

Journal of the  
Hawaii Audubon Society



For the Better Protection  
of Wildlife in Hawaii

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NOVEMBER 1960

## PAIKO LAGOON

### An Appeal for a Sanctuary for Shore Birds

Prepared for the State Planning Office, October, 1960, by the  
Hawaii Audubon Society

In planning for Hawaii, now and in the future, it is likely that someone thought of wildlife preservation. However, it has not been my luck to see or hear any mention of it as yet. We have the Conservation Council for advisement, as well as the Master Plan and the State Parks plan of the State Planning Office. . . They do not mention birds. Wildlife in Hawaii, unlike other areas of our country, where animals of many kinds abound, or used to be abundant, is represented only by birds, insects and other small land and marine forms. This discussion is confined to the birds of Hawaii.

In the mainland United States and in Europe, and indeed in many other parts of the world, there are areas set aside to be preserved as they are so that the great outdoors may be known, enjoyed, and appreciated. To enjoy natural surroundings has been an urge in all people since cities began. In Hawaii we are lucky to have some areas preserved by the Federal government. The State is beginning to set aside such areas.

Some of these preserved areas are and must be actual sanctuaries, set aside to be untouched, inviolate, so that wildlife may continue to exist there. This may hamper the freedom of picnickers, but it adds to the value: the land and everything living on it is saved so that all may know it now and in the future, unchanged by man.

In Hawaii we have off-shore islands, mostly off Oahu, where the sea-birds may live safely. Luckily our forests are pretty well preserved at the moment, because we must maintain them to keep our water supply at high level. This has been a lucky break for the birds. Plants are sometimes guilty of damaging a forest, if they are more sturdy than the native growth. On Kauai, last summer, Frank Richardson found that the rare birds, almost never seen in the lower forests, were there in the native forest. There is now a project aimed to save this native forest area for the sake of the birds and the plants.

Birds of our gardens, the mynah, sparrow, doves, are adaptable, exist in some miraculous way on seeds and insects in the greenery they can find in the city and its suburbs.

But the birds that are losing out at a dangerous rate are the shore birds, the water birds. Some of these are endemic to Hawaii, which means that they came here anciently from the American continent or from islands far to the south or west, doubtless blown by the winds of some unusually severe storms; they came, found the land a place where it was possible to live, though different from the land they had known.



Those that survived adapted themselves to the differences between Hawaii and their old homeland, and changed in some ways, no longer resembling exactly their ancestors. They became endemic to Hawaii. This took centuries to accomplish. And it made our Hawaiian birds precious in the eyes of scientists who study such miracles of nature as change in forms and habits. Unfortunately, the isolation made the birds particularly vulnerable to new conditions that developed when haoles came to Hawaii, bird and plant haoles especially. Diseases were introduced and many of the endemic birds could not survive. Many Hawaiian birds became rare; some species died out altogether.

Another calamity fell. Just as all over America, the wealth of birds was not appreciated thoughtfully. Thousands were shot for food, needlessly. There was other food. Thousands were shot for what is called sport. So many were destroyed that healthy birds became scarce or disappeared completely.

Now a third calamity has occurred. In Hawaii, especially on Oahu, where there used to be more shore birds than on any of the other islands, we have forgotten the needs of the shore birds. All the ponds and estuaries where birds used to be found in abundance are now being put to new uses, drained so that the land beneath the water can support shelter for humans rather than shelter for birds. Houses we must have, and many minds and purses are eager to supply the demand. Shall we fatten a few purses, and toss away pride of possession of rare birds, our own, so as to supply ourselves with a few houses that could be elsewhere?

For bird lovers it has been a tragic thing to see Kaelepulu pond drained, the hundreds of birds there driven away. Driven where? In the last few weeks some have been seen at Kaneohe marsh, where there is little food for them; at the Nuuanu reservoir; some are at a corner of Pearl Harbor; a few at the marshy area at Kahuku, now being drained. At Salt Lake houses are being built around the shore; shots have been heard in that region. Is there supervision of the area? At Haleiwa, the pond where coots have lived in abundance has been considered for an amusement park. There is just one spot left where the shore birds are still happy: Paiko lagoon, at Kuliouou, on the southern shore of Oahu. It is an arm of Maunalua Bay.

