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A PROGRESS REPORT ON THE INTRODUCTION OF THE BARN OWL (Tyto alba pratincela) TO THE ISLAND OF KAUAI

<u>Prepared by:</u> Steven Au - Department of Agriculture Gerald Swedberg - Dept. of Land and Natural Resources Division of Fish & Game

The Barn Owl (Tyto alba pratincola) was introduced to the state of Hawaii by the Hawaii Department of Agriculture in an effort to establish it as an aide in the biological control of the various species of rats (Rattus) which infest the islands.

The purpose of this report is simply to record a brief history of this introduction as it concerns the island of Kauai, and to compile the observations and notes of various observers from the date of the initial introduction on Kauai, until June 30, 1965.

RELEASE INFORMATION

The first release of Barn Owls on Kauai occurred on June 10, 1959, when eighteen birds from the San Antonio Zoo were liberated by Mr. Alan Thistle of the Dept. of Agriculture, accompanied by Messers. W. Moragne and David Silver (of Kauai) at Kilohana, Kauai, below C.E.S. Burns reservoir.

Tomich (ELEPAIO, Sept., 1962) lists the second release of Barn Owls on Kauai as occurring in October, 1961, but does not give the exact date. Dept. of Agriculture records on Kauai show a release of two birds in Waimea Valley on November 3, 1961. These are apparently the same birds; the first date (October) probably being the date when the birds were shipped to Kauai and November 3, the date when they were actually released. The birds were from the San Diego Zoo, California.

The third release on Kauai was on May 10, 1963, when four Barn Owls (also from San Diego) were released on Kekaha Sugar Co. land near the old ammunition dump in Mana, by Mr. Steven Au of the Dept. of Agriculture.

The fourth release on Kauai was on June 4, 1963, when four Barn Owls were released in Kekaha, on Kekaha Sugar Co. land.

A re-release occurred on December 30, 1964, when a Barn Owl which had been captured in Hanalei was kept for a week, fed, and released.

FOLLOW-UP OBSERVATIONS

Sightings of Barn Owls have been and are being made incidental to other activities by both Dept. of Agriculture and Fish and Game personnel, as well as employees of the various plantations and other persons acquainted with the project. Observations and specimens are turned over to Mr. Au of the Dept. of Agriculture, and no sightings

Permission to publish obtained by Thelma Hensley.

have been recorded unless it was certain that the observer was qualified to distinguish between the Barn Owl and the native Pueo (short-eared owl, Asio flammeus).

A total of twenty-seven dead, crippled or "sick" Barn Owls have been recovered. Of these, information was complete enough in seventeen instances that the approximate location of recovery could be plotted on a map. (See Table 1). In many instances it was fairly obvious that the immediate cause of death was automobile traffic on highways. Also, in many instances the condition of the recovered specimen was such (due to mutilation or decomposition) that post mortem examination for possible predisposing factors contributing to death would have been difficult or impossible. One live but apparently "sick" bird was sent to Honolulu for study.

A total of 35 positive sightings of live Barn Owls have been recorded totaling fifty-one birds. Of these, information was complete enough in thirty instances (38 birds) to allow the sightings to be plotted on a map. (See Table 2).

REMARKS

It is apparent from the number of verified sightings, and recoveries (a total of 28 birds were released and 27 birds have been recovered - with live sightings continuing); that the species has reproduced on Kauai and can apparently be considered as established.

Locations of the observations and recoveries indicate that the species has spread nearly around the island, at least in the lowland areas.

Observations of individual birds in some instances showed apparent weakness and lethargy; which indicates the possibility that there may be predisposing factors contributing to deaths as road kills, and that there may be a great deal more mortality occurring unnoticed in areas away from the highways.

