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THE 1929 AND 1936 "BUY-A-BIRD" CAMPAIGNS ON HAWAII By Andrew J. Berger Professor of Zoology, University of Hawaii

Most of what we know about the introduction of exotic birds to Hawaii is found in the papers by Caum (1933) and Bryan (1958), neither of which give details for most of the introductions. Helen S. Baldwin of Hilo generously provided me with copies of correspondence dealing with two "Buy-a-Bird" campaigns that were sponsored by the Chamber of Commerce of Hilo in 1929 and 1936. The Chamber of Commerce later gave the correspondence to the Manuiki Audubon Society.

Little information is available for the 1929 campaign. Gordon H. Scruton, Executive Secretary of the Chamber of Commerce of Hilo, wrote as follows on November 14, 1936, to Mrs. Walter F. Dillingham, President of the Hui Manu on Oahu: "I thought you might be interested in knowing that the Chamber of Commerce of Hilo in January 1929 inaugurated what it chose to call a "Buy-a-Bird" campaign, at which time, by popular subscription, an amount was raised totalling a little over \$3,000.00, and with this sum the Chinese Thrush, Pekin Nightingale, and the Red Cardinal were introduced on the Island of Hawaii." The Chinese Thrush is the Melodious Laughing-thrush (Garrulax canorus); the Pekin Nightingale is the Red-billed Leiothrix (Leiothrix lutea); and the Red Cardinal is the Cardinal (Cardinalis cardinalis).

The file contains one bill for 45 Chinese Thrushes at \$5.00 each and for 184 Pekin Nightingales at \$2.50 each. The total bill, including freight, brokerage fee, and customs dues, came to \$822.85. There is no mention of the Cardinals. The only information available on the release sites in 1929 is that for three pairs of Chinese Thrushes and three pairs of Cardinals. One pair of each species was released "on Judge Wise's place, Piopio Street near Kila, in memory of W.S. Wise, Jr." One pair of each species was released "on the site of the old Hilo Hospital, Waianuenue, in memory of John J. Wise." And, one pair of each species was released "at Homelani Cemetary, in memory of Emma F.

Wise and Nellie E. Wise."

More complete information is available for the 1936-1937 release program. On November 6, 1936, Mr. Scruton wrote to Mr. Eugene Horner, Supervising Principal, East Hawaii, Waianuenue Avenue in Hilo: "On Monday, November 9, we will inaugurate another Buy-A-Bird Campaign, similar to the one carried on by this Association in 1929. Mr. Alexander Fraser, manager of Hilo Sugar Company, has accepted the chairmanship, and Mr. Clyde E. Crawford, one of the vice chairmen, will have schools as his particular charge.

"The school children in 1929 were our best boosters and in their small way contributed immensely to the fund. We, at that time, appreciated the fact that their pennies and nickels meant as much to them as the larger contributions of the adults and we feel that because of their interest, a number of contributions were received from parents who might

not otherwise have become acquainted with our Campaign.

"We should, again, like to enlist the support of these children and this office is prepared to assist you in any way you wish, to put the message before them. We will have a Buy-A-Bird program broadcast over station KHBC, Monday evening, November 9, at 5:30 and we hope that the kiddies will listen in. It is possible that the radio station will give us other time on the air and if they do, we might put on a kiddies' program."

This Buy-a-Bird committee contained 23 members, and the committee lost no time in

pursuing its goal. On November 17, 1936, Mr. Clyde E. Crawford, Vice-Chairman in charge of Schools Buy-a-Bird campaign, sent a letter (on Chamber of Commerce of Hilo letterhead stationary) to principals of schools:

"The children in all schools on the Island of Hawaii are asked to cooperate in the splendid movement of importing song birds. The birds we plan to bring in if enough money is subscribed during the Campaign are: Chinese Green Flycatcher (White eye) Simplex

simplex Swinhee, Japanese Blue Flycatcher (Robin) Cyanoptila Cyanomelana Cyanomela Temminck, Japanese Tumbler (Varied Titmouse) Sittiparus Varius Varius, Thrush (Laughing) Timaliidae, Non-Pareil Bunting (Cyanospiza Ciris), Indigo Bunting (Cyanospiza Cyanoa).

"The green and blue flycatchers are of the PeeWee family, brilliant songsters and

almost exclusively an insect eating bird of splendid plumage.

"The laughing thrush, so named because on being frightened, or frequently without any apparent cause, it breaks out into a chorus of notes resembling laughter, is quite a large bird being mostly between nine and twelve inches in length with the head more or less distinctly crested. It feeds on the ground; also found in trees where they seek refuge when disturbed. They have a strange habit of going through various amusing performances on the ground, erecting their crests, drooping their wings, etc. They construct large, cup-shaped nests in trees and lay spotless white or blue eggs.

"The Non Pareil Bunting is a purplish blue with back and shoulders a bright yellowish green, red on the upper tail-coverts and under parts bright vermillion red. The female is a dull color although she has a brighter hue than the Indigo bunting, her coloring running

from dull green to olive yellow.

"The Indigo Bunting is a bird with a distinct personality. The male has a peculiar color; no bird outside of the tropics has such a peculiar blue as the male Indigo bird. On the other hand, the female is the plainest of housewives and is distinguished only by her very cheerful cheep. Instead of blue, she is a colorless striped brown. The food of this bird consists almost entirely of insects and weed seeds. They are a friend to fruit orchards, eating caterpillars, canker worms, beetles, and bugs harmful to growing crops.

"In our Buy-A-Bird Campaign, the children can help in many ways. First of all, if it is at all possible we should like to have contributions from the children ranging from a penny and over but more than their financial support we want their interest; we want their aid in protecting bird life; to prevent boys and girls from throwing stones at our feathered friends, from shooting at them with sling-shots and air rifles and we particularly want them to see that no one cages these birds. All these acts are strictly against the law and any boy or girl disobeying the law can be punished. By preventing the molestation of bird habitats they will make it unnecessary for officers of the law to perform an unpleasant duty.

"Let us all welcome and make a home for our featherd friends."

Circumstances beyond the control of the committee, however, delayed the importation of new birds. Mr. Scruton explained in a letter dated December 1, 1936, to Mrs. Walter F. Dillingham in Honolulu:

"I have your kind note of November 20, and hope you will forgive my tardiness in not answering it before now. I had really hoped to be able to give you some interesting information on our Buy-A-Bird Campaign and that is why I haven't written sooner.

