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HAWAII'S OWN HOUSE SPARROW

By Hubert Frings
(University of Hawaii)

About four or five million years ago, a few birds came, by some chance, to the Hawaiian Islands, which up to that time had lacked bird life. These were the ancestors of the modern Drepanidids, the Hawaiian Honeycreepers. They found a virgin territory--a land rich in plants and insects. So they moved into all habitats, changing form as they filled all the niches. However, all the species were derived from relatively few individuals, so they kept a basically similar body-pattern.

Thus, the birds of the Hawaiian Islands are prized by biologists as examples of evolutionary processes, although most of the evolution took place long before man's arrival in the Islands. Studies on island faunas, such as this, convinced Darwin over a hundred years ago of the reality of the process of evolution, and led him to develop his ideas as to how it occurred.

Until recently, evolution was regarded as a very slow process which could not possibly be observed in a limited time. It now seems that this may be wrong. The development of insecticide-resistance in flies, and of races of moths whose dark colors match the backgrounds in industrial areas of England, both of which have occurred in relatively short times, indicate that evolution may go on much more rapidly than was believed.

And now the Hawaiian Islands enter the picture once again. In a recent article in Science*, Drs. Richard Johnston, of the University of Kansas, and Robert Selander, of the University of Texas, have found that the House, or English, Sparrow in Hawaii apparently has evolved into a new race, or subspecies, separate from its continental cousins. The English Sparrow has suffered deportation by man from its original home to all parts of the world. Often, ironically, the Sparrow is then regarded as a pest, because it is a resourceful competitor of man. Man has thus carried on an unplanned experiment in potential evolution with this species. The experiment is now beginning to yield results.

Before discussing these, we might just briefly outline the means by which evolution happens, as biologists see it today.

Any species, such as the English Sparrow, carries heritable materials that affect future generations, the genes. The sum total of heritable material we call the gene pool of the species. No one individual has a full sample of the genes in the gene pool. Only the population has all the genes in the proportions in which they exist.

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*Johnston, R.F. and R.K. Selander. 1964. House Sparrows: Rapid Evolution of Races in North America. Science, 144: 548-550 (1 May 1964).

Some genes are very prevalent--those that give the distinctive body form and functions of the species. Other genes are less prevalent or very rare--those that produce unusual characters.

When a relatively small number of individuals from a large population is removed and taken somewhere else, they take with them only those genes which they have. When man does this, he usually does not select, but takes accidentally, in the bodies of the emigrants, some genes and leaves others. This produces a new population with a new gene pool. Naturally the animals carry a high proportion of the genes which determine the basic body pattern. They, however, may also carry some rarer genes in high proportions, or miss them entirely.

When the displaced animals reach their new home, they now must modify old ways of behavior or develop new ones. Body patterns that were useful in the area from which they came may no longer be useful or may even be disadvantageous. As a consequence, there is a readjustment of the gene pool through deaths of individuals carrying genes that are disadvantageous and prospering of individuals with genes that are advantageous. So gradually the gene pool becomes quite different from that of the parent population.

At the same time, gene changes, or mutations, take place both in the parent stock and in the displaced stock. These new mutations must also be tested against the vicissitudes of the environment. The displaced population probably has different foods, enemies, and habits from the old population. So mutations that would be advantageous to a large continental population may be disadvantageous to a small island population, and vice versa. As time goes by, therefore, different mutations accumulate in the island population and in the continental population. Given sufficient time, the two populations become so different that they are separate races, and later may become separate species.

Now, a key point in all this is how long it takes to happen. Up to now, biologists believed that it would probably take at least three to four thousand years for a new race of birds to evolve. Obviously, the species of Drepanidids have had plenty of time to develop, but certainly there would not be time enough for the evolution of new races of English Sparrows, which reached Hawaii in 1870, barely a hundred years ago.

