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For the Better Protection of Wildlife in Hawaii

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CAGEBIRDS By W. M. Ord

The introduction of cagebirds to Hawaii for subsequent sale in Honolulu pet shops is an area where potentially harmful pests could be brought into the islands, if an intelligent and fair policy were not carefully adhered to. By intelligent and fair policy, we mean one that takes into consideration our agricultural economy and yet also makes allowances for a small but thriving retail segment of the community which caters to a growing number of aviculturists.

No one, irrespective of his interest, wants to see birds released that will have a detrimental effect on any of the state's income earners. Pineapples are generally cited as a good example. Birds which are brought into Hawaii have to be considered for their effects on such crops should they ever get free--intentionally or otherwise.

As examples, our readers have read several articles in recent issues of THE ELEPAIO about the exotics on Diamond Head and the Indian Hill Mynahs in Manoa Valley and on Tantalus. All of these birds were brought into Hawaii as cagebirds; none were authorized releases. In the case of the various species of weavers, they are all male birds and will die in time. The finches are of both sexes and reproduction has taken place; they are, however, seed-eaters and their chances of survival without seeds to feed on is so remote it isn't worth considering. The Hill Mynahs though, are "a horse of a different color," their feeding habits are more omnivorous and their chances of adapting and surviving in a wild state are increased accordingly.

"Cagebirds" is the topic for this month's general meeting. (See page 40)

Between Mr. Dillingham and Mr. Thistle, I am sure, you will be presented with both sides of the story as each of them sees it. There will be plenty of opportunity for questions, and a good turnout of members is hoped for.

NOTES from Mary C. Evans, September 5, 1966: FINCHES

On Monday, August 29th, a pair of small birds, smaller than a white-eye appeared on our feeding table; the male, a ruby red, shading into reddish brown, the female a reddish brown with a spot of red by her tail. Rushing to Northwood's "Familiar Birds of Hawaii" and Munro's "Birds of Hawaii" and finding no information on this lovely pair, I finally got in touch with Walter Donaghho.

He said that from the description I gave him, he would assume that they were fire finches, recently released...in the Diamond Head area.

Our home is on Royal Circle, just the other side of Black Point. We had wild bird seed on our feeding table.

The latter pair now appears daily at our feeding table. One day when there was no food there, the little ruby red fellow called loudly for his meal. Naturally, I rushed to put it out for him. We hope they will be permanent guests at our bird table.

The blue bird may be Cordon Bleu, a waxbill. These finches and waxbills are new escapees, and until they find their ecological niche in Hawaii, all field notes about them are very important, so if you have any information on these birds or other escapees, please write to Kojima, 725-A 8th Avenue, Honolulu, Hawaii 96816.

WATERBIRD OBSERVATIONS ON KANAHA POND, MAUI - SUMMER OF 1966

Two thorough censuses were conducted on Kanaha Pond near Kahului, Maui, on July 13 and August 11, 1966 for waterbirds. Considerable water remained in the pond, but much of the northwest end was dry and exposed. Almost all of the interior small ponds were also dry except for a few deep holes. The results of the censuses were as follows:

Species								July	13		August	11
Black-crowned Night	He	ere	on					45			25	
Coot								95			99	
Black-necked Stilt								451			475	
Ruddy Turnstone											115	
Golden Plover								3		•	25	
Wandering Tattler .								1			2	
Sanderling								-			11	
Wilson's Phalarope								-			1	
Least Tern				•				1			-	
Black Brant	•							-			1	
Shoveler	•				0			2		•	2	

The Least Tern was observed several times during the July 13 count. It was first noted resting upon the dry mud flats near the railroad tracks at the northwest side then later observed in flight over the water in the center of the pond. Observation was made with 10x binoculars and 25x spotting scope. Blackish bill, black eye stripe, white forehead, gray back, white rump, and black at the bend of the wing and the leading edge were all identifying marks. Mr. Homer Ford of the Portland, Oregon office of the Bureau of Sport Fisheries and Wildlife also was able to observe the bird.