"The strike has, of course, made it impossible to even consider the importation of birds from the mainland so that all we are doing at present is receiving contributions for the fund. You will probably be interested to know that the managers of the majority of our business houses in Hilo, and on a few plantations are circulating a subscription list among their employees, suggesting that a donation, however small, be made. We heartily approve of this plan because even if a person only gives a few cents, he or she feels a possessive interest in the birds imported and assist in their protection.

"I shall be happy to write you again in a few weeks when I hope more interesting

information will be available for you, about our Campaign."

On January 7, 1937, Mr. Scruton wrote to Mr. Leslie Wishard, Manager of the Kaiwiki Sugar Company at Ookala, Hawaii: "You will be interested to know that we have raised approximately \$1,100.00 and that as soon as the strike is lifted, our Committee will learn what birds can be imported, at once, and contract for them. A plan of distribution will then be made and we will advise you of such plans with respect to Ookala."

Not all people were convinced of the wisdom of importing exotic species, as is suggested by the following letter sent by Mr. Scruton to Mr. A.T. Spalding, Manager of the

Honomu Sugar Company at Honomu, Hawaii, on November 23, 1936:

"We have your letter of November 21 with respect to our plan to import songbirds and copy of Mr. C.E. Pemberton's letter. /Unfortunately, Mr. Pemberton's letter is not in the file./

"We appreciate very much your letter and the fact that you wrote to the Hawaiian Sugar Planters' Association about the matter illustrates plainly your desire to see that all sides are properly represented. We can understand Mr. Pemberton's viewpoint but have this to say in support of our Buy-A-Bird project, and it is this:

'ALL BIRDS PROPOSED FOR IMPORTATION WERE RECOMMENDED TO US BY THE BIRD COMMITTEE OF

THE H.S.P.A. AND HAVE THEIR UNQUALIFIED APPROVAL'

"The writer, when in Honolulu last, called personally on Mr. Edward L. Caum, assistant botanist at the Experiment Station, H.S.P.A., and talked for some time about importing birds. Mr. Caum gave me a list of those birds at present being imported by the Hui Manu in Honolulu which list is much more extensive than is ours and has given me to understand that the H.S.P.A. was in accord with the importation of so-called beneficial birds. He, too, spoke about the possibility of these birds eating pests and parasites, alike, but minimized the damage which might be done in that respect inasmuch as so many of the birds were known to make their associations in other places than cane fields. With such a send-off the local Buy-A-Bird Committee felt it was definitely on the right track and, therefore, started the 1936 Campaign. It is sincerely hoped that this letter will help to allay your fears of any possible dangerous element the imported birds might be.

"The writer is interested in the last paragraph of your letter with relation to the Pekin Nightingales ganging up. As you probably know, these birds are quite common at the five thousand foot level and only upon rare occasions are they seen near human habitation. The writer took the matter up with Mr. L.W. Bryan who had also noted this phenomena, and it is Mr. Bryan's opinion that it is the inherent migratory instinct of the Pekin Nightingale that brings this bird down about once a year or so from its home in the upper levels. We are not afraid of these birds migrating even to any of the other islands as all of them are birds that do not fly great distances over water, and Mr. Bryan assures us that birds liberated on the Island of Hawaii would remain here always."

Similarly, on March 4, 1937, Mr. Scruton sent identical letters to Mr. Spalding and to Mr. John M. Ross, Manager of the Hakalau Plantation Company at Hakalau, Hawaii:

"Our Buy-A-Bird Committee met on Tuesday afternoon and decided, definitely, on the species of birds and quantity to be introduced on the Island of Hawaii with the money raised by popular subscription. The list is as follows: 100 Pairs Chinese Green Flycatcher, 40 Pairs Japanese Blue Flycatcher, 40 Pairs Japanese Tumbler, 40 Pairs Non-Pareil Bunting, 40 Pairs Indigo Bunting.

"In a letter dated November 25, to Mr. L.W. Bryan, Mr. Edward L. Caum, assistant botanist at the H.S.P.A. Experiment Station, highly praised the bug eating habits of these birds and that is the real reason the Committee has decided to confine itself to just the

five species.

"You have expressed a willingness to contribute to the fund should the birds to be imported meet with your approval and that of the H.S.P.A., hence this letter to you. If you are still of the same mind, we will be only too happy to have your contribution."

The reader should note that most of the statements about birds in the correspondence quoted here are totally unreliable. For example, "The green and blue flycatchers are of the PeeWee family." No bird family is called the "PeeWee family"; the "Chinese Green Flycatcher" actually is the Japanese White-eye (family Zosteropidae); the Japanese Blue Flycatcher is an Old-world flycatcher (family Muscicapidae). "The laughing thrush" / there are more than two dozen species of laughing-thrushes in India alone is not "so named because on being frightened...it breaks out into a chorus of notes resembling laughter." The "Pekin Nightingale" is not a nightingale and the species does not occur near Pekin; this is the Red-billed Leiothrix; it does not have an "inherent migratory instinct"; it is a nonmigratory species that is "subject to slight vertical or erratic movements in winter."

Nevertheless, the following species were released between May 15 and June 23, 1937: Japanese or Varied Tit (<u>Parus varius</u>), also called the Japanese Tumbler in the petstore trade; Japanese Blue Flycatcher (<u>Cyanoptila cyanomelana</u>), also known as the Blue Niltava and the Japanese Bluebird in the petstore trade; Japanese White-eye (<u>Zosterops japonica</u>); Indigo Bunting (<u>Passerina cyanea</u>); and Painted Bunting (<u>Passerina ciris</u>), also called the

Nonpareil Bunting and the Butterfly Finch in petstores in Hawaii. The dates and areas of liberation are shown in the following table.

