

# THE ELEPAIO

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## LEAHI NATIVE GARDEN

By George C. Munro

On February 18, 1950, permission was kindly given me by Col. Dean R. De Merritt of the Hawaii National Guard to make a study of the native plants remaining on Diamond Head. This was with a view to collection of seeds for the proposed wildlife refuge in Kapiolani Park. While engaged in this I had word of a most spectacular display of flowering wiliwili trees (*Erhthrina monosperma* Gaud.) in Maunalei Valley, Lanai. In years past I had collected botanical specimens from some scattered trees of this species with flowers of different shades of color in that valley. I have been informed that these old trees died and for a time there were none of the species there. Then in a favorable season a mass of young plants came up and these made a wonderful show flowering in October 1949. I suggested collecting seed from these and scattering them around Diamond Head on the chance that some day the trees might improve the scenery there. Mr. Colin Lennox, President of the Board of Agriculture and Forestry, responded to my appeal for seed and my offer to spread it while botanizing on the ridges around the crater. He suggested planting the seed which seemed of course a much bigger job but would give more favorable results. He sent me up to perhaps 10,000 seeds collected on Molo-kai and I received about 6000 more from my nephew Hector Munro of the Hawaiian Pineapple Company on Lanai, of seed from the trees with flowers of different shades of color.

In trials of planting, the end of my long mountaineering staff was found useful to break the surface of the loose soil of the slopes and cover the seed. The exertion is slight and the stops help to slow the pace of travel and really assists the botanical search. Since April this year with some help from others there have been planted over 4000 seeds of this Hawaiian tree. For keeping count my practice when alone is to carry 100 seeds in two lots though I may plant only 50. When fortunate enough to be accompanied, my companion, generally young and surefooted, does the higher steep slopes and I work the lower slopes. However most of the time I am alone on the mountain side revelling in its sylvan quietness.

A good wet season will bring up a number of the planted seeds, in fact they are appearing now, but a proportion may remain in the ground for some years as is the habit of these dryland plants (a natural provision against extermination). I see no reason why this tree should not succeed on Diamond Head as the situation seems ideal and others of the dryland and shoreside plants still exist there. The light wiliwili wood was used by the Hawaiians for outriggers for their canoes and for fishnet floats, and this may have been the cause of its extinction if it was originally present there. However, I have found from various sources that at different times horses, cattle, wild goats, axis deer and hogs ranged over the outside ridges of the crater. It is therefore a wonder that I have so far been able to find about a dozen native plants still growing there. Probably at the end of the



wet season, which seems to have made a good commencement, I shall have found more and will furnish a list of them.

Marie Neal in "Gardens of Hawaii" says that the flowers of the wiliwili "range from pale red to white with orange, yellow and pale green as intermediate colors." The tree had four stages in the year - all more or less spectacular. During part of the dry season its limbs are bare; on approach of the wet season it is covered with a mass of flowers, followed by a dense canopy of green leaves. The leaves fall and the numerous seedpods open on the upper side and remain so with two red seeds exposed for some time before they drop and the limbs are bare again till the flowers of the following season open.

Wili in Hawaiian means twisted, and there were a few very old trees of this species on the plain below Lanai City, Lanai, that were veritable examples of the name. Their trunks, about four feet high to the branches and two feet in diameter, were flanged, knarled and twisted into all shapes. They bore flowers, leaves and seeds till they eventually died of old age. Any young plants were no doubt destroyed by the stock of the ranch.

The highest point of the rim of the crater of Diamond Head (Leahi - the Hawaiian name) is 760 feet elevation and the lowest about 400 feet. The army trail along the west side and about a mile in length facilitates the work of planting. It is at present open to the public at both ends. This trail, if not needed by the Army or National Guard, should be kept open, in repair and clear of encroaching vegetation. It provides a pleasant, level, dry and clean hike for elderly persons and children and will improve as such as the years go on.

