THE ELEPAIO

Journal of the
Hawaii Audubon Society

For the Better Protection
of Wildlife in Hawaii

VOLUME 26, NUMBER 8 FEBRUARY 1966

THE PROGRAM AND OBJECTIVES OF THE HAWAII DIVISION OF FORESTRY

By Russell K. LeBarron
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When I was a boy in North Dakota, I had the good fortune to become acquainted with a remarkable young man, Russell Reed, who was an outstanding ornithologist and served for many years as Curator of the North Dakota State Historical Society. Surprisingly, North Dakota has a very rich bird life in numbers and species. Under his teaching, I learned a great deal about birds. For several years I kept an annual list of species seen and identified, which generally numbered about one hundred and forty. This early interest in birds was a factor in influencing me to take up forestry as a profession. Interests in birds and forestry led me to become conservation-minded.

In 1925, forestry was about the only conservation-oriented profession, and it is still true that foresters are the strongest and most effective participants in conservation. The conservation movement has now spread to take in the whole world of nature.

The relationship of organisms to their environment is particularly important here in Hawaii. Less than 200 years have gone by since the first human invaders, other than the Hawaiians themselves, reached Hawaii. Yet, the changes brought about are more violent and lasting from the biological point of view than any volcanic disturbance since these islands were raised from the ocean. Plants and animals have been introduced intentionally, others have come in by the hitch-hike method, diseases have accompanied some, and the whole fauna and flora that had developed here originally have been affected. If all foreigners who have come since Captain Cook's arrival were to disappear, the islands would never go back to their original state. We have set loose forces that are irresistable and irreversible.

We cannot set the clock back. The realistic approach is to do the best job we can in the light of the present situation, having in mind the future needs of a rapidly expanding world population.

In Hawaii, the term Forest Reserve is sometimes misunderstood. It does not mean land owned entirely by the State, set aside for forestry. Many parcels are privately owned, not subject to full control by the State.

A few statistics may put forestry into its proper perspective in Hawaii.

This article is an excerpt from the talk given at the meeting of the Hawaii Audubon Society on October 18, 1965. Permission to print obtained by Margaret Titcomb.

Every conservationist should know that: --

1. Area of the State..... 4 million acres
2. Area intensively cultivated..... ½ million acres
3. Area grazed..... 1 million acres
4. Area of potential commercial forest... 1 million acres
5. Area of unproductive forest..... 4/5 million acres
6. Area of rock land..... 4/5 million acres
7. Commercial forest, private..... 592,000 acres
8. Commercial forest, public..... 496,000 acres
9. Sixty per cent of the privately owned forest land is divided among twenty-four owners.

If we set aside the urban, cultivated, grazing lands and rocky land, we find that there are about two million acres which can be considered "wild land", and only half of this is capable of growing timber of commercial quality. Ownership is about equal between private and public.

The State is interested in privately owned forest lands and tries to promote interest in forestry on all forest lands. The State also furnishes fire control when needed. Much of the assistance to private owners comes from Federal grant-in-aid programs, which are administered by the States.

Several years ago, the Division of Forestry of the Department of Land and Natural Resources prepared a multiple-use plan for the management of the State wild lands. This is still the principal guide to our program. The plan is based on the very sensible assumption that public forests can supply several important types of goods and services. Wood is an important product but by no means the only one, or necessarily the most important one. Other major products are water, wildlife, recreation, and forage. In general, these are compatible to a considerable degree. We think it is a mistake to attempt to use public lands on a single-use basis. With our growing population, we simply do not have enough land to set aside large blocks exclusively for each kind of use. There are exceptions, of course, but generally wild lands are not neatly arranged so that recreation can be the use here, timber there, water somewhere else, etc. Rain falls on all lands. Lava flows and pali are intermingled with productive timber land. Timber land is useful for recreation.

Forestry management includes building an organization of competent personnel, providing access to the forests with roads and trails, providing fences to control livestock, choosing trees that are the best for certain areas and certain purposes, developing a strong fire protection system, and controlling erosion on areas that have not fully recovered from past devastation.

