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NA LAAU HAWAII
(Plants belonging to Hawaii)
By George C. Munro

Na Laau Hawaii has passed through its fourth wet season. The wet season in Hawaii from October to March is the time of greatest growth for Hawaiian xerophytic or dryland plants, those most in need of protection here and which will constitute the "living museum" of Na Laau Hawaii. The amount of rainfall varies considerably on different islands and in different locations on each island. In this case, at Na Laau Hawaii the seasons of 1950-51 and of 1954-55 were very wet ones and from March 1951 to November 1954 there was no soaking rain. One rain in the wet season heavy enough to reach the subsoil is necessary to bring many of the dryland plants through the long months of the dry season. So experience has been gained on how much drought some of our dryland plants will endure.

The Hawaiian wiliwili (Erythrina sandwicensis) seed of which was planted in 1950 and which gave the demonstration of the suitability of the location for this class of vegetation are now up to five feet or more high and in beautiful foliage. This spectacular flowering tree, endemic (found nowhere else) to Hawaii, starting from planted seed and given no care or watering through the unprecedented drought, can be said to be permanently established. The alaweo or aweoweo (Chenopodium oahuense) from seed broadcasted over the area in 1952 and 1953, and given no care whatever, is now in masses flowering for its second season and up to six feet high. The fern (Doryopteris decora) brought from another part of Diamond Head is also established.

Of the native plants originally there, ilima (Sida fallax) killed back in 1952 and not in evidence till the November 1954 rains is at the end of March 1955 in masses up to four feet high with its large light green leaves presenting a beautiful sight on the hillside. The large shrub heuhiuhi or kolomano (Cassia gauichaudii) a few of which survived the drought is up to five feet high and carrying a fine lot of green seedpods. Nehe (Lipochaeta lobata) var. (albscens) from seed germinated during the drought seasons is three feet six inches with plenty of showy yellow flowers and ripening seed. Alena (Boerhavia diffusa tetrandra) a large rooted trailer went through its seasonal growth. Nao (Abutilon incanum) was numerous and in fine foliage when it was suddenly struck with a blight and badly wilted. It is hoped that it will recover enough to ripen seed as it is a very beautiful plant. Koali awahia, a pink flowered morning glory (Ipomoea conjesta insularis) is also making a good recovery and we hope to have it drape the dead kiawes. It and some other quick growing native plants may need holding back later but will do good service in the meantime in helping to choke out the foreign plants. The two grasses, pili (Andropogon contortus) and emoloa (Eragrostis variabilis), grew luxuriantly, kakonakona (Panicum torridum) though present, was in much less quantity and shorter in growth than in March 1953. The

Hawaiian dodder, kauna'oa or pololo (Cuscuta sandwichiana) the plant of Lanai, not seen for several years grew luxuriantly and seeded heavily. There are single plants of three rare varieties of known species under care and giving good promise of survival. One is a narrow leafed form of halapepe from Auahi, Maui, another a single stemmed tree like form of (Hibiscus brackenridgii) and a white flowered form of the bean (Canavalia galeata). A number of these are endemic and the others indigenous to Hawaii though found in other places.

Thus there are three introductions established and ten originally there including the Hawaiian poppy (Argemone alba) var. (glauca), a few plants from original seed of which flowered and seeded last year. Other species are under care and seeds of more than 100 have been planted and broadcasted over the surface, many of which will succeed there when conditions of rainfall, light and shade necessary to their germination and development are accorded them. Some of the work is experimental and much will be learned of our dryland plants as more of them are brought in. There is no question now of the success of the undertaking if its human connections stand by it.

A recent airplane contour photograph of the western side of Diamond Head donated by good friends of the cause show that Na Laau Hawaii runs up to 275 feet elevation from about 110 feet elevation at the old Army trail, but we have about given up hope of holding below 150 feet on the south side and 120 feet elevation on the north side. The land on the north side is lower than on the south side so this makes a nearly straight line across the ridge from north to south and gives the project about two acres of a variety of terrain and soil conditions. By controlling the vegetation every form of native dryland plant life can be given the conditions of location it needs. To bring it to its finest stage and keep it so, it will need someone studying and caring for the project. It will be well worth this effort.