The Wilson's Phalarope was found in the southwest corner and in typical fall plumage. When it flew it displayed the distinctive white tail which separates it from the other two species. The writer is familiar with this species, since he has seen many thousands in the late summer as they move through the Great Basin country of California and Oregon.

The populations of stilts seen were the largest to be recorded on the pond for several years. Even though Kealia Pond was dry on both dates, censuses involving both ponds the past two summers did not result in such large total populations.

(Eugene Kridler, U.S. Bureau of Sport Fisheries and Wildlife, 835 Akumu Street, Kailua, Hawaii 96734)

"The longer I live, the more my mind dwells upon the beauty and the wonder of the world." -- John Burroughs

NOTES from Margaret L. Nott, August 15, 1966: RICEBIRDS (See THE ELEPAIO, September 1966, Volume 27, Number 3, pages 23-24)

...I kept the ricebirds for sixteen days, and since they were getting pretty self sufficient, especially the older one, and I felt that they needed a larger area to live in, I took them to Mr. Throp at the Zoo. He took them home with him and told me that he would try to splint the little crippled foot by sewing the toes down on a cardboard foot.

I waited several weeks before I called him. He told me that the operation had been a success, and that both birds were now in the finch cage with the other birds. I went to see them soon after that, and I was so happy to recognize the birds and could hardly see any defect in the little cripple. He has a very slight limp. Both looked so trim and happy in their pleasant surrounding.

Mr. Throp told me that the birds were really spice finches, but in Hawaii they are called ricebirds, <u>Munia nisoria</u> (Temminck).

I was at Kula, Maui, last week or rather on my way up to Haleakala and stopped at a little lodge (Kula Lodge) for lunch, and I saw the same birds there in the trees near the lodge.

LETTER from W. Todd Furniss, September 12, 1966: WEDGE-TAILED SHEARWATER

Wedge-tailed shearwater is gone. She left a cold egg before 4:00 p.m. today. I found the egg still cold and abandoned at 7:30 p.m. I candled it and found it infertile--rotten, in fact. Its measurements are (in inches) $2 9/16" \ge 19/16"$.

The bird was just seen by Mrs. Ray Belnap, 4106 Black Point Road, by the path to the community pool by the ocean, in a shallow depression about 10 feet mauka of the path. Within a few days, the bird had moved to a deeper depression 6 feet away, one that measured about 10x12 inches and was overhung by a rock. On the second sighting, about August 1-8, the Belnap's dog had apparently frightened the bird away, but an egg was there and was still warm. Later that day the bird had returned, and Mrs. Belnap fed whole wheat bread to it. The bird may have been disturbed later by other pet dogs or cats, or mongooses. On September 10, Mrs. Belnap notified me, and I in turn asked you to come out to identify the bird....

(Identified by W.M. Ord as wedge-tailed shearwater. Is this the first report on the shearwater's nesting on Oahu? If you have any information on this subject, please write to Kojima, 725-A 8th Avenue, Honolulu, Hawaii 96816.)

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LETTER from Elizabeth Dyer, Newark, Delaware, September 12, 1966.

...I doubt whether I shall get around to writing a formal article on impressions of birds in Hawaii. I might mention some of the special pleasures and excitements, however. They included the first views of 'i'iwi feeding on sandalwood blossoms at Hosmer's Grove on Maui and the 'apapane on the red bristles of the 'ohi'a-lehua. Our red-colored birds are the scarlet tanagers and the cardinals, neither of which has the delicacy of these honeyeaters, nor do they feed on red blossoms.

The many views of sociable golden plover seemed unusual, because they are so scarce in the middle Atlantic states and usually seen only with telescopes and with eye-straining to be sure they aren't black-bellied plover.

Cattle egret we have now, but not decorating watercress farms, nor flying in lovely curves above canefield mudflats. Ours are usually on the ground near cattle, perched on the backs of cattle, or following a mowing machine.

Never have I seen a pueo as close as that one we saw on the Audubon trip. Ours are usually fluttering in the distance.