However, the studies of Johnston and Selander have shown that the English Sparrow in Hawaii differs strikingly from English Sparrows on the mainland or in New Zealand whence the Sparrow came to Hawaii. This is only one example given by these biologists of differences in English Sparrows throughout the North American continent. Apparently the species could be logically divided into numerous races from different geographic regions. The differences that these two workers have studied have been chiefly in color and size. My own observations would suggest that even more striking differences might exist in behavior patterns between the English Sparrow in Hawaii and on the mainland.

In terms of color, the Hawaiian Sparrow is very distinctive, unlike specimens from any other locality. As Johnston and Selander put it: "They are characterized by a reduced value of the dark markings of the plumage, a general absence of fine streaks on the under parts, and an overall rufous-buff color which is especially intense on the breast and flanks. The legs and feet tend strongly to be pale buff in color rather than dark-brown as in continental birds. The unusually strong differentiation of the Sparrows of the Hawaiian Islands is not surprising in view of their geographic isolation and the fact that they have had an evolutionary history apart from North American populations."

The second variation is in size, and Johnston and Selander have used Sparrows from Honolulu as examples of extreme variation in bill length. The bill length of adults is significantly longer in Honolulu Sparrows than in those from any other region studied. It appears that, contrary to theoretical thinking on the subject,

which would call for a couple thousand years at least for differences to become stabilized in populations, these differences have become stabilized in a relatively short time.

The development of so-called industrial melanism in certain species of moths in England is another example of rapid evolution. The British have collected moths for some time, and the extensive collections of professionals and amateurs have been used by the British scientist, Kettlewell, to discover that moths in the industrial areas of England have become progressively darker over the years. Many species today are so much darker than the ancestral types captured only two hundred years ago, that they might be considered new species, except for the known intermediate stages.

The major factor in this case has been predator pressure on the moths. As the trees and other settling places near industrial communities became blacker and blacker with soot, the light moths, which were previously well concealed on the light forest trees, became more and more conspicuous to their predators, the birds. As a consequence, darker moths escaped preferentially to reproduce, and gradually genes producing darkness of body and wings accumulated in the population. So now moths in industrial areas are markedly darker than they were two hundred years ago. In the wilder regions of northern England, on the other hand, the same species are still as light as ever.

It is thus to a very important field of biological research that our Hawaiian House Sparrow is contributing. This emphasizes the fact that the imported birds in Hawaii deserve much more study than they have received. The Mynah, the Brazilian Cardinal, the American Cardinal, the Lace-neck Dove, the Barred Dove, all are descendants from small groups of displaced animals which brought with them samples of genes from vast gene pools in the home areas. These small samples were then honed against the new environment. It is almost certain that studies on these would show striking differences from home populations, as in the case of the Sparrow. Personally, I can testify that the behavior of the American Cardinal and English Sparrow, which I had plenty of opportunity to observe in the eastern United States, is, in Hawaii, different from that of the parent stocks. There is evidence--by ear only so far--that the songs and calls of these birds also differ from those of the parent stock.

Certainly the Drepanidids of the Hawaiian Islands, long famous in evolutionary thinking, deserve study and preservation. However, the imported birds also deserve study and observation by all who love birds and who wish to know more about life processes. These birds are infinitely easier to find and much more convenient to observe for long times than the Drepanidids. These are birds evolving. Let no one think that most of the important information about the birds of Hawaii is already known. These imported birds still offer the chance to delve into the unknown.

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MINUTES OF THE HAWAII AUDUBON SOCIETY
GENERAL MEETING, JULY 20, 1964

The meeting was called to order by Maurice King at 7:30 p.m.

Mr. King told of the hike on Koko Head on July 12 to see the fairy tern. He then turned the meeting over to Miss Margaret Titcomb, who led the discussion on interesting Hawaii's children and youth in nature and conservation.

Mr. David Woodside of the Fish and Game Division reported that in working with Boy Scouts he has found the bird study unit in the Boy Scout handbook difficult to work with because of the emphasis on mainland birds. However, there is a unit on wild life management that is useful. Another problem in arranging bird study is that most of the Scout meetings are held in the evening. Mr. Woodside said that we should train leaders to work with children, but that this takes time.