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Date	Species	Where Liberated	Quantity
5/15/37	Indigo Bunting	Olaa	34
5/15/37	11 11	Hilo Tree Nursery	25 59
5/15/37	Painted Bunting	Kaumana Hilo	19
6/23/37	11 11	11 11	14
6/23/37	11 11	Kukuihaele, Hawaii	36 69
6/19/37	Japanese White-eye	Papaaloa	40
Ħ	11 11	29 Miles, Olaa	30
11	11 11	Waimea, Hawaii	40
.11	11 11	North Kohala	40
11	11 11	Puu Waawaa	40
11	11 11	Kaumana Golf Course	42
6/26/37	11 11	Pahala	20 252
11	Japanese Blue Flycatcher	Kealakekua, Kona	30
n	11 11	North Kohala	36
11	11 11	Ookala	30
11	11 11	Hilo Nursery	13 109
6/23/37	Japanese Tit	Papaikou	12 12
		Total	501

The above table (taken directly from the files) does not agree with one other list (without a date) on the "distribution of birds," which states that 20 pairs of Painted Buntings were released each at Honokaa and Hilo; that 20 pairs of Japanese White-eyes were released each at Kealakekua and Hilo; and that 20 pairs of Japanese Tits were released each at Laupahoehoe and Papaikou. In any event, there is no evidence that any of these species except the White-eyes established themselves as breeding populations. There appear to be no published records of the behavior of these birds after release or when these unsuccessful species were last seen in the wild.

The following statement about the White-eye in <u>Hawaiian Birdlife</u> (Berger, 1972:222) obviously needs revision: "Judging from the available records on introductions (Bryan 1958), this species has spread, unaided by man, from Oahu to all of the main inhabited islands." On the contrary, the unpublished records discussed here show that the White-eye was released on the island of Hawaii in 1937. The Japanese White-eye is now ubiquitous on that island, being found from sea level to tree line and in the wettest rain forests as well as in the near-desert region of Kawaihae. I believe the Japanese White-eye to be the most common land bird in Hawaii.

I suspect that the White-eye also was released on Maui by the Hui Manu branch on that island, but my efforts to obtain the records of that organization have been fruitless.

It is of interest to note that only one of the five species released in 1937 became established, whereas all three species released in 1929 became established and are now widely distributed on Hawaii. No detailed studies have been conducted, however, on the altitudinal and ecological distribution of the Melodious Laughing-thrush, the Red-billed Leiothrix, and the Cardinal on the island of Hawaii. I add the following notes on these species as a basis for more detailed studies on the distribution of them on Hawaii.

I have seen the Melodious Laughing-thrush at elevations from 1000 feet (Ainaloa housing area, July 23, 1970) to at least 7800 feet (on Mauna Kea). It is possible that this species has increased its range upward on Mauna Kea in recent years. I first saw the Melodious Laughing-thrush in the Kaohe Game Management area (Puu Ahumoa, elevation about 6500 feet) on July 15, 1968; I saw it near the Puu Laau cabin (elevation, 7400 feet) on October 4 and November 4, 1969; and, on May 1, 1970, I saw birds at an elevation of about 7800 feet in the Mauna Kea Game Management area. I first saw this species along the Wailuku River trail (elevation about 4000 feet) on May 12, 1968.

The Red-billed Leiothrix is widely distributed on Hawaii but seems to prefer the wetter areas: for example, the rain forest of the Laupahoehoe Forest Reserve and the Kilauea Forest Reserve. I also found this species at elevations between 3700 feet and 5200 feet enroute to Puu Lehua on the Henry Greenwell ranch on August 27, 1966. I saw four birds at an elevation of 8000 feet along the trail to the summit of Mauna Loa in Volcanoes National Park on July 22, 1970, and I found one singing bird near Halepohaku (elevation about 9200 feet) on July 21, 1970. The Red-billed Leiothrix also inhabits the

mamane-naio forest on Mauna Kea. I have seen this species at Pohakuloa and at elevations upward to about 7800 feet in the Mauna Kea Game Management area. I have found nests with eggs as early as April 6 (1968) and as late as July 23 (1970). On April 14, 1967, I found a nest containing three fully-feathered young near the Puu Laau cabin in the Mauna Kea Game Management area.

The Cardinal is a common inhabitant in lowland areas throughout much of the island, and it is found in the kiawe—haole koa thickets in the very dry region from Puako to the North Kohala District as well as in the wetter areas along the Kona coast and on the windward side of the island (for example, Akaka Falls, Hilo, Ainaloa housing area, Black Sands Beach). On the Hamakua Coast, I have seen Cardinals at elevations as high as 5200 feet. Cardinals are found in Volcanoes National Park, and I have seen them at elevations to 5780 feet (near Keawewai Camp) just north of the Park. This species also is common near sea level in the Kona—Honaunau region and at Manuka State Park (elevation 1700 feet); I also have seen them at elevations of 5000 feet in the Puu Lehua area. I have seen Cardinals on the Puuwaawaa ranch, and assume that they occur, where suitable habitat is found, between there and Puako. I first saw a Cardinal in the Kaohe Game Management area (near Puu Ahumoa) on Mauna Kea on November 18, 1967; I saw my first Cardinal near the Puu Leau cabin on November 8, 1968; the birds now are widely distributed in this area.

Literature Cited

Berger, A.J. 1972. <u>Hawaiian Birdlife</u>, University Press of Hawaii, Honolulu. Bryan, E.H., Jr. 1958. Check List and Summary of Hawaiian Birds. Books about Hawaii, Hon. Caum, E.L. 1933. The exotic birds of Hawaii. Bernice P.Bishop Museum Occ. Papers, Vol. 10, No.9.

Editor's Note: If you have any information on the Hui Manu o Maui, please share it by writing to Dr. Andrew J. Berger, Department of Zoology, University of Hawaii, Hon., HI 96822.

U.S. Fish & Wildlife Service, Region one News Release, 13 June 1975: Fish & Wildlife Aid to States Tops \$43 Million-...U.S. Fish & Wildlife Service Director Lynn A. Greenwalt said the \$43 million is the first of two installments that will be distributed to the States this year from excise taxes collected in fiscal year 1975...It will be used by the States to finance their fish and wildlife programs during the first half of fiscal year 1976. The second installment will be distributed in December....

Funds for fish restoration programs come from a 10 percent excise tax on fishing rods, reels, creels, and artificial baits, lures, and flies. Funds for wildlife restoration and hunter safety programs come from an 11 percent excise tax on sporting arms and ammunition and a 10 percent excise tax on pistols and revolvers.

"This self-taxing concept has stood the test of 37 years," Greenwalt said. "Since 1938 over \$700 million has been collected in excise taxes on these items. Fifty percent of these funds has gone into improving habitat for game.... Twenty-five percent has supported research into such things as census-guided selection of hunting seasons and bag limits and life history studies on a variety of animals.... Another 20 percent has been spent buying or leasing land...—in all, more than 54 million acres or over 84,000 square miles.... Only 5 percent of the funds has gone to administrative overhead."