Your Indian mynah, which resemble to some extent our mockingbirds in flight, seem not to have the bad habit of driving other birds away.

I cannot think of any Middle Atlantic cousin to the white-tailed tropicbird (koa'e). They wheeled in beautiful circles near the Wailua Falls and in Waimea

Canyon on Kauai.

It was great pleasure to me to see such large numbers of black-necked stilts (more power to you in preserving the needed wetlands), and to find, thanks to Mr. Ord and the others on the Audubon trip, 2 brown boobies and the pectoral sandpiper. I enjoyed seeing the flocks of mannikins and strawberry finches and to see well the wandering tatlers that are so familiar to you. All this was quite worth the trouble of jumping irrigation ditches, walking on soft red earth that filled shoes or collapsed underfoot and baking one's face under the really hot sun of this scorching day.

Another pleasure, not connected with your trip, was the sound effects in Hawaii. The very first day, in Honolulu, I was wakened by the calls of the barred dove and the conversation of the mynahs. On Maui the calls of the spotted doves and the "sees" of the white-eyes were conspicuous. Near Volcano House on Hawaii it was the cheerful calls of the 'apapane (some suggestive of the song sparrow in rhythm) that were intriguing. I also enjoyed seeing and hearing your 'elepaio....

I am greatly impressed with the kindness of everyone I met, in helping me learn as much as possible about birds and trees of Hawaii in the short week I had there (September 6-13).

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## FIELD TRIP to Rabbit Island, August 28, 1966.

This trip was originally planned for August 14th, but since the boatman was unavailable at that time, we had to reschedule the trip.

The bird population was down considerably from what we had expected. The Sooty Terns had completed their breeding cycle and all of the young birds had already left. During the climb around the island's crater approximately 12 adult Sooty Terns were seen or heard as they gave their 'wide awake' call as they flew overhead.

The Bulwer's Petrels had all left. There were plenty of signs of their prior presence in several known old nesting sites.

The Wedge-tailed Shearwaters were well along in their breeding cycle. Most burrows had young birds approximately six weeks old--others had abandoned eggs. As we waited for the boatman to take us back to Oahu, a number of adult Shearwaters were observed gliding over the ocean surface.

The Noddy Terns were in all stages of their breeding cycle. This seems to be about 'par for the course' where this species is concerned. Many Noddy Terns were obviously unemployed (probably nonbreeding birds and self-supporting immatures), others were either incubating eggs or raising young ones--the age of which ranged from newly hatched chicks to flying young.

The ground conditions were extremely dry. All of the grasses were dried up; practically all of the tobacco plants growing in the crater area had died off, which made rabbit spotting very easy. A rough estimate as to the number of rabbits seen, allowing for possible duplication in the count, could be conservatively placed at twelve.

There were thirteen participants; all of whom landed on the island safely and returned in a like manner, even though the sea was beginning to get rough.

W.M. Ord

# FIELD TRIP to Observe Shorebirds, September 11, 1966.

Nine participants set off hopefully to find shorebirds, though I must admit at first I was a little pessimistic. The reason is that the fruitful areas that we frequented last year had all been planted with sugar cane.

Stopping first at Rainbow Island (Sand) we scanned the islands and mudflats within Keehi Lagoon. A quick count soon produced at least 70 Stilts with possibly more feeding out of sight behind mangrove bushes. Golden Plovers, Turnstones, Sanderlings and Wandering Tattlers were fairly well represented, though the overall numbers were considerably down from what we had seen in this area on previous visits. A Brown Booby and a lone seagull were spotted through the telescope, though positive identification of the seagull was impossible due to the distance. It did, however, have black tips to its wings which would eliminate the Glaucous and Glaucous-winged species.

Passing by Sumida's Water Cress farm, we counted twenty-one Cattle Egrets and several Stilts. With the road currently torn up in this area, stopping and observing at leisure is no longer possible.