Mr. Ronald Walker of the Conservation Council suggested working with science clubs in high schools, also that the Audubon Society work with the Conservation Council.

A visitor, Mr. Herbert Drapkin, told of the highly successful science center and youth museum in Fullerton, California. There, a steering committee was composed not only of scientists, but included teachers, a children's librarian, pediatrician, etc. Later, businessmen, lawyers, engineers were needed. The Fullerton Center does not limit its interest to nature study but emphasizes the unity of science.

To begin with, the Fullerton group tried to define their goals, and then had their ideas printed, and drawings made. Money was donated by groups such as the elementary principals' association, but they did not ask for city funds, because the Science Center wished to be independent of city control. However, they obtained the approval of the City Council. There are 26 members on the board of directors, in order to spread the interest, and 450 family members. It has plans for a $450,000 plant on 50 or 60 acres. Property values around the Center have increased.

Science centers such as this work with the schools but do not compete with them. The emphasis is on asking questions, on discovery. One can study aspects of biology, visit a tide pool, learn glass blowing, etc. There are public lectures on such subjects as archaeology and artifacts, photography, electronics,with the age level specified for each talk. Nature camps in other areas are run in connection with the center.

Exhibit cases are made in certain specified sizes,so that they can be exchanged with those of other institutions.

College students are often leaders and assistants in the program. There is also an auxiliary league of interested parents.

The Pacific Science Center in Seattle, and the centers in Fort Worth and Kalamazoo are also excellent.

Mrs. Veronica Medeiros, an elementary school teacher who has served as liaison between the Bishop Museum and the public schools here, made several suggestions:
1. Help teachers and teachers-in-training. They need content as well as bibliographies - live materials in addition to printed matter. Perhaps the Audubon Society could reach the University of Hawaii teacher-training cadet groups, take them on field trips, etc.
2. The Audubon group might prepare papers that could be mimeographed for the teachers. There is a free mailing service available to schools. Mr. Barrett of the D.P.I. would be the one to see about this.

Dr. Hubert Frings of the University Biology Department agreed with Mrs. Medeiros that we should try to work through the University. He also felt we should spread the base of interest--include marine life, invertebrates, etc., as the National Audubon Society has done.

Miss Unoyo Kojima reported that the Trail and Mountain Club is going to have chapters in different schools, starting in September, with Kailua the first. She spoke of the importance of having a nature adviser along on hikes, as well as a regular leader. A nature leader doesn't have to know a great deal - one can always look up the answer for the next time. Two or three leaders are needed with larger groups, to be with the fast or slow walkers. It takes time and dedication to keep up a program of this kind.

Dr. J. Murray Speirs, Department of Zoology, University of Toronto, told of the work that is going on in his area. For instance, at the Y.M.C.A. camps boys sign up for the privilege of getting up at 5:00 a.m. and going in small groups for two-hour nature hikes.

Dr. Speirs told of the very active Junior Field Naturalist Club there for the 8-12 year-old group, limited to 200 children. The leaders are drafted from the University; the club officers come from the children themselves. There are small groups for bird study, botany, minerals, etc., that meet monthly. The children publish their own magazine once a year, and run one meeting a year themselves.

About 20 of the 200 are interested enough to go on to the Intermediary Field Naturalist group. The leader writes a newspaper column, appears on TV, and answers questions over the phone.

There is an Island Nature School in Toronto that runs for 11 months. Every 6th grader in the city gets to this school for one or two weeks a year. The children study astronomy, pond life, etc.

The Royal Canadian Institute gives monthly lectures on all sorts of topics, and there is a summer school for students gifted in nature, math, etc.

Mrs. Maurice King said that as a school librarian she felt the lack of simple, attractive, inexpensive books on Hawaiian birds comparable to the children's books one can get on mainland birds. Something like Dunmire's BIRDS OF THE NATIONAL PARKS IN HAWAII, but emphasizing the common, every-day birds would be a great help.

