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ENDANGERED WILDLIFE IN HAWAII

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The latest expression of national concern for wildlife is Public Law 89-669, The Endangered Species Preservation Act, enacted by Congress and signed by President Johnson on October 15, 1966. The direction taken by this recent legislation departs significantly from generalized wildlife conservation lawmaking generated by previous Congresses. Heretofore, wildlife conservation has been directed largely at preserving populations. The conservation of species is something entirely different. Species are the living threads which form the intricate fabric of nature. Populations are renewable; species, once lost, are not. In providing for conservation at the species level, P.L. 89-669 thus marks a historical departure from previous conservation legislation.

Never in the history of man have the wild resources of a continent been so swiftly ravaged as during the past century in North America. Within a few generations of Americans, wildlife populations of unprecedented numbers together with their supporting natural plant communities - whole regional ecosystems - have been drastically altered or entirely destroyed.

What was once the world's greatest single-species wild ungulate population - some 60,000,000 plains buffalo - has been reduced to a few scattered herds on protected sanctuaries. Passenger pigeons, reckoned by one eminent authority, after years of sifting the records, to number 3-5 billion at the time of the discovery of America - perhaps the most impressive species of bird that man has ever known - have been wantonly, and completely annihilated. Not one living bird remains. A living resource has become unrenowable. Five other species of birds, nine different mammals, and six kinds of fishes have been extirpated in North America during the historic period.

The impact of civilization in Hawaii has pushed an even larger number of species into permanent oblivion. At least 25 kinds of birds - 40% of the endemic birds known to have inhabited the Islands - have become extinct in the historic period. In fact, Hawaii's loss of 25 species comprises more than 15% of all kinds of birds which have become extinct in the world since 1600! Hawaii's only sizeable endemic mammal, the Hawaiian monk seal, has been reduced to an endangered few. Tragically, little or nothing is known of the unique fresh water fishes which may have made Hawaii their home - their stream habitat was thoughtlessly altered or destroyed before thorough collection and identification surveys were carried out.

Destruction of wildlife habitats continues at an accelerated rate today, sparked by the population explosion and unprecedented development of land. Some

130 kinds of birds, mammals, amphibians, reptiles, and fish are now listed by the Committee on Rare and Endangered Wildlife Species, U.S. Department of the Interior. Twenty-three of these species, or 18%, are found in Hawaii.

Taking note of the national concern for the fate of the country's disappearing wildlife and recent positive accomplishments by conservation agencies in saving certain endangered wild species - whooping cranes, nene, trumpeter swans - Congress provided stopgap funds in 1965 for