By the dump on Waipio Peninsula, we were fortunate to find two recently constructed filter beds which boasted a fair shorebird count. There was a certain amount of Stilt movement, but a conservative count would put their numbers at between thirty and forty. There were also approximately sixty Turnstones, thirty Sanderlings and at least twentyfour Golden Plovers. Feeding on the perimeter of one of the filter beds was a flock of Mynahs which must have numbered over a hundred birds. In West Loch there was little or no mudflat area and only one Coot and one Black-crowned Night Heron were seen. A lone Heron was observed which looked very much like a Little Blue Heron. Bob Pyle reported to me several weeks ago that he thought he had seen one in this general vicinity.

In the area where the filter beds used to be, large flocks of Strawberry Finches and Black-headed Mannikins were put up out of the tall weed grasses. Several Pueo were observed also. Another large group of Stilts were also seen, among which were seen some Turnstones, Sanderlings and Cattle Egrets. Two Pectoral Sandpipers were seen at close range but no Sharp-tailed Sandpipers.

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W.M. Ord

### READERS' NOTES:

NATIONAL WILDLIFE, August-September 1966, page 17, WILDLIFE OMNIBUS:

Eggs Send Hatching Signals: An English scientist discovered recently that quail eggs send clicking signals to each other in the 48 hours before they hatch.

Miss Margaret Vince of Cambridge University has been studying this theory for three years and has finally proved that synchronization of the hatching in some species--such as quail and others--is due to the activity of the embryos themselves. She said that they do this to make sure they all hatch out together, even though they were laid at different times.

Lead Poisoning Killing More Ducks: Lead shot lying around marshes after the hunting season has for years been killing ducks which have inadvertently eaten them. But with increasing hunting pressure, more ducks are dying from lead poisoning now than ever before.

The Fish and Wildlife Service is reluctant, of course, to lower the boom and require that shot pellets be cast with materials other than lead. But the conservation-minded ammunition industry has been experimenting with alternatives such as cast iron.

A committee made up of representatives of the ammunition companies, the Fish and Wildlife Service and the Canadian Wildlife Service has been appointed to study the problem.

TRIBUNE-HERALD, April 17, 1966, page 4: BIRDS HAVE REAL LOVE SONGS by Helen Shiras Baldwin. (Ruth R. Rockafellow's contribution)

...Not all the bird voices we hear are songs, some are "call notes," like those ricebirds give, or plovers to keep individuals in a flock in touch with one another. Others are alarm cries, like those a cock pheasant gives when startled. This puts other pheasants on guard, especially mother pheasants with young, and they seek cover.

Ornighologists tell us that most of the melodious songs male birds sing are done in defiance of other males of the same species and to establish territories or "homesteads" in which the nest will be or already is built. These birds like buffer zones of trees, brushland or grassland between their nests and those of other birds of the same species.

Most bird species do not resent other species using their territories. You will often find mynahs, sparrows and ricebirds all nesting in the same palm or banyan tree.

An 'elepaio, however, will instinctively lead you around the margin of his home site by his songs, calls and fluttering near you until you are safely away from his territory. You may then meet another apparently identical 'elepaio who will similarly lead you in a curving direction about his territory. This is probably the basis for the old Hawaiian story that an 'elepaio will lead you deep into the woods till you are hopelessly lost; or if you are favored by the gods, the 'elepaio will lead you to your proper destination.

But 'amakihi, cardinals, finches, 'oma'o and mejiows definitely sing to establish territories, usually singing from the same spot or nearby ones day after day. Skylarks which have no use for trees sing from the sky, but choose the same part of the sky over and over.

All birds are not so peaceful in their relations with one another. Some, like mynahs, will actually fight for territory both in single combat and in groups, though the combatants are rarely killed in battle. Both sexes take part in the war cries and fighting.

"Peaceful" doves will fight off a strange dove who enters their communal territory. An 'i'iwi will try to drive away all other bird species as well as his own from his territory. This often keeps him so busy that while shooing off some intruders others fly in to eat his insects and sip nectar from his flowers.

Do birds have real love songs? Definitely yes, as anyone who has watched a cooing dove approach his lady love can see at once. Mynahs have soft endearing notes given and responded to by both sexes.

