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WESTERN SAMOAN BIRD NOTES

By R. H. Green
Zoologist, Queen Victoria Museum, Launceston, Tasmania

In the course of three weeks spent in Western Samoa (19th May to 14th June, 1965) I took the opportunity to make some observations on the birds of Upolu and Savai'i. In most cases the species were new to me and identification was based on Mrs. Ashmole's "List of the Birds of Samoa," 1963 (mimeographed by the Pacific Scientific Information Center).

Observations were limited to a coastal area of Upolu between Apia and Falaola airport, the hills behind Apia, a day trip to Lake Lanoto'o, and a two-day trip to the crater of Mt. Matavanu on the island of Savai'i.

The absence of sea bird records is because my arrival and departure were by air and it was not practical to make a sea trip during my temporary stay.

White-tailed Tropic Bird, Phaethon lepturus: Occasionally a pair or individuals were seen passing high overhead in direct flight between the sea and the jungle covered hills behind Apia. Possibly these were breeding birds.

Fairy or White Tern, <u>Gygis alba</u>: About six birds, assumed to be this species, were seen in a small flock "hawking" at great height above the hills near Afiamalu, behind Apia, on 21st May. A few odd pairs and individuals noticed at other times flying over the coastal area near Apia.

Pacific Golden Plover, <u>Pluvialis dominica fulva</u>: Odd birds feeding on the tidal mud flats along the coast east of Apia on 27th May. About 40 individuals scattered over the airfield at Falcola on 13th June. Many appeared to be in breeding plumage.

American Wandering Tattler, <u>Heteroscelus incanus</u>: Not positively observed, but one wader, possibly this species, was seen feeding on the tidal mud flats on the coast between Apia and Faleola.

Reef Heron, <u>Demigretta sacra</u>: Apparently fairly common on the intertidal zone near Apia. Seven individuals were seen on 27th May. All were well apart and of dark plumage. No "white" herons were seen.

Bush Fowl, <u>Gallus gallus</u>: What was possibly one of this species was heard in the hills near Mt. Matavanu on Savai'i. For about 15 seconds it called in alarm as if suddenly flushed from a nest.

Banded Rail, <u>Rallus philippensis</u>: Commonly observed on Upolu and Savai'i especially crossing the roadways. On 26th May a pair were seen with at least

one young chick on the roadside on Savai'i.

Crimson-crowned Fruit Dove, <u>Ptilinopus porphyraceus</u>: Heard commonly on Upolu and Savai'i and often flushed in the hills behind Apia.

Samoan Tooth-billed Pigeon, <u>Didunculus strigirostris</u>: Not observed in the flesh, but a recently prepared skin of a road killed(?) specimen was shown to me.

Blue-faced Lory, <u>Vini australis</u>: Commonly heard and seen on both Upolu and Savai'i. Occurences seemed most common in the hills and the species was very plentiful round Mt. Matavanu.

Barn Owl, $\underline{\text{Tyto}}$ alba $\underline{\text{lulu}}$: Observed on several occasions on Upolu flying through the plantations in broad daylight.

White-rumped Swiftlets, <u>Collocalia spodiopygia</u>: Very numerous on both Upolu and Savai'i, particularly in the hill country. A number were seen hawking inside the crater of Mt. Matavanu.

Flat-billed Kingfisher, <u>Halcyon recurvirostris</u>: One bird seen perched on a wire in a clearing behind Apia.

Polynesian Triller, <u>Lalage maculosa</u>, or Samoan Triller, <u>Lalage sharpei</u>: One of these species was seen commonly on both Upolu and Savai'i. They were tolerant of man and were a common sight on sports grounds, even during the progress of matches. Several were seen over the bare lava on Savai'i.

Red-vented Bulbul, Pycnonotus cafer bengalensis: A common bird throughout the settled areas of Upolu. I do not recall seeing any on Savai'i or in the jungle covered hill country of Upolu.