Hawaii's soils and climate are capable of growing many kinds of trees. In fact, on a per acre basis, our potential in this regard exceeds the United States mainland and most parts of the world. For instance, we believe we have the tallest hardwood tree in the United States--a planted eucalyptus about forty-five years old, on the Island of Hawaii. A good forestation program for creating the maximum return will require careful, skill planning. We think we are on the right track, but we have a long way to go. Our goal is to plant 100,000 acres in thirty years.

In watershed management we still have a lot to learn, though I feel confident that our general program of protection and management is headed in the right direction.

As to wildlife, management is perhaps still mainly at a custodial level. Feral animals have been reduced to more or less tolerable levels. Wild cattle are gone; goats and pigs require continual reduction by hunting. But regulation of hunting is the responsibility of the Division of Fish and Game.

In recreation, we see a field that is growing rapidly in importance. In the past, the beaches and the sea itself were sufficient for most citizens seeking recreation areas. Some relatively small groups, such as hikers, hunters, and groups such as the Hawaii Audubon Society, looked to the hills. But with more people come more interests. We know that roads, trails, picnic and camping facilities, and access to lands of the interior of the islands must be developed. We are glad to help in the establishment of natural areas for the protection of rare species and plant and animal communities. The Alaka'i Swamp Reserve, for instance, was set up as a result of joint efforts by the Forestry and Fish and Game Divisions, to meet the suggestion and insistence of Dr. Frank Richardson and other ornithologists. Certain especially important areas have been set aside as State Parks, and have been assigned to a Division of State Parks, which was split off from the Division of Forestry a few years ago. Undoubtedly that was a good solution for areas with highly concentrated recreation value, but all wild lands have value for recreation. Much can be done to disperse recreational use over all wild land and give more satisfaction to more people.

Let me say that we must distinguish between aspiration and action. Our multiple-use plan is a statement of what we consider to be attainable as ideal. In some phases, the accomplishment and the ideal are relatively close. In some phases, much remains to be done. We need research all the time, and as use increases, we need further care in management. As in all other endeavors, we can never stand still.

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OAHU BIRD SURVEY
By Walt Donaghho
November 17 - December 3, 1965

Waipio, November 17: Found shore birds in diminished numbers in the Waipio Settlement basins. There were only one sharp-tailed sandpiper, along with a pectoral sandpiper, not noticed on the last visit. I noted a pair of long-billed dowitchers on the mudflats of the Waikiki basin. Their thin "teets" upon flight were just about the only way to identify them. Stilts were down--only 13 noted. Also noted were 56 sanderling, 17 turnstone, and 29 golden plover. One skylark was counted, and there were many black-headed mannikins in the tall grasses of the Ewa basin.

Workmen were working on the outlet gate of this basin, and the mudflats were drying up, with only a small puddle of water in the southeast corner.

Of great interest were a large flock of over 135 cattle egret, along with over a hundred mynahs feeding upon an infestation of caterpillars of Celerio lineata in a large field lying fallow Ewa and makai of the settlement basins. One egret was noted with a stick, flying from the field towards the rookery near the County Dump in West Loch.

Trash from this dump has been pushed by bulldozers clear across the fishpond, up to the mangroves where the cattle egrets are nesting. Are they going to destroy the rookery as well? What perfect irony! Here, at great cost, we import cattle egrets, only to destroy their breeding places! Does anyone see any intelligence in these actions? If so, tell me, I would like to know!

Opaeula, November 18: Covered at least two-thirds of this trail and found conditions just about as disappointing as before. Twenty-three 'apapane, of which 21 were seen more than a mile in; 15 'elepaio; 2 'i'iwi, one seen, one heard; and NO creeper; and NO 'amakihi. Try as hard as I might, I just couldn't make into 'amakihi, the white-eyes I saw. They always turned into white-eyes! There were a pair of green birds that looked suspiciously like 'amakihi, but I couldn't get a good look at them. If I had, they would also probably have turned into white-eyes!