We feel that this last stand should be denied all other use so as to remain a refuge for shore birds. It is little enough area to devote to the saving of these rare and precious birds on this island.

Which are the shore birds? There are many. The stilt is one of the most beautiful and most rare. It stands about 15 inches high, black above, white underbody. Its bill is slender and long; it digs into mud and coral for its food. Its legs are long, slender and pink, slender as reeds. It flies with much flapping of wings, and spends a great deal of time looking for food at such places as Paiko lagoon and the mud flats adjacent. It likes both fresh and salt ponds, and can fly between the islands, it is said. Actually, it remains on its own island most of the time. The night heron (aukuu to Hawaiians) loves marshy areas, too. The ducks, both Hawaiian and two others that are travelers from America, used to be innumerable. The Hawaiian duck can now be seen on Kauai, perhaps on Niihau, occasionally on Oahu, rare everywhere. There are still coot and gallinule, called alae ula and alae keokeo by Hawaiians. Both are dark colored birds, about a foot long, one with a red spot on the front of its head, the other with a white spot.

Besides these birds that remain in Hawaii, there are the migratory birds: the plover, wandering tattler, sanderling, turnstone. Hawaii is a strategic place for them, for they are the birds that make the amazing flights yearly from Alaska or northern Canada to Hawaii, and some go farther south. For most of them, Hawaii is the beginning or the end of that long journey that they persist in taking, for what reason no one knows. Some may rest on the water occasionally, but they land here almost exhausted, eager for rest and food. Here they used to find plenty of places for food, undisturbed by man. Now there are few such areas. It would be a terrible pity if



this flyway of the migratory birds became entirely inhospitable to them; they would become extinct. Other islands than Oahu will receive them, but if Oahu cannot, no migratory birds will be seen here. The sight of the "first plover" to land has been joyful news to bird lovers each season. We remain in awe of their urge to summer in the north, spend winters in Hawaii, and do it without benefit of tour agents!

At Paiko lagoon the migratory birds may be seen each year, along with the birds that stay at home. The migratory birds rest and fatten here; in the spring they are ready to make the long flight to nesting grounds in the north.

Many in Hawaii have never had the chance to know this amazing story of bird life. We hope that many will allow themselves to observe birds for their own delight; inevitably they will be eager to preserve them. We hope that children of this and following generations may have the chance to see and appreciate these and other birds.

It can happen. It is sure to happen if we set aside Paiko lagoon, care for it well, as a sanctuary for shore birds.

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#### OUTLINE OF ARGUMENTS AND FACTS TO BE CONSIDERED:

1. The birds now established at the lagoon as a feeding ground, of their own choice, embrace all the birds mentioned above except coot and gallinule. Whether these would come we do not know. A description of each of these is found in the accompanying booklet: HAWAIIAN BIRDS, issued by the Hawaii Audubon Society.

2. The lagoon is a suitable place, large enough to give the birds privacy; they are happily adjusted there now and should remain so. No other place compares with it in size and food supply. Nesting areas can be provided, we hope, by introducing plant growth in some area: reeds, etc. such as grew in Kaelepulu pond. This should be done promptly; nesting time will come soon, and last season's nesting areas at the inner end of Kuapa pond having been destroyed, as well as Kaelepulu.

3. Birds are difficult to move from one area to another. They may or may not find a man-made area to their liking. You cannot put up a sign: "Please move on, find another spot; this area now for other use." The birds would not understand.

4. These birds are eminently desirable because they are insect devourers, are valuable scientifically, they are beautiful, they are interesting to watch, many people enjoy and value them. There are thousands of tourists who want to see just that, something beautiful in "beautiful Hawaii," something rare and interesting, peculiarly Hawaiian. Waikiki is a disappointment to thousands, and increasingly so. If tourism is to be a leading business of the future, the preservation of this natural area, near town, on the main road that tourists take, is a prize. Hawaii could not be more lucky.

