

# 'ELEPAIO

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For the Protection of  
Hawaii's Native Wildlife

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## LOGGERHEAD TURTLE RECOVERED FROM A TIGER SHARK AT KURE ATOLL

by George H. Balazs

The loggerhead turtle, *Caretta caretta* has been documented in Hawaiian waters on only two previous occasions, with both records occurring in the main islands at the southeastern portion of the 2600 km archipelago. The first known case involved an immature specimen found in an emaciated condition at a fish market in Honolulu sometime during the late 1930's (Spencer Tinker, personal communication). The second case occurred in February 1978, when a small female measuring 79 cm in straight carapace length was recovered alive, floating at the surface at Penguin Bank off the Island of Molokai (Altonn 1978, McKinney 1978). This specimen had an amputated but healed left front flipper, as well as recent injuries to the head and tail. In addition, the turtle was heavily infested with a piscicolid leech of the genus *Ozobranchus* (see Davies and Chapman 1974 for description), an ectoparasite of sea turtles not previously reported from Hawaiian waters. Recuperation on the turtle subsequently took place in captivity at Sea Life Park on Oahu, where the animal continues to be on public display. It should be noted that two other loggerheads also in captivity at Sea Life Park at the present time (Fig. 1) were originally imported into Hawaii by the Waikiki Aquarium, probably from Florida during 1967 (Charles De Luca, personal communication).

### Findings

During a visit to Green Island at Kure Atoll (28°25'N, 178°20'W) in the Northwestern Hawaiian Islands on 26 July 1978, personnel of the U. S. Coast Guard Loran station provided me with the partially digested parts of a sea turtle recovered from the stomach of a large tiger shark (*Galeocerdo cuvier*). I was informed that between 1100-1600 hours on 31

May 1978, station personnel had engaged in recreational shark fishing off the southern end of the island using a hook and line set from a small outboard powered boat. Several 1.5 m gray reef sharks (*Carcharhinus amblyrhynchos*) were initially captured and cut up for bait. This resulted in the capture of a 3.5 m male and a 4.0 m female tiger shark (Fig. 2). Numerous bird bones and feathers that were not retained for identification were the only items found in the stomach of the smaller specimen. Turtle parts were recovered from the larger shark; however some of this material, as well as other food items of an unidentified nature, were regurgitated and lost during the landing process. The turtle parts consisted of an intact mandible,



Figure 1. Adult loggerhead at Sea Life Park. The distinguishing characteristics of this species include a large head, a reddish-brown body, and five lateral laminae on each side of the carapace rather than the four present in *Chelonia* (green turtles) and *Eretmochelys* (hawksbills). Photo by George H. Balazs.

the horny beaks that cover the jaws, and small portions of the cranium, plastron, and carapace. Examination of these items and comparisons with data presented by Carr (1952) and the loggerheads at Sea Life Park resulted in the positive identification of the turtle as a loggerhead. Based on the size of the mandible, the straight carapace length was estimated to have been 55-60 cm, indicative of an immature specimen.

#### Discussion

Based on the state of digestion of the identified parts, it is reasonable to assume that the shark ingested the turtle while in the vicinity of Kure, or possibly Midway, 90 km to the southeast. This recovery therefore constitutes the first record of a loggerhead in the Northwestern Hawaiian Islands. It is not possible, however, to determine if the turtle was alive or dead at the time of ingestion. Based on the two earlier records, loggerheads found in Hawaiian waters appear to be aberrant individuals originating from distant populations. In the North Pacific Ocean, loggerhead populations occur along the coast of Mexico (Marquez 1969) and off the Japanese islands of Kyushu, Shikoku, and the southern portion of Honshu (Nishimura 1967, Uchida 1973). An individual from any one of these geographic areas could have drifted or moved under its own power to Hawaiian waters. Similar cases of stray turtles crossing considerable distances of open ocean have been described for European waters (Brongersma 1972). In this respect, it is also of interest to note that a drift bottle released near Kogoshima, Kyushu, Japan during March 1976 was found by Coast Guard personnel washed ashore on Green Island in February 1978.

Tiger sharks are known to feed regularly on sea turtles, a fact that has been well documented for Hawaiian green turtles (*Chelona mydas*) throughout much of the Archipelago (Tester 1969, Fujimoto and Sakuda 1972, Taylor and Naftel 1978). The recovery and analysis of turtle parts, such as reported in the present case, therefore offers considerable potential for gathering valuable ecological data on sea turtles that would be difficult, if not impossible, to obtain by other sampling techniques.