Mrs. King had conferred with Mrs. Anne Powlison about our problem of increasing interest in birds. Mrs. Powlison, sponsored by the Hui Manu, goes around to the public schools, on request from the principal, and shows Hawaii Audubon Society films on Hawaiian birds. She would be delighted to have more such films to exhibit.

Mrs. Powlison has long been a newspaper columnist on Hawaiian birds. She would be happy to help with the writing of a bird book for children. What might we aim at in size, color, type of cover, price range, and so on? She was glad to hear that the Audubon Society is getting out a new edition of our own pocket guide. Mrs. Powlison says she always tells school children about the Hawaii Audubon Society and the junior memberships available, but has no idea how many children may have joined because of this. In considering such junior membership, Mrs. Powlison feels that the membership card could be very important. Could it be of a special color, and what ages would be included? Should there be divisions for different age groups? What special privileges would the child be entitled to? What special duties might he have as a member of the Hawaii Audubon Society - how can young people serve?

Mrs. King wondered if colored post cards of ordinary island birds might be printed. She also mentioned the possibility of working with other local agencies such as the Children's Museum, Board of Parks and Recreation, Bishop Museum, Hui Manu, etc. In putting out a book might Sister Mary Lawrence, who has written a nature series for the Catholic schools, be consulted, as well as Miss Grenville Hatch, who edited the Hawaii Audubon handbook HAWAIIAN BIRDS. Bob and Dorothy Hargreaves, who have done attractive booklets on Hawaiian flowers are another suggestion, and for publishers, Tongg Publishing Company, and Tuttle.

One suggestion was that the National Science Foundation might be of assistance. Another person thought we might work through the Hawaii Academy of Science.

Mr. Bob Brown, vice-president of the Conservation Council, was unable to be present, but has indicated his strong interest in work with young people. Junior memberships in the Council are now available. The Conservation Council is made of individuals or organizations who have an interest in any phase of conservation - human, wildlife, soil, etc. Mr. Woodside wondered if our Audubon group is really the one to pursue this project of working with youth - wouldn't the Conservation Council be better suited to take the lead?

Miss Titcomb urged the members to think over these ideas, bring others if possible, and consider what they might be willing to do to help.

The meeting was adjourned at 10:30 p.m.

Respectfully submitted,
Lucinda King
Secretary pro tem

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SUBSTITUTING FOR THE TREASURER

While pinch-hitting for the vacationing Treasurer of our Society I have had the pleasure of taking in moneys for the Nene Restoration Fund, which now has climbed to over $1500.

The list of donors is long, and we are most grateful.

One sizeable donation deserves special mention. It came from two hundred young people, the 5th and 6th grades of the Punahou Summer School, teachers Mrs. Bohart and Mrs. Matthews. An article about the Nene Restoration Fund in Bob Krauss' column started them off. By saving, denying themselves some of the joys of movies and candy, also by making and selling cookies and selling some precious possessions, such as coins in a coin collection, they all raised $95.00!

In a week, the sum was added to by $58.00 more, and in another week another amount was added: $20.00. At that point, school broke up. It was July 31st. The whole sum is therefore $173.00, and the money comes to us shining with youth and endeavor.

Bob Krauss took note of the donation in his column, when he heard of the first $95.00. That was a thrill to the children and they yearn to read of his pleasure at the final reading of $173.00.

Another thrill was the visit of Ron Walker. He responded to an invitation from Mrs. Helen Bohart for a picture of the Nene, the noble bird which is the "bird" of our State. He came and received the fascinated attention of the children as he talked of the bird and why it needs this assistance from us, and showed movies and still pictures. It was doubtless his talk that drove the children to the added effort of the last $78.00.