The "Leahi Native Garden" is another outgrowth of the native botanical investigation of the outside ridges of Diamond Head of which more will be told later. For the present suffice it to say that the writer will be pleased to receive from anyone wishing to cooperate, seed of any uncommon native dryland plants for trial in this interesting experiment.

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A most interesting and important paper was read at the semi-annual meeting of the Hawaii Academy of Science by Dr. Harold Lyon, Director of the Foster Gardens, regarding the introduction of the Axis or Spotted Deer to the saddle areas of the Island of Hawaii, and the selection of habitat by the deer. Dr. Lyon spoke from personal observation of the habits of the deer in India and New Zealand, and quoted several experts to support his contention that such an introduction would be disastrous.

Experience shows that the deer, according to Dr. Lyon, rarely range at ground elevations higher than 3000 to 3500 feet. This may be a result of a combination of various factors, such as the colder climate, the different flora and the barometric pressure. The natural habitat of the deer is in the lush dense growth of the lower humid jungles. That the Axis deer on the Island of Molokai is confined largely to the rather barren western end of the island merely points up the fact that the deer would rather live on a sparse diet at a lower elevation, than on a better diet at a higher altitude.

It is reasonable to assume, therefore, according to Dr. Lyon, that the deer would inevitably leave the saddle region of the Big Island (Pohakaloa being some 3500 feet above sea level) and seek the lower forests on the windward side of the island. The scarcity of potable water at the saddle site would be a driving force to start the exodus of the deer. Once in these lower forests, hunters seeking to



control the deer population would find it impossible to get near enough to the deer to shoot.

Dr. Lyon also stressed the very present danger of the infection of the deer with anthrax, and the possible contamination of water supplies by them, with a resulting infection of the human and animal population of the island.

In India and New Zealand the deer have become a serious problem, said Dr. Lyon, and considerable sums of money are being spent unsuccessfully to control them. The combination of conditions on the Big Island is ideal to cause a similar problem there, and the matter of control would be no more successful.

Following Dr. Lyon's assertion that the deer was a favorite food of the Bengal tiger, one of the Academy's members suggested that the Board of Agriculture and Forestry might consider the introduction of a few tigers simultaneously with the introduction of the deer as a control factor. This was not received with enthusiasm by members of the Board present. - H. Paul Porter

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#### YOUR PRESIDENT REPORTS

I have been asked by the Editor of the Elepaio to submit a report of the activities of the Society during the past year. It is not an easy assignment, for the greater part of the year is marked only by the monthly field trips which have been, for the most part, eminently successful and quite satisfying.

The monthly meetings were the guinea pig for an experiment which we have decided to modify. In February, the Society felt that a study group should be started, meeting on the regular meeting nights, and devoting the greater part of the time to a rather intensive study of bird-life. The first few meetings were well attended, but the usual mortality set in, and the attendance by September was such that we were convinced the Study Group should meet separately, with the meetings of the Society being scheduled as they have been in the past.

We have been particularly gratified that we have been able, in three instances to be of public service in the cause of conservation. In March of this past year we were asked by the President of the Board of Agriculture and Forestry to participate in the observance of Wildlife Conservation Week.

Members of the Society fell to, and assumed the greater part of the burden of bringing this observance to the attention of the public. Miss Grenville Hatch organized members of Art Classes at Roosevelt High School in the making of posters. Arrangements were made for the use of windows at Patten's downtown shop and the Home Insurance Company. Mrs. Ruth Rockefeller took charge of the decorating of the Home's window, and produced a very excellent and natural setting of mounted birds and native plants. Mr. George C. Munro kindly furnished several mounted specimens of birds and Miss Ruth Dingus supplied photographs for the display at Patten's. Both of these windows attracted considerable favorable attention with their messages of conservation. Our monthly meeting occurred during this week, and was high-lighted by the showing at the Library of Hawaii of some fine colored movies of wildlife in California and Hawaiian shore birds by Mr. William Ward. This was well received by the public who almost filled the auditorium.

In midsummer the Board of Agriculture and Forestry announced its intention to plant Axis Deer in the saddle region of the Big Island. Public reaction supporting the protests of this Society and others, caused the Board to defer such action,



thereby stopping the destruction of some of the most unique flora in the world.

