The "colony" was at an elevation of about 2800 feet and along a 0.25-mile stretch of the Munro Trail, a jeep road that winds through the mountain forest on the ridge crest. Although I found no burrows, observations of the birds in the area suggest that the petrels nest on the ridge slopes, which are covered by uluhe fern *(Dicranopteris)* and 'ohi'a-lehua *(Metrosideros collina)*. Based on the number of calls heard and birds seen flying overhead, I estimated the "colony" to be less than 100 individuals, probably closer to 50 birds. In the next summer I again heard and saw petrels at the site on a night trip on 29 May 1977.

Although petrels may nest elsewhere on mountain ridges less accessible for human observation, the "colony" discovered seems to be the only one on the Munro Trail. I made observations for at least a few hours before and after sunset in June, 1976, at five other sites along the Munro Trail between Puu Kilea and Haalelepaakai Puhielelu Ridge. I heard only sporadic petrel calls. Most of these calls were believed made by adults flying to the "colony" site, but may have also indicated scattered nesting attempts. I also made two night trips, one in June, 1976 and the other in July, 1976, to Kanepuu. No petrel activity was noted.

Dark-rumped Petrels appeared in the colony area soon after sunset, with calls and flights back and forth over the ridge being most common for the first one or two night hours. A number of birds seemed paired in flight. Petrel calls and birds flying overhead declined as the nesting season progressed, probably due to the adults leaving the grounds when nesting attempts failed and the natural tendency for progressively less care of the chicks as they developed. By 1 October 1976 no adults were heard or seen in the area. From the available information, the nesting season of the 'Ua'u on Lanai seems to be similar

to that of the population in Haleakala Crater, Maui, from May to November (Berger 1972).

Populations of Dark-rumped Petrels on Maui and Hawaii are generally found at higher elevations, in habitats devoid of much vegetative cover (Berger 1972). It may be that the introduced small Indian mongoose *(Herpestes auropunctatus)* on those islands prevents the establishment of petrel colonies at lower elevations. The colonies at the upper elevations may still exist because they are above the normal range of the mongoose. Only on Lanai are Dark-rumped Petrels currently found below 3000 feet elevation, and only on Lanai (and possibly Kauai) are mongooses absent. The future status of the 'Ua'u on Lanai possibly will depend on preventing the introduction of the mongoose.

ACKNOWLEDGEMENTS

My appreciation to the following for their night assistance: Dr. Roy Cunningham and Jo Cole of the U.S.D.A. Hawaiian Fruit Flies Laboratory, Ki Chun Kim, Ki Song Kim, Ki Yong Kim, Steve Montgomery, Robin Rice, Sam Shin, and most of all to Kyong Nan Hirai. My thanks to Dr. Andrew J. Berger for comments on the manuscript. This was part of a study on the Lanai Avifauna conducted under the direction of Andrew J. Berger on funds provided by the Hawaiian Fruit Flies Laboratory of the U.S. Department of Agriculture through the Department of Entomology of the University of Hawaii.

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UPDATE ON KII POND

by Richard A. Coleman

Flocks of migratory ducks; shorebirds; and Hawaiian stilts, Ae'o, have become a common sight at the restored 20-acre portion of Kii Pond along Oahu's north shore ('Elepaio, Nov. 1977:61). Through the sweat of Gordon "Demi" Black's brow, the water level was finally stabilized in September and bird numbers responded favorably.

The current fall average bird population includes: Black-crowned Night Heron, 4; Hawaiian Stilt, 25; Cattle Egret, 10; Pintail, 35; Mallard, 4; American Widgeon, 4; Northern Shoveler, 20; Green-winged Teal, 2; American Golden Plover, 60; Wandering Tattler, 6; Ruddy Turnstone, 25; Sanderling, 5; Bristle-thighed Curlew, 2; Dowitcher, 1; Pectoral Sandpiper, 2; Sharp-tailed Sandpiper, 10; Least Sandpiper, 1; as well as Spotted Munia, Northern Cardinal, Red-crested Cardinal, House Finch, Barred Dove, and occassionally a Pueo and a Barn Owl.

The ducks and shorebirds have been utilizing the numerous islands for resting. Hopefully the Hawaiin Stilts will nest there this summer. A pair of mongooses were seen in November on one of the few brush covered islands near the dike, apparently building a nest. They had to cross a meter deep moat and another 10 meters of shallow water to get to the island! Traps were set up immediately and two mongoose were caught. No further mongoose sightings on these islands have been reported. The brush islands are scheduled to be burned soon, and other islands will be modified to enhance stilt nesting.

Work is progressing on further improvements to Kii Pond, part of the James Campbell National Wildlife Refuge. Anyone wishing additional information concerning this refuge should contact the U.S. Fish and Wildlife Service at the Division of Refuges, 300 Ala Moana Blvd., Room 5302, PO Box 50167, Honolulu, Hawaii 96850; or at (808) 546-5608.

DO MAINLAND COOTS OCCUR IN HAWAII?

by H. Douglas Pratt

Traditionally, all coots seen in Hawaii have been referred to the endangered endemic subspecies *Fulica americana alai* known as the Hawaiian Coot. Apparently no valid records exist for the mainland form *F. a. americana* in the islands. Nevertheless, some authors (Munro 1943, 'Elepaio, 3:37; Udvardy 1960, 'Elepaio, 21:20-22) have suggested that mainland American Coots may visit Hawaii. Coots are highly migratory, and several other continental waterfowl regularly winter in the islands in numbers, so such occurrences would not be surprising.