Island Thrush, <u>Turdus poliocephalus samoensis</u>: Seen fairly regularly on both Upolu and Savai'i, but only as pairs or individuals. A nest with 3 eggs, situated 5 feet above the ground on the foliage of "Wild Ginger," was found on the slopes near Lake Lanoto'o, Upolu, on 11th June.

Samoan Fantail, Rhipidura nebulosa: A common bird on both Upolu and Savai'i.

Scarlet Robin, <u>Patroica multicolor</u>: One pair observed near Afiamalu, Upolu. The male was seen to feed the female several times. Both sexes are strikingly different from the Australian form. The white forehead and wing patch are very much smaller and the black much more prominent; the black upper surface on the female being almost equal to that on the male.

Samoan Whistler, Pachycephala flavifrons: One male seen near Afiamalu.

Wattled Honeyeater, <u>Foulehaio carunculata</u>: A common and noisy bird on both Upolu and Savai'i, particularly in the hills. They were common round the lip of Matavanu crater, feeding on the red blossoms.

Cardinal Honeyeater, <u>Mezomela cardinalis</u>: A common bird particularly in the hills. They were very numerous, feeding on the blossom round the edge of Matavanu crater, and appear to be in all stages of plumage from sub-adults to full adult plumage.

Polynesian Starling, <u>Aplonis tabuensis</u>, or Samoan Starling, <u>Aplonis atrifuscus</u>: One of these species was seen on occasions on Upolu.

Introduced Mynah, (Acridotheres tristis?): Often seen in Apia, but does not appear to have spread as yet beyond the town area.

In addition, about two dozen small waders, somewhat resembling Stints, were seen on a tidal mud flat between Apia and Faleola, on 27th May. The observation was made from a public bus and identification was impossible.

On 2nd June two large black and brown Tern-like birds were seen flying from the hills behind Apia to the open sea, and on 8th June a similar bird was seen in flight to Lake Lanoto'o.

HAWAIIAN BIRD SURVEY By Walt Donaghho*

KAWAILOA SWAMP

The 1965 Hawaiian Bird Survey was launched this July by a trip with Eugene Kridler to examine the Kawailoa Swamp for Michio Takata, who wishes to know just how valuable the swamp is as a bird sanctuary, how much damage a proposed double-laned highway would do to the swamp, and whether the highway could be diverted.

I found the swamp quite changed, since I saw it last in 1947. There is no longer a channel connecting Ea Lake to the west with the Ukoa Pond to the east. This is all overgrown with ditch grass and honohono. Of course, there are no longer any gallinule. The Ukoa Pond is covered with water hyacinths on which mynahs and a parent gallinule and her young walked feeding. I heard one more gallinule within the bulrushes that bordered the pond. We counted 12 Aukuu, about half of which were young birds. Five coot were on Ea Pond.

The highway would no less than destroy the Ukoa Pond, which would be deplorable. Yes, it certainly can be diverted. It could aim more mauka, missing the pond and passing over a hard coral roadbed, better than the more unstable swamp. This would be cheaper, as there would be no necessity for quarrying, transporting rock, and the paying wages for the necessary man-hours for doing so. This alone should be enough to get the authorities to divert the highway and leave the pond as a sanctuary for the fast disappearing water birds.

KOKO HEAD, July 4, 1965.

With Mike Ord, Dr. Andy Berger, Gene Kridler, and young Gene-o along for moral support, we spent a memorable day examining the colony of white terns in the inner crater makai of Hanauma Bay. Nine terns, mostly flying in pairs (the ninth bird was a competitor for the female) flew about over the crater, now and then landing in the kiawe forest on the bottom. We noted no eggs or young.

More amazing observations were to be made as we proceeded to the high bluffs on the outer southeast side of Koko Head. Here, we saw a flying immature term sitting on the tuff slope just above the rim of the cliffs; a testimonial that it was reared on Koko Head. Two pairs of terms flew about the cliffs and perched on a rocky ledge just below the rim, but examination by Mike and Andy disclosed nothing.