The finest bird love duet in our islands is that of the hwa-mei or Chinese thrush. The male sings a few special sweet notes. The female answers with singing note of her own from a distance. The two flit about the hushes singing and answering in songs and coming closer to each other. Finally they may sing together sitting almost side by side on a branch--suggestive of the delightful Hawaiian Wedding Song.

All bird voices are interesting. All express feeling one kind or another. It is up to us to learn to understand them.

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#### FOR JUNIOR MEMBERS:

LETTER from Steve West, Loving, New Mexico, August 11, 1966:

...Winter provided many interesting birds but spring provided few. Summer has been better than those two seasons combined.

...Just recently, I visited the Cave Swallow nesting colonies at Carlsbad Caverns National Park....Getting to the cave required six hours of walking, but it was certainly worth it. At the nests I noticed something that I had not seen or read about before. At the nest both male and female would sit at the edge and feed the young. In the two sexes there appears to be a different coloring on the throat. One is light as it is supposed to be, but on the other bird it appears to be slightly darker. The nests are unusual in that they have a wide rin instead of the type the Barn Swallow makes. This enables both birds to sit at the nest and feed the young at the same time. I wonder if the birds stay together in the nest at night, because there appears to be no other place they could stay.

The nests are built up each year. Some are rather large, while others are smaller. The sizes indicate the age of the nests. After the young birds have hatched the egg shells are not eaten by the parents as some birds do, but they are simply pushed out of the nest, because even if a predator were to enter the cave it could not get to the nests.

While we were in the cave, I left for the entrance to get my notebook and camera. As I left, some of the birds that had been flying around in the cave got excited and tried to leave. I was standing at the cave entrance, and they were buzzing all around me trying to get out. As I moved to get out of their way, one of the birds hit the cave wall. I must have moved into its path as it was flying from the cave. At first, I thought it was dead, but as I picked it up I could tell it was hurt, but couldn't tell if it would live or not. I laid the bird on a rock, and when I came by later it flew away. I'm certainly glad I decided not to "put it out of its misery."

I have always wanted to take a color slide of a Cave Swallow, and here was my chance, but I didn't think of it until the bird had flown away....

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## ZOO NEWS

Have you seen the picture of the three Laysan Teals following their mother at the Honolulu Zoo? July 12, 1966, Honolulu Star-Bulletin on page A-4 shows a picture of the Laysan Teals. According to the Zoo director Jack Throp the birds seldom breed in captivity.

He also announced other good news--the extremely rare Laysan Finchbill also hatched some eggs...and he believes they may be the first of this species to be hatched in a zoo.

### SHOES FOR NESTS?

Landscape architect Richard C. Tongg has pictures to show that shoes make cozy homes for birds. According to THE HONOLULU ADVERTISER, July 25, 1966, page C-1, when Tongg was on Kauai recently, he had placed a pair of brogues upon the shelf of an outdoor rack, sheltered by roof eaves. The next time he needed to wear them, he found that a Chinese thrush had begun a nest in the right shoe and the Shama was a-building in the left.

"The Chinese thrush stayed only about a week after the Shama began to build," Tongg said. "She deserted her nest when it was half finished." But the Shama finished her nest and laid four eggs in the shoe which she had lined with twigs, dried leaf veins and roots. Her egg-sitting vigil lasted 15 days, during which the father Shama sat sentry duty in a nearby tree. Loud and clear, he gave out with melodicus, whistle-like songs and calls. As a signal for the changing of the guard Tongg said the male hit a peculiar note that always served as the mother bird's cue to back out of the nest, dive low and fly away through a hedge. No sooner was she gone than the father bird took her place in the nest, his long tail sticking out of the shoe top like a flag.

When three of the four eggs had hatched, the mother bird's real work began. It was she who flew off to forage food for the babies. Father's duty appeared to be to remain on guard and sing loudly. The fledglings did not emerge from their shoe nursery until about two weeks after they had hatched. The first baby bird disappeared without being seen. Tongg doesn't know whether to term him a drop-out or a high flyer. But, four days later, the second baby hopped up on the rim of the shoe where he sat for about an hour before trying his wings. Later that day, the third flew out of the nest and away.