Mainland coots (Fig. 1A) can be distinguished in the field by the configuration of the frontal shield. In the Hawaiian Coot the shield is larger and more bulbous (Fig. 1B) than in its mainland counterpart. It extends up the front of the head to a point between and over the eyes. Usually, the bill and shield of these birds are pure white. A few individuals of the Hawaiian Coot, however, show a dark ring near the tip of the bill and a dark red frontal shield sharply set off from the white bill (Fig. 1C). This rare morph resembles the mainland subspecies in color pattern, but the size and shape of the shield is that of the Hawaiian race. In mainland birds, particularly in winter, the frontal shield is only a small knob and terminates on the forehead *in front of the eyes*. The differences are most obvious when the birds are seen together.

Variation in the frontal shield of the Hawaiian Coot, as well as the occurrence of mainland birds in Hawaii are being investigated by biologists throughout the islands. Birders who have information relative to this research and who wish to assist in this effort should contact Dr. Robert J. Shallenberger, P.O. Box 1166, Kailua, HI 96734.

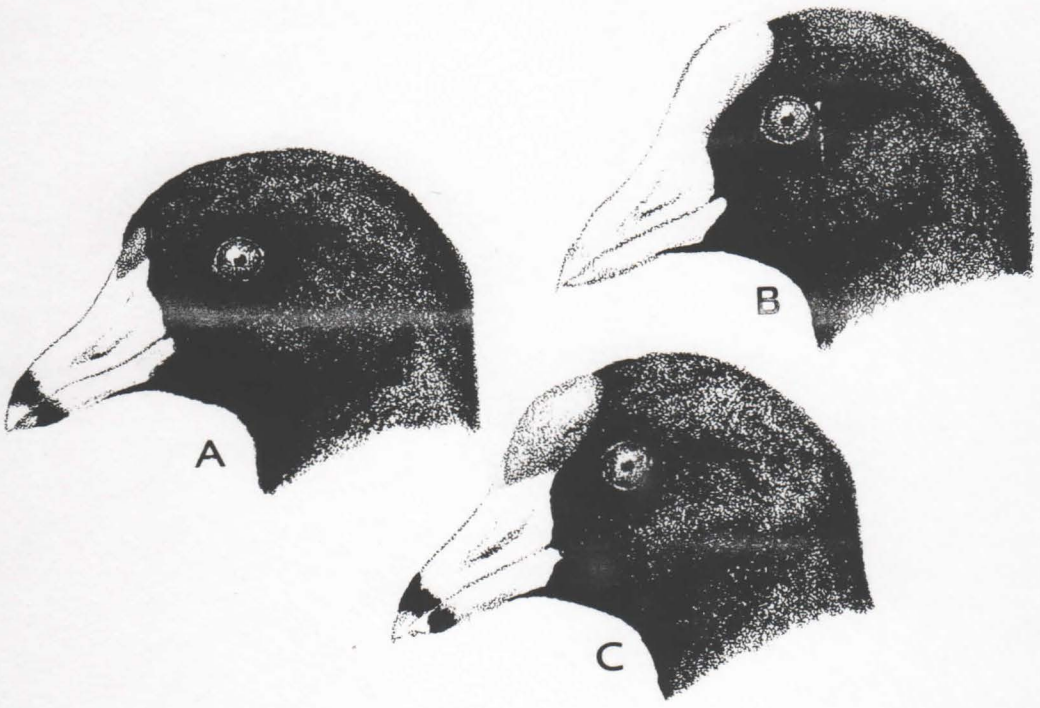

Fig. 1. Illustrations of a mainland American Coot (Fig. 1A), a typical Hawaiian Coot (Fig. 1B), and the red-shielded morph of the Hawaiian Coot (Fig. 1C).
Illustrations by H. Douglas Pratt

WHERE THE GAME BIRDS ARE

by Mae E. Mull

An amended regulation governing game bird hunting throughout the State has been released by the Division of Fish and Game. It took effect on 14 October 1977 and is the first revision in the rules since 1973. This year the annual game bird season on public hunting grounds opened on 5 November and continues through 15 January 1978. According to the regulation, the following fifteen species of game birds, all introduced, can be legally taken by hunters on the islands noted for each species: (Kaua'i=K, O'ahu=O, Moloka'i=Mo, Lā-na'i=L, Maui=M, Hawai'i=H; asterisk (*) indicates change in vernacular or scientific name, as given in the regulation, to conform with the "Preliminary List of the Birds of Hawaii" by Robert L. Pyle ('Elepaio, April 1977, pp. 110-121).

Ring-necked Pheasant (*Phasianus colchius*) K, O, Mo, L, M, H
* Green Pheasant (*Phasianus versicolor*) K, O, Mo, L, M, H
* Kalij Pheasant (*Lophura leucomelana*) H only
* California Quail (*Lophortyx californicus*) K, Mo, L, M, H
* Gambel Quail (*Lophortyx gambelii*) L only
* Japanese Quail (*Coturnix coturnix*) K, O, Mo, L, M, H
* Spotted Dove (*Streptopelia chinensis*) K, O, Mo, L, M, H
Barred Dove (*Geopelia striata*) K, O, Mo, L, M, H
Mourning Dove (*Zenaidura macroura*) H only
* Chukar (*Alectoris chukar*) K, Mo, L, M, H
* Gray Francolin (*Francolinus pondicerianus*) K, Mo, L, M, H
Black Francolin (*Francolinus francolinus*) K, Mo, M, H
* Erckel Francolin (*Francolinus erckelii*) K, O, L, H
* Chinese Bamboo Pheasant (*Bambusicola thoracica*) M, H
* Turkey (*Meleagris gallopavo*) Mo, L, M, H

A new feature of the regulation is the designation of game birds for which the season is closed on public hunting grounds -- thirteen post-Cook introductions and the Red Jungle Fowl or Moa, first introduced by the ancient Polynesians. Because their status is uncertain or the populations are too small to withstand sustained-yield hunting, the regulation forbids the taking of the following gamebirds: (species not on the "Preliminary List of the Birds of Hawaii" because of uncertain breeding status are indicated by an "o").