Three red-tailed tropic birds flew in and started their flying backwards in circles above the rim of the crater. They examined us, as did a pair of white-tailed tropic birds, as we stood on the rim of the southeast cliffs. Do they nest on these cliffs? A nest here would be the first recorded for Oahu. They are suspected of nesting on Niihau, and have been seen going into holes in cliffs on Lanai.

^{*}Walter R. Donaghho, one of the late Mr. George C. Munro's proteges, has recently returned from Seattle to conduct a long-needed Hawaiian bird survey. ALOHA.

Three more white terms were flying about in the deep ravine down the west end of the main ridge of Koko Head.

POAMOHO TRAIL

Tim Burr and I hiked over this trail Monday, July 5. I noted quite a few changes! First, no amakihi on my list! Where were they? Never before have the amakihi ever failed to show up on my lists in the native forests of Oahu. The creeper also was absent. Usually it is a reliable inhabitant on this trail, where I have counted as many as seven or eight. The woods were on the silent side, in contrast to the noisy flocks of birds seen here before. Fifty apapane were counted, slightly more mejiro, and I saw two and heard one iiwi. I was quite surprised to hear the uguisu in the rain forest at the summit. This bird I had heard previously in the Waianae in the much drier woods, and was beginning to think of it as inhabiting the drier areas of forest. It could hardly find a damper and wetter spot on the entire island! Other birds noted were the Pekin nightingale, elepaio, three ricebirds, a pair of linnets and one turtle dove on the road.

MANOA VALLEY

Took a hike on July 15 up to the Manoa Falls. Noticed that this area is now a forest of planted trees; a large tree resembling jacaranda, eucalyptus, African tulip, and a tree with rosettes of large leaves, its name escapes me; it grows in the Mexican jungles. The understory is largely guava, with much hau thicket. Planted and native koa grow on the ridges. There is some kukui in the valley.

This area I found to be mainly the domain of flocks of leiothrix which occupy the undergrowth, and the white-eye, which feeds on the blossoms of the African tulip, the mountain apples which also grow along the stream, and other blossoms. I whistled for, but failed to see elepaio. One shama thrush was heard along the road above the housing development now under construction, and before the start of the trail.

KAELEPULU POND, July 16-17, 1965.

Spent two days exploring the pond and the canal mauka of Campos Ranch. Counted 110 coot, 20 stilt, and 23 aukuu, also four gallinule, two in the canal, one in Kaelepulu Pond, in a large island of bulrushes about halfway along the mauka shore, where the coot and stilts are, and the fourth one in a small marsh on the Campos Ranch makai of the canal, and mauka of the rock quarry. Four stilt were also seen here. I believe they fly over here from the Kaelepulu. I saw four leave the marsh at 9 a.m. on the 17th, and at 3 p.m., saw a pair flying from Kaelepulu along the west shore headed in the direction of Kailua and this marsh.

One gallinule is nesting in a clump of bulrushes about 100 yards from the Campos Ranch bridge across the canal. If you examine this clump from the bridge you can see the red bill through the rushes.

The birds still find a good habitat along the south side of Kaelepulu, and the area could still be saved, either by purchasing the land as a wildlife refuge, or the Kaneohe Ranch hanging on to the land. They are not bothered by the construction across the lake, which includes blasting, and they certainly wouldn't be bothered by the activities of normal living. The birds get along with the cows, which improve the habitat in a way by churning up the mud along the shore, and creating nesting places for the stilt. I didn't see any nests, but strongly believe they nest here. Two pairs of birds were highly concerned about my presence on each day, in the same area.

In addition to the four stilt, eight coot, one gallinule and one aukuu were seen on the small marsh on Campos Ranch. More gallinule are certainly in the dense grass here, as well as along the canal banks. If this land remains in Campo's hands the birds are safe. I don't believe he has any intentions of making any radical changes on it.