Nothing more was seen of the Shama family for more than a week. Then, as if to say "Thank you," the mother and one of her babies returned to pay a brief call before migrating to the forest area which is the Shama's natural habitat.

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FIELD NOTES from Violet Hansen, Volcano Hawaii, August 14, 1966.

... The plovers are beginning to return to the Islands. Yesterday afternoon, 4:10 to be exact, 8 to 10 of them flew very low over our front yard. One of them landed and stayed in one spot for 20 minutes then took off. This has happened often in the past 15 years-one will stay for about 20 minutes--take off, and in about 2 weeks one or two will return and stay until it is time to go back to Alaska.

I have never seen them this early in August before.

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Are you watching a plover? As of August 25, the plover is back now and has established its feeding ground. Many of them still have their breeding plumage. Have you noticed that they carry on a steady conversation with each other when they first arrive? What are they saying? What is the purpose of this sociable conversation? Is it to establish feeding territory? Please write to Kojima, 725-A 8th Avenue, Honolulu, Hawaii 96816, about your bird.

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What are you doing about keeping Hawaii beautiful? Here are some suggestions:

- 1. Keep your own home and property clean. Leave camp sites, picnic grounds, beaches, hunting and fishing areas litter-free.
- 2. Carry a litterbag in your car or boat. Always dispose of trash in a proper receptacle.
- 3. Urge public officials to provide adequate collection and disposal facilities and a sufficient number of receptacles for street trash.

4. Cooperate with others working to eliminate litter in your community. LITTER DOESN'T THROW ITSELF AWAY. IT IS THE INDIVIDUAL WHO CREATES LITTER AND ONLY THE INDIVIDUAL CAN PREVENT IT. Let's keep Hawaii clean!

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## NATIVE HAWAIIAN LAND BIRDS By Paul M. Scheffer

The "Native and Endemic Land Birds of Hawaii - 1966" is the second of a series of three Hawaiian bird lists appearing in THE ELEPAIO. The list may be found on page 39 of this issue. Volume 27, Number 3 included a list of the introduced birds reported to be now in the State of Hawaii. A list of the freshwaterbirds and shorebirds will appear in November.

The Owl is the only species of land bird on the list that is not endemic to the Hawaiian Islands. This same species of bird is also found in many other sections of the world.

The list of native and endemic land birds was prepared primarily for the Mainland visitors who have an interest in our birds. For this reason the list does not include three other species or subspecies of land birds that are reported to be on the leeward islands of the archipelago. These birds are identified as:

| Laysan Finch | (Psittirostra | cantans)   | endemic | to Laysan  | Island          |
|--------------|---------------|------------|---------|------------|-----------------|
| Nihoa Finch  | (Psittirostra | cantans ul | tima)e  | endemic to | Nihoa Island    |
| Millerbird   | (Acrocephalus | familiaris | kingi)- | endemic    | to Nihoa Island |

Only a part of the list of native and endemic birds and their distribution is based on personal observation. Much of the information was obtained from recognized authorities on native bird identification and from THE ELEPAIO.

You will note that 19 of the birds are marked with an asterisk (\*) to indicate their "endangered" status. Mr. Banko has informed me that a more complete official listing of the endangered species is yet to be issued by the U.S. Department of the Interior, Bureau of Sports Fisheries and Wildlife. My identification of the 19 birds should thus be considered as tentative.

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## SALT LAKE

"Land Board Staff Backs Golf at Lake, For Highest and Best Use, Golf Course Approval for Salt Lake Likely, Loss of Fight by Conservationists Seen Decision Expected Tomorrow on Salt Lake Project, Golf OKd for Salt Lake"

These were the headlines from Honolulu Star-Bulletin. On September 9, 1966, on page 1, the news article said, "Salt Lake, which Oahu conservationists want to preserve as is, will become a golf course within two years with State sanction....