o Bobwhite Quail (*Colinus virginianus virginianus*)
o Reeve's Pheasant (*Syrmaticus reevesi*)
o Chinese Francolin (*Francolinus pintadeanus*)
o Sharpe's Francolin (*Francolinus clappertoni sharpii*)
* Barbary Partridge (*Alectoris barbara*)
o Mountain Quail (*Oreortyx picta*)
o Bare-throated Francolin (*Pternistis leucoscepus*)
o See See Partridge (*Ammoperdix griseogularis*)
o Indian Sandgrouse (*Pterocles exustus erlangeri*)
* Rock Dove (*Columba livia*)
o Chilean Tinamou (*Nothoprocta perdicaria*)
Red Jungle Fowl (*Gallus gallus*)
* Indian Peafowl (*Pavo cristatus*)
* Helmeted Guineafowl (*Numida meleagris*)

Other details, such as hunting times, hunting arms, bag limits, and public hunting areas on the different islands, are contained in the ten-page Regulation 3. It is available at Division of Fish and Game offices on all islands.

Island of Hawaii Representative
Volcano, Hawaii

EXPANDING RANGE OF KALIJ PHEASANT ON THE BIG ISLAND

by Mae E. Mull

At a public hearing on changes in the game bird hunting regulation held in Hilo on 15 August 1977, Divison of Fish and Game biologists announced the addition of the Kalij Pheasant to the official game bird list. This Asian jungle pheasant

presently occurs only on the island of Hawai'i. Apparently it was first introduced to the island in 1962 by the leaseholders of the State-owned Pu'u-wa'awa'a ranch. Participants in the public hearing were told that the Kalij Pheasant has spread from the ranch to other North Kona areas, including the slopes of Hualālai, south to the upland South Kona forests, east to the Pōhaku-loa flats and 'Āina-hou Nēnē Sanctuary in the saddle between Mauna Kea and Mauna Loa, and across the island to the windward rain forests, including Pihā in the Hilo Forest Reserve.

By the amended regulation, hunters are permitted two Kalij cocks per day on weekends and holidays from November to mid-January, but only in the established dryland hunting areas. The five public areas for bird hunting are all on the dry side of Hawai'i island: Mauna Kea Game Management Area (GMA), Pu'u-anahulu GMA, Pōhaku-loa GMA, Ka-'ohe Horse Pasture GMA, and Pu'u-wa'awa'a Cooperative GMA. There are no open hunting areas for game birds in the wet forests.

In his article "The Kalij Pheasant on Hawaii" ('Elepaio, Dec. 1975, pp.66-67), Thane Pratt described his observations of the Kalij in North Kona during July and August 1975. He commented that these Southeast Asia jungle pheasants appear "well adapted to Big Island rain forests." On 16 April 1977, Bill Mull and I watched a Kalij hen for several minutes as it warily half-circled around us through the ground vegetation at a distance of 20-25 feet in a wet kīpuka with a closed 'ohi'a canopy just south of the Saddle Road at 5,240 feet elevation. The bird wouldn't flush.

At first thought, another exotic bird in the rain forest sounds threatening, but food supply, predation, disease or the inevitable poaching eventually may be limiting factors in population expansion. In fact, its ultimate local biology and ecology are unpredictable. Monitoring Kalij populations in the rain forests, as well as in the drylands, could provide useful data on the adaptation of this jungle pheasant and its impact on Hawai'i island habitats.

Island of Hawaii Representative
Volcano, Hawaii

HAPU'U AT WHAT COST?

Volcano, Hawaii
September 30, 1977

Mr. William Y. Thompson, Chairman
Department of Land and Natural Resources

Dear Mr. Thompson:

The CDUA (9/6/77) by the Bishop Estate for expansion of commercial hapu'u harvesting to a new increment of 300 acres in the Kileaua Forest Reserve is a Society concern because of the injurious impact of this action on the ecosystem.

In 1971 the Estate submitted a CDUA for merchantable hapu'u clearcutting on 2,956 acres (Lot E) of the reserve. This acreage is prime native rain forest on the east slopes of Mauna Loa between 4200'-6200' elevation. Following strong public protest on the devastating impact of such logging on intact native ecosystems, the Board granted a permit for harvesting on 150 acres and set other conditions to be supervised by the Division of Forestry.

Considering the pittance that accrued to the Estate, there was hope that the Trustees would opt for the far greater value of preserving the remainder of the forest in its natural processes of succession as a rich heritage of Kamehameha Schools--for the biological study and enrichment of generation after generation of Hawaiian students and teachers. This option can still be seized.

What concerns the Society is the piecemeal loss of original 'ohi'a-hapu'u and koa forests with little recognition of the valuable functions fulfilled by these stable, diversified forests in non-consumptive use. The enclosed comments on industrial forestry from the 'Elepaio point out the existing values of native forests that are usually ignored in the marketplace.

Parcel by parcel the unique 'ohi'a-hapu'u system, with its myriad interdependent life forms, is permanently altered by mechanical operations. Exotic grasses and weeds move in to the disturbed areas, followed by other introduced organisms.

Rare endemic birds and plants with restricted ranges inevitably disappear.

Although the reserve's 5,070 acres are assigned to the Conservation District, close to half of the forest has now been drastically altered by clearing, logging and grazing operations -- about 2,264 acres. Is not such land use more appropriate to the Agricultural District? Further loss is implicit in the CDUA request for "additional expansion of the harvesting area in the future without the necessity of public hearings" (p. 2).