#### Acknowledgements

My research of sea turtles in the Hawaiian Islands is conducted with grants from the Office of the Marine Affairs Coordinator, State of Hawaii, and the University of Hawaii Sea Grant College Program (04-7-158-44129 Contribution No. UNIHI-SEAGRANT-JC-79-03). I gratefully acknowledge the assistance and

information provided by LTJG Jim Stark (Commanding Officer) and other personnel of the U.S. Coast Guard Loran Station at Kure Atoll. Appreciation is also extended to Mr. Spencer Tinker, Mr. Charles De Luca, Dr. Edward Shal-lenberger, Mr. Bob Bourke, Mr. John Naughton, Dr. Leighton Taylor, and Captain Gary Naftel.

Green and Sand Islands at Kure Atoll are wildlife refuges administered by the State of Hawaii, Department of Land and Natural Resources, Division of Fish and Game. I am grateful for the continuing cooperation provided by the staff of these agencies during the course of my research.



Figure 2. Two tiger sharks (*Galeocerdo cuvier*) captured by Coast Guard personnel at Green Island, Kure Atoll on 31 May 1978. Photo by LTJG Jim Stark.

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#### CORRECTION

Below is a corrected Table 4 from Ron Walker's article on "A trip to Kure Atoll, December 21-22, 1977" from the last issue of the 'Elepaio (Vol. 39:134). Mahalo to Jack Hailman for pointing out the error.

Table 4  
POPULATION ESTIMATES  
OF ALBATROSS ON GREEN ISLAND  
(Woodward 1972)

	1963	1964	1966	Average
Laysan Albatross	3,600	4,000	1,450	3,017
Black-footed Albatross	650	700	500	616
<b>TOTAL</b>	<b>4,250</b>	<b>4,700</b>	<b>1,950</b>	<b>3,633</b>

## THE DROWNING OF A BLACK NODDY TERN

by Charles van Riper III<sup>1</sup>,  
Sandra G. van Riper<sup>1</sup>,  
J. Quinn Casey<sup>2</sup>, and Irene B. Casey<sup>2</sup>

On 27 August 1977 we made observations on a Black Noddy Tern (*Anous tenuirostris*) colony in the Kalapana extension of Hawaii Volcanoes National Park, Hawaii. This congregation of terns appears to be a permanent colony, as the first author has consistently found them when visiting the area during the past four years (June and December 1975, April and December 1976, January and March 1977, November 1978, and January through March 1979). The birds can usually be found on the sheer cliffs along the coast, about 6 km west of the eastern park boundary.

As we approached the edge of the sea cliff (at 1344 hours), a group of 12 terns was circling close to shore, apparently fishing. Upon closer examination we noticed that one individual was unsuccessfully trying to rise off the water. We observed this bird for the next 15 minutes, during which time its efforts were characterized by rapid wing flapping as it attempted to become air-borne. During each brief struggle, it would rise off the water, usually no more than 30 cm, then fall back and lie on the surface with its wings extended to either side. Periodically the crest of a wave would break over it.

After the tern tired, its wing beats became slower, but attempts to fly were still continuous. In a 13-minute period the bird drifted several hundred meters down the coastline, and closer to the cliffs. At 1359 hours a series of four large waves washed over it, and the tern was not observed again.

Since we arrived after the bird was in the water, there was no way of determining how it had become waterlogged. R. Shallenberger (pers. comm.) has found four adult noddies and one adult Sooty Tern (*Sterna fuscata*) washed up on the beach at Manana Island in a waterlogged state. C. Kepler (pers. comm.) saw a Brown Pelican (*Pelecanus occidentalis*) be caught by a wave near La Jolla, California, and subsequently be washed to shore. The Kalapana coast has few places where a bird could wash up unbattered by the rocks, so it is probably less likely the birds in this area could survive a thorough dunking. Moreover, Berger (1972:62) and Johnston (in prep.) mention experiments on Sooty Terns which show that these birds tended to become waterlogged

within half an hour, and as a result rarely alight on the water for more than a few minutes at a time.