Picking up the mail has been done once a week. The letter from Punahou lay in the box for almost a week. Your servant, undersigned, realized on Friday Morning, July 31st, when she got the mail, that it was the last day of school. A letter had already been written when this dramatic fact occurred to her. Quick, the telephone! Yes, Mrs Matthews was contacted. Thanks poured forth from the Audubon officer, and Mrs. Matthews promised that the loud-speaker would be put into use so that the children would be thanked before they scattered to other places, near and far, and would be assured that their dear and adored friend, Bob Krauss, would know of their efforts again. Who could tell? He might mention them once again in his glamorous column.

Margaret Titcomb

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THE NENE'S FRIENDS ON THE MAINLAND

A copy of a letter to Mrs. L.W. Kovar, of Owatonna, Minnesota, from Barbara Sather, gives us news of the Round Lake Waterfowl Station, at Round Lake, Minnesota.

Barbara Sather's father, Kenneth L. Sather, has there what is "probably the largest collection of waterfowl in America," according to a write-up of the sanctuary-collection by Jim Kimball, of the Minneapolis Sunday Tribune (9/15/63).

To quote further, Mr. Sather has "eighty different species of ducks, geese and swans from all parts of the world." He started out in the cookie business, and has been very successful. "Nothing to it" he says, "Just buy low and sell high and the business keeps growing." His success enabled him to start this hobby, if that is what it may be called, only five years ago, "with five mallards and five geese." He raises them and "sells them to zoos throughout the country." He has a biologist, Glen Smart. "Like Sather, he is particularly interested in getting giant Canada geese re-estblished in this part of the country."

"Smart is also attempting to develop, through hybridization, a new type of duck which would be intermediate between the mallard and the pintail. They have already been brought to the third generation.

"The idea behind this experiment is to develop a bird which would be like no other duck in the wild. It could then be used in shooting preserves and prevent the mistaken kill of wild birds which sometimes get mixed in with those on preserves." (Is this an idea that helps Hawaii and its tourist-hunters?)

"It is truly a thrill to see and photograph such a variety of wild fowl, but I had no trouble picking a favorite. It was the Nene or Hawaiian goose. They are beautiful, tame, gentle and curious."

The story of the rescue of the nene follows. "One pair was sent to Sather and it is hoped that they will breed next year.

Miss Sather says, "The Nene goose requires the same treatment as most other geese. In Minnesota the only difficulties are their limited resistance to cold winters and their early laying."

We hope that residents of Hawaii may know their State bird better and be equally admiring of it!

Margaret Titcomb

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READERS' NOTES

HONOLULU STAR-BULLETIN, July 27, 1964, page 11, $125,000 is Sought to Continue Nene Restoration by Helen Altonn

A photograph of children watching the banding of the British-reared geese was an ideal news release for the nene project. The individuals who contributed toward the recent nene fund drive were able to see the results of their contributions.

The article said, "It is hoped that a separate colony can be established on Maui in case anything happens to the one on the Big Island. Nene did exist in prehistoric times on Maui, so...we're putting them in a natural home. About 237 nene have been raised at Pohakuloa and 129 of these have been released to mate with wild ones. On the Big Island the wild birds have successfully paired with those reared in captivity and they are nesting. There is no evidence yet of nesting at Haleakala, but the Hawaiian birds are mating with those from England.

"The nene project has been acclaimed as the most successful wildlife restoration effort in the world, but those close to the project fear that, unless it is sustained, the effort may be in vain."

THE HONOLULU ADVERTISER, July 28, 1964, page B1, English Nene to Help Restore State Bird Here by Joe Carter

Tuesday morning, July 28, as a sequel to last night's article in Honolulu Star-

Bulletin there was a photograph showing the identification band on nene's leg, and an article on the nene project.

"A horse and mule train carrying burlap cages will make a rugged 10-mile drive up to Haleakala Crater on Maui today, a pilgrimage toward saving the rare nene goose from extinction.

"Inside the cages will be 20 young nene from England and eight from the Big Island. They are carefully banded so Fish and Game Commission officers can keep track of their progress....

"The transplant today which will raise Maui's nene population to 82, is part of a drive that involved many persons from game officials to school children....