Of the distribution announced today, \$30 million was distributed according to a formula based on hunting license holders and the area of each State of wildlife projects. Another \$2.6 million was distributed, on the basis of State population, for hunter safety programs. Under the Federal Aid to Fish Restoration Program, \$10.8 million was distributed on a formula based on the number of sport fishing license holders and the area of each State. ...Maximum and minimum limits are placed on the distribution of these funds so that States smaller in area and population...receive reasonable apportionments. Hawaii apportionment:Wildlife restoration—\$150,000; hunter safety—26,000; fish restoration—108,000.

Zoonooz, June 1975, Vol.XLVIII, No.6, pages 10-12: A Lesson from the Nene by Arthur C. Risser, Jr. (Contributor, Ruth R. Rockafellow)--...This year, for the first time in the San Diego Zoo collection, Nene have hatched: One on 1 February, and four on 15 March. The male parent was received from the Patuxent Wildlife Research Center in 1970. Parental stock producing this male came from Pohakuloa. The female parent was hatched and raised at Patuxent and came to our Zoo in 1973. These birds and their offspring are at home in their grassy enclosure on Elephant Mesa. ...

I had the opportunity to visit Pohakuloa and discuss the success of the project with

Mr. Ah Fat Lee... This season, 143 goslings have been raised from 26 breeding pairs. All birds are banded before being released and then ranchers along with game biologists report sightings of wild flocks. During the summer of 1974, a flock of Nene roosted in a ranching area about halfway between the town of Hilo and Pohakuloa and was easily censused. Of the 118 birds counted in this flock, 93 were not banded, good indication that captive-bred birds are mating with the wild stock and rearing young successfully. ...

Since this particular monthly publication by the Zoological Society of San Diego has other interesting articles on the bird of paradise and the survival centers, a reference copy will be displayed at the general meeting.

Honolulu Star-Bulletin, 30 August 1975, page A-9: Waterbird Count Is Up by Harry Whitten A census taken this month of three endangered waterbirds by the Fish and Wildlife Service and the State Fish and Game Division recorded the highest number since the counts were first begun in 1968. The information will be useful in helping to pinpoint waterbird areas that need preservation and in helping to prepare a recovery plan for Hawaiian waterbirds. Sixteen wildlife biologists, who visited by foot, boat and helicopter all water areas which might support waterbirds tallied.../the following:(from State Fish and Game Division, David Woodside) Hawaiian Hawaiian Hawaiian

Woodside)	Hawaiian	Hawaiian	Hawaiian
	Coot	Gallinule	Stilt
Hawaii	130		17
Kauai	1,727	88	381
Maui	160	•	523
Molokai	32		11
Niihau	155		37
Oahu	165	15	507
Total:	2,369	103	1,476/

Eugene Kridler, endangered species coordinator with the U.S. Fish and Wildlife Service, pointed out, however, that a definite increase was noted only for the coot; that populations of stilt and gallinule, were up, but not significantly so. More birds were counted because a greater effort was put into the count this year, especially on Kauai, he noted. Coots apparently had a good season on Kauai, and biologists reported seeing many young birds there this year. They never get a good count on gallinules, Kridler said, because it is a very secretive bird.

Memorandum to District Forester Libert Landgraf from State Forester Tom K. Tagawa, 23 May 1974, subject: 1974 Legislative Appropriation for DLNR for Fencing and Stocking of Silverswords and Other Endangered Species of Plants and Animals on the Island of Hawaii for Protection and Propagation: We have been notified that a \$25,000 appropriation has been provided DLNR to fence and stock silverswords and other endangered species of plants and animals on the island of Hawaii. Allotment of this appropriation is subject to all the restraints of any other CIP /capital improvement project/, and since the project was not originated by the Hawaii District, we will have to start from scratch to develop an effective, worthwhile use of the fund. We suggest the following steps: (1) Hake a review of your resources and locations where effective protection projects can be developed. Define alternatives. (2) Discuss the project with your local board member, legislators and concerned organizations such as the Conservation Council, Soil Conservation District and Audubon Society. This proposal may have originated from the "grass roots" and therefore public involvement is particularly appropriate. (3) After review of alternatives developed in one and two above, develop a project work plan and submit it for review by the State Forester. (4) Develop and process EIS, 70B, CDUA, and all other material necessary to have the funds allotted.

... Before proceeding, please contact Senator S. Hara for the details. I understand he submitted the CIP request for this project.

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Comments on Silversword Planting Project, Draft Environmental Assessment, June 1974 to Superintendent G. Bryan Harry, Hawaii Volcanoes National Park from Mae E. Mull, 31July1974

The decision as to whether or not the Park should propagate and plant silverswords should be based on a consistent policy that underlies the whole program for the reestablishment of endemic Hawaiian species into their former range. In our view the Park's

foremost responsibility is the restoration and maintenance of native ecosystems in their ongoing process of natural selection and succession—with man manipulating the system only to remove exotics and to restore the destroyed native biota to their former Park habitat.

Concerning the restoration program, we commented previously on the necessity of protecting the genetic integrity of endemics by avoiding the potential for mixing gene pools in planted stock and the desirability of preserving the natural genetic diversity within one form of a planted species. /see THE ELEPAIO, May 1975, Vol.35, No.11, p.128/Manipulating endemics on Park lands calls for special attention to the dangers of both artificial hybridization and of inbreeding that can result in the permanent alteration of the genetic composition of endemic forms.

The Society continues to give firm support to the policy expressed by a Park official: "that propagating rare plants not originally found in the park is not consistent with the Service policy." (Morris, 1967) Cast in an affirmative mood, the Society supports the propagation of rare plants known to have been Park residents as part of the effort to

restore the components of Park ecosystems that existed in pre-Cook times.

The two forms of Argyroxiphium sandwicense that have been imported into the Park from considerable distances are not known to have occurred in the Park originally. Although the Haleakala silversword (planted 1953-54) and the Mauna Kea silversword (planted 1973) share the same species name, botanists recognize them to be separate forms. Regardless of its intrinsic beauty and attraction to visitors, surely the Haleakala form should not be cultivated on this Park's lands. Whether the Mauna Kea form ever occurred naturally on Mauna Loa is unknown, and in the absence of a positive determination the plants should be removed from Park lands. If Park managers feel there is substantial value in retaining those silverswords for botanical study or for display to visitors, those non-Park forms should be moved to a closed arboretum environment or to pots at Park headquarters.