These conditions seem analogous to conditions on the Poamoho and Kipapa Trails, which cover the richest areas of Oahu, with the exception of the Schofield side of Kaala. I don't believe it is the quietness of 'amakihi which prevent me from seeing them, as I have had no trouble on the East Manoa Ridge and in the Waianae. The Koa

will bloom shortly. In the past, that has brought the 'apapane in large numbers into an area. Let's see what will happen this season?????

Mokapu, November 23: Counted 25 stilt in the ponds--15 in those makai of the Marine Base highway and 10 on the Kaneohe side on the mudflats along the north shore by the Marine Base. Fifty-seven turnstone, 19 sanderling, and 73 golden plover were also counted. Six noio flew about over the ponds, dipping down now and then after fish. There were four skylarks in the grassy field at the southeast corner, just inland from the beach.

November 26: With Winston Banko and his son Paul, I surveyed most of the stilt and shore bird areas in the Honolulu and Pearl Harbor area in an attempt to see just how many stilt would be on the island. The result follow:

Kuapa Pond: 8 a.m. No stilt noted, 3 golden plover and 6 turnstone counted.

Paiko Lagoon: The stilt in this area all seemed to be over here--37 being counted. Six flew over to Kuapa Pond during the time we were here. In addition, we counted 18 turnstone, 12 golden plover, and 1 'auku'u.

Waipio-West Loch: 10 a.m. Thirty-seven stilt were in the pond on the mudflats between the County Dump and the town, of which 15 flew up at our approach and flew over to West Loch. The rest flew up as we spooked them and flew over to the Loch, the last three going over at about 10:30 a.m. Twenty pintail and a pair of green-winged teal on a pond bordered with bulrushes were spooked by us and flew over to West Loch. Eighty-nine golden plover and 2 'auku'u were the other birds noted; the plover being mostly on the mudflats with the stilt.

We couldn't get more than 37 stilt on the mudflats of West Loch near the egret rookery, so it seems that all stilt seen were those we spooked earlier from the mudflats between the County Dump and the town. We also noted the pintail sitting on the mudflats.

Seventeen 'auku'u, 7 sanderling, 5 golden plover, 3 coot and 1 stilt and wandering tattler were counted by Banko on the mudflats makai of the County Dump.

There were less birds than formerly on the settlement basins. The Waikiki basin is drying up; the water having been turned off. Thirty-nine golden plover, 26 turnstone, and 1 sanderling were noted here. Water ran into the Ewa basin, but there were only 9 golden plover on the mudflats. The grasses were full of flocks of black-headed mannikins and strawberry finches.

Keehi Lagoon had only a few plover and turnstone, and no stilt were noted.

At 5 p.m. I returned to Kuapa and Paiko to see what had happened with the birds, and I found 31 stilt on exposed mudflats at Paiko and 6 on Kuapa in the ponds near the road--making 37 in all, same as the morning count. A pair of pueo were hunting over the portulaca flats at Kuapa; the second time I have seen this pair in this area. Among the increased number of plover and turnstone on the mudflats of Paiko Lagoon there were six sanderling and one sharp-tailed sandpiper.

Our count for the day was 75 stilt. Kridler reported 41 from Mokapu and 21 from Kaelepulu--making a total of 137 from all areas except Kahuku. How many were up there?

Kipapa Trail, December 3: Results, as in the past, very poor--20 'apapane, 15 'elepaio, 1 male 'amakihi, and NO 'i'iwi and NO creeper.

Most of the 'apapane were down below the native forest in the planted forest, at paperbark blossoms. In the evening, I noted three within 200 yards of the Crossley ranchhouse. It seems to me that, were 'apapane as numerous as they were during the 40's, there would have been many more here.

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FIELD NOTES: October 20, 1965, Hill Mynah by Margaret Titcomb.