"Besides funds for raising the nene in captivity, money is also needed to protect the birds from the mongoose and other hazards.

"The mongoose eats nene eggs from the nest and also attacks the adult birds when they are molting and unable to fly--one factor in the original loss of birds. Another factor in the near extinction...was hunters. The nene nests during the fall and winter--the time that geese ordinarily are hunted, because most species nest in the spring and summer. When hunters killed the parents, the young birds starved or the eggs were left unattended. Nene hunting now is banned, so the mongoose remains the only major threat to the birds.

"After the birds reach Haleakala Crater today, they will be freed in a three-acre pen with their wings trimmed. Besides the native feeds, they will be given domestic grains to gradually change their diets. When their wing feathers grow out, the birds will be accustomed to grasses and berries native to the 4,000 to 7,000-foot altitude and may fly away to freedom. They may find mates and in about two years have young nene. This natural increase and more imports from England are expected to cause the bird to flourish in numbers."

Unoyo Kojima

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LETTERS: From Chester M. Fennell, Seoul, Korea, 2 August 1964.

...I was exceedingly pleased to hear of the Fairy Terns nesting at Koko Head.... When I was in Hawaii, as you may recall, we congratulated ourselves to no small degree if we just now and then sighted them off the coast - mainly on Manana. In fact, I believe that's the only spot I ever did see them. Of course we never found them nesting there that I recall. Yes, you're quite right, they are a most fascinating, beautiful species and one of my favorite of all the "sea-going" kinds. We have the Asiatic Little Tern here in Korea, a summer resident, but it in no way begins to compare with the grace and delicateness of the Fairy Tern. The Nordmann's Tern is also sometimes observed on migration off the east coast of the Korean peninsula, but I don't get over that way often enough to ascertain either its regularity or abundance.

Frightfully hot and humid here at the moment and I find it extremely difficult to continue my field observations.... Of all the crazy times of the year for the shorebirds to be coming back from their nesting grounds in Siberia this is it! But every year they start showing up the latter part of July already. Just this afternoon I saw a group of four Dunlins along the Han River near Seoul and a week ago a group of six Australian Curlews and five Little Stints. Nearly all were still in full breeding plumage - the Dunlins with their jet black underparts and the Stints with bright reddish heads and necks. No doubt the Pintail Snipe are already beginning to come in, too, although I haven't had the energy to get out across the Han River and into the rice paddies and marshes they frequent to check on them. The Pintail Snipe (Capella stenura) usually come through the Seoul area in large numbers during August and have almost all passed through before the migration of the Common Snipe (Capella gallinago) begins. The two species, of course, are extremely difficult to tell apart in the field although the Pintail tends to have a slower flight and lacks the usual "scape, scape" alarm note of the Common Snipe.

Thought you might like a copy of my latest paper on dietary habits of some Formosan birds.* I'm currently working on a similar, longer paper on specimens taken here in Korea. Hope to have it published, eventually, in the CONDOR. Dr. Wada of

Kochi University on the island of Shikoku in Japan did all the stomach analyses for me. He's unusually good, since he is an authority in both botany and entomology - a rare combination, indeed.... There's so very much to be done over here and in the nearby Pacific Basin area that I feel I've only been able to scratch the surface to date. Of course, it's the old story, the more one does the more he realizes what should be done. Guess a person really needs 3-4 lifetimes to accomplish a substantial portion of his goal. At least ornithologists....

Please give my very best regards to all....

*Bull. Inst. Zool., Academia Sinica 2: 65-73 (1963), Stomach Analyses of Some Taiwan Birds, by Chester M. Fennell was enclosed.

This report is based upon a study of the stomach contents of 238 specimens representing 65 species of birds. Most birds were collected between March-May, 1959 and 1960, in central Taiwan and along the east coast by the author as a guest investigator during the course of field studies at the Parasitology Department of the U.S. Naval Medical Research Unit No. 2, Taipei, Taiwan.