5. On this island of Oahu there is and will be for many years to come the greatest concentration of population. That means that the greatest number of people in Hawaii can see this bird sanctuary easily, near the city, near the road. Nature study in the schools is beginning. Trips to this area could be made. There is no other concentration of birds seeable. The sea birds are on islands, restricted; the forest birds have too wide a range to demonstrate to classes of children. For many years schools on the mainland have taken classes to nearby sanctuaries or other spots where plants and animals can be observed. It is far more valuable in education than pictures or words.

6. Every sanctuary has to be guarded. Because of the residences around Paiko lagoon, it will be easier to care for as a sanctuary than any other area that could be created, supposing that creation could be accomplished. An attendant or guide should



be available, perhaps by appointment for tour parties and schools, full time or part time.

7. Residents around the lagoon are being interviewed; all want the lagoon relieved of stagnant odors, none so far want it to be used for anything except a sanctuary.

8. There are concentrations of birds (fewer than at Paiko) in some military areas. Some may think that this is an advantage, eliminating the need for any other sanctuary. But military areas can never be restricted to any use but military. We can be thankful that the birds can find temporary homes there. No reliance can be put on their permanence.

9. It may save a little time to meet the rumored objections, or other plans for Paiko lagoon. One is to make it a marina. Kaneohe Bay is scheduled to become one of the world's finest marinas. Keehi lagoon will also be a recreation spot for water sports. At Haleiwa the large pond is likely to play the same role. Birds cannot live in amusement parks; they must have some privacy. It will seem entirely wrong, subversive to the interests of Hawaii if all the waters available are devoted to the physical pleasures of water sports, chiefly for the enjoyment of the young and active. They are in a minority, even counting onlookers. The rest of us deserve consideration also. We shall have Kanaha pond, on Maui, another sanctuary for water birds. But each island should have an area safe for its birds, Oahu most of all, for the reasons above given. It may be said here, that it will be a shocking disgrace to Hawaii if our endemic and migratory birds are not cared for.

Another plan suggested is a compromise: dredge a boat channel around the edge of the lagoon, the shore, and leave the center for the birds. Those who know birds know that this will not work. It would amount to an island completely surrounded by disturbing, terrifying noise, to say nothing of the fumes of gasoline and oil. Birds could not endure it.

Still another plan is for a ferry slip or dock "somewhere" in the area. There is room in Kewalo Basin for the ferry already started as an enterprise. A ferry dock is an unlovely convenience. Let us not plan to needlessly ruin the beauty of Paiko lagoon for a hypothetical ferry to Maui. Did you ever see a bird incapacitated because it had landed on the water and its feathers were thick with gummy oil? It has happened many times. The bird has no way of cleaning off the oil, and must therefore die. If oil is in the water many birds are affected.

10. One distress at Paiko lagoon that residents have had to endure (I should think too long; we heard of this last February) is the noisome odors from the lagoon. All lagoons develop some odor of decaying vegetation, but it need not be so much as to become a nuisance. At a guess, the causes at Paiko may be the presence of cattle in the valley that drains into the lagoon, or next to it, from seaweed floating in sluggish waters, and from the accumulation of silt which prevents movement of water. The pond needs some careful dredging, just how much and where is a judgment for an expert to give. But the pond is right now being "murdered," its coral base thick with silt. The lagoon belongs to the State, under the Harbor Board. There may be a good reason why no dredging has been done for some time. No money? That would not be a good enough reason; the State has enough money for housekeeping. Suspicions have been expressed that the lagoon will be allowed to fill with silt so that it will "make land" eventually. If this is the plan, I hope all citizens will rise and protest. If Paiko lagoon belongs to the State that means it belongs to US. We are the State.

11. Paiko lagoon is an old fishpond, and is a favorite place today for mullet, perhaps other small fish. One resident is sure that <sup>they</sup> spawn in the pond, stay until partly grown, then take to the sea and their "travels around the island," streaming out through the little outlet to Maunalua Bay. No study has been made of the habits



of the mullet in this pond, but it is sure that the pond is a valuable spot as a pond, few left along Oahu shores.