"The Board of Land and Natural Resources followed the recommendation of its staff and gave International Development Company approval today to go ahead with the golf project.... (continued on page 40)

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| COMMON NAME             | SCIENTIFIC NAME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | KAUAI                        | OAHU | MAUI | HAWAII          | MOLOKAI | LANAI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |
| AKEPA                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |      |      |                 |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Hawaii Akepa            | Loxops coccinea                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |      |      | е               |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Kauai Akepa             | Loxops coccinea caeruleirostris                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | e* i                         |      |      |                 | ++      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Maui Akepa              | Loxops coccinea ochracea                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |      | e*   |                 | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| AKIALOA                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |      |      | ant managements |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Kauai Akialoa           | Hemignathus procerus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | e*                           |      |      |                 |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| AKIAPOLAAU              | Hemignathus wilsoni                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                              |      |      | е               | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| AMAKIHI                 | 1999 (1997) 1977 - 1978 (1998) 1988 - 1978) 1978 - 1988 - 1979 (1997) 1993 (1997) 1973 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1974 (1997) 1 |                              |      |      |                 |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Hawaii Amakihi          | Loxops virens                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                              |      |      | N               | N       | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |
| Kauai Amakihi           | Loxops virens stejnegeri                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | E,                           |      |      |                 | T       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Maui Amakihi            | Loxops virens wilsoni                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                              |      | E    |                 | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Oahu Amakihi            | Loxops virens chloris                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                              | E    |      |                 |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| ANIANIAU                | Loxops parva                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | E                            |      |      |                 |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| APAPANE                 | Himatione sanguinea                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | N                            | N    | N    | N               | N       | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |
| CREEPER                 | nin anderen is Alexandren in Alexandren in Alexandren in die seine die Alexandren in Ale                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |      |      |                 | 1       | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |
| Oahu Creeper            | Loxops maculata                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              | e*   |      |                 |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Maui Creeper            | Loxops maculata newtoni                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                              |      | e*   |                 |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Molokai Creeper         | Loxops maculata flammes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                              |      |      |                 | e*      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Kauai Creeper           | Loxops maculata bairdi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | e                            |      |      |                 | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Olive-Green Creeper     | Loxops maculata mana                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                              |      |      | e*              |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| CROW                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |      |      |                 | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Hawaiian Crow           | Corvus tropicus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |      |      | e*              |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| ELEPAIO                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |      |      |                 | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Hawaii Elepaio          | Chasiempis sandwichensis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 1 1                          |      |      | Е               |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Oahu Elepaio            | Chasiempis sandwichensis gayi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                              | E    |      |                 | ++      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Kauai Elepaio           | Chasiempis sandwichensis sclateri                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | E                            |      |      |                 | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| HAWK                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              | 1    |      |                 | T       | 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |
| Hawailan Hawk           | Buteo solitarius                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                              |      |      | e               |         | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |
| HONEYCREEPER            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |      |      |                 | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Crested Honeycreeper    | Palmería dolei                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                              | Ì    | e*   |                 | ext.    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| IIWI                    | Vestiaria coccinea                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | n                            | n*   | n*   | N               | 1       | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |
| NUKUPUU                 | Hemignathus lucidus hanapepe                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | e*                           |      |      |                 | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| OOAA                    | Moho braccatus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | e*                           |      |      |                 | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| 00                      | Psittirostria psittacea                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | n*                           |      |      | <u>n*</u>       | +       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| OWL                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |      |      |                 | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Short-eared             | Asio flammeus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | N                            | N    | N    | N               | N       | N                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |
| PALILA                  | Psittirostria bailleui                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                              |      |      | e               | 1 1     | -                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |
| PARROTBILL              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |      |      |                 | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Parrot-billed Koa Finch | Pseudonestor xanthophrys                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                              |      | e*   |                 |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| THRUSH                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 1                            |      |      | ****            | ++      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Hawaiian Thrush         | Phaeornis obscura                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                              |      | 1    | e               | ·       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Kauai Thrush            | Phaeornis obscura myadestina                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 6*                           |      |      |                 |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Molokai Thrush          | Phaeornis obscura rutha                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                              |      |      |                 | e*      | ų.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |
| Small Kauai Thrush      | Phaeornis palmeri                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | e*                           |      |      |                 | 1       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
|                         | Contraction of the second s                                                                                                                                                                                                                                                       | and the second second second |      |      |                 |         | and the second se |  |  |