WAIPIO

Examined these mudflats with Tim Burr on July 18. Counted 115 stilt, 28 coot, 8 aukuu, and 6 cattle egrets. The mangroves are solid along the shore, and I can see that the old approach taken by the Society doesn't offer much of a view anymore. There is a better one from the new housing development above the old railroad west of the High School, but a telescope is best for examining shorebirds from here.

KIPAPA TRAIL, July 18, 1965.

Rain interfered with birding, finally causing Tim Burr and me to turn around, but we got some idea of the birds in the lower part of the trail. The forest was largely silent, with a few apapane about two miles in. Elepaio was the commonest native bird, a pair being in almost every glen, most coming up to the trail to investigate "that other elepaio" which had an exasperating habit of whistling and remaining hidden! At least three uguisu were heard, and we saw the usual quota of hill robins and white-eyes.

Again, no amakihi. Or perhaps one, a fat silouette that seemed too fat for mejiro. The amakihi appears definately on its way out, and a few years may see the Oahu amakihi become extinct. The mosquito, competition, or whatever it is, it seems to be decimating their numbers. Imagine, on two trail lists, only one bird that MIGHT have been an amakihi!

RABBIT ISLAND, June 27, 1965.

Dave Woodside took Gene Kridler and me out to Rabbit Island, and the first thing I noticed was that the socty terms seemed to be all over the place. It was hard to locate noddy terms from the boat, but we later found them in small colonies around the rim, and others in the ravines on the southwest slope under the main peak, and also on the east slope, above the flat. A far cry from 1947, when sooties were flying about all over. I understand the colony was founded in 1949. The sooty has displaced many of the noddies from their former colonies on the rim, yet a fair number still remain.

They avoid the tussock grass areas, which are the domain of the wedge-tailed shearwaters, as formerly. They were all on eggs, which Dave stated were a week old, all birds laying about the same time. They also occupy the bottom of the crater, which is now overgrown with grass. In 1947 it was barren, with patches of pigweed. Tobacco is now rampant, covering the slopes of the crater.

I found Bulwer's petrel still nesting along the bluffs behind the beach. I counted nine on eggs in the northwest colony, and one pair copulating in a small burrow that was waist high. There were five more seen in the higher bluffs south of the landing beach, and two had kicked their eggs out from under them; the egg lying a foot or so behind the bird.

Pigeons flew up on two occasions, and were each time attacked by a flock of sooties and noddies.

Kridler made an estimate of at least 200,000 sooties on the island. Noddies were estimated only one-fifth as common, or about 40,000. He made a count of 300 noddies on eggs to 9 young birds. There seem to be two main nesting periods of the sooties; those on eggs and up to half grown young, and from nearly grown young to those flying. There didn't seem to be too many half grown young.

FIELD NOTES

Molokai, August, 1964.

A black-crowned night heron was standing in one of the defunct fishponds on the south side of Molokai as we were en route to Halawa Valley. Many stilt were in the mud flats; their pink legs almost hidden in the mud. White-tailed tropic birds flew over the lookout above Kalaupapa, while we sat and looked down into the settlement. No native birds were seen or heard in the forest area where we went to see the only known surviving sandalwood measure - a hole dug in the ground the size of the hold of a sailing ship. There were ring-necked pheasant and California quail along the way back to Kaunakakai.

Lanai, August, 1964.

Again we saw or heard no native forest birds. Many North American cardinals, mynahs, and all kinds of doves were visible. Saw six or eight goats and antelopes on the way to Shipwreck Beach. Chukar, quail, and ricebirds were seen on the way to Lanaihale. It was wonderful to see Mr. Munro's fog drip working, after having read about it in THE ELEPAIO for many years.

Hawaii - Volcano Area, August, 1964.

White-tailed tropic brids were down in the fumes near the floor of Halemaumau. An omao was heard in the area near the golf course. Someone said the plover arrived on August 8; however, although we heard them on the 13th, we didn't see any until the 17th. An io flew out of a tree on the Chain of Craters Road, evidently startled by the noise of our car. The hawk circled nearby for some time so that, with binoculars, we could see the sharp beak.