An environmental description and the significant effects of such past, present and future harvesting would be fully disclosed and evaluated in the EIS to be prepared under EQC regulations. Reviewers would also expect the EIS to include information on the regeneration and growth rates of hapu'u.

We thank you for considering the issues raised here, and we would appreciate knowing your determination on the EIS requirement.

With aloha,

Mae E. Mull
Island of Hawaii
Representative

UPDATE ON HAPU'U HARVESTING: As of 9 December 1977, an EIS determination notice on the proposed action had not been filed with the Environmental Quality Commission. Also, a public hearing date has not yet been announced on this application for commercial use of Conservation District land.

FISHING VILLAGE AND BIRDS ON MOKAUEA ISLAND

November 14, 1977

Dr. Richard E. Marland, Director
Office of Environmental Quality Control
Honolulu, Hawaii 96813

Dear Dr. Marland:

This letter is in reference to the proposed Mokauea Fishing Village to be situated on Mokauea Island in Keehi Lagoon, Oahu. As you are well aware, the Hawaii Audubon Society has a long history of involvement in the controversy surrounding the Reef Runway project and its impact on resident and migratory bird life in the lagoon. Although "replacement" areas have been constructed to compensate for habitat lost during runway construction, less disturbed portions of the lagoon still provide feeding habitat for the endangered Hawaiian Stilt (*Himantopus mexicanus knudseni*), Black-crowned Night Herons and migratory shorebirds and seabirds. The shallow water and shorelines of Mokauea Island is one such area. In view of serious habitat alteration elsewhere in the lagoon, we feel that it is imperative that the quality of remaining habitat, such as that surrounding Mokauea Island, be maintained or improved through wise management.

In the absence of effective controls over human access and activity on the island, there is no mechanism to minimize disturbance to the birds. It has been suggested that illegal poaching may also be occurring, but this has not been confirmed to our knowledge. Dogs now run free with no attempt to keep them out of bird feeding areas. Growing uncontrolled, the exotic mangrove forest will continue to encroach on the island. Although this vegetation supports some bird life, long range impact on shallow water feeding habitat for birds will be adverse.

If the proposed Mokauea Fishing Village is developed with proper waterbird management guidelines in mind, it is likely that the ultimate effect on native birdlife and our opportunity to enjoy this resource will be positive. The following management guidelines are recommended. The housing units should be confined to presently disturbed areas, as is proposed. Access of dogs to the bird feeding areas should be prevented. If the village residents can not successfully control their own dogs, it would be necessary to ban dogs from the island altogether. It is our understanding that the public would be guaranteed access to the island, but movement on the island could be controlled by the use of established trails. Near prime feeding areas confining human use to limited observation sites would help to minimize disturbance and improve the viewing opportunity over the long run. If coupled with interpretive signs or displays, this could greatly enhance the educational experience. Incorporation of bird study and appreciation into the overall interpretive program planned for the Mokauea Fishing Village would provide an important link with early Hawaiian culture that is so often neglected

in environmental education in the islands.

We understand that the members of the Mokauea Fishermen's Association are working closely with State biologists and archaeologists in their planning for the Moakauea Fishing Village. Mr. Ronald Walker, of the State Division of Fish and Game, has conducted waterbird studies throughout Keehi Lagoon over the last several years. He can provide valuable additional advice to insure that the fishing village is developed in a way that is compatible with waterbird management objectives. We think it is imperative that State biologists, including Mr. Walker, be intimately involved in further planning. We also would like to have the opportunity for continuing input into the planning and development of the fishing village.

Combining wise wildlife habitat management with improved environmental education opportunity is a prime objective of the Hawaii Audubon Society. The proposed Mokauea Fishing Village can be an important step towards this objective.

Aloha,

Robert L. Pyle, Ph.D.
President

November 25, 1977

Dear Dr. Pyle,

Thank you for your letter describing how the proposed Mokauea Fishing Village can serve as a beneficial factor in protecting bird habitats. As you know, this matter had raised doubts in the minds of many of us, and I am very glad to learn of your recommendations on how the Village could co-exist with birds.

I have personally supported the concept of the Mokauea Fishing Village since I first heard of it. Your help in establishing the necessary guidelines for protecting the nesting and feeding areas will certainly be most appreciated. The help you describe from the Fish and Game staff has also been promised.

Your letter has been a substantial help in advancing the proposed Village.

Thank you again for your kokua.

Sincerely,

Richard E. Marland
Director

LETTER TO THE EDITOR

Volcano, Hawaii 96785
Dec. 2, 1977

Dear Sir:

THE ENDANGERED PALILA BIRD

Whether caused by some *lolo* flicking his burning cigaret into the bushes or by intense sunlight focussed through a discarded bottle into tinder-dry grass, the burning the latter part of November of the endemic mamani (*Sophora chrysophylla* forma *maunakeaensis*) forest upon which the endemic Palila (*Psittirostra bailleui*) depends for food and shelter is a tragedy. This forest fire reduces the present few hundred birds of this famed endangered species to hunger and to limitation of space for breeding and nesting. But the Palila has been subjected to such tragedy throughout its evolution in geologic time whenever the Goddess Pele enlarged Mauna Kea with volcanic eruptions and directed lava flows through its forests. After a resulting decline in population, the surviving Palila always snapped back to its former abundance or even beyond as the area subjected to such a holocaust returned to its former forested state in a decade or two.