Much seed has been planted in the area we expect to have to surrender but we hope that the homesite area will not be too close so that as valuable plants come up we can transplant them to a safer position as we did early this year with a plant of the rare Lanai tree like form of (Hibiscus brackenridgii) and it is doing splendidly.

If conditions are favorable at the end of this year we hope to have a good showing of the Hawaiian dodder on an isolated slope with other native plants and a record kept of its effect on them. It is a spectacular plant when in mass growth. The only fern we have will also be showy in the wet season in pockets of earth on a rocky slope. Another rocky slope can be draped with alena which among other plants is inconspicuous.

Na Laau Hawaii is now extremely fortunate in having the keen interest of my nephew, Hector G. Munro, now making his home in Honolulu. During recent years he has helped considerably by collecting seed of rare Lanai plants and will continue that by friends on the island. We make a biweekly trip to the site and he takes much of the heavier work out of my hands. This is very fortunate as the stage had been reached when an understudy was needed in the work as there is much to be learned in distinguishing the native plants from those foreign to Hawaii. For this we have to rely on professional botanists who are helping considerably.

The work at present is mostly on trails and weeds. The large algeroba and koehaole trees are being killed by chemicals and ringbarking to conserve the moisture in the ground for the wiliwilis and other native plants growing around them. These trees have served a good purpose in breaking up the underlying rock and bringing the locality into a condition more favorable to other plants. The dead trees will support native climbers till they fall and their decay add to the rich humus of the soil. Aided by the larvae of insects this decay is sometimes very rapid even in these dry areas. Some good seed is on hand and more will be collected. This will be put into the ground before the winter rains.

(Written March 31, 1955)

ON MATTERS OF CONSERVATION

From the Honolulu Star-Bulletin, June 6, 1955:

It has taken a long time, but Senator Noboru Miyake, Kauai Republican, has finally achieved one of his cherished projects - conservation of inshore fisheries.

He's been working for it for six years. Now Governor King has signed Senate Bill 80 as Act 192.

Its four basic features:

1. It declares a legislative finding that reef and inshore fishing has greatly deteriorated as the result of excessive taking of fish.
2. It establishes all marine waters of the Territory as a marine life conservation area to be administered by the Board of Agriculture and Forestry.
3. It creates four fishery advisory committees, one for each county and each composed of six members, to consider any matter affecting fishing and fish conservation within their counties.
4. It empowers the Board of Agriculture and Forestry to make rules and regulations governing the taking or conservation of fish, lobster, crab, squid or other marine life.

The law is long overdue. Piecemeal legislation has been enacted in the past to deal with specific abuses - dynamiting, poisoning, use of nets with excessively small mesh, and penalties for taking certain size limitation.

But this is the first time that the subject of marine conservation has been brought together in an all-embracing project aimed at protecting reef and shore fishes from the greedy, selfish fisherman.

Fishing is more than a sport in Hawaii - it is essential to the diet needs of a large proportion of our population. And we have been depleting our fish resources faster than they can be replenished. Senator Miyake's bill is aimed at restoring the balance. This is a demonstration of statesmanship in conservation of one of Hawaii's major resources.

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And a letter from our President, Robert Pyle, to Governor King:

Honorable Sir:

The Hawaii Audubon Society wishes to express its whole-hearted approval of the actions you have taken on two particular bills passed by the recent Legislature.

The marine life conservation bill, which you approved as Act 192, should provide a solid basis for intelligent protection and proper use of Hawaii's inshore fish resources. Also, we feel that you acted wisely in withholding your approval from the bill to permit introduction of Axis deer on Maui.

In both of these matters, it seems that the best interest of Hawaii's natural wildlife have been served. The Society commends you for your far-sighted attitude toward our natural resources.

And the Governor's reply to Mr. Pyle's letter:

Dear Mr. Pyle:

Thank you for your very nice letter of June 6 in which you express your approval of my action in signing a bill which will serve to protect Hawaii's

inshore fish resources, and also withholding my approval from a bill permitting the introduction of Axis deer on Maui.