White-eyes and house finches bathed as usual in the garage gutter of our house near the golf course. The females seemed more aggressive than the males. Leiothrix were heard but not seen. A few apapane were about, but not many. Clear, dry weather generally keeps them higher in the forest in August; rainy weather usually brings some to our area. The annually seen coots in the pond at the Tropics Lanai in Hilo had a baby coot trailing them this year.

Oahu, May, 1965. WHITE-TAILED TROPIC BIRD.

On an airplane flight chartered by a group of students and teachers from the University High School to observe the geological features of the island of Oahu, I saw a koae from the plane. This was a new experience for me; usually I have seen them around and in Kilauea and Halemaumau and in the Koolau Range valleys - never before from the air. We were over Waimea Bay, when I spotted the koae very clearly below us, tail feathers and all. The viewing was very brief, a surprise and a pleasure.

Janet E. Bell

FOR JUNIOR MEMBERS:

In BIRDS OF THE WORLD, Oliver L. Austin, Jr., says, "The White-tailed Kite is now very rare in the southern parts of the United States, but still fairly common in parts of Central and South America." (Page 76)

Describe the bird on the calendar, then compare it with that of Peterson's and see whether or not you were able to find all the field markings. In A FIELD GUIDE TO WESTERN BIRDS, he says that it is a pale gray bird with white head, underparts, and tail, and either perched or flying it shows a large black patch toward fore edge of upper wing. It is falcon-shaped with long, pointed wings and a long tail.

It soars and glides like a small gull and often hovers with the fluttering wings held gull-fashion well above the body, and frequently dangles its legs while flying. It frequents open marshy places, open foothills, and river valleys to look for food, and it uses its feet to seize and to kill its prey--small snakes, lizards, grasshoppers, rodents, and other insects. It builds a platform of twigs in trees growing adjacent to pen country, and in May lays 3-5 heavily blotched eggs. As in most hawks the incubation period is long, 4 weeks or more.

It is found chiefly in southwestern United States. Although formerly it was found in Florida and probably South Carolina and Oklahoma, it is now, a rare bird east of the Mississippi and is considered an accidental in the East.

Gayle Pickwell in BIRDS on page 3 states that the White-tailed Kite is the

most beautiful hawk in North America, and it is now the rarest. He further comments on this beautiful hawk as being "friendly, and so it is almost extinct. Nearly all the Kites that remain, and they are very few, show their white tails, black shoulders, and dangling legs in a few regions in California."

Have you seen the robins? There's an interesting article, History of a Robin's Nest, by F. Seymour Hersey in the Summer 1965 issue of the MASSACHUSETTS AUDUBON, pp 195-200.

The author describes in detail the use of the feet by the robin in nest building.
"...When first noticed there was only a small handful of soft, dead grasses
loosely wedged between upright shoots...

"Soon after I first noticed the nest the female returned with a beakful of the same material. After depositing her load upon the material already accumulated, she stepped onto the nest, flattened her body over it, partly spread one wing while the other was apparently partly cupped over the edge of the material, and then kicked vigorously with the leg on the same side as the spread wing. This kicking lasted about ten or fifteen seconds, then the bird moved about the distance of one-tenth of the circumference of the nest and kicked again, and continued this action until she had made a full circuit of the nest. She now hopped out of the nest to a nearby twig, where she stood for about half a minute without looking back at the nest at all, and then flew away. In a minute or so she returned with more material and place it in the same manner...It was difficult to see the value of this action, at least at this stage of nest building. The nest was only a shapeless accumulation of grass, with no semblance of a cavity or depression, and after the bird got through kicking, it looked no different. The bird may have been pushing and wedging the grass more firmly between the upright shoots of the bush that supported it; and it is true that now that the nest is nearing completion, a considerable amount of grass has been forced out between these shoots and thus helps to anchor it in place... The bird continued to bring material pretty steadily all day... Each load brought was carefully kicked into position. The energy used was really enormous. The bird spent a full minute, or even somewhat more, arranging each accession and often paused when turning around in the nest....