It is generally accepted that some form of silversword occurred naturally on the upper slopes of Mauna Loa, based on the observation of David Douglas on the Kapapala side in 1834. Although Douglas remarked that the dried stalks he burned were the same species that he had observed on Mauna Kea, apparently no specimens were collected, and we cannot

assume they were identical forms.

While no silverswords are known today to exist naturally in the vicinity of the Park, an effort should be made to search for straggler plants in likely areas that are inaccessible to feral mammals. If the Park is to follow a consistent restoration policy, then having a Silversword Project at all would depend on whether a remnant colony can be found in or close to the Park or whether it can be determined what silversword form occurred formerly in the Park vicinity.

Both avenues can be explored over a short time period. In addition to the concentrated visual search, a botanist should pursue the promising clue to the herbarium specimen of a Mauna Loa silversword that is listed in the paper by David D. Keck: The Hawaiian Silverswords, systematics, affinities, and photogeographic problems of the genus Argyroxi-

phium, Bishop Museum, Occasional Papers, Vol. XI, No. 19, March 20, 1936.

Keck lists available specimens of A. sandwicense, and among them is one collected by C.N. Forbes on Mauna Loa "above Kapapala, Kau" that is in the Bishop Museum. Close examination of that specimen in comparison with the Mauna Kea form and with the Ka'u silversword may suggest the direction of, or the closure of, a Park Silversword Project—in the event no extant plants are found in the ground search.

From literature available to me, it appears that Forbes did most of his Hawaii collecting between 1910 and 1920, which raises hope that a few plants may still survive in upper Kapapala. It is interesting to note that on topographic maps the National Park lands above the State-owned Kapapala grazing land are also designated as "Kapapala." The fact that in 1936 Keck failed to note the distinguishing features of the Ka'u silversword (Bishop Museum specimen, collected by Meinecke, "Kaa, Pohina, Kau, August 29, 1922") and subsumed it under A. sandwicense—but it was later raised to variety level by Rock & Neal (1957) and to full species status by the Degeners (1957) as A. kauense—raises intriguing questions on what the findings will be by the taxonomist who examines the Forbes specimen.

With our present knowledge, Alternative II—remove all existing silverswords in the Park—is the only proposal consistent with the policy to re-establish rare endemic plants into their former range. The investigations suggested above may reveal what the true Mauna Loa silversword is, and then a restoration project should be based on those findings.

Present Silversword Distribution. Ka'u silversword: It should be noted that there are two separated colonies at upper Kahuku. The estimate of "a hundred or so individual plants" appears excessively low. With other respondents, I observed several times that number on a visit to one of the colonies in 1972.

It may be useful to know that State Forestry planted fifty Haleakala silverswords in a fenced area at Puu Kihe at 8,000 feet elevation on Mauna Kea in 1936. Six plants survived and the first produced seed in 1947. See L.W. Bryan, "Ahinahina," <u>Paradise of the Pacific</u>, 1948; reprinted with additional notes in <u>Newsletter</u>, Hawaiian Botanical Society, Vol. XII, No. 1, February 1973. This planting site is about six miles north of Kahinahina where the remnant Mauna Kea form struggles for survival. ...

The following is a summary of the comments, questions and recommendations presented for the Hawaii Audubon Society at the public hearing on the RULES OF PRACTICE AND PROCEDURE AND STATE LAND USE DISTRICT REGULATIONS by Mae E. Mull, 5 August 1974, Hilo, Hawaii

The ad hoc procedure concerning "letters of intent" during the current 5-year boundary review is not contained in the statutes and rules and regulations under which the Commission*now operates. Because "letters of intent" do not confirm to an existing procedural framework, there is considerable uncertainty and ambiguity on how the Commission, petitioners and the public are to treat these intent letters, on how they relate to formal petitions for amendment to district boundaries, the effects on tax rates for the lands in question, and whether the Commission itself may recommend the re-districting of these lands at the formal hearing on boundary changes later in the year. This is an appropriate time for the Commission to clarify the "letters of intent" procedure so that interested persons will know just what they are responding to. If this is a sound procedure for informing the Counties and the public of proposals for land use changes, it should be incorporated into the Commission's rules and regulations according to the Administrative Procedures Act.

*/Land Use Commission/

Part I. Rules of Practice and Procedure

1.4 <u>Public Records</u> (a) <u>Tape recordings</u> of meetings and public hearings of the Commission should be included as part of the public record to insure that there is a <u>verbatim</u> account of findings of fact, statements and decisions.

1.5 Appearances and Practice before the Commission (g) "Contemptuous conduct at any proceeding before the Commission shall be grounds for removal from such proceedings." We strongly recommend that this proposed amendment to the rules be removed in the final draft. Such a rule appears to be in conflict with the due process provisions of the State and federal Constitutions in that a person could be denied his right for a fair hearing before the Commission by the arbitrary ruling of the Chairman. Who, other than the Chairman, is to decide what constitutes "contemptuous conduct"? On a few occasions in past public hearings, I have observed that shouting from the audience was in response to unfair or improper procedures being used by the Commission. Public response was being cut off or the developer was being treated to unfair advantage by the Commission. The conduct of the Commission itself and of the presiding officer sets the standard for public response at proceedings. When the public is assured of its right to speak and to be listened to by the Commission in a fair and orderly manner, then the reason for unruly behavior is removed.

To include this amendment in the rules has the effect of debasing the dignity and standards of the Commission itself. The purpose of the Commission is to represent the <u>public interest</u> and <u>public welfare</u> in the assignment of land use boundaries. Until the time this amendment is ruled unconstitutional by the courts, it could have a dampening effect on public participation in the decision-making process that substantially affects the public interest. This amendment could also be interpreted as an attitude of contempt by the Commission toward public input.

Remember that the Commission is already protected under the police powers of the State and County through statutues and ordinances governing public behavior in public places. In addition, in the existing Commission rules under Section 1.19 Conduct of Hearing, the duties of the presiding officer to conduct a fair hearing are already spelled out: "(b)...The hearing shall be conducted in such a way to afford to interested persons a reasonable opportunity to be heard on matters relevant to the issues involved and so as to obtain a clear and orderly record. The presiding officer shall take all actions necessary to insure the orderly conduct of the hearing."

We urge the Commission to omit the "contemptuous conduct" amendment from the final

draft of the rules.