12. If this lagoon is decreed a sanctuary, it would be entirely proper if the State paid the comparatively small expense of dredging to set the waters in healthy motion to get rid of odors. If the State is unable to foot the bill, it will have to be done by some other means. There are springs in the pond, according to the geologic surveys; they would help to keep it clean. The cattle are scheduled to be moved soon, we are told. As to appurtenances needed they would be: plant growth for nesting, and access for the public. It is possible to dream of a piece of shore frontage eventually. But there is no hint of it at present. However, there is a small park adjacent, a fine viewing spot for the southern end of the lagoon and the valuable mud flats next to the pond. These mud flats are just as popular with the birds for lunch counters as the coral and mud of the lagoon itself. Let us keep them AS THEY ARE. Nature is not always improved by having areas remodeled neatly, the natural look and features done away with so that man's design may appear. In fact, loveliness usually vanishes with such grooming.

At any viewing spot one or two telescopes would be tremendous allurements. They would have to be cared for by a responsible person; it might be necessary to have a small charge for their use. With them, the pond could afford a sight of the everyday life of the birds, without any chance of disturbing them.

It might be possible to build out, a short distance from shore, taking care that it did not interfere with the view of any resident, a platform for viewing. But the park at present provided should be enough.

The Hawaii Audubon Society will be happy to cooperate in any way possible in making Paiko lagoon a treasured and excitingly enjoyable asset to those who become acquainted with it.

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Copies of this appeal will be distributed to members of the Society, and to those listed below among others because of their interest in bird-life and in Hawaiian birds. It is hoped that those who are at home base and read this appeal will write us their comments for or against this idea.

Any part of this article may be quoted by any newspaper, or magazine, or may be used by commentators in radio or television work, the only specification being that words be not lifted out of context so that the thought is lost.

Margaret Titcomb  
President

#### Ornithologists:

Dr. Ernst Mayr, Museum of Comparative Zoology, Cambridge. Author of many books and articles on Pacific birds.

Dr. Roger Tory Peterson, author of the widely known and used bird guides. Hawaii will be included in the next guide to birds of western United States. Shall we have to admit that we care little for them, allow them to become extinct?

Dr. Robert Cushman Murphy, former Curator of Birds, American Museum of Natural History, in New York. During his service, the famous "Hall of Pacific Birds" there was completed.

Dr. Dean Amadon, present Curator of Birds, American Museum, author of a definitive



study of the Hawaiian honeysuckers (mamo, oo, iiwi, etc.)

Dr. Miklos Udvardy, University of British Columbia, Professor at the University of Hawaii, 1959; he has studies of Hawaiian birds still in process.

Dr. Alfred M. Bailey, Director, Denver Museum. One of the finest museum groups of Hawaiian sea birds is nearing completion at his museum, a study started in the 1920's.

d'Arcy Northwood, Keeper of the National Audubon Refuge in Pennsylvania, first president of Hawaii Audubon Society, author of "Familiar Hawaiian Birds."

George C. Munro, dean of Hawaiian ornithologists, author of "Birds of Hawaii."

Joseph E. King, former president of Hawaii Audubon Society, now with U.S. Fish and Wildlife Service, Washington, D.C.

Charles Hanson, former president, Hawaii Audubon Society.

Ross Leffler, Department of Fisheries and Conservation, U.S. Department of the Interior, recently in Hawaii.

Harold J. Coolidge, Executive Director, Pacific Science Board, National Research Council.

Paul Breese, Director, Honolulu Zoo.

Dr. Paul B. Sears, Section of Conservation, 10th Pacific Science Congress.

#### Organizations:

National Audubon Society

Hui Manu

Libraries of each island

Maui Historical Society

Kauai Historical Society

National Parks, Hawaii and Maui

Hawaiian Academy of Science

Conservation Council of Hawaii

Coordinating Council for Conservation

Nature Conservancy in Washington

U.S. Fish and Wildlife Service

Director, State Commission for Agriculture and Conservation, Hawaii



## KE KUA'AINA FROM OCTOBER 1, 1959 TO SEPTEMBER 30, 1960

By George C. Munro

Last year at this time I told of dry conditions for the preceding twelve months and this report will tell the same story. There have been no heavy kona rains for the last two wet seasons. This of course may not be an abnormal condition in a decade.