On coming home (Tantalus) the other day a loud and joyous whistle came through the high eucalyptus trees. A neighbor came over and we wondered what it could be, Someone guessed pet mynahs, escaped. There were two, it was reported. They were travelling toward Pacific Heights. Where are they now? It was a whistle better than any small boy could make, with a glorious note of freedom-found in it!

GOOD NEWS from Dr. Kenneth K. Otagaki, Chairman, Board of Agriculture, State Dept. of Agriculture, August 20, 1965:

"...I am pleased to report that to the best of our knowledge, it has not been necessary for the macadamia farmers in the Kona District to use malathion* for the control of the southern green stink bug (Nezara viridula var. smaragdula). This has been largely due to the effectiveness of introduced stink bug enemies by this Department which has kept the bug below pest levels. If it should become necessary for the farmers to use malathion to supplement biological control, it is unlikely that birds will be affected because most birds abhor stink bugs...."

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*See THE ELEPAIO, October 1964, Volume 25, No. 4, page 29.

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FIELD NOTES: ALAKA'I SWAMP, KAUAI, MARCH, 1965

By Lawrence N. Huber

About thirty minutes before dusk, close to one mile past the Koaie Cabin, on the Koaie-Waialae Trail, I observed an 'Akialoa. I was about two hundred feet from the point at which the trail started to descend into the next valley when I noticed the bird in the top of a large 'Ohi'a tree that was leaning out over the edge of the ridge about fifty feet from the trail. Normally, I probably would not have noticed it, but as it was the only bird I could hear or see at that time I gave it special attention. It was a dull olive-green nondescript-looking bird with a tremendously long, slightly decurved beak. The beak appeared to be as long as the bird itself (not including the tail). The 'Akialoa, which gave a clear loud whistle about once a minute, was feeding on the 'Ohi'a blossoms. Because of its bill it had to acquire some peculiar and awkward positions when it fed. Its basic position while feeding reminded me of a curlew trying to preen its neck. After about three minutes in that tree it flew past me into a smaller 'Ohi'a just down the trail from me. This tree was blossomless and the bird just foraged through the leaves at the top.

As I moved under this tree I noticed a male 'O'u that had apparently settled down for the night. Although the 'O'u was only fifteen feet over my head, it never moved and only called infrequently during the period of observation. Darkness was approaching, and I was forced to turn back for camp. When I left, both birds were still in the same tree.

Total observation time was from twelve to fifteen minutes. I was using 7/50 binoculars and had excellent views of the birds both with and without the binoculars. The afternoon was cloudy and it rained all night. There were no other birds present during the time I was watching the 'Akialoa and 'O'u. The next day I went back to the same place but did not see either bird. Another 'O'u was present, and because of its dark beak and dull colors I believe that it was probably an immature. This 'O'u gave the same call as the 'O'u on the previous day.

The calls of the 'Akialoa and 'O'u were exactly alike except one bird's call went up in pitch and the other's went down in pitch. Both were clear, loud, one note whistles. I cannot remember which call went with which bird at this time.

This report is so late, because I was the only observer and I decided that a sight record by a nobody in ornithology without any proof was worthless. But after considering that Mike Ord's banding of Hawaiian endemics has shown that the birds inhabit the same areas and even the same trees year after year, there is a good possibility that the bird can be seen again once the area and call are pointed out, and thus verify my sighting.

I have birded many times on all four main islands, and there is no doubt in my mind that the bird was an 'Akialoa. Also, the bird seemed to be completely healthy with no visible defects.

Mr. Huber came to Hawaii as a member of the Smithsonian Institution's Pacific Ocean Biological Survey, and at present he is majoring in zoology at the University of Arizona.