RECOMMENDATIONS

- 1. It is recommended that records of live sightings and recoveries be continued.
- 2. It is recommended that all specimens in suitable condition be submitted to Honolulu for post mortem examination.
- 3. It is recommended in the case of recoveries where the specimen is badly decomposed, that the claws be salvaged for positive identification of species, and as an indication of the age class of the bird.
- 4. It is recommended that in the event of any future releases or re-releases birds should be banded with #6 leg bands in order to provide information especially on movement and longevity of individual birds.

Prepared Sept. 16, 1965.

Table 1

RECOVERIES OF DEAD, SICK, OR INJURED BARN OWLS ON KAUAI

June 10, 1959, through June 30, 1965

Date	Numbe	er Area	Loca	tion	Observor	Remarks
	1	NOT RECORDED			And the second s	
8/2/61	1	Kokee	Puu Ka Pel	e Park		
2/9/63	1	Between Puhi	and Lihue on Hwy		G.E. Swedberg	Broken wing
3/4/63	1		and Koloa turnoff	on		
		Hwy (Knuds	en Gap)			Broken wing
4/2/63	1	Kalaheo	-		A.W. Perreira	Appeared shot
4/ /63	1	Kapaa		Sgt H.	Christiansen	
4/6/63	1	Moloaa - on H	wy near camp		G.E. Swedberg	
5/2/63	4	NOT RECORDED			-	
6/4/63	1	NOT RECORDED				
6/23/63	1	Kealia			Louis Ornellas	

Table 1 (Continued)

Date	Num	ber Area Location	Observor Remarks
12/2/63	1	Kapaa	Dr. D. Plucknett
12/2/63	1	Hanapepe	Duke Wellington
1/16/64	1	Moloaa - on Hwy near camp	G.E. Swedberg
3/ / 64	1	NOT RECORDED	
4/16/64	1	NOT RECORDED	
5/ /64	1	Hanapepe Salt Pond	Donald Sugawa
8/28/64	1	Lihue - Between Ag. office and	
		Nawiliwili	G.E. Swedberg
11/30/64	1	Nawiliwili	G.E. Swedberg
4/22/65	1	NOT RECORDED	
5/6/65	1	NOT RECORDED	
5/6/65	1	Hanalei	Warren King
5/13/65	1	Kapaa	Sgt H. Christiansen
5/28/65	1	Kapaa	G.E. Swedberg - actually found on 5/19/65 by Mr. Pat Lyons
6/2/65	1	Kalaheo - near HSPA Exp. Sta.	R.E. Fuller

Table 2

OBSERVATIONS OF LIVE BARN OWLS ON KAUAI
June 10, 1959, through June 30, 1965

Date	Num	ber Area	Location	Observor	Remarks
3/6/59	1	Mana			
3/6/59	1	Kapaa	Homesteads		
12/4/59	1			Steven Au	
12/4/59	1	Nawiliwili Bay I	lighthouse near		
		bagasse dumping	grounds	James Yamada	
4/5/60	1	Half-way Bridge	near rock crusher		
5/2/60	1	Wailua			
5/2/60	1	Kukuiula - above	McBryde stable		
3/2/61	3	NOT RECORDED	0		
10/26/61	í	Kokee			
10/26/61	1	Kekaha			
10/26/61	1	Hanapepe Salt Po	nd - cane field		
2/4/61	3	Between Hanapepe			
3/ /62	2	H.H.C. land - Pu			
2//62	5		est Reserve Trail 5		
/ /63	1	ruu ka rete rore	est Reserve Hall	Steven Au	
2/11/63	1	Wai lua	Golf Course	G.E. Swedberg	
3/28/63	1	W <u>a</u> ilua Hanalei	Steel Bridge	D.T. Fullaway	
/2/63	1	Knudsen Gap	Steel Bridge	Steven Au	
/2/63	i	Hanalei	Lookout	G.E. Swedberg	
1/2/63			20022000		
/2/63	3 1 2	Kekaha			
1/4/63		Kokee	Waimea Canyon Rim	Alan Thistle	
1/4/63	3	0			
2/2/63 /30/64	3 1 1	Omao Between Kundsen	Can and Omao		
/30/64	2	Kokee	dap and omao		
1. /64	2		c. Camp 10 & Kumuwela	Rds	
8/8/64	1	Between Hanalei	Lookout and Bridge	Ronald Walker	
2/30/64	1	Anahola		G.E. Swedberg	
/30/65	1	Omao-Kolea Road			
/30/65	1	Hanapepe Salt Po			
1/4/65	1		Trail 4 (Polihale)		
/20/65	1	Opaikaa Falls		G.E. Swedberg	
5/22/65	1	Lawai Valley		Steven Au	
5/26/65	1	Lawai Valley		Steven Au	