For your information, I have already instituted action leading toward the appointment of the commissions prescribed for the protection of the inshore fish resources. These commissions should be named within the reasonably near future.

I am of the opinion that the Axis deer on Maui, and incidentally on Kauai, would cause an untold amount of damage to plants in the forests and even to agriculture. For this reason, principally, I felt that I could not give approval to the spreading of Axis deer on islands other than Molokai and Lanai.

Your commendation is appreciated.

HUI MANU HONORS AUDUBON'S BIRTHDAY

For the past three years the Hui Manu has specially celebrated the birthday of John James Audubon, which occurs on April 26th. In all libraries on Oahu books were placed and left for a period of a week or a month as each library desired. The Hui Manu this year gave each library two interesting, small bird-books with colour plates, easy for reference and use, and the President of the Hui Manu added gifts of bird books which she had been on the watch for during the year. At the Damon Library in Punahou School a bird contest was held twice, and the winner presented with a bird book as a prize by the Hui Manu. The sum total of this Audubon bird week celebration is a wonderful response in all students using the libraries in bird-interest and responsibility. Both the Audubon Society and the Hui Manu can rejoice in this.

LETTERS FROM OUR MEMBERS:

Audubon Camp of Connecticut, June 25, 1955 ... The special delegates session of the Audubon Camp of Connecticut is drawing to a close. It has been a busy week with a varied program of nature and conservation films and group discussions of the accomplishments and problems of each of the local societies represented. Such common problems as to how to reach children and young people through the schools and junior clubs, and how to handle publicity on radio and TV programs were reviewed, and of course, the subject of the wildlife sanctuary received special attention.

The week was not entirely given over to work, however. One day we visited the National Audubon Society headquarters and the American Museum of Natural History in the city of New York, and on the afternoon of that same day we investigated Jones Beach and the marshes behind for shore birds and waterfowl. It was a wonderful day. Early morning walks and trips at odd times have provided opportunities to get acquainted with the bird life here at the Greenwich Audubon Center. Our list for the camp area includes 55 species.

The other delegates are principally from the east and south and have shown great interest in hearing about the birds of Hawaii and the activities of the Hawaii Audubon Society. We consider it quite a privilege to have been here this week and believe that we have obtained considerable information and new ideas which may be of value in furthering the activities and objectives of our group in Hawaii. A detailed report will be presented upon our return.

Grenville Hatch
Joseph King

Rockport, Me. ... Rockport seems far away from Honolulu, but it's lovely here, with trees in their pale green spring leaves, tulips everywhere, white and purple lilacs starting to bloom. The Atlantic looks much like the Pacific, but there seems to be extra salt tang in the air ... I think of the Auduboners more often than they might imagine. In fact, I started out keeping a bird journal but didn't get very far with it. You'll understand why if I copy a few entries:

San Francisco - robin and black bird (blackbird? in Golden Gate state park. Sea along waterfront.

From the plane - en route from S.F. to Chicago - a bird below us? or another plane?
From the train - en route from Chicago to Boston. Pigeons beside a railroad station.
Several hawks? Crows?

Just before Harrisburg - a glossy black bird somewhat larger than a mynah, rather long tail feathers. Two white geese in farm pond. (Oh! another horse chestnut tree in full bloom - magnificent.)

But you would be proud to see me peering out the front window here, at the bird feeding tray my step-father has put up across the road, at the edge of a patch of forest. Grackles, starlings and blue jays - I can identify them in the blink of an eye. Also the squirrels that cross the road and climb up the screen door to let us know they want peanuts. Weekly outlay for peanuts - 49¢. Joe, my step-father, knows the name of everything that stirs in these parts. We drove yesterday along the shore and saw a flock of sea gulls riding in the water in a quiet cove, a bittern sitting on a nearby rock, and two muskrats swimming in a pond. Also three rabbits (brown, with white powder-puff tails) scampering around people's lawns. Oh! and today, a red-winged blackbird flying across a field. So though I may have learned little about Hawaiian birds, at least my eye has been sharpened for Mainland birds

Written by the author of "The Day Before the Day Before
Kamehameha Day."