In Hawaii noddies start nesting in May or June (Shallenberger 1970, Brown 1976), and most young fledge by late August. We observed no nesting individuals, which makes it doubtful that this bird was newly fledged and had fallen into the water. In addition, we observed no avian predators in the vicinity, and a very sick bird would probably not have struggled as long as this one did. Munro (1944:64) observed this species fishing when waves were breaking on rocks, and stated that when a wave receded "they splashed into the smooth water and cleverly evaded the incoming breakers." Perhaps the bird we observed was fishing, and an unexpectedly large wave broke over it, soaking the feathers and thus rendering the bird incapable of flight. If rough seas extend for prolonged periods, it is possible that drowning might be a significant mortality factor in this species.

#### Acknowledgements

We thank C. Kepler and R. Shallenberger for unpublished information, and R. Barbee, D. Reeser, and C. W. Smith for help with logistics. The first and second authors were supported by Contract CX 8000 7 0009 from the National Park Service to the University of Hawaii and by Earthwatch during the period of these observations.

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## OBSERVATIONS AT A ROCK DOVE NEST IN WAIKIKI

by Jean Bancroft

On February 15th, 1978, my husband and I left Canada in the depths of winter, and flew to Honolulu for a winter vacation. The hotel where we stayed was on a very busy street in the Waikiki area.

Imagine my delight, therefore, when I looked down 35 feet from the lanai and noticed a white Rock Dove (*Columba livia*) sitting on its nest in a coconut palm tree (*Cocos nucifera*). The nest was approximately 25 feet from the ground and was built on the stub of a palm branch which had been lopped off close to the trunk. A few wisps of fibrous material from the tree provided a spot on which the female had laid her two eggs.

After observing this nest with my binoculars for several days and nights (as a spotlight from the hotel shone on the tree), on February 21st, early in the morning, I noticed that two chicks, light beige in colour, had hatched. On the fourth day they commenced to take on white down feathers.

On the 23rd of February I was fascinated by the feeding process. I have observed the nests of many Mourning Doves (*Zenaidura macroura*) in and around Winnipeg, but I have never been able to get a close view of the nestlings being fed. In this case, the young bird inserted its beak into the side of the parent's beak and then began what appeared to be a tug-of-war. The adult bird, with a pumping motion of his or her body, regurgitated food from its crop and fed the young what is known as "pigeon's milk." After several days the nestling exercised its wings vigorously during this feeding procedure.

From my daily observations all seemed to go well until the 28th, when my binoculars acquainted me with a puzzling picture. One nestling was lying prostrate and the other nestling and an adult were pecking at it. It was then evident to me that one nestling had died.

On the 12th day I noticed that tail feathers were developing on the remaining nestling. Except for a narrow edging of black on its tail the young bird, when full grown, was pure white, as were its parents (one adult had a narrow beige trim on its tail). I understand that, in some cases, due to intergradation with Rock Doves of feral domestic stock, the white Rock Dove (which belongs to

the same species) may have a bit of black and/or other colour in its plumage. This may also affect the colour of the beak and eyes. The eyes and beaks of all the birds in this nest were pinkish.

Both parents gave undivided attention to the care of the remaining nestling. It seemed that one parent took over at night, sitting very close to the young bird. On the 13th day both parents appeared to coax it to leave the nest. They left the nestling alone and it kept looking down below and stirring about. Many times I thought it would go overboard and plunge to the pavement below. During the last two days there was much flapping of wings and, on the 9th of March, sometime between 18:15 and 20:10 the young bird left the nest; thus completing a very interesting 17-day nestling period.

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#### ALOHA TO NEW MEMBERS

We welcome the following new members to the Society and hope that they will join in our activities to further conservation in Hawaii:

Joint with National: B.W. Adams, Honolulu; Mary S. Bell, Honolulu; Debra Blachowiak, Koloa; R. Butchart, Honolulu; Terri Chun, Honolulu; Elisabeth Cummings, Kaneohe; Helen D. Devereux, Honolulu; James L. Dykes, Honolulu; Alan G. Engholm, Makawao; Benjamin J. Gomes, Hickam AFB; Pauline Harada, Hanalei; William B. Harkins, Kula; Merrill B. Jensen, Mililani; Alan K.H. Kam, Honolulu; Dr. E.J. McClurkin, Kaneohe; Tom Meier, Tamuning, Guam; William S. Merwin, Haiku; Steven H. Morgan, FPO San Fran, Calif.; Robert L. Nelson, Haiku; Christopher Nielsen, Kaneohe; Wayne M. Pitluck, Honolulu; Richard C. Ragle, Kailua-Kona; Helen C. Reed, Honolulu; Wayne Paul Santos, Haiku; Mrs. G.A. Schattauer, Captain Cook; Evelyn Shepard, Honolulu; Michael F. Speidel, Honolulu; Mrs. R.H. Thorp, Honolulu; and Eileen Waskiewicz, Kailua.