OAHU BIRD SURVEY By Walt Donaghho

October 30 - November 9, 1965

October 30: Saw a female duck hawk fly up past the Powlison residence on its hill between Lanikai and Kailua, then fly off over the Mid-Pacific Country Club.

It is very likely that this is the same bird reported by Ord over the Ala Moana Shopping Center on November 15. This bird can easily cross Oahu in a few hours, so it may be seen anywhere on the island. (See W.M. Ord's note on page 63)

Waipio Settlement Basins, November 4: Found the basins covered with a large number of shore birds, most of which were feeding on the alluvial fan of mud forming in front of the outlet pipe in the NE corner of the Waikiki Basin. Here were a large flock of sanderling, 75 in number, smaller numbers of turnstones and golden plover, 54 stilt, a pair of black-bellied plover, and at least four sharp-tailed sandpipers. Seven more sharp-tails were feeding with a small flock of turnstones on the mudflats of the Ewa Basin. The north half of this basin was dry and covered with tall grasses and other shrubs, in which fed flocks of black mannikins. My count mounted to 180 birds. Strawberry finches were also seen here, as well as flying in from the cane fields. One skylark was noted.

<u>Puuloa Rifle Ranges</u>, November 4: Six black mannikins were noted on one of the rifle ranges. Judging from the literature, these birds now fully occupy the Ewa plains and the Waipio Peninsula, and are starting to move inland, being reported from the Mililani Cemetery at Kipapa.

Lyons Arboretum, November 9: Of greatest interest here were the small flock of Indian hill mynas, of which a dozen have taken up residence in the grove of Albizzias on the ridge above the arboretum headquarters buildings. I only counted eight for sure, but Mr. Donald Anderson assures me that there are a dozen. Dr. Berger also saw a dozen on a recent field trip here with his class. Anderson also states that these birds have been here since 1960, when three escaped from a pet shop on Keeaumoku Street. They increased to 8 a year later, then to the current dozen.

Two shama thrush were also heard singing from the depths of the guava understory, and leiothrix and Brazilian cardinals were among other birds noted.

Descriptions of the waxbills and finches that I have seen at the end of the Na Laau Hawaii trail on Diamond Head:

Common waxbill: Brown, lighter below, dark red mask over eyes.

Orange-cheeked waxbill: A very bright orange facial mask, larger than that of the common waxbill, will identify this bird.

Lavender waxbill: A very sleek looking bird, like the waxwing in its trim appearance. Washed with light lavender, and sporting a red mask over its eyes. Has a red, black striped tail.

Cordon bleu: I wonder if I have to describe this familiar cage bird? Brown wings, blue breast, and a red football shaped spot behind the eye. Has a longer tail than the other waxbills.

<u>Firefinch</u>: A bright red breast will readily identify this bird. Lacking the white spots of the breast of the strawberry finch. It also sports a white ring around the eye.

Grey singing finch: Looks like a pale papaya bird, with a white breast streaked with brown in the manner of the linnet, and a grey-brown back. Legs, pink.

Green singing finch: Like a green papaya bird, if that bird could be envisioned in green. The female is faintly washed with green, and sports a dark lei across the chest.

Wonderful News on Nene from Dr. Roger E. Baldwin, assistant professor of science at the Hilo Campus of the University of Hawaii, October 9, 1965.