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The National Wildlife magazine (749 North Second St., Milwaukee 3, Wisconsin) will devote its December/January, 1964/65 issue to Hawaii. They want pictures and accompanying material on conservation programs and problems of wildlife only. No scenes, flowers or people. They will pay for what they use: $25 to $75, and return what is not used. Naturally, there is not a great deal of time before the issue must be made up, though they themselves do not mention that fact. Here is a chance for some of us. They mention birds, mammals, fish, flora and fauna.

Margaret Titcomb

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FIELD NOTES:

From Nualolo Valley, Kauai, August, 1964, by Margaret Titcomb

Some archaeologists have been working in this valley and one of them, William Kikuchi, has kindly reported on birds - lots of them. It is no great surprise that sea, shore and forest birds take to that valley, but good to hear news of them: an owl frequents the place, several plovers (at least six are back already or stayed through the winter), shearwaters moaned at night from the cliffs, a koa'e, one or more, were often seen, also iwa, sanderling, quite a few mejiro, some mynahs, and an auku'u "in the next valley."

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Wedge-tailed Shearwater Found Nesting on Mokauia Island by Yoshio Kondo

On July 25, 1964, a colony of nesting wedge-tailed shearwaters (Puffinus pacificus chlororhynchus, courtesy Edwin H. Bryan) were observed on Mokauia Island located off Malaekahana, Oahu.

One unattended egg was seen in a small underground coral cavern five feet or so below the surface. A close inspection of similar coral caves revealed three brooding hens. The birds were unafraid. We were careful not to disturb them and refrained from further search. Egg: Chalky white, pointed at one end, blunt on the other; length about 2½ inches.

Signs of previous nesting (or attempts to nest) were numerous on the sandy portions of this island. These are large holes about 12 inches in diameter, excavated laterally and at a small downward angle into the soft sand grown over by manienie grass.

There is a great deal of human traffic on Mokauia Island, both sightseers and fishermen. Apparently the shearwaters are unafraid and most of the visitors are unaware of the bird colony's existence.

Witnesses of the colony were: Patrick Kirch, Carl Christensen, Kay and Yoshio Kondo.

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BLANCHE A. PEDLEY

It is very difficult to express adequately our indebtedness to a member - still a member, we are glad to say, who rendered such valuable service as Blanche A. Pedley. For many years she served as treasurer, uncomplainingly and conscientiously, even though the task took a great deal of time in her busy life as a physics teacher.

Part of the task was the routine caring for dues of members, and all that it entails. But the sale of our Hawaiian Birds guide was a complete and heavy task also. Now she has asked to be free of this care.

Though we do not express gratitude frequently, seeming to take for granted such kindly help, we are truly aware of our good fortune in having such a time-consuming share of the routine work done and always well done.

We hope that Blanche now enjoys thoroughly the opportunity to be a "free-roving" member, without a financial care in her mind. We enjoy her companionship, and honor her for her unselfish service.

Margaret Titcomb

The Hawaii Audubon Society takes great pleasure in expressing its appreciation by granting Mrs. Pedley honorary membership in the society.

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WANTED: (1) An editor for THE ELEPAIO
(2) Materials for THE ELEPAIO
(3) December, 1963, issue of THE ELEPAIO, Volume 24, Number 6.

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SEPTEMBER ACTIVITIES:

September 13 - Field trip to study shorebirds. Bring lunch, water, and if possible, your own 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 14 - Board meeting at the Honolulu Aquarium Auditorium at 7:30 p.m. Members are always welcome.

September 21 - General meeting at the Honolulu Aquarium Auditorium at 7:30 p.m. Program for the night: Eugene Kriedler will show a film on Alaska, WINGS OVER THE BLITZEN, filmed at Malheur Refuge.

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MAILING ADDRESS: P.O. Box 5032, Honolulu, Hawaii, 96814

DUES: Regular - $3.00 per annum
Regular out of State - $2.00 per annum
Junior (18 years and under) - $1.00 per annum
Life - $50.00