We botanized in Mauna Kea's decadent mamani forest as recently as July 30, 1977, hearing the bleating of sheep some little distance about us. We were then amazed at the great number of viable yellow mamani seeds peppering the ground, a condition that must have prevailed ever since tree and mountain existed together. Thus every time Madam Pele wiped out a mamani forest with her infrequent but regular eruptions, such mamani seeds sprouted to replace the old forest with a new one. This year's winter rains will cause the sprouting of the seeds as in the past. But, unfortunately due to the interference of man and his introduced varmints, unlike in early times, feral goats and especially feral sheep will greedily seek out the tender seedlings to nibble them down to their roots, killing them "*make*, die, dead." As a result, without man's timely intervention NOW, the area presently devastated by fire will remain a burned out desert subject to wind and rain erosion - a second Kahoolawe. Do we "Primapes" want to leave such a heritage for our children to contemplate, or do we want to reclaim the land and save

a remarkable bird from extinction? If the latter, we must foster the return to ancient ecological conditions. What may that be?

EXTERMINATE MAUNA KEA'S FERAL GOATS AND SHEEP SO THAT MAMANI SEEDLINGS CAN GROW TO MATURITY TO RENEW THE PALILA'S FEEDING AND NESTING SITES.

Incidently, such a mamani forest will milk clouds sliding over the mountain of their moisture as fog drip, augmenting Hawaii's artesian and groundwater resources.

Aloha,

Drs. Otto & Isa Degener

REPORT ON THE HAWAIIAN PIG

(Excerpts from an article in the Honolulu Star-Bulletin, October 24, 1977)

by Harry Whitten

When Capt. James Cook arrived in these Islands, he discovered the first discoverers, the Hawaiians, had already brought here an animal with which he was quite familiar. He could probably smell its cousins on his ship. This was the pig.

Cook noted that the Hawaiian pigs lived in the mountains and he described them as "a small species of hogs, with long heads and small erect ears."

Today's Hawaiian pig is a descendant of those brought here by the Polynesians but isn't quite the same. Cook started the process of change by landing a domesticated English boar and sow on Niihau in 1778 and other introductions in the years since have mixed with the original, small Hawaiian pig to produce the feral pig that now roams Hawaiian forests.

The feral pig and the problems he causes are discussed in a report issued last month by the Cooperative National Park Resources Studies Unit of the University of Hawaii at Manoa's Department of Botany.

The agreement with the National Park Service provides for studies by University faculty and students of biological resources in national park units in Hawaii. Clifford W. Smith of the UH Botany Department is unit director.

The unit's report on "Kipahulu Valley Feral Pig Proposal" was written by Smith and Cheong H. Diong, a graduate student in zoology from Malaysia, now working toward his Ph. D. at the University.

Cheong had written articles in Malaysia decrying the decline of the wild pig in Malayan forests; he finds the hope here is that wild pigs will decline.

Kipahulu Valley is part of Haleakala National Park; the pigs are there and the National Park Service wishes they weren't.

The valley is a unique area, with at least 74 species of native ferns and related plants, a dozen species of rare Lobeliads, and many endemic plants. The valley has a complex ecosystem, ranging from tropical rain forest to subalpine vegetation.

The upper portions of the valley, between 2,000 and 6,000 feet elevation, have been relatively undisturbed, but exotic animals and plants are invading certain areas. The valley is also a sanctuary for many rare and endangered birds.

An expedition in 1967 identified the feral pig as the primary destroyer of native ecosystems.

"The park realizes that the feral pig is an animal that needs to be controlled and managed in order to preserve the native biota and physical environment within the valley in as natural condition as possible," the report says.

The report says the pig introduces exotic plants, damages birds' food supply, causes soil erosion, and helps degrade the near-pristine rain forest.

The report discusses possible control methods, such as trapping, shooting, poisoning or use of chemicals, hunting with dogs, chemical sterilants, fencing, or just doing nothing.

It finds disadvantages to all such proposals, suggests a mixture of controls may be necessary, and outlines a plan for a more extensive study.

One suggestion for the study would be to put collars with radio transmitters on 30 pigs, in order to monitor their movement and thus get maps of their home range.

In any case, the report decides something should be done; doing nothing would result in further damage and degradation of the forest.

FIELD TRIP: LIKEKE TRAIL AND KAWAINUI MARSH

November 13, 1977

Carloads traveling from all directions converged on the Old Pali Highway at 7:30 am for the Likeke trail portion of the November 13, 1977 HAS field trip. Dick Davis, trail-blazer par excellance, had spent several days on the trail in past months, clearing the dense overgrowth. Eighteen members and guests followed Dick on the trail until about 10:30 am. We heard or saw small numbers of the most common exotic birds (Shama, Melodious Laughing-thrush, Northern Cardinal, Japanese White-eye, House Finch, and Red-vented Bulbul). The Japanese Bush-warbler was conspicuous in its apparent absence. Its calls are ever present here during spring and summer months. Although the trip was not particularly exciting ornithologically, the trail was interesting and new to nearly all of us. For those interested in returning to the area, I suggest a dawn trip between March and July. Even the road itself can be a good place to listen and watch birds from the car.

Photo by Greg Vaughn
Ahuimanu Productions

Fig. 1. Long-billed Dowitcher photographed on November 15, 1977 at Kawainue Marsh, Oahu.

After leaving the Old Pali Highway, we all gathered at Mr. Martin Knott's ranch below Castle Hospital at Kawainui Marsh. Tim Burr described the ongoing Division of Fish and Game Koloa release program, while I gave a brief rundown on the distribution of birds in the marsh and on the last decade of history surrounding the pressures of urban development in the area. We walked down to the Koloa release cage where 27 banded birds are housed prior to their anticipated release in early December. The activity of birds in the cage had attracted six wild Koloa to the cage area. I returned to the site three times over the next week and counted as many as 11 Koloa outside the cage, including at least three unbanded birds. The successful nesting of Koloa in the marsh is very encouraging. Of particular interest during the HAS field trip was a single Long-billed Dowitcher feeding on the muddy shoreline across the stream from the Koloa cage. Everyone was able to observe this bird during the trip, and I successfully filmed it (Figure 1) several times over the next week. We also observed several Golden Plovers, Cattle Egrets and a single immature 'Auku'u at the cage site. Although not recorded in this area during the field trip, a pair of gallinule and as many as seven stilt were seen in the cage area during my filming trips later in the week.