"The next morning she continued work and gradually a slight depression began to form in the nest. By noon I noticed she was bringing mud. This was kicked into position in the same manner, and it seemed she worked even harder now...Arriving with a piece of mud about the size of a marble, she stood for a few seconds on the edge of the nest, looking down into it, then carefully pushed the mud into an apparently selected place. Sometimes the mud appeared to be pushed in with some force. She then stepped into the nest and kicked vigorously, not only where she had put the mud but all the way around the nest. In intervals of rest between kicks, she would reach outside with her bill and pull bits of grass in towards the wall. The mass of grass now began to take shape quite rapidly. Now I could see the way her method worked. The mud she brought was placed in the bottom of the nest. As she kicked and turned around in the nest, she pushed the mud and grass outward and upward, pushing up the rim of the nest and giving it the typical shape. By four o'clock she stopped work for the day.

"This morning she continued to bring mud and the walls were pushed up about half an inch higher and considerably thickened. By noon the nest seemed ready for the lining; and at two o'clock the first lining material was brought. This was a dozen strands or more of a long dry grass, completely different from what had been used before. It was laid horizontally across the top of the nest, then the bird hopped into the nest and kicked it into place, turning around and around, and tucking loose ends in with her bill. As more grass was brought, it was pushed into place with the bill and the kicking became less vigorous; but as the lining material increased, I could see it worked up the sides from the bottom of the nest by the bird's feet and pushed against the soft mud by the bird's breast as she turned.

"By four o'clock the bird stopped work, and the nest appears to be complete, although it is possible some more lining material may be added...."

Do you know of any other bird that uses its feet for nest building? Please share your experiences with the other members by sending in your field notes to me.

LETTERS: From Steve West, Loving, New Mexico, July 16, 1965.

...While I was in Arizona, I added 11 new birds. They are:
White-winged Dove Arizona Woodpecker Phainopepla

Inca Dove Black-tailed Gnatcatcher Arizona or Mexican Jay Lucy's Warbler Spotted Dove (most likely Zone-tailed Hawk

Gambel's Quail Spotted Dove (most likely Zone-tailed Haw

I've added a few birds around here lately, but I think that the most interesting was a female American Redstart near Loving on June 6. At that time of the year they should be nesting in northern Colorado. We had an excellent spring migration here in southeastern New Mexico. We saw a total of 11 species of warblers. I have listed them here:

Audubon Warbler Orange-crowned Warbler Yellow-breasted Chat Yellowthroat Myrtle Warbler Yellow Warbler Wilson's Warbler Nashville Warbler American Redstart

Black-throated Gray Warbler Black-throated Green Warbler

I was talking to the Park Naturalist at Carlsbad Caverns about the Golden Eagle's nest in the park. He told me that one of the eggs failed to hatch, so he saved it for the park collection. A second young eagle was banded in the park. The caverns are famous for the large number of bats, mostly Mexican Free-tail. I was reading a book about the bats of Carlsbad Caverns, and it said that the bats left at night and came back in the morning. When they return, they dive straight at the entrance at an estimated speed of 20 to 25 mph. A friend and I are going to spend the night there and get up early in the morning to see this action...We hope to find some Ring-tailed Cats, while we are there...

Sammy Burkham and I spent the other day at 6-Mile Dam catching fish with nets, identifying then releasing them. We did see a Black-crowned Night Heron, which was new to me...

Johnny Fischer from Corpus Christi and I went bird watching at the Pecos and Black Rivers not too long ago at about 4:30 in the morning. We found 2 Belted Kingfishers, 2 Harris' Hawk, 1 Swainson's Hawk, 1 female Common Merganser, 1 Yellow-breasted Chat, and 2 Muskrats.