...Last week Dr. Guy Dority and I took a hike to Three Trees Kipuka on the Mauna Loa strip area. We went up for two reasons: to look over the cave there and to see if we could find any of the nene that we had been told were up there. We spent about half an hour at the cave and then looked over the rest of the kipuka. Imagine our surprise and excitement when we found one group of eleven nene and another group of three. I had with me a 360 mm telephoto lens with my Pentax camera, so I started to take some pictures. Unfortunately they took off before I could get pictures on land, but I did get three pictures of the birds in flight. There could be no doubt of their identity, for they flew directly overhead and gave their distinctive cry. We counted both groups on the wing as well as on land, so we are sure of the count. There could be more nene in the area, but there are definitely at least fourteen. We informed the National Park people.

Here are the data: Time of sighting, noon (plus or minus fifteen minutes). Date, October 2, 1965. Number of birds, fourteen in two groups (eleven and three). Location, Three Trees Kipuka on Mauna Loa.

News on Mockingbird on Kauai from Thelma Hensley, September 17, 1965.

... Kauai now has mockingbirds... Families have been nesting at Mahelona /Hospital at Kapaa/ for the past three years and seem to be fairly well distributed. I've seen them at Kekaha too

+++++

Notes on Cattle Egrets from Gerald Swedberg (Thelma Hensley's contribution).

The following is an excerpt from our monthly report of August, 1965: "Beginning August 19, 1965, numerous reports were received of cattle egrets in the Kekaha and Hanapepe areas. The largest number observed to date was eleven (seen two months ago) in a field near the Kekaha alfalfa patch. The last known observation of these birds on Kauai was in the fall of 1961, some four years ago. The most recent release of these birds on Kauai was in June of 1960 at Kipu-Kai."

Field Trip to Study Shore Birds, October 10, 1965.

The 10 October field trip to study shore birds started from the Honolulu Main Library about 8:30 a.m. with 3 members, 5 visitors, and 3 children in attendance. The weather was fine the entire trip with temperature averaging in the low 80's and some overcast to keep the air comfortable.

The party drove to Sand Island, but we were disappointed by the lack of birds here. We proceeded around to the movie site of the film "IN HARM'S WAY" with its dead coconut palms. Many shore birds were sighted on Squatters Island opposite, as shown by the following listing. We watched the LURLINE come in to see if an albatross might be following, but again were disappointed. Few birds were in evidence in the area of the proposed International Trade Center, although here the long looked-for Jaeger was sighted near a buoy. From here we drove to Sumida's Farm. We could see only part of the farm from the highway, but did count six cattle egrets.

SQUATTERS ISLAND AREA OF PROPOSED 30 Stilt INTER TRADE CTR SUMIDA FARM 6 Tattler 1 Pomarine Jaeger 6 Cattle Egret 40 Ruddy Turnstone 5 Plover 1 Plover (flying) plus 3 in flight 2 North American Cardinal 2 Brown Booby 5 Sanderling

50 Plover

One visitor and two children left the party at Sumida's Farm before we proceeded to the Waipahu Dump. At the Dump the count for shore birds was quite good; and the trees along the bluff were alive with the flight of small birds and their songs. We heard and saw two Brazilian and one North American Cardinal before the atmosphere of the dump caused us to hurry along to the Reservoir area. The walk over the dry, deeply cracked adobe clay proved quite interesting, and here a Pintail Duck was sighted although the area did not yield a very large count. This was more than offset by the dike area which proved very productive for the number and variety of shore birds. It was here that Mr. Ord sighted a skylark.

WAIPAHU DUMP	RESERVOIR	ALONG DIKES
15 Stilt	6 Mynah	26 Stilt
4 Black-crowned	7 Strawberry Finch	19 Cattle Egret
Night Heron	1 Pintail Duck	7 Turnstone
2 Plover	2 Stilt	1 Sanderling
	1 Plover	12 Plover
	2 Brazilian Cardinal	2 Sharp-tailed Sandpiper
	1 Ricebird	6 Pectoral Sandpiper
		48 Black-headed Mannikin
		l Skylark

The party disbanded after leaving the Peninsula, with three of us returning via the Sumid's Farm. From the opposite side of the highway we had a wonderful view of the entire Farm and counted 15 Cattle Egret. One stood on a dun-colored cow and on the opposite side of the Farm another stood on a black-white cow.