FIELD NOTES:

HAWAII REVISITED

By Grenville Hatch

A fortunate chance brought me to Hawaii for three weeks this past summer. It was all a great pleasure--to strengthen old friendships, to see the lovely colors of the ocean, the beautiful mountains, and then, as a choice bit to go over Aiea trail with Unoyo, and Althea and John Marrack. It seemed quite like old times, as we walked slowly on a perfect morning, looking for birds. Several 'Elepaio came close, responding to our squeaks, and had I written this before I read Walter Donaghho's report in the September ELEPAIO, I would have said that we heard a number of 'Amakihi, but did not see them. Now, horrified at possibility that our 'Amakihi are disappearing, I not only wonder if my ear had lost its accuracy this summer, but has it been misleading me for some years? One call of the White-eye is very similar to that of the 'Amakihi, but I had always thought I could distinguish between them. At any rate, we saw no 'Amakihi nor 'Apapane, but I had a glorious day, just being on the beautiful trail with congenial friends.

During the first week of August I spent four days at the Volcano. A friend and I spent many hours at the Thurston lava tube entrance, always a good place for birds. Here there was no Lehua in bloom, andthe 'Apapane were feeding on the fuschias. In the Bird Park, where we spent the better part of two days, I suffered the usual frustration from being unable to see the birds which abounded in the tree tops, far, far above. 'Elepaio came close, surprisingly so, as I always found the Hawaii 'Elepaio much more wary than our Oahu birds. There was neither Lehua nor Mamane bloom, so I was disappointed in seeing no 'I'iwi, but consoled myself with the thought that undoubtedly it would be in flower higher up. However, when we went up the Mauna Loa truck road, there was not a single Mamane, or 'I'iwi, in sight. While I cannot say that my birding at the Volcano was very good, the days spent there were a delight, as they always are.

Last week end (Sept. 25, 26th) Joe King was in La Jolla for a conference, and on a morning walk along the shore, we saw a Wandering Tattler--nothing very rare for Hawaii, but rare for this part of the world. We felt like three misplaced Hawaiians as we watched it feeding on the rocks.

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FIELD NOTES:

WEATHER WE LIKED IT OR NOT

By Carl Frings

The University of Hawaii's Ornithology calss field trip of October 10, 1965, under Dr. Berger's leadership proved to be a soggy, but interesting outing. The first winter-type storm of the season bathed Ulupau Head with rain and fog, but did not dampen the birding.

The purpose of the trip was to visit the Red-footed Booby colony. Approximately 200 adult, juvenile, and dark phase Boobies were seen. The Boobies were more difficult to approach than they were during the brooding period. Most of the young sighted seemed capable of flying. Despite the wariness of the birds, one hopeful scholar attempted to catch a young sleeping Booby, but he found with this bird the reversal of an old adage: the serrated beak <u>is</u> mightier than the pen-wielding hand. Needless to say, the bird did not stay in the hand long. The usual chorus of chatters and "burps" greeted us along our way, but the odor emanating from the sodden rookery produced an effect not really describable, yet it was interesting in its own way. The regurgitated remains of a meal, defensively produced by a disturbed adult, suggested that flying fish had been the entree.

Possibly more noteworthy, however, were the other ornithological findings of the day. A number of carefully woven Ricebird's nests were found at the edge of the Booby colony in the Kiawe bushes, but none was occupied. Frigate birds soaring majestically in the mist greeted us, as we arrived at the Booby colony. On our way to the Marine Base a Hawaiian Gallinule was sighted at the back edge of Kawainui Swamp. More stunning, however, were about 3 dozen Stilt along the road from the gate to the Booby colony. The Stilt, in beautiful formal black and white plumage, were feeding along the road and on the lawns of the residential area. A number

of Golden Plovers tagged along with the Stilts, and, in one place, several Turnstones were mixed with the group. All the birds looked healthy and trim. They did not seem to mind the light steady rain.

The class enjoyed the expedition, the weather dampening the clothes but not drowning the spirit.

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FIELD NOTES: ANNUAL VISIT BY LEIOTHRIX AND CHINESE THRUSH
By Mary Roberts

As in the last few years, a swarm of leiothrix and Chinese thrushes made a quick and melodious swing through our area as far down as Wilder Avenue as soon as the heavy rains started and the temperature dropped to the low 60's. An empty lot next to our home seemed to hold a particular attraction for them. A number of leiothrix eyed our bird bath from the plumeria tree, but joined the others quickly as they proceeded on their brief stay in our garden and swarmed into an orange tree across the street from us. This was in early November and they have come back from time to time, and we hope they will delight us with their visits more frequently.