The nesting season is here, and so far I have found the nests or suspected nesting of 43 species--33 in New Mexico, 10 in Arizona....

The House Finch nested twice here in our yard this year. That makes a total of four nests in the past three years. The first one failed to rear young or even hatch eggs, because some Brown-headed Cowbirds laid two eggs in the Finch's nest. The second nest of last year, I think, hatched eggs, but I doubt if it reared young. I observed one of the parents taking food to the nest and I heard the young one crying, but I don't think the young ones lived. This year the first House Finch's nest seemed to be empty, and the second nest also seemed without eggs. I don't know what is causing this egglessness, but I sure wish it would stop.

The District Forest Ranger, Stan Tixier, found a dead female Calliope Humming-bird for me. It is too late to mount, but I think that it will dry out fine. I also have a dead Harris' Hawk, Eastern Meadowlark, Lesser Nighthawk, and a House Sparrow that I have to mount. I also have a Lesser Goldfinch's skull to prepare... At Roswell they have a colony of Mississippi Kites, the only breeders of that species in the state. If I should be lucky enough to see it, it will be a new "lifer."

Do you know anything about the Masked Bobwhite, the October's bird on the calendar? If you do, please share your information with other members by writing to me.

Minutes of the Meeting of the Hawaii Audubon Society, June 21, 1965

... The June field trip was to Rabbit Island. There were 18 people in the group; little trouble in landing. Birds seen were Wedge-tailed shearwater and large quantities of Sooty tern, which babies were almost all full grown and also a large number of Common noddies with eggs and very young in evidence. Return trip was without incident; a successful trip.

The speaker of the evening was Mr. David Fellows, Marine-Zoologist on the staff of the University of Hawaii, who talked on the subject of the reefs of Oahu, and showed slides of under-water scenes that he had taken. They were very beautiful; many reef animals of great variety of form and color were in each slide.

Mr. Fellows spoke of the unfortunate fate of our reefs right now, caused by the suddenly changing conditions. That there is more popularity for going reefing is due to the new apparatus for staying under water for extensive length of time. There are no regulations as to what one may do to a reef or take from it. Therefore, there is great destruction, for most divers want to take what delights them; many throw away what they have ripped off the reef. There are also fishermen who use bombs and poisons in order to get more fish faster.

Three areas of the Oahu reefs are especially popular or unfortunate: Magic Island, Kaneohe Bay and Hanauma Bay. Magic Island operations have killed the reef along the Ala Moana shore; Kaneohe Bay is a lifeless area, or nearly so, after the flooding rain of early spring, because it carried out to the Bay a great deal of soil, which it could skim off the land easily because of all the recent realty operations. Hanauma Bay is a favorite spot for skin-divers, and they are not conservationists. Regulations for use of the reefs are badly needed.

Margaret Titcomb, Secretary

ALOHA to our new members:

Stephen Au, 850 Richards St., Honolulu, Hawaii 96813 Mrs. Rosie Chang, 4141 Kaimanahila St., Honolulu, Hawaii 96815 Mrs. Henry A. Dangler, 4622 Aukai St., Honolulu, Hawaii 96815 Roger Lee Hill, Jr., 3371 Loulu St., Honolulu, Hawaii 96822 Dr. Alfred J. Marston, 111 Eighth Ave., New York, New York 10011 Mrs. Donald P. Russell, North River Road, Milford, New Hampshire

SEPTEMBER ACTIVITIES:

September 12 - 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: Mike Ord, telephone: 587-328.

September 13 - Board meeting at the Honolulu Aquarium Auditorium at 7:30 p.m. Members are always welcome.

September 27 - PLEASE NOTE DATE. General meeting at the Honolulu Aquarium

Auditorium at 7:30 p.m. Program for the night: Eugene Kridler

will show AMERICAN BISON filmed at National Bison Refuge in

Montana and FOR THE PEOPLE - WILDLIFE REFUGE, a film on the

national waterfowl refuges on the Mainland.

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Ronald L. Walker