1.11 Amendment of Documents and Dismissal. Why does the Commission propose to delete this section from the rules? It relates to the filing of documents that are "not in substantial conformity with the applicable rules or regulations of the Commission." Is it being deleted because it is in conflict with the ad hoc practice concerning "letters of intent"?

1.18 Further Notice of Amendment. We recommend that this section be altered so that all interested persons can know in advance of a scheduled public hearing of the Commission. It should be amended to read: "In any proceeding of the Commission, a further notice of the proposed amendment shall be issued by publication thereof in a newspaper of general circulation in the State."

1.19 Conduct of Hearing (a) Public Hearing. This section should be amended by adding the word "island" so that residents of Molokai and Lanai can have the opportunity of participating in Commission meetings and hearings on land use changes on those islands. The amendment would read: "A public hearing shall be held at least once in the county or counties or island to be affected by the proposed amendment of district boundaries or rules and regulations."

1.21 Petitions for Amendment of District Boundaries or Rules or Regulations or Special Permits (a) Scope. The proposed amendment to this section would remove the existing right that "any interested person...may petition the Commission for the amendment of established district boundaries." This would foreclose the present public option of petitioning for changes in land use boundaries. This is a backward step to take in this time of increased public concern for the removal of productive lands from the Agriculture District, and the speculation or intensive development of lands transferred to the Urban District. The public interest in petitioning the Commission for sound land use zoning in the Agriculture and Conservation Districts should be retained in the rules. We recommend that this amendment be dropped in the final draft of changes in the rules.

1.22 Fee Accompanying Petition. The proposed amendment would substantially increase the fees for petitions to amend district boundaries. We firmly recommend that the fees not be increased and this section be retained in existing form. The increase in fees to \$1,000 for landowners who petition for re-districting of 200 acres or more is not likely to reduce the volume of petitions from such affluent petitioners. What concerns us is the psychological effect on the Commission of the pre-payment of such an excessive fee in advance of a decision. Psychologically, the Commission could be favorably disposed toward the petition because of the large investment in fees by the petitioner.

We further recommend that a section be added to the Rules that the Commission support its decisions, rulings and dismissals by stating the reasons for the action taken.

FOR JUNIOR MEMBERS: Barred Dove's Nesting at 725-A 8th Avenue, Honolulu, 17 July to 13 August 1975, on a mango branch 9 feet from the ground.

Is it routine for barred doves to use the same nests? If so, how long?

On 17 July I noticed a barred dove sitting as though brooding in the same nest used from 11 December 1974 to 11 January 1975, reported in the March 1975, Vol. 35, No. 9. pages 102-103, THE ELEPAIO. Despite the nest being very flimsy and could see through it, no repairs were made.

17 July 1975-Noticed a bird in the nest.

- Saw 2 eggs. Exact dates of egg laying not obtained, because to avoid disturbances observations were made when the adult bird was off the nest.
- 31 Off nest from 1530-1600, no nestlings.
- 1530-observed movements, glimpsed one nestling with adult. 3 August 9
 - 1030-off nest; saw 2 nestlings-one with eyes opened, other closed.
 - 10 Off nest--0800-1015, 1100-1315, 1625-1740 (approximate)
 - 11 Off nest--0735-0915, 1200-1320; saw house finch perched on nesting branch-any significance?
 - 12 Off nest--0715-0730; saw house finch on the same branch; at 0730 adult flew in and started feeding both nestlings; 0755-off, 0910-feed, 0925-brood, 1000-feed, 1215-roost, 1445-feed, 1600-feed.
 - 13 0615-nest empty; found a fledgling on the ground but no trace of the other. What happened? Because of cats I returned the fledgling to the nest. 0735-feed, 0830-off, 0945-feed, 1015-off, 1105 & 1125-feed & communicate

(adult called & fledgling responded). At 1125 saw the house finch perched on the nesting branch. 1140 & 1410-brood, 1545-off, 1645-brood, 1840-off, 1920-brood (evidently feeding & my observations didn't synchronize).

14 August

O615-nest empty; O740-adult called, O810-fledgling on ground fed by two adults (Is this a family of male, female and a fledgling? Where did the other adult come from? Where was it adult until now?), 1000-1800 fledgling on mango branch 5 feet off the ground fed by both birds; 1835-gone.

15 0740-fledgling perched on fig branch 5 feet off the ground and 6 yards away from the mango tree; 1200-gone.

21 1500-fledgling and parents were feeding; fledgling had begged for food, but parents seldom if ever reluctantly offered.

These are very casual observations with many questions. You too can have fun by becoming a part of your environment and experience the excitement of living.

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Field Notes: On 8 July 1975 I found an unusual moth in my yard, so I took it to the State Dept. of Agriculture the next day, and Harry Nakao identified it as mango-tip borer (Bombotelia jocosatrix Guenee), a noctuid. In India it is called mango-leaf caterpillar.

The following excerpts are from the Potential Mango Pest in Hawaii Report, 22 April 1968: .../It/ was collected by light recently in the Punahou district.... It occurs in North Queensland, Australia, on mangoes and is known as the large mango tip borer.

According to H. Jarvis in "Pests of Mango" the first symptoms of infestation by this insect are a wilthing of some of the growing tips on the outside of the trees, accompanied by the blackening of the leaves on such twigs, die-back ensues, and dormant buds on the more mature wood develop and produce a bunched-type growth. The larvae bore in the shoots from the tip to the thicker part where they pupate in the silk cocoons.

The adult moth has a wing spread of about one inch, is russet brown in color, with lighter marking across the forewings. The endings, however, have a white botch with a broad smokey-brown margin and have a conspicuous black dot under each wing.

If you know anything about this moth, please share your experiences.

Luckily I saw two fairy terms on a busy Sunday, 24 August 1975, at Kapiolani Park. One at 1015 near the golf driving range. I raised my arm and circled it over my head to attract the term. For a moment I thought maybe it would hover over me, but when a car came zooming by, off it went headed for the sea. Picnickers were everywhere, so I was thankful for at least seeing the tern, but my luck was still with me. As I hurriedly approached the circle with the fountain, I stopped a moment to be thankful for the beauty before me-having the ironwood for a background the splashing water oblitered the cacophony of the dashing cars; I heard only the symphony of the splashing water, soughing wind through the trees, and chirping and cooing birds; then suddenly, I saw the second fairy tern fly out from the ironwood toward the sea--a graceful white bird hovering and flying among the brownish-green trees headed into the dark-blue sky speckled with white clouds toward the expanse of blue-green water with white breakers. These were precious moments, but I had to leave. First few steps were heavy, but when I had realized how fortunate I Was to see fairy terms in the city proper, I couldn't contain myself and started to skip, hop, jump, and dance my way home. Then, I saw flashes of yellow before me. At first I thought it must be optical illusion -- I was too happy; I was seeing things, but no, the yellow flashes were from a pair of saffron finches. As the Hawaiian says a MANUAHI (gratis). I was home by 1200 a perfect day! MAHALO NUI LOA!