We ended the day in the pleasant atmosphere of Aiea Park where we had lunch before returning home.

Laura E. Walther

FIELD NOTES from W. M. Ord.

November 15, 1965: A falcon, probably Peregrine, was observed for 5 minutes flying low over the Ala Moana Shopping Center at 5:30 p.m. While the observer did not have binoculars, the silhouette, flight pattern, and behaviour suggested the Peregrine Falcon. (See Walt Donaggho's note on page 61)

November 11 and 12, 1965 (Rain and wind storm): Female Bufflehead was reported on the Ala Wai Canal by Mmes Ruth Rockafellow and Martha R. Scruton on November 11, and by Mr. & Mrs. Sam and Willie Argante of Sacramento Audubon Society on November 12.

FOR JUNIOR MEMBERS:

THE BIRDS OF WAKE ISLAND By Erin Casey*

Wake Island's bird population is large in some ways but small in others. The population is large with the amount of birds we have there, but small in the different kinds of species.

There are twenty-two different species (really twenty-three, if you count singly a lone, wild sparrow as a species) which include frigates, boobies, tropic-birds, terms, curlews, sandpipers and others.

The most abundant of the birds is the Sooty Tern, which nests in numbers between 250,000 to 1,000,000 birds. It is similar to those at Hawaii's Rabbit Island. Other fairly common birds are the Brown Boobies, Red-footed Boobies, and the Frigates. Red-tailed Tropicbirds are seen once in a while, too.

The boobies and the frigates live more or less in the same area on Wilkes Island, one of the three connecting islands forming the crescent half-moon that is "Wake." A lagoon is enclosed by the circling islands and the reef. The Red-tailed Tropicbirds may be found on Wilkes, Wake and Peale Islands. They are rather

^{*}Editor's Note: Erin has recently returned from Wake Island, and although she is busy as a seventh grader at Punahou, she has generously contributed this article. Thankyou.

scattered, though.

The Noddy Terns are abundant there, too; although they are sometimes hard to locate. On one occasion Robert McFarlane, a visiting University of Florida Zoologist, and I had to walk through sea-cucumber infested waters to get to a rock where they were nesting. It was quite a slimy experience.

One of the rarer birds is the Dunlin, which has only been seen once on the island.

Two other birds that are rarely seen are the Masked Boobies and the Hawaiian Noddies. Our three species of ducks are also rarely seen there. You really have to know where to go to see them.

Shore birds are easy to find. All you have to do to find them is walk along the beaches. Accessible beaches surround the whole small island.

Another rarer bird is the White-tailed Tropicbird. We have about three on the island, as of my last check. (Two parent birds and one chick) The three I observed, nested in a pile of broken up cement, which was rather unusual, because they usually nest on cliffs. Old Japanese blockhouses formed the rubble they chose as their home.

We have three varieties of ducks on Wake: the Shoveler, Garganey's Teal, and the Pintail. The only place that you can find these birds is in the forward area of the Wake Island runway. No one can go there without special permission.

The following is a list of birds observed on Wake, as compiled with the help of Zoologist Robert W. McFarlane of the University of Florida:

Red-tailed Tropicbird
White-tailed Tropicbird
Masked Booby
Brown Booby
Red-footed Booby
Great Frigatebird
Golden Ployer

Ruddy Turnstone
Wandering Tattler
Sanderling
Bristle-thighed Curlew
Sooty Tern
Gray-backed Tern
Common Noddy

Hawaiian Noddy
Fairy Tern
Garganey's Teal
Pintail
Shoveler
Sharp-tailed Sandpiper
Yellowlegs

Dunlin

Ivory-billed woodpecker and trumpeter swan are the last of the endangered birds on the calendar to be studied this month.