About half of the group continued on the trip to the hillside bordering the marsh along the Quarry Road. Here we were treated to clear views of gallinule, coot, 'Auku'u and a group of six ducks that included four Lesser Scaup and two male Redheads. I am unaware of any records of Redheads at Kawainui, and, in fact, there are few records for the entire state. Three frigatebirds were drinking from the surface as they flew over the largest pond. Four of the most intrepid participants on the trip were treated to a short boat trip into the marsh before we wound up the field trip around 2 pm.

Robert J. Shallenberger

ANNUAL FINANCIAL REPORT

The Annual Financial Report of the Society for 1977 is in preparation and will be published soon.

COOPERATIVE WATERBIRD BANDING PROGRAM UNDERWAY

by Richard A. Coleman

A cooperative banding program for Hawaii's endangered waterbirds will soon be underway. The U.S. Fish and Wildlife Service and Hawaii's Division of Fish and Game are banding together to study inter-island and intra-island movement of the Hawaiian Stilt, Ae'o; Hawaiian Coot, 'Alae Ke'oke'o; Hawaiian Gallinule, 'Alae 'ula; and the Hawaiian Duck, Koloa.

Scheduled to begin in January 1978 for Hawaiian Stilts and Hawaiian Ducks, and March 1978 for Hawaiian Coots and Hawaiian Gallinules, the banding will be conducted on National Wildlife Refuges and State Wildlife Sanctuaries throughout the main islands; initially on Oahu and Kauai. The success of this program will depend heavily upon the number of accurate band sighting reports received from concerned HAS members and other bird watchers.

An auxiliary marking will be used in addition to the standard Fish and Wildlife numbered metal band. Hawaiian Stilts and Hawaiian Ducks will be marked with three colored leg bands and the aluminum numbered band (2 bands per leg above the tarsal joint). Eight possible colors will be used in the sequence: red, white, orange, dark blue, light blue, yellow, green and mauve (purple).

The sequence and color of bands and which leg it is on (the bird's right or left) is very important for individual identification of the banded bird.

An example of an accurate band sighting report would include the following:

1. Name of observer.
2. Place of observation.
3. Date and time.
4. Species of bird.
5. How observed: binoculars, scope, naked eye...
6. Was bird among a flock? How many in flock?
7. Bird's left leg: top band color/ bottom band color.
8. Bird's right leg: top band color/ bottom band color.

Note: An aluminum numbered band is used in combination with the other three colored bands, so this band would be reported in the sequence as "color: Aluminum."

Partial sightings, one leg or part thereof observed, should also be reported.

Hawaiian Coots and Hawaiian Gallinules will be marked with alpha-numbered colored nasal saddles. The exact reporting system will be reported in a future 'Elepaio article. Evenually, Hawaiian Ducks, presently marked with colored leg bands, may also have these nasal saddles as auxiliary markers. iliary markers.

People sighting banded birds should notify the Division of Refuges, U.S. Fish and Wildlife Service, 300 Ala Moana Blvd., PO Box 50167, Honolulu, HI 96850, telephone: 546-5608. I cannot stress enough the importance of *accurate* band sighting reports since the sequence and color of bands on the bird's right and left legs will individually identify each marked bird.

GLEANINGS FROM THE TECHNICAL LITERATURE

FROM WHENCE THE HONEYCREEPERS?

THE ORIGIN AND EVOLUTION OF HAWAIIAN HONEYCREEPERS (DREPANIDIDAE)

by Robert J. Raikow

Living Bird 1976: 95-117.

The Hawaiian honeycreepers, family Drepanididae, provide one of the most spectacular examples of adaptive radiation, the process by which a founding line or species evolves into a variety of species. When we look at the resulting array of diverse types, in this case ranging from the Palila to the Nukupu'u in bill shape, we wonder what the ancestor (or ancestors) of the honeycreepers was like and what the evolutionary steps that led to today's rich assortment of species were. Recently, ornithologists have debated whether our honeycreepers started with a thin-billed, nectar-feeding species from the tropical American family of honeycreepers called Coerebidae (which some taxonomists think is really a grouping of unusual warblers and thrushes) or with a finch. By the first hypothesis, the nectivorous drepanidids would be the most primitive, by the second, the seed eaters.

In this paper, Dr. Raikow, an expert on bird myology, finds that the muscle structure of the drepanidids is very uniform and most closely resembles that of the primitive finches, such as the rosy finches (*Leucosticte*). Furthermore, the

primitive finch tongues and nasal opercula resemble those found in the finch-billed drepanidids, such as the Palila and Nihoa Finch. The nectar-feeding drepanidids have tubular tongues and more closed nasal openings, adaptations found in other nectar feeders elsewhere in the world. This evidence leads to the conclusion that the founding stock of the drepanidids was a primitive finch. From what we know of dispersal patterns, it certainly seems more likely that a finch from a family of migratory and irruptive species, rather than a coerebid, generally sedentary species, would colonize the Hawaiian Islands. Raikow goes on to suggest a phylogeny in which *Psittirostra* (Palila, 'O'u, Nihoa and Laysan Finches) has changed little from the primitive cardueline ancestor, and *Pseudonestor* (Maui Parrotbill) just a little more. Another line from this ancestor begins the trend of bill elongation, giving off *Paroreomyza* (Creeper), then develops the tubular tongue and in sequence gives rise to *Hemignathus* ('Akiapola'au, 'Akialoa, Nukupu'u), *Loxops* ('Amakihi, 'Anianiau, 'Akepa), *Palmeria* (Crested Honeycreeper), *Himatione* ('Apapane), *Vestiaria* ('I'iwi), and finally *Drepanis* (Mamo). All in all, a fine assortment to have come from a few exhausted finches that found this refuge in the vast Pacific Ocean.