On a tour around Tantalus to see the lovely, snow-white tree daisies (Montanoa) in full bloom, we were surprised by two beautiful male shama thrushes flitting from branch to branch in a group of Christmas-berry trees. As they perched momentarily on a branch, dainty as a piece of Rosenthal China, they whipped their long tails just as the mockingbird does. Once hidden in the underbrush, they started their amazing series of chuckles, at times sounding like teasing laughter, and then their strong, wonderful call. This was the lowest on Tantalus we had ever seen them, being the turn on Makiki Heights Road which is planted with the lovely yellow flowering albizia.

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Field Trip to Study Shore Birds, November 14, 1965.

November 14, 1965, field trip will probably go on record as the wettest that the Audubon Society has ever taken. Subsequently, it wasn't surprising that only four people braved the elements, two of whom will be the leaders of the National Audubon Society post convention tour to Hawaii in November, 1966.

Our first stop was at Rainbow Island to look for Albatross and Pomarine Jaegers, but due to poor visibility we didn't see either. The islands in Keehi Lagoon were disappointing--very few Golden Plover and Ruddy Turnstone were seen, though this can be attributed to the high tide eliminating practically all of the mudflats.

Waipio Peninsula between West and Middle Lochs was very much more fruitful. The mudflat behind the City and County dump had a flock of 40 Stilt feeding and resting on it. As we walked through the sugar-cane fields, large flocks of Strawberry Finches and Black-headed Mannikins flew up in front of us. Scanning the mudflats of the settlement basins with the telescope we saw one Sharp-tailed Sandpiper, one Long-billed Dowitcher, two Black-bellied Plover, a flock of 60 Sanderling, several Golden Plover, Ruddy Turnstone and Wandering Tattler, one Pintail, one Shoveler and many more Strawberry Finches and Black-headed Mannikins. Several Skylarks were heard singing, though I don't know what they had to sing about, since it was raining continuously. During this time at Waipio we were surprised to see a Tern flying around. At first glance it was easy to see that it was not one of our Hawaiian species because of its color and size. After careful observation and note taking, we determined that it was a Black Tern in full winter plumage, and as far as can be determined at this time it is the first record of a Black Tern in Hawaii.

W. M. Ord

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Margaret Titcomb's contribution: Letter from Bill Ward.

Our song recorder, Bill Ward, has gone to New Zealand, with his sound recorder tucked under his arm, providing that's the way he carries it. He reports that:

"We've seen about 20 New Zealand birds we could identify, and as many more that we couldn't. We have nice recordings of: Red-billed gull, Morepork (an owl),

and the Tui. We have several other recordings we can't identify." He is getting acquainted with people fast, and they are helping with bird names and in other ways. "The northern Kauri forests were quite wonderful, not only the Kauris but the tree ferns (bigger than Hawaii's) and the other plants, not to mention the bird life in them....About the only thing hard on us was the cold....Temperature in Auckland exhibition halls was 50°. But the N.Z. people go around in shorts and even barefoot. We are getting more used to it and it is beginning to get warmer...We'll acclimatize!"

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FOR THE JUNIOR MEMBERS:

The subject of the 1966 calendar is nesting birds. Pick out either your favorite nest or the nest used for the month of your birth date and find out about their differences, then see whether or not you can find any bird in Hawaii making the same type of nest. If you do find your bird, please share the information with other members by writing to Kojima, 725-A 8th Ave, Honolulu, Hawaii 96816.

Nest building is very important for the survival of a species, so the preservation of the habitat requirements for the satisfactory rearing of the young is vital. Look at your calendar and count how many are nesting on the ground, how many in a tree, and how many on a cliff. Look carefully at the materials used, the shape of the nests, and the number of eggs and young.