The endangered species are used not only on calendars but also on stationery. Harriet Linn has generously contributed the $3\frac{1}{2}x4\frac{1}{2}$ French-fold notes on the rare and endangered birds, and fortunately ivory-billed woodpecker is one of the four birds used as subjects. The painting is by Robert Hines, same as the one on your calendar. The last page of the note has the following description of the bird:

"Ivory-billed woodpeckers, larger than crows, are the largest woodpeckers in North America. Their original habitat ran from North Carolina to eastern Texas and southward from the mouth of the Ohio.

"By 1885 the birds had dwindled greatly, and by 1926 were believed to be extinct. While seen later in isolated spots in Louisiana and Florida, the last reliably reported sighting of this bird occurred during 1952 in Florida. They may now be making their last stand in the pine-wooded, swampy area where they were originally most abundant.

"This disappearance was probably caused by destruction of their food supply when loggers invaded the southern swamps. The young trees left in a cut-over forest provide much less food for woodpeckers than do the mature trees of an old forest. For food, Ivory-bills are particularly dependent on wood-boring insects that live in the inner bark and between the bark and wood of trees or limbs not too long dead."

The trumpeter swan's story is much brighter than that of the ivory-billed woodpecker's.

Winston E. Banko studied the history, habits and population of the trumpeter swan from 1948 to 1957 at Red Rock Lakes Refuge in southwestern Montana, and wrote THE TRUMPETER SWAN, North American Fauna No. 63, published by U.S. Fish and Wildlife Service, April 30, 1960.

In this pamphlet he says that the present U.S. population of trumpeters is found mainly in a 60-mile radius encompassing parts of southwestern Montana where the Red Rock Lakes Migratory Waterfowl Refuge is found, eastern Idaho, and north-western Wyoming, including Yellowstone National Park. The total continental population of trumpeters probably numbers 1,500 or more.

It is evident that the trumpeter swans were once an abundant and widespread species on the continent. The plumage of these great birds became and remained an article of frontier commerce for over a hundred years. This fact, perhaps more than

any other now apparent, caused the near extinction of the trumpeter.

The entire plumage of the adult trumpeter swan is white, but head and neck commonly show rusty stains from ferrous waters; iris is brown; bill is black; and feet are usually black or gray but sometimes tinged with brownish, yellow, or olive.

Young trumpeters emerge as downy cygnets in either of two color phases, gray

(common) and white (rare). Both sexes are alike in coloration.

Trumpeters are expressive and use their voices to show their feelings and attitudes. The call has a definite hornlike quality over a wide vocal range and may be uttered from one to a number of times, at widely spaced intervals or in staccato fashion. The trumpeter gives voice perhaps most often in flight but also commonly while on land or floating on the water. Though they are perfectly capable of loud hissing, this has only been heard from cornered flightless trumpeters.

The feet with their great webbed area are usually employed both as an aid in

gaining speed on the take-off and as an effective brake in alighting.

When hard pressed in close pursuit and unable to fly, all age classes will dive to avoid capture, and once submerged they are often capable underwater swimmers.

Sometimes adults also display the curious ability to submerge almost their entire bodies in the water while the head and neck remain upright in a normal position. This is apparently accomplished by changing the web action, thus literally pulling themselves downward in the water while swimming.

Possibly the earliest breeding of trumpeters may be accomplished as the pair enters the breeding season completing their fourth year of life, but the initial age at which a wild pair comes into breeding mood may be influenced by the quantity of unoccupied territory located in suitable nesting habitat.

Nests are usually located so that all or part of the site is bounded by a moat of water. Nest-building activities are shared by both sexes, though the female probably contributes the bulk of the effort. She usually lays from 4 to 6 eggs. A normal incubation period is from 33 to 37 days.