— *C. P. Ralph*

"THE BIRD BUSINESS" 5-1/2 MILLION BIRDS A YEAR

If watching "Baretta" on TV has made you want a cockatoo, you are not alone. Sales and prices of these birds have soared in the U.S. recently. Where do these and other pet birds come from? How are they handled? What are their fates? Greta Nilsson addresses these and other questions related to the importation of birds in a well-written, thoroughly researched booklet called "The Bird Business." Her report is available for $3.00 from: Animal Welfare Institute, P.O. Box 3650, Washington, D.C. 20007.

Ms. Nilsson found that most of the 282,000 birds that importers tried to bring into the U.S. in 1976 were wild-caught, rather than aviary bred. The same is true of the rest of the 5-1/2 million birds estimated to be traded each year over the globe. This massive collecting of certain species, especially combined with habitat destruction for many of them, is seriously depleting populations of some species. Equally tragic is the 80% mortality rate after the birds are captured and before they reach their final customers. Even once in customers' hands, many birds die because the owners are ignorant of proper care.

Bird importers currently must comply with regulations of three federal agencies. The Fish & Wildlife Service requires a customs form for any wildlife imported. The Department of Agriculture requires importers have a permit and that all birds pass through a 30-day quarantine at one of 38 approved stations. This is to check for Newcastle disease. The Department of the Interior restricts entry of certain species that are endangered, are prohibited export from countries of origin, or are covered in the Migratory Bird Treaty Act. The good intentions of all these regulations is foiled by rampant smuggling, vague permit categories, crowded and unsanitary quarantine stations, uninformed and overworked customs officials, and so on.

Ms. Nilsson also discusses the risks involved when exotic birds are released or escape in a new home. She favors establishment of a "clean list" (selected species approved for import), as does Hawaii Audubon ('Elepaio, October 1977:45).

After presenting these and other aspects of the bird trade, Ms. Nilsson makes some recommendations that could improve the lot of the birds. She suggests our long-term goal should be to produce all pet birds in aviaries, allowing no trade in wild-caught birds. At present, the monetary incentives offered by U.S. citizens to bird hunters and dealers is so great—e.g. $3500 for a cockatoo—that no amount of legislation could stop the trade.

— *C. P. Ralph*

LETTERS TO THE EDITOR

Sept. 26, 1977
Volcano, Hawaii

Dear Editor:

Regarding the expansion of commercial hapu'u harvesting operations in the Kilauea Forest Reserve, Ka'u, Hawaii, Tax Map Key: 9-9-01:7 (File No.: HA - 9/6/77 - 992), we wish to add a few comments:

We are opposed to expansion of hapu'u harvesting as contemplated in the area mentioned above:

1. We wish an ENVIRONMENTAL IMPACT STUDY of the area performed to convince skeptics what a National Treasure the area actually is. Common sense tells us that the hapu'u increase in height per year little more than the width of the stalk of its frond. Estimating this generously, it would be but a couple of inches per year. In seeing the hapu'u trunks turning and twisting among themselves over the ground before rising, any child can figure that most of these trees were already old before Kamehameha I was born; some very likely developed as sporelings about the time of the birth of Christ. They are Methuselahs.

2. The Bernice Pauahi Bishop Estate, established by Kamehameha's granddaughter, is lead by a group of Americanized Trustees who are evidently imbued with the sacred *haole* duty to turn assets into dollars and cents: this, we believe, amounts to a rental of less than $75 per month to harvest or "eradicate" 300 acres of this virgin, irreplaceable, climax, treefern forest. In addition the Estate reaps, we were told, 3 cents per cubic foot of raw treefern fiber (actually aerial roots). The Estate is not paid for the woody part of the trunk nor for the starchy pith, both wisely allowed to rot on the ground. Can anyone imagine that graceous Princess Pauahi, whose grandfather admonished his retainers to liberate forest birds after plucking a few of their prized feathers, would tolerate such vandalism? What would seem so amusing to us *haole* were it not so tragic is that the *ohana* make such a hullabaloo about a former prison island, a barren Alcatraz, that helps enable our Military to perfect their ability to defend our Nation from a Third World War; yet they fail to utter a boo against wiping out living Creations unique to the Island of Hawaii!

3. The Island of Hawaii, due to the action of modern man since its rediscovery by Captain Cook, with bulldozers and buzzsaws is slowly drying up. Many streams formerly permanently filled with rapidly flowing water harboring *hihiwai* and *o'opu* are now running dry. Areas such as that covered with treefern may register a rainfall of barely 100 inches per year according to rain gauges; but it traps more than that amount of water in fogdrip from cold fern fronds, like the drops of moisture condensing on the outside of a glass of ice water. Such rain and fogdrip is caught by the living treefern and its dead trunks, as would a sponge, and eventually trickles down to replenish our artesian water supply. An example of fogdrip is observable about the Humu-ula Sheep Station. There the grass under every *mamani* is green and healthy; while away from it, it is but yellow hay.

4. Besides hapu'u the area involved harbors the peculiar tree (not the bush) *naio* or false sandalwood (*Myoporum fauriei*), a *Tetraplasandra* tree new to Science, and an abundance of the otherwise extremely rare fern *Toppingia* which has pale green fronds creeping horizontally through the jungle for six and more feet. Why mention other plants and animals that depend on them for food and shelter. Don't just think of birds! There are many more peculiar and fascinating Creations -- who ever heard of Hawaii's predaceous caterpillars until recently! -- in danger of extermination. This means for ever.