Local Regular: Alfred Abreu, Kealahou; Mrs. D.H. Akers, Kula; Reeta Dean, Kailua-Kona; Shirley Liu, Honolulu; Christabel Lukens, Kailua; Lucia Peterson, Honolulu; Mrs. Edward Ralston, Kailua; Elaine Russo, Honolulu.

Subscribers: William Balfrey, Weed, Calif.; Tim Lowrey, Berkeley, Calif.

A special MAHALO to the following new Life Members: Alphonse Labrecque (a Regular Member since before 1947), Douglas Mason.

## WOODLAWN/WA'AHILA RIDGE FIELD TRIP

MARCH 11, 1979

Thirteen members and guests began the hike up the Woodlawn Trail at 7:45 a.m. with high hopes of seeing the featured 'Elepaio, as well as other native bird species. The weather was superlative: there were very few clouds, and the cool morning temperatures and continuing light trades kept us comfortable, even at midday.

As we walked up the lower portion of the trail, the songs of several species were heard, including those of Shama, white-eye, House Finch, Northern Cardinal, Japanese Bush-warbler, and 'Amakihi. Both Barred and Spotted Doves were seen on the trail, and we were able to catch several glimpses of an elusive Shama. It was not until we neared the steeper portions of the trail that we were able to see 'Elepaio. At least six of these birds were seen and heard as we walked upwards through groves of guava, Eucalyptus, and Kukui. We were treated to excellent views of several 'Elepaio as they moved close to the trail, often only 20 or 30 feet away.

At 9:30, we gritted our teeth and began the steep ascent to the top of Wa'ahila Ridge. Our efforts were rewarded as we entered the predominantly native forest and began hearing both 'Amakihi and 'Apapane. 'Amakihi were extremely active: they were constantly singing or calling and were easily seen as they moved through the koa and 'ohi'a branches over our heads. Several bright yellow adult males were seen, and some of the group were lucky enough to see one of them in full flight song. 'Apapane were less obvious, although they were heard in low numbers at the higher elevations. One adult was seen foraging in 'ohi'a blossoms near the top of the trail.

After a leisurely lunch at the top of the Woodlawn Trail, we began slowly working our way back down the trail at 11:30. More 'Elepaio and Shama sightings were to be had before we reached our cars at 12:45, finishing off an extremely pleasant Sunday morning.

Approximate total counts for the day are as follows: Spotted Dove 5, Barred Dove 3, Red-vented Bulbul 2, Red-whiskered Bulbul 3, Shama 17, Japanese Bush-warbler 6, 'Elepaio 9, Japanese White-eye 31, 'Amakihi 23, 'Apapane 5, Spotted Munia 5, Northern Cardinal 12, and House Finch 13.

--M. Stemmermann

## DEVELOPMENT STOPPED AT NINOLE COVE, BIG ISLAND

Overwhelming public opposition to a beach construction project at Ninole in Ka'u District on Hawaii Island forced the developer to withdraw the proposal. The Corps of Engineers held a public hearing at Pahala on January 25, 1979 to receive testimony on the application by Hawaiiana Investment Company (a C. Brewer & Co. subsidiary) to excavate mud, rocks and grass from the brackish-water Ninole Cove shoreline and add 600 tons of imported white sand to create a sloping beach.

The construction purpose was to enhance the recreational activities at the Seamount-at-Punalu'u resort complex by creating a beach park. But the site of this private venture for commercial purposes is State-owned public shoreline with Conservation District land use zoning.

Society testimony noted that a man-made white sand beach (in a region of natural black sand beaches) primarily to benefit resort visitors and condominium owners would have a significant impact on the human environment of residents and thus warranted the preparation of an environmental impact statement. We suggested that dredging, sand importation and intensive human use would have undesirable effects on fish, marine life, and native plants and birds in the area.

We asked the Corps, "For how long a time is any portion of the imported sand expected to remain in place--considering the vulnerability of this shoreline to tsunami, subsidence, stream flooding and debris washing?" Twice in February extremely heavy rains from Kona storms sent flood waters surging down Ninole Stream, depositing a new layer of debris and rocks and altering the shoreline contours of the cove. The 600 tons of imported white sand would have been largely washed out.