(1) Key to distribution code --

CAPITAL LETTERS: The species is native (N) to two or more islands or is endemic (E) to one island; it is commonly observed in a suitable habitat.

lower case letters: The species is native (n) to two or more islands or is endemic (e) to one island; this species can generally be seen only in localized habitats with persistent effort and careful observation.

> An asterisk (\*) indicates a very rare species. An underlined letter indicates that the species is on the official "endangered species" list.

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SALT LAKE (continued from page 38)

"The company owns the 205-acre lake, but needs the board's okay to develop it because it is in a conservation zone. About 170 acres of the lake will be filled in to provide new land for the golf course. Plans call for about 35 acres of waterways, forming a chain of small lakes and canals. Golf courses are permitted in conservation areas under the land-use regulations....

"The land department staff based its conclusion...on the weight of considerable testimony that the lake is unsuitable for recreation, fishing and wildlife.

"Representatives of conservation groups in the community have pleaded for Salt Lake's protection as Hawaii's 'only natural lake.' However, geological evidence was offered showing the lake is artificial. The State Department of Health said it is unsanitary for swimming and engineers ruled out boating...."

According to Mr. Henry Damon (Honolulu Star-Bulletin, August 26, 1966, page A-1) the lake has existed in its present state only since 1910. It was much smaller before that and often dried up in the summer, and Honolulu's commercial salt came out of the lake. His grandfather, who owned the property, put in facilities to expand the pond and stabilize its waters in 1910.

GONE! Another pond that listed thousands of coots and waterfowls is gone.

\*\*\*\*\*

ALOHA to our new members:

Regular: Mr. & Mrs. D.J. Byrne, P.O. Box 419, Honolulu, Hawaii 96809.
Mr. & Mrs. William P. Mull, 3202 Woodlawn Dr., Honolulu, Hawaii 96822.
Junior: Jonathan Hegele, 2526 Papai Street, Honolulu, Hawaii 96821.

\*\*\*\*\*

<u>National Audubon Society's 62nd Annual Convention</u> at Sacramento, California, from November 11 to 16, 1966, will highlight the effects of population growth and economic expansion on wildlife and its habitat, on watershed and forest ecology, on mountain and seashore scenic beauty, and on established and proposed parks and recreation area.

One of the four post-convention tours led by the Sacramento Audubon Society is to Hawaii from November 16 to 23.

For more information write to: Convention: National Audubon Convention, 613 Riversville Road, Greenwich, Conn. 06830. Post-convention Tours: Sacramento Audubon Society, 7248 Fair Oaks Blvd., Carmichael, California.

\*\*\*\*\*

OCTOBER ACTIVITIES:

- October 9 Field trip to study shore birds. Bring lunch, water, and if possible, your car. Transportation cost (\$1.00) to be paid to the drivers. Meet at the Library of Hawaii at 8:00 a.m. Leader: Walt Donaghho, telephone: 700-440.
- October 10- Board meeting at the Honolulu Aquarium Auditorium at 7:30 p.m. Members are always welcome.
- October 17- General meeting at the Honolulu Aquarium Auditorium at 7:30 p.m. Program for the night: Discussion by Mr. Lowell S. Dillingham, President of Dillingham Corporation and the Hui Manu and Mr. Alan Thistle, Division Head of Entomology and Plant Quarantine on cagebirds being brought into Hawaii. Moderator, W.M. Ord. (For additional information regarding the meeting see article on first page, "Cagebird" by W.M. Ord) \*\*\*\*\*

HAWAII AUDUBON SOCIETY EXECUTIVE BOARD:

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