In summary, we pray the *ohana* spirit of Kamehameha and his granddaughter Pauahi will prevail in land bequeathed to the Hawaiians, rather than the *haole* spirit of turning God-given Treasures into dollars and cents.

Aloha,

Drs. Otto & Isa Degener

CONSITITUTION AND BY-LAWS APPROVED

At the general meeting on November 21, 1977, the final vote and tally of mail ballots was taken on the new constitution and by-laws. It had been under study by the Executive Board for many months, gaining approval of the Board, and was sent out in the October 'Elepaio. The Presiding Officer, Vice-President Robert Shallenberger, announced at the meeting that mail ballots had been received, 81 for the new constitution and by-laws, 8 against, and 1 undecided. A show of hands of those present at the meeting who had not submitted postcards indicated 9 for and 3 against. Thus it was voted to accept the revised constitution and by-laws.

THE CITIZEN CONSERVATIONISTS IN TAHITI AND FRENCH POLYNESIA

by Steve Montgomery

One of my most rewarding experiences during the four months of travel in the Marquesas and Society Islands was meeting several leaders of Ia Ora te Natura (Life to Nature), which was founded in 1973 and remains as French Polynesia's only environmental group. In the belief that persons with concerns and feelings for the Hawaiian Islands will also find inspiration in the actions of the kindred spirits I discovered 2,400 salty miles to the south, I want to tell you about their accomplishments and plans.

In windows and offices around Papeete, I came across three posters announcing activities like Nature Week. The designs, done by young students, artfully depicted the interdependence of plant and animal lifeforms. A poster of a seabird in flight informs the viewer that *Votre peche depend de lui* ("your fish depend upon him") because boats follow the boobies to schools of aku. Upon seeing the native streamlife poster prepared by the Conservation Council for Hawaii, they requested permission to translate the captions and reprint it because nearly all the life forms on it have relatives in Tahiti.

Educational activities have focused on preparing a series of booklets on the distinctive environment of the South Pacific for use in the school systems. Other than an excellent color handbook, *Birds of Tahiti*, by J. C. Thibault, there are few local environmental references for the serious teacher and layman.

I was given two issues of a magazine published and edited by Jacques Drollet and other volunteers with articles on sea turtles, marine park proposals, environmental aspects of agricultural developments and the origins of Polynesian life. One issue is almost wholly devoted to the benefits and problems of introduced or exotic species. The African snail and Troca shell, foreign birds, the water hyacinth and insects of medical interest each have an article (usually printed in both French and Tahitian). They want to know more about Hawaii's experience with carnivorous mollusks brought in to control the African snail and have a warning for Hawaii about the Melastome plant, *Miconia*, which has proliferated uncontrollably in their lowland forests.

Working out of a tiny rented office staffed by a half-time secretary, it is only the personal committments of members like the teachers, housewives and biologists I met that get things done. When the French government has not responded to environmentalists' concerns, the group has taken the issue to court, as for example when mother-of-pearl shell gathering was permitted in the Isle of Scilly marine preserve. Continued dissatisfaction with official policies has led several members, especially Drollet, Philippe Siu and Marie-Therese Danielsen, to become active in campaigns with a new and growing political party.

Department of Entomology
University of Hawaii
Manoa

ALOHA TO NEW MEMBERS

We welcome the following new members and hope that they become active in the activities of the Society.

New Members: Babs Beckingham, Captain Cook; G. Vernon Byrd, Kilauea; Dudley W. Coillet, Belmont, Massachusetts; Denver Field Ornithologists (Dale A. Wilkins and Sandy Westendorf), Denver, Colorado; Brent Giezentanner, Kailua; Leah G. Niemoth, Kailua-Kona; Pat Nevin, Honolulu; Dr. and Mrs. Oliver P. Pearson, Orinda, Californa; David Raimist, Glassboro, New Jersey (Junior); Mr. and Mrs. Clement L. Ralph, Berkeley, Californa; Mrs. Bev Rothenborg, Honolulu; Don H. Smith, Waialua; and L. Mark Thomas, Honolulu.

New Life Member: Mr. and Mrs. O. Edward Hyde, Kailua-Kona and Nantucket, Massachusetts.

Donations: Mr. Rhys Walkley of Black Rock, Australia donated to our book collection a copy of the book *Australian Birds* by Robin Hill. Mahalo!

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HAWAII AUDUBON SCHEDULE OF EVENTS

Jan. 8. Field trip to Mokauea Island. We will visit the site of the proposed Hawaiian fishing community near Sand Island, and view birds in the area. Meet at the State Library on Punchbowl St. at 8 a.m. *(Note time change)*. Bring binoculars, lunch, water. Leader: Dick Davis (247-3741).

Jan. 9. Board meeting at Waikiki Aquarium Auditorium, 7 p.m. Members welcome.

Jan. 14. Big Island Field Trip to Hilo area ponds and shores to search for migrant and resident waterbirds. Meet at Wailoa Visitor Center parking lot at 8 a.m. Bring binoculars and lunch. Leaders: Bill and Mae Mull (967-7352).

Jan. 16. Membership meeting. "Bathhurst Inlet's Flora and Fauna". Glen and Trish Warner will give an illustrated talk on the wildlife around their wilderness lodge in the Northwest Territories, Canada. 7:30 p.m., Waikiki Aquarium Auditorium.

Jan. 23. Special membership meeting. "Hawaii's Forest Gems: Status and Prospects of Endangered Native Land Snails" by Alan D. Hart. Slides and specimens of our most spectacular animals. Joint meeting of H.A.S. and the Conservation Council for Hawaii. 7:30 p.m., Waikiki Aquarium Auditorium.

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

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