At the close of the public hearing, after 16 speakers in a vocal audience of 150 had raised serious questions or expressed outright opposition to the project, the applicant announced the permit application would be withdrawn because of the strong public sentiment against it.

An amended application for a landscaping and maintenance project only above the Ninole shoreline was approved by the State Board of Land and Natural Resources on March 23. No buildings or structures will be constructed within the project site, and additional trees and shrubs will be planted to complement existing vegetation.

On a January 20 visit to Ninole, William Mull and I observed a flock of 18 'Akekeke (Ruddy Turnstone) foraging in the rock debris in the middle of the cove. We watched four 'Ulili (Wandering Tattler) at different points on the rocky shores searching for food. Kolea (Golden Plover) were seen inshore and on grassy flats. Overhead an 'Iwa (Great Frigatebird), with a wingspan of seven feet, angled wings and deeply forked tail, sailed on strong wind currents and remained in view for ten minutes.

Koloa, the endangered Hawaiian Duck, may have been an earlier resident of Ninole Stream and the adjacent Koloa beach. The habitat seems favorable and Koloa may return with the reintroduction of the species to the Big Island by the State Division of Fish and Game. 'Auku'u (Black-crowned Night Heron) are frequently seen in the area, and Kioea (Bristle-thighed Curlew) has been observed on Ka'u shores and beaches.

Mae E. Mull  
Island of Hawaii Representative

## CORRECTIONS

Two substantive errors in the article, "Hapu'u Logging to Go Ahead" (*Elepaio* 39:105-106), need to be corrected. The Division of Forestry is not against hapu'u logging in the Kilauea Forest Reserve. Comments from State Forestry in the Staff Report to the Board of Land and Natural Resources, dated February 9, 1979, favor expansion of tree fern logging in the Kilauea Forest, including the statement that "the hapu'u industry is important and it should be supported morally and technically by forestry."

The 'aiea tree found on the Kilauea project site (*Nothocestrum longifolium* var. *rufipolosum*) is not the only specimen known to occur on the windward side of Hawaii Island; it is the only subspecies of *Nothocestrum longifolium* known from the windward side of the Big Island. It occurs sparingly in nearby rain forests and is on the Federal Register list of proposed endangered plant species.

Mae E. Mull

## MAHALO FOR CONTRIBUTIONS

MAHALO NUI LOA to the following members who have generously sent contributions to the Society: Steven Parabolici, Charles Scheffe.

## STILT COLOR BANDING CONTINUES

Color banding of Hawaiian Stilts (A'eo) has continued this year at several locations on Oahu. Ninety-three stilts, including 10 fledglings of the 1978 season, have been auxiliary marked with three colored plastic bands and an aluminum band. These bands, two on each leg, are placed above the tarsal joint ("knee") so they can be seen on wading stilts. The unique combination of colored bands and the metal bands on each leg affords individual identification without recapture.

This banding effort began in December, 1977, at Hanalei National Wildlife Refuge (NWR) on Kauai. Three stilts were captured and banded during several nights of mist-netting. One of these "Hanalei" stilts was recaptured in March, 1978, at the Waiawa (Pearl City) unit of Pearl Harbor NWR on Oahu. This was the second record of inter-island movement of Hawaiian Stilts, and the longest open ocean crossing of 74 miles (119 km).

The first inter-island stilt movement was documented in 1968 when a stilt, color-dyed and banded at Kanaha pond on the island of Maui, was seen three months later at Kahuku, Oahu on two different occasions (G. Kridler, pers. comm.). Based on population fluctuations, stilt are also assumed to migrate between Niihau and Kauai (T. Telfer, pers. comm.).

Stilt movement around Oahu has been documented by numerous sightings of color banded stilts in the Pearl Harbor area (Ray

Larsen, pers. comm.), Kahuku, and recently at Nuupia ponds in Kaneohe (L. Hirai, pers. comm.). Several pairs are banded at the Honouliuli (West Loch) unit of Pearl Harbor NWR and at the Kii unit of James Campbell NWR.