The young of the trumpeter are equipped with an egg tooth believed to help in breaking out of the shell. This sharp point is a special adaptation designed only for pipping the shell and disappears sometime after hatching.

Family ties in the trumpeter are strong, and the family feeds in a tightly

knit group.

Though eagles do kill adult swans on occasion, and coyotes may occasionally molest the swan, man is, by far, the greatest enemy with which they have had to contend. Shooting and lead-poisoning still account for more casualties, than the aggregate of all other known causes of adult mortality.

Mr. Banko concludes that the trumpeter swans in the tri-state region of Montana, Wyoming, and Idaho should no longer be considered an endangered species; this population has increased at a constant rate for 20 years, and it now exhibits signs of leveling off at the maximum level this environment will support, but as the trumpeter population becomes more widely distributed, the possibility of hybridization with the mute swan may become a threat. With continued diligent management and protection, the transplanting program should assure the continued growth in numbers and expansion of the range of the trumpeter swan in this country.

During the past year we have studied fourteen endangered or rare birds, and although this article ends the series, if you have additional information on these birds, please share your experiences with the other members.

If there is any particular subject you want to study during this year, please write to Kojima, 725-A 8th Avenue, Honolulu, Hawaii 96816.

SURPRISE!!

On Sunday, November 28, at 10:30 a.m. four leiothrix were feeding on the Christmas berries (Schinus terebinthifolius) at 725-A 8th Avenue. Yes, they were not only feeding but also calling and softly singing. These were four healthy birds--very active and gregarious. They were very much at home and for fifteen minutes they flew in and out of a large mango tree and shared the berries with the white-eyes. What were they doing in Kaimuki? Are they escaped caged birds or are they migrating? Is there anyone who can enlighten me on these four birds? Has anyone seen leiothrix in the residential areas on Oahu? Where? When? Please write to Kojima. ****

ALOHA to our new members:

Dr. & Mrs. Charles A. Ely, 6139 Pahukula Place, Honolulu, Hawaii 96821 ****

1965 CHRISTMAS COUNT

Christmas bird count will be on Sunday, January 2. The areas to be covered and the leaders are as follows:

Group A: From Koko Head side of Diamond Head out to Paiko Lagoon and Kuapa Pond, including the residential area - Walter R. Donaghho

Group B: From Ewa side of Diamond Head, Kapiolani Park including the Zoo-Jack L. Throp Manoa Valley, University campus and downtown Honolulu - Andrew J. Berger Manoa Falls Trail - Winston E. Banko

Group C: Punchbowl and Tantalus - Ronald L. Walker

Group D: Aiea Trail - Unoyo Kojima

Group E: Kaelepulu Pond, Kawainui Swamp, Kailua residential area and Kaneohe Marine Base - Eugene Kridler

Group F: Keehi Lagoon, Salt Lake and Nuuanu Valley - W. M. Ord

Those wishing to participate in the count, please call Mike Ord at 256-320 to specify the area of your choice.

The National Audubon Society advises us that in order for our count to be printed in the Audubon Field Notes it will be necessary for all participants to submit 50¢ entry fee. Group leaders will be asked to collect entry fees as well as the full name and address of participants for the Audubon Field Notes.

JANUARY ACTIVITIES:

January 2 - Christmas bird count.

January 10 - Board meeting at the Honolulu Aquarium Auditorium at 7:30 p.m. Members are always welcome.

January 17 - General meeting at the Honolulu Aquarium Auditorium at 7:30 p.m. The author of THE TRUMPETER SWAN, Winston E. Banko, wildlife biologist of the U.S. Fish and Wildlife Service, who is here to study Hawaii's endangered species of birds, will talk about the trumpeter swan, and illustrate his talk with color slides.

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Eugene Kridler

DUES: Regular - \$3.00 per annum

Regular out of State - \$2.00 per annum

Organization - \$2.00 per annum

Junior (18 years and under) - \$1.00 per annum

Life - \$50.00

DUES FOR 1966 ARE NOW PAYABLE