In November 1959, there were a couple of light showers and in December another of about a quarter of an inch. On January 28, 1960, about the same amount fell and in February about the same. In March about three inches and on May 11, two inches, and a quarter of an inch on August 28.

The seepage noted in 1956 and 1957 has shown very little since then, and is only very slightly in evidence now where some plants seem to show that it still exists despite the light rainfall.

The endemic plants endured these conditions as follows:

Argemone alba var. glauca. The native poppy, puakala. Though I had sown much seed of this in the vicinity of Ke Kua'aina none of it has germinated so far. But in 1956 two plants came up at Ke Kua'aina and flowered in 1957 and 1958 for fifteen months altogether and then gradually died. The seed was spread over all of the reserve and a few plants came out after the March rain but soon died. It is a plant that does not thrive in shade.

Hibiscus brackenridgii. Tree form, probably endemic to Lanai, which grew to a handsome tree eight feet high and flowered for four months in 1957, two months in 1958, and one month in 1959, but died in July 1960. The seed was all saved, planted over all of Ke Kua'aina and distributed to other institutions. Watering might have saved it, but it had probably run its course. Seed of the prostrate form has been planted. Both grew under extremely dry conditions on Lanai.

Portulaca cynosperma. Growing from scattered seeding tops, it keeps close to the ground in the open but does not do so well in shade. It has flowered and seeded, so we consider it established.

Kokia sp. This is either rockii or cookei. The first from Hawaii and the other from Molokai; both rare plants. Seed of both is in the ground but this is the only plant we have so far. It endured the drought very well, though quite bare of leaves like the wiliwili in the dry season. It responded well to light rainfall and was getting water biweekly and had several small leaves, but vandals nipped the shoot with the leaves. We will continue to give it water and hope it survives.

Sapindus oahuensis. Hawaiian Aulu, Kaulu or Ionomea, a small tree. A plant about a foot high in 1958 has grown little since but has withstood the dry conditions very well and has green leaves still and is getting water every second week when Hector carries some for a few of our most precious plants.

Erythrina sandwicensis. The wiliwili tree. From seed planted in 1950 and 1951 there are many trees around Diamond Head eight feet high and some higher. (Some have even grown from broadcasted seed). They came out in fine leaf after the showers of January to March but were nearly leafless by the end of April. They are having a long rest now so we hope that if we get good rains in October they will flower for the first time in November.

Canavalia lanaiensis var. munroi. I treated this plant at length in my last report but omitted to say that Drs. Otto and Isa Degener honored me by attaching my name to it. It is the vine that died when the winter rains came if we watered it during the dry season. A fine crop of seed was procured from three vines when we refrained from giving them water. Much of the seed was planted and distributed among other growers. There is only one plant of it this year. It is in a locality which seems to get a minimum of seepage and no watering. It will be interesting to see how it responds to the heavy rains.



Sicyos hispidus. Hawaiian Anumu. I doubt if this vine has survived the drought. It grew several feet long but did not flower. One flowered in 1958, but did not mature seed.

Lipochaeta lobata var. albesens. One of the Hawaiian Nehes growing naturally at Ke Kua'aina. Several large bunches which flowered heavily after every rain last year did not respond to the lighter falls this year and have probably reached the end of their span of life. Plenty of young plants will appear when the heavy rains come. It is quite a showy plant when in flower.

Ipomoea tuboides. Seed of this annual night blooming morning glory germinated at Ke Kua'aina and grew into a fine vine which flowered plentifully in 1957 but did not mature seeds. The vine died and has not appeared since. This plant has quite a large tuber which lies dormant in the dry season about six inches down in the ground showing no top till the rains come. It then sends up a slender vine which grows rapidly and flowers profusely. A good deal of seed was planted adjoining the present site of the reserve from which we hope to get a good supply of seed later. Only two seeds that had been saved as samples from former plantings had been planted at Ke Kua'aina. Seed of other varieties of the species has been planted.