Observers are urgently needed on all islands to report sightings of color-banded stilts. Information from these reports will help us to understand better stilt diurnal and seasonal movements and improve stilt management techniques. Observers should note: 1) date, time, and location of observation; 2) the color band sequence from top to bottom on each leg. The colors in use are red, yellow, green, orange, light blue, dark blue, mauve (lavender), and white. An example of a sighting report might be: 5/2/79 - 0811 - Kii pond; left leg: red/yellow; right leg: aluminum/light blue.

Partial band combinations are also valuable and should be submitted as such. Please state if you are unsure about the color of a particular band you are reporting.

Submit reports to:

Rick Coleman  
U.S. Fish and Wildlife Service  
P.O. Box 50167  
300 Ala Moana Blvd.  
Honolulu, Hawaii 96850

Coleman can also be reached by phone at 546-5608. All reports will be promptly acknowledged.

*Rick Coleman*  
*U.S. Fish and Wildlife Service*

*Tim Burr*  
*Hawaii Division of Fish and Game*

## NOTE TO CONTRIBUTORS TO THE 'ELEPAIO

All contributions concerning natural history and conservation are welcomed, especially those pertaining to the Pacific area. The Editorial Committee wishes to encourage material from the Pacific Islands, such as the Trust Territory, Guam, American Samoa, and other areas. Articles on all natural history subjects are solicited.

It would facilitate the processing and review of your contribution if it could be submitted typewritten and double spaced, although this is not a requirement. All articles of a scientific nature are sent out for comments to at least two reviewers familiar with the subject.

To insure proper handling and rapid publishing of your contribution, it should be mailed to the Editor: C.J. Ralph, 3467 Alani Drive, Honolulu, HI 96822.



A baby Hawaiian (Black-necked) Stilt photographed just out of the egg.

*Photo by Robert J. Shallenberger*  
*Ahuimanu Productions*

HAWAII AUDUBON 1978 FINANCIAL REPORT

ASSETS

	1 Jan. '78	31 Dec. '78
Checking Accounts	\$ 68.27	3,607.49
Savings Accounts		
General	10,342.66	7,392.93
Book	37,195.70	18,725.51
Savings Certificate	<u>0.00</u>	<u>10,047.02</u>
Totals	\$ 47,606.63	39,772.95
		\$ -7,833.68

INCOME

Dues		
Local, regular	\$	1,354.00
Local, life		925.00
Joint from N.A.S.		4,325.50
Donations		
Taylor Scholarship		900.00
Munro Bequest		5,000.00
Christmas Count Fees		53.50
Other Contributions		757.03
Tax		23.09
Postage		162.48
Savings Interest		1,977.49
N.A.S. Due through H.A.S.		754.00
Publications		
Hawaii's Birds		
1975 ed. direct sales		4,425.06
1978 ed. direct sales		3,225.00
1975 ed. distributor sales		5,202.54
1978 ed. distributor sales		3,885.84
Guide to Hawaiian Birding		132.25
Field Checklist		48.45
Preliminary Checklist		50.00
Posters		50.50
'Elepaio Back Issues		<u>36.93</u>
Total Income	\$	33,288.66

EXPENSES

Contributions		
Taylor Scholarship	\$	450.00
Palila Court Case		1,000.00
Research Grants		245.00
Science Fair Awards		15.56
General Office		
Phone calls, supplies		145.60
Postage (office and book)		445.40
Copying and Printing		180.56
Excise Tax		106.81
Christmas Count Fees		67.50
N.A.S. Dues through H.A.S.		771.00
Fees and Refunds		91.93
Asilomar Conference		364.10
N.A.S. Chapter Meeting		129.90

Publications (copies)

Kokua for Life (4,300)	429.09
Endangered Waterbirds (4,500)	935.73
Hawaii's Birds 1978 ed. (30,150)	
publication cost	29,128.92
slide protectors	74.88
copyright registration	10.00
services of G.K. Vaughn	75.00
'Elepaio (12 issues)	
printing	4,586.80
typing services	79.56
postage, N.A.S. labels	671.71
IBM typewriter, supplies	<u>1,117.29</u>
Total Expenses	\$ 41,122.34

Lawrence T. Hirai  
Treasurer

PUBLICATIONS OF THE SOCIETY

HAWAII'S BIRDS by the Society (1978). This is the best field guide to our birds, and includes colored illustrations of all native and well-established exotic species. \$3.25 plus postage: 48¢ (surface mail) or 67¢ (air). Hawaii residents only: add 13¢ for tax.