Are the fairy terns nesting in the ironwoods? Does anyone know?

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Plover Watching: 20 August 1975, 0815, at Bishop Museum grounds. I saw two plovers still wearing the breeding plumage.

Since this is your publication and its quality depends on you, please send in your observations or suggestions to Kojima, 725-A 8th Avenue, Honolulu, Hawaii 96816.

Field Trip to Manana Island, 24 August 1975 by Omer Bussen

A letter to Michio Takata, Director, Division of Fish and Game, requesting an entry permit to Manana Island August 10 (August 24, alternate) resulted in a phone call from Ralph Saito. He informed me that Fish and Game first prepares a permit with each person's

name attached; then each person must read and sign a release before the permit is processed. He implied that allowing us to sign the release on the day of the trip was an exception granted in May, and that we should not expect it again. I collected names anyway, totalling 23 between July 25 and August 4, when I called in the names to Ron Walker's secretary. Dave Woodside called the same afternoon; he indicated we could sign the release on the 10th, and that I should call back Thursday morning. Thursday, he told me to come down Friday morning and hand-carry the permit for the last signature needed. When I got there at 8:30 AM, I was told that Chris Cobb, Chairman of the Board of Land and Natural Resources, had left that morning for Maui and would not be back in the office until Monday. No one else could sign in his absence (Mr. Takata's signature was already on the permit), and we would have to postpone our trip to the 24th. Mr. Woodside did agree to add the names of ten additional persons who had called me between August 4 and 7. I was unable to begin making the necessary calls to the 33 participants until Friday evening. A long distance call to a couple coming from Volcano proved too late; they had already left for Oahu. Dave Smith delivered a message to the apartment of another person with no home phone.

Apparently the new cumbersome procedures for an entry permit were begun on the advice of the Attorney General's office. We should surely ask for a review. It seems particularly strange that we must go all the way to a member of the governor's cabinet for permission.

August 24. The weather bureau reported "small craft advisories for all Hawaiian waters—wind over coastal waters ENE 25-30 knots, seas 8-10 feet." Seventeen of us (3 boat trips) waded ashore about 9 AM under a sunny sky. We started up the left-hand ridge, to make a clockwise circuit around the larger intact crater. Wedge-tailed Shearwaters were numerous, sitting on eggs in their burrows above us; a few waddled out and flew off. Several downy chicks were seen here and throughout the morning. Higher on the ridge Common Noddies were abundant, but few eggs and no chicks were seen. Not a single bird was found incubating and defending an egg, as they did a year ago. On the broad and steep slope from the crater up to the lesser northern peak there was a large concentration of Noddies below, with perhaps 50-100 Sooty Terms above—the only group of Sooties seen.

While still on the west ridge, 3 Red-tailed Tropicbirds put on quite a performance, flying together quite near us; we all heard their "squawks" and later one just overhead emitted a "bawk-bawk" sound. Two of them performed their characteristic paired flight for us over the crater, each bird in turn flying or letting itself be carried backward behind the other. Robert Pyle saw one of the three birds land inside the crater, across from us, at the vegetation line on the NE side. We carefully made our way there, where all of us got within about 5m of it. It flew up and we found it had been sitting in a nearly bare spot below a rocky ledge, well shielded by grass tufts in front. We climbed to the ridge top, where a second Tropicbird landed about 25m down the outer windward slope. A climb down showed its sitting place to be like the other's, but facing the other way. It returned as soon as I left the area. The first bird had two red tail feathers, the second, only one.

A single immature Sooty Term was found on the NE rim, carefully balancing itself, facing into the very brisk wind. It allowed me within about lm before flying off.

Our second annual August rabbit bounded from underfoot and all the way down into the crater bottom.

From the 360 ft. summit, many Noddies could be seen on the outer slopes.

Back at the beach, numerous Wedge-tailed Shearwaters were to be found, and a few chicks. No Bulwer Petrels were seen.

As three of us waded out to secure the returning boat, the largest set of swells chose to come in, breaking over our heads. Bill Madden, our pilot, watched for lulls in the swells, and we eventually got everyone off without mishap.

Field Notes from C. Fred Zeillemaker: Kauai, June-August 1975

Black-footed Albatross—A single bird passed between Kilauea Wildlife Administrative Site (light station) and Mokuaeae Island June 15.

Newell Shearwater—Several birds heard and observed flying inland along north shore after dark in June. Dead birds along highways especially concentrated at Kealia, Wailua River Bridge and Eleele.

Wedge-tailed Shearwater-Eggs were laid in Kilauea Wildlife Administrative Site

(light station) colony during second week of June. Most eggs hatched August 10-15. One nest on surface of ground beneath beach naupaka (Scaevola frutescens var. sericea) was successfully incubated within three feet of a heavy visitor use area. The egg hatched August 12.

Red-tailed Tropicbird—Nine at Kilauea W.A.S. June 9, pair observed investigating nest sites June 17. Two or three pairs frequented area in July and one or two pairs frequented and landed on cliffs in August, possibly indicating nesting.

White-tailed Tropicbird—At least one nest at Kilauea W.A.S. fledged a young in August. Red-footed Booby—An estimated 350 nests were located on the Kilauea W.A.S. representing one-quarter to one-third the total "Crater Hill colony". A majority of birds fledged during August. Some young remain in nests.

Brown Booby-Twenty-eight roosted on Mokuaeae Island (off Kilauea Point) June 30 and

32 were there August 15.

Great Frigatebird—Up to 200 roosted on Mokuaeae Island throughout the period.
Cattle Egret—A roost of at least 750 birds occurred in the main red-footed booby
colony at Crater Hill (east of Kilauea Point) throughout the period. At least 20 nests
contained young of varying sizes in June. This may have been the first nesting by the
species on Kauai. The population was not thought to be above 20 birds until Oahu birds
began arriving in large numbers during the fall of 1974.

Mallard-A pair circled over and then landed at Hanalei NWR August 18.