Cuscuta sandwicensis. Native Kauna'oa or pololo. The representative plant of Lanai grows naturally periodically below Ke Kua'aina and seed was sown in an isolated part of the reserve where it can be kept in check. It is a parasite and kills the alaweo, but ilima seems to resist it. When growing in a mass it is quite spectacular.

Chenopodium oahuense. Native Alaweo or Aweoweo which grew from broadcasted seed to large bushes which have died, young half grown plants are also wilting. It is quite a handsome plant but is too vigorous and will need curbing. Our area is too small to have large masses of any particular plant. In the mountains of Hawaii it grows to a small tree, but here it is a thick bush. The Hawaiians used the leaves for food.

Panicum torridum. This showy annual grass was in masses in the wet season of 1952-53 and again in 1956-57 and practically absent between these dates so we expect to see it luxurious in the coming wet season.

Doryopteris decora. This fine fern did well last year but was not so showy this year. The light rains did not seem to suit it. It is one of the first plants to start on new lava flows.

Of the indigenous but not endemic plants that did fairly well during the year: the ilima (Sida fallax) and Mao (Abutilon incanum) both seeding well after the showers. The Cassia gaudichaudi tree did fairly well. The original nine foot high tree died in the 1955 drought. An insect destroys most of the seed of this nice little tree.

Towards the end of 1959 the Garden Club of Honolulu deposited \$1000.00 with the Board of Agriculture and Forestry to be used in developing Ke Kua'aina. A man worked on it for a time but it is difficult to obtain a workman suitable for the task and we are on the lookout for one now. In the meantime it is pulling along slowly as before.

The Garden Club of Honolulu also honored me by establishing a stone seat at Ke Kua'aina commanding a beautiful view from Waikiki right round the north end of Oahu to St. Louis Heights. A plaque is attached to the seat which reads: "To George Campbell Munro, Founder of Ke Kua'aina, on his 94th birthday, May 10, 1960. From the Garden Club of Honolulu." I am grateful for the honor and the comfort of the seat and yet more so for the added status given to the project by these actions of the Garden Club of Honolulu.

Ke Kua'aina was started under the sponsorship of the Hawaii Audubon Society which furnished funds and much manual work, as also did private persons. It may seem that there is not much to show for this but it must be remembered that Ke Kua'aina is only four years old and these rather dry years. It was started about a year after my nephew, Hector G. Munro, joined me and we retreated back to the mountain away from the menace of building sites which threatened the undertaking; fortunately to find



that the new site was a more favorable one. The planting for the six years before that was on other parts of Diamond Head. The largest wiliwili trees at Ke Kua'aina were planted in July 1950 on one of my tramps through, planting as I went. They surely show the suitability of the site for a living museum of our dryland plants.

My thanks go to the many persons who helped in many ways in the welfare of this little part of the new park, Na Leau Hawaii, on Diamond Head.

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#### ERRATA:

In the letter from William Dunmire which appeared in the September 1960 issue of "The Elepaio," page 13, Bulwer's petrel was added by the undersigned to identify the ou. This is an entirely different ou from the one intended. I doubt that anyone else in the world would have made such a hasty mistake as

Margaret Titcomb.

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#### NOVEMBER ACTIVITIES:

FIELD TRIP: UNOYO KOJIMA WILL LEAD THE TRIP.

Nov. 13 - To Aiea Loop Trail if the weather permits. Meet at the Library of Hawaii at 7:00 a.m.

MEETING: Board - Nov. 14, at 3653 Tantalus Drive at 7:30 p.m. Members are always welcome.

General - Nov. 21, at the Honolulu Aquarium Auditorium at 7:30 p.m. Mr. H. Ivan Rainwater will talk on "Insect Control at the Gates of Hawaii, Ships and Planes."

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#### HAWAII AUDUBON SOCIETY OFFICERS:

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MAILING ADDRESS: P.O. Box 5032, Honolulu 14, Hawaii

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