This is the time of the year when birds will be gathering nesting materials, so look around you and see how many birds are busily picking up the nesting materials in their beaks and flying off to a hidden spot where they have chosen for their home. But, no matter how curious you are, don't disturb the birds, because if you do, you'll frighten them away.

The August-September, 1965, issue of the NATURAL HISTORY magazine on pages 40 through 47 has an interesting article on the "Evolution of Nest Building" by Nicholas E. Collias.

The author says, "The primary and general functions of a bird's nest are to help insure warmth and safety for the developing eggs and young, and the problems of warmth and safety for the young are generally most acute for small birds, which explains why, as a rule, birds of small body size build nests that are more elaborate and better concealed than are those of larger birds."

He begins the explanation of the evolution of nesting by pointing out that there is a family of birds called Megapodiidae, which instead of using the parental incubation buried their eggs in the soil and relied on heat furnished either by decaying vegetation or the sun. The nest may vary from a simple small pit dug in the sand, large enough for just one egg, to gigantic mounds of soil and decaying vegetation from 30 to 60 feet long and reaching 15 feet in height--the largest bird nests known.

He says, "Parental behavior may supplement or even substitute entirely for a nest under severe environmental conditions. For example, the Emperor Penguin, which breeds in the Antarctic winter, has no nest, but rests its single egg on the feet, covers it with a fold of skin from the abdomen, and incubates it against the body. Probably no other animal breeds under such trying conditions. At an opposite extreme, eggs or nestlings exposed to strong tropical sun in open situations are customarily shaded by the body and wings of the parent, as in the case of the Sooty Tern of Midway Island, whose nest is a mere scrape in the coral sand....

"In contrast to cavity nesters, birds that build open nests on the ground are subject to a greater chance of nest failure. Consequently, there is a strong selection pressure to build an adequate nest, to develop other special means of parental care, or to evolve markedly efficient concealing coloration. In certain cases, the color pattern of the eggs and the young, as in the European Stone Curlew, or of the young and the parent, as in the Whip-poor-will, matches the surroundings so closely that the nest has disappeared in evolution, presumably because a nest itself would attract attention and be too conspicuous....Species of birds with precocial young (covered with down and able to move about) are generally ground

nesters, whereas species with altricial (naked and helpless) young frequently nest on trees or bushes.

"Tree nesting requires the solution of new types of engineering problems. The nature of the materials used varies with the body size of the bird and its lifting power. Large birds use large twigs and even branches, which will not readily be blown out of trees by the wind. Medium-sized birds use small twigs or grasses or both, sometimes adding mud to help attach and bind the materials. Many small birds use spideror insect silk as a binding material for the attachment of the nest to the substrate and to bind various other materials of the nest together....

"In contrast to its importance among the social insects, a compound nest has been evolved by only a few species of birds. The compound nest consists of a common nest mass in which more than one pair of birds or more than one female of the same species occupy separate compartments. Many different individuals may work together on the common roof, which may be one key to the evolution of this remarkable structure. Special security from predation seems to be an important factor in making possible gregarious breeding, a phenomenon that is rather rare among small land birds, although common in sea birds on remote islets or in accessible cliffs."

There is a great difference between the shallow scrape of a Sooty Tern in the coral sand of a tropical island andthe immense communal dwellings of the little Sociable Weaver, but in order to survive, each bird is adjusting to the ecological demand of its particular environment, so let's help preserve the best living conditions for all species concerned.

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Letter from Steve West, Loving, New Mexico, November 8, 1965:

Fall migration is very good here this year. Last year it was not so good. We have Townsend's Solitaire, Cedar Waxwing, Audubon's Warblers, and Western Tanagers here now. A few days ago we had a female Summer Tanager and even a Palm Warbler. I also think there was a good increase of White-necked Ravens.