FIELD CHECKLIST OF BIRDS OF HAWAII by R. L. Pyle (1976). A pocket-size field card listing 125 species found in Hawaii with space for notes of field trips. (Postpaid) . . . . . \$ .25 (ten or more, 10¢ per copy)

GUIDE TO HAWAIIAN BIRDING by members of the 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 Kauai, Oahu, Molokai, Maui and Hawaii. (Postpaid) . . . . . \$ 1.00

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 which are currently established as viable populations. Gives each species' status. (Postpaid) . . . . . \$1.00

ENDANGERED WATERBIRDS OF THE HAWAIIAN ISLANDS by R. J. Shallenberger (1978). Hawaiian Stilt, Coot, Gallinule and Duck, each described in 2 pages of photos and text. Covers description, ecology, status, and distribution. (Postpaid) . . . . . \$ .50

OFFSHORE ISLAND CONSERVATION

JUNE MEETING TOPIC

Kay Kepler, associated with the U.S. Fish and Wildlife Service, will give a beautifully illustrated talk at the Audubon meeting on June 18 entitled "Conservation on Small Offshore Islands in Puerto Rico". Dr. Kepler worked in the area for more than three years, visiting most of the islands and becoming familiar with their problems and beauty. Illustrating her talk with many slides, Dr. Kepler will show how conservation is progressing in areas with many similarities to, and some differences from, the Hawaiian situation. Among the pressures which are similar to those on our offshore islets, such as Moku Manu or Manana, are bombing by the military, human disturbance, and introduced mammals. Dr. Kepler and her husband have published several scientific articles in their researches on the wildlife of these islands.

The meeting will be at 7:30 p.m. at the McCully-Moiliili Library at 2211 South King Street. There is ample parking just behind the library.

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PALEHUA-PALIKEA TRAIL FOR

AUDUBON FIELD TRIP IN JUNE

The rarely conducted field trip to the Palehua-Palikeya trail will be held on June 10. Campbell Estate has given permission, but has limited participation to 15 people (members only). The Estate has required that all participants fill out and notarize a waiver that must be in the leader's hands no later than June 4. This trail, on the south end of the Waianae Range on Oahu, promises some good views as well as some of the native birds of our mountains. Meet at Hawaii State Library on Punchbowl Street at 6:30 a.m. Bring lunch, water, and a car, if possible. Leader: Omer Bussen, 262-5506 (evenings).

IF NOT A MEMBER, PLEASE JOIN US

JOINT MEMBERSHIP

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Table with membership rates: Individual \$18.00, Family 21.00, Sustaining 30.00, Supporting 50.00, Contributing 100.00, Donor 250.00, Life (single payment) 1000.00, Dual Life (single payment) 1500.00

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LOCAL MEMBERSHIP

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Table with local membership rates: Regular \$3.00, Junior (18 and under) 1.00, Subscriber (non-Hawaii residents) 3.00, Life 100.00 (payable in \$25 annual installments)

BIRD OBSERVATIONS DUE FOR

SPRING SEASON

Sightings of rare or unusual birds are now being compiled for the spring season for American Birds. Any observations between March 1 and May 30 should be sent to Dr. Robert L. Pyle, 741 N. Kalaheo Ave., Kailua 96734. Also solicited are observations of regular birds which have changed their status, or are out of their normal ranges. These seasonal reports are published four times a year in the Audubon journal, the Hawaiian Islands section edited by Dr. Pyle and C.J. Ralph.

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HAWAII AUDUBON SCHEDULE OF EVENTS

\*\*\*FOR DETAILS, SEE INSIDE BACK COVER\*\*\*

- June 2 (Sat.). Clean up Kaelepula Canal on Hamakua Drive, Kailua. Rescheduled from last month. Meet near Mr. Sub at 9 a.m. Phone Rob Shallenberger for details (261-3741).
- June 5 (Tues.) Board meeting at the home of Walter McKinney, 2637 Puunui Ave., at the end of Liliha Street in Nuuanu Valley at 7 p.m. (595-2366). Members welcomed.
- June 10 (Sun.) Field trip to Palehua-Palikea at the South end of the Waianae Range. Reservations required. Leader: Omer Bussen, 262-5506.
- June 18 (Mon.) Regular Meeting. "*Conservation on Small Offshore Islands in Puerto Rico*" by Kay Kepler. 7:30 p.m. at the McCully-Moiliili Library, 2211 S. King St.

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