Golden Eagle-The long-time Kauai resident bird was spotted by Lars Norgren June 9 over pastures southeast of Kilauea. Four of us watched the bird soar, stoop on an unsuspecting great frigatebird and then pass from view in the Anahola Mountains.

Golden Plover—Single birds at Hanalei NWR, Huleia NWR and Kilauea W.A.S. through June. Two were at Hanalei NWR July 16. A flock of 6 arrived from sea at Kilauea July 30. Eighteen were at Hanalei by August 8, 35 by August 18 and 47 by August 22.

Wandering Tattler-One or two at Hanalei NWR, Huleia NWR and Kilauea W.A.S. through June and July. The 5 at Hanalei NWR on August 18 indicated an influx of birds.

Sooty Tern-One bird appeared at Kilauea W.A.S. June 6.

Red-crested Cardinal—An adult was at Huleia NWR June 20 and 2 were at Poipu Beach Park August 31.

Letter from Mrs. Clyde K. Stroburg, 18 August 1975

***. We visited 5 of the Hawaiian Islands in May and June, also landed on Lanai for a few minutes enroute to Molokai. We bird-watched whenever possible, seeing the most varieties on Maui and Kauai. You might be interested in the birds we saw, so am enclosing a list. Hawaii: 'Amakihi, 'apapane, cardinal, barred dove, spotted dove, 'elepaio, house finch, 'io, mynah, chukar partridge, ring-necked pheasant, white-tailed tropicbird, white-eye. Kauai: 'Amakihi, 'apapane, red-footed booby, cardinal, barred dove, spotted dove, cattle egret, great frigatebird, 'i'iwi, mynah, chukar partridge, pueo, wedge-tailed shearwater, skylark, Chinese thrush, shama thrush, red-tailed tropicbird, white-eye. Maui: 'Apapane, cardinal, Hawaiian coot, house finch, black-crowned night heron, red-billed leiothrix, mynah, chukar partridge, pueo, skylark, Hawaiian stilt, white-tailed tropicbird, white-eye. Molokai: Cardinal, Brazilian cardinal, barred dove, spotted dove, great frigatebird, mockingbird, mynah, chukar partridge, California quail, white-eye. Oahu: Cardinal, Brazilian cardinal, barred dove, spotted dove, cattle egret, mynah, shama thrush, white-eye.

There were fewer coots and Hawaiian stilts at Kanaha Pond in Kahului, Maui, and much less water in the pond than there was two years ago. A tiny pond near the road was covered with scum, but on a sand bar in the middle a stilt was nesting on a pile of small pebbles. A stilt had been nesting in this exact spot two years ago. At the Kilauea Lighthouse on Kauai we saw what we think was a red-tailed tropicbird. They aren't supposed to be there, so is this possible? Four of us were watching through binoculars and the bird's tail was definitely red, we all agreed. We saw many more pueo on Maui and Kauai than we ever have before, but only one red-billed leiothrix in Hosmer Grove on Maui, where we had seen quite a number before. There were very few birds in the Grove this time, for some reason, though skylarks were plentiful on the slopes of Haleakala. ...

From Erika Wilson, 25 August 1975. ... I gave an illustrated talk on Hawaii's avifauna to about 50 people at the Susquehana Valley Audubon Club on Tuesday. The club has a pot-luck

dinner once a month, followed by a business meeting and program. I played some music from the Life of the Land record by the McClellans, and read a short portion of the Kumulipo about the creation of the birds. Then I showed slides of Hawaii's beautiful country and its birds. My talk was well received, which was in no small way due to the slides Dr. Shallenberger provided, to which I had added a few of my own.

Incidentally, the McClellan's record was produced in LeRaysville, Pa., which is a short 25 miles from Towanda where I am staying. LeRaysville has a number of Amish families, and they can be seen driving their horse-drawn carriages down the roads of the village. ...

We will be leaving Pa. next week for Zurich. We are going to see Patricia Bloedon in Germany before going to London. I know I will have lots of bird news to share with you from Europe. ...

Lecture-Series on Hawaiian Natural History

Friends of Foster Gardens is sponsoring <u>free</u> to the public a Hawaiian Natural History series, entitled "Sundown Supper Series 1975—Hawaii's Natural Heritage." The gardens will be available for the public to bring a beachmat picnic supper at 6:00 p.m. Illustrated lecture will begin at 7:00. The schedule of talks is as follows: 26 Sept-Geology, 3 Oct-Marine organisms, 10 Oct-Plants, 17 Oct-Animals, 24 Oct-Panel discussion on preservation of Hawaii's natural history.

Editorial Policy: The Board unanimously voted on 8 September 1975 for the following changes: (1) THE ELEPAIO to 'ELEPAIO and (2) For the Better Protection of Wildlife in Hawaii to For the Protection of Hawaii's Native Wildlife. The changes were made because (1) the 'u'ina, the hamzah, is a consonant, and forms an essential part of the words in which it is found and (2) the addition of native takes care of the non-protection of the pestiferous exotic wildlife.

REQUEST FOR NESTING INFORMATION: Audubon members can add a great deal to our records of the nesting activities of both introduced and native species if they will call when they find a nest. Dr. Berger has agreed to coordinate the nest-record program. If you find a nest, please call him at the Department of Zoology, University of Hawaii, telephone 948-8655 or 948-8617. MAHALO NUI LOA for your interest and KOKUA.

The poster "We Care About Hawaiian Wildlife Habitat" is available for a suggested donation of \$1.50 or more. Despite our frugal existence we are unable to give away this valuable educational poster to the general public. For information call Steve Montgomery, 941-4974.

HAWAII'S BIRDS, a field guide, is out of print. As soon as the new edition is out, we'll let you know. We'll do our best to keep the price as it is now, but no guaranty.

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OCTOBER ACTIVITIES:

12 October - Field trip to study shorebirds. Bring lunch, water, and if possible your car. Transportation cost (\$1.00) to be paid to the drivers.

Meet at the State Library on Punchbowl Street at 8:00 a.m. Leaders:

Omer Bussen, 262-5506 & Dr. Sheila Conant, 988-6522 (evenings).

13 October - Board meeting at Waikiki Aquarium Auditorium, 6:45 p.m. Members welcome.

20 October - General meeting at Waikiki Aquarium Auditorium at 7:30 p.m.

Program: Corals, Coral Reefs and What Lives There by Dr. Arthur Reed /

(color slides).

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