FIELD NOTES

Mokulii - May 21, 1955 ... On May 21, while exploring the island of Mokulii, I was very fortunate to be a member of a group of hikers who came upon the nest of a white-tailed tropic bird, sometimes called the Bos'n bird (Phaeton lepturus dorotheae). This was evidently the nest of the same tropic bird that Dr. Frank Richardson had seen while he too was exploring the island in 1954.

The nest while located in a little nook at almost the very peak of the island, is not too difficult to approach. In the nest was what I believed to be an immature bird. It's bill was of a light color and it's feathers were spotted with black. While I was trying to get a picture of it, the bird kept up a continuous squawk. The parent bird was not seen anywhere at all this day, but I had seen it flying over and around the peak when I visited the island at an earlier date.

Also seen on the island were burrows of the wedge-tailed shearwater (Puffinus pacificus cuneatus). Though no birds were seen, fairly fresh droppings indicate that the birds still inhabit the island.

Mace Norton

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Ulupau Head - May 22 ... The Society's field trip May 22 was a visit to Ulupau Head to see the nesting red-footed boobies and other birds of the ocean and shore. Fifteen persons were present, including members: Gossard, Labrecque, Norton, Bell, Sinclair, Mr. and Mrs. Pyle and guests: Arthur Roy, Kay Imamura, Ann McElroy, Margot Noda, Joe Robinson, Bill and Suzanne Ohmsete and their six-month old daughter, Nanette. At the main gate of Kaneohe M.C.A.S. we were met by Pfc. Ott, who accompanied us as escort throughout the trip. Certain sections along the approach road are closed to visitors, but the headland area including the booby roost was unrestricted and we were completely free to roam there at will.

As usual the nesting boobies provided the first thrill and most of the excitement for the party. Two independent estimates of 500 to 600 birds were made at about 9:45, shortly after our arrival, but a count taken earlier in the morning probably would have been much larger. Some birds were observed carrying nesting material and some were incubating single eggs. Most nests contained a downy chick - some quite large, some small. No recently hatched naked young were seen, nor any non-flying young with feathers. Photographers had a field day.

At least 50 full grown birds with partly or entirely brown plumage were perched along the steepest slope just below the end section of the road. Only a few nests and a few white birds were on that slope, but nearly all the brown birds present were settled there.

A highlight of the trip came a little later on when a beautiful white tern, sometimes called fairy tern, ventured by and was seen by practically everyone. Several times during a 20 minute period it flew by the overlook at the end of the booby trail, and on one occasion it approached quite closely and lingered long enough for all to have a good look. It was from this same spot that a pair of white terns were seen last October, and like that time, the wind today was fresh and the sea choppy.

A short while later several members spotted a red-tailed tropic-bird and watched it for a minute or two until it disappeared in the distance. Sooty terns were numerous and common noddies were all about. One brown booby and a couple of Hawaiian noddies were glimpsed down near the water.

Lunch was enjoyed at the overlook nearest Moku Manu, and through Mace Norton's scope the hordes of terns, boobies and frigates could be seen about the island. A sea turtle in the water below us finished off the ocean observations for the day.

Enroute back to the main gate, we stopped at the ponds and obtained the following shorebird counts: 3 golden plovers (1 in good breeding plumage, the other two just beginning to change); 3 tattlers, in drab plumage; about 15 turnstones; 68 stilts; 12 Hawaiian noddies foraging avidly for fish; no herons, sanderlings, or ducks. One female pheasant; 2 coots and a pair of axis deer were also recorded.

Bob Pyle

JULY ACTIVITIES

FIELD TRIPS: July 10 - To Kawaihoa. Meet at the Library of Hawaii at 7:00 a.m.

July 24 - Mr. McGuire will lead the trip to Waikane. Meet at the Library of Hawaii at 8:00 a.m.

MEETING: July 18 - At the Aquarium at 7:30 p.m.

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MAILING ADDRESS: P.O. Box 5032, Honolulu 14, Hawaii
Material for the ELEPAIO: 3661 Tantalus Drive, Honolulu 14, Hawaii

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