In July, the Society was invited to participate as a charter member in the organization of a Conservation Council for Hawaii, and the writer was elected to represent the Society. At the second meeting of the Council, your President was elected its Secretary. Though still in the organizational stage, the Council has acted effectively in several matters pertaining to the preservation of Hawaii's resources. The Council, while without official status, as yet, is composed of members who represent influential groups, and your President's membership in the Executive Committee opens the way to a far more effective use of our influence as a conservation agency.

Plans have been made for a very interesting year ahead of us. While the study group experiment was not successful, the Society has grown, and will continue to grow, in its capacity for public service. - H. Paul Porter.

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#### LETTERS AND NOTES

Honolulu --- Since 1944 the Liothrix have made an annual descent from the hills to the area around Roosevelt High School, remaining there for varying lengths of time. Reports from other districts lead one to hope that the time may be approaching when these beautiful little songsters may remain in the lowlands - and one might add, we wish too, that they would leave the forests to the native birds. This year the first Liothrix was heard at Roosevelt on November 30th, a single bird, apparently. On December 14th, they arrived in some numbers. Last year a few remained about the school for several months. Our readers will recall the reports of nesting in other sections. Again we made a plea for observations on the movements of these birds. - Grenville Hatch.

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Kalena, Oahu --- Perhaps the November bird walk was too near a holiday; only eight persons enjoyed the breath-taking panorama of the misty Koolau and the colorful Wahiawa Valley on November 12th, when we leisurely birded around the slope of Mt. Kalena. The trail was very much overgrown, and the lehua blossoms were all gone except for an occasional one or two flowers showing the brilliant scarlet color. The woods were quieter than usual. Our most challenging experience was the silence of the ordinarily vociferous bush warbler. Of course we never see the bird, but practically everyone has heard its song--on this day and also when the group was at Pa Lehua, no one heard the bird. What has become of these songsters?

We looked and listened for Iiwi, but we were too restless a group to see this handsome bird without the aid of the lehua nectar. Though Apapane are considered to be shyer than the Iiwi, we were pleasantly entertained by a couple of Apapane singing and calling to each other. That gentle, almost pleading call note of the Apapane can never be imitated by a human. I have heard many persons attempt it, but always the results were too harsh. As usual the Elepaio was very friendly. Amakihi were plentiful, but none of them sang for us. There were about a dozen young ricebirds learning to shift for themselves. They would fly to the tip of a grass blade but quickly fall to the ground, for they hadn't learned the fine art of buoyancy. I had a wonderful time watching these youngsters who were so jealously protected by their elders. These birds did not sound like ricebirds, but I saw them so I was sure they were. There were a couple of birds giving out the call notes of



the Chinese thrush; they gave only about three notes, very loud and harsh, but they never finished the call nor sang. We wanted to see the birds, but unfortunately we returned without a glimpse of them. *Liothrix* was plentiful as usual and we heard it all around us; also linnets were observed from the road where the trail starts.

Maybe because of the unusually poor birding, we were much more sensitive to the quiet expectancy and enchantment of the luxurious and beautiful tropical forest. - Unoyo Kojima.

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#### Bibliography ---

Allen, Gwenfread E., Nene--rare bird of Hawaii, Nature Magazine, Vol. 43, pp. 464-465, Nov. 1950. Illus. Photo: J.R. Woodruff.

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#### JANUARY ACTIVITIES:

FIELD TRIP: Sunday, January 14, 1951, to Kawaiiloa. This trail is in the Koolaus back of Haleiwa and should prove comparatively dry. The last time we hiked at Kawaiiloa we found bush warbler - will they be heard now? Meet at the Library of Hawaii at 8 a.m. bringing lunch and car if possible.

MEETING: Monday, January 18, 1951, Auditorium, Library of Hawaii, at 7:30 P.M. Miss Helen Peterson, one of the members of our group, who is also a camera hobbyist, will show a group of her latest color pictures.

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