We went to and stayed at the Caverns as we hoped we would and saw the bats. The Ranger estimated that there were between 100,000 and 200,000 of them there. It was very interesting and I hope to see it again next summer. Most of them are gone by now. While we were there, we also did quite a bit of bird watching. There were even 2 Varied Buntings there. They have been reported at the Park many times. We found a den of Gray Fox (3) in a little gully. The three young ones were playing at the entrance to their den when we came along....

Johnny Fischer from Corpus Christi, Texas, Sammy Burkham and I went to Roswell on the 8th of August. We foundthe Mississippi Kite we were searching for. Vester Montgomery told us where we could find it, and then he took us bird watching at Bitter Lakes Wildlife Refuge. Mr. Montgomery has done much field work in southeast New Mexico. He and R.C. Brummett, who passed away last December, have added many birds to the State list. Mr. Brummett added at least 6 in the 10 years he was here. Probably his most remarkable birds were the Roseate Spoonbill, Black Skimmer, and the Piping Plover. We hope to hold a Christmas bird count in this area where he did so much of his field work.

A Cooper's Hawk was at Six-Mile Dam the other day. I hope that this winter the Accipiters are not as rare as they were last winter. We saw them on no more than half a dozen occasions. Recently also the egrets and night herons have been rare. This summer we have seen only one Black-crowned Night Heron and no egrets.

John Fischer and I will be making posters on wildlife to place in the schools. We're tired of much of this needless destruction of wildlife that is going on. A colony of Cliff Swallows which was estimated at 250+ was destroyed this summer and only one nest could be found. A smaller one of both Barn and Cliff Swallows was destroyed at least twice this year, and we think may be even more. It contains less than 40 nests.

I am working on the Hornaday Conservation Award in Explorers, and I would appreciate any suggestions that you might have on projects.

We were bird watching the other day and found a Black Duck and several Northern

Phalaropes. Both were new birds to me. We went to several lakes near Malaga. All of them were abundant with bird life. I will bring my Loving bird list up to date and also get a map of the area showing the best bird watching places.

I am supposed to send in reports on the game birds that we observed to the New Mexico Department of Game and Fish. At the September meeting of the Sportmens' club meeting John Phillips and I had to give the side of the predator story which told of the good they do. Several of the members were definitely against them and wanted them wiped out.

Recently, Sam Burkham and I went to 6-Mile Dam and found six dead Least Sandpipers. One of them had a spot of blood on its chin. I think that someone had shot them about a day before we got there. We have also found one dead Robin and one dead Brewer's Sparrow.

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CHIP-CHIP

By Mrs. Matilda Gomes as recorded by Grenville Hatch

As I sat on the front lanai of our home in upper Kalihi valley one morning some months ago, a little ricebird flew into my lap, seeming quite unafraid. I called to my daughter to bring me some rice, which he ate from my hand.

Since then, he flies in every day, and even follows me around the house, like a tiny dog. We call him "Chip-chip", from his call. He is very particular about his food. One day we ran out of the Chinese rice to which he was accustomed. When I offered him Japanese rice he angrily threw it out of my hand, and refused to eat until we borrowed some of his usual kind from the neighbors.

One day my grandchildren found a dead ricebird in the garden, evidently one killed by a slingshot. They were sure it must be Chip-chip, but knowing I would grieve, decided not to tell me. However, they were so anxious that my suspicions were aroused by their constant inquiry, "Has Chip-chip come today?" Great was the rejoicing when Chip-chip came.

Now, months later, Chip-chip has brought some of his friends, but he has no intention of letting them take his place--he will not tolerate any closer approach than the steps to the lanai.

Mrs. Gomes is in her nineties, but is bright, alert, and with excellent eyesight and hearing.

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FEBRUARY ACTIVITIES:

February 13 - Field trip to Palikea to study forest 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: Mike Ord, telephone: 256-320.

February 14 - Board meeting at the Honolulu Aquarium Auditorium at 7:30 p.m. Members are always welcome.

February 21 - General meeting at the Honolulu Aquarium Auditorium at 7:30 p.m.
Speaker: Dr. Hubert Frings
Topic : Lives of the Tiny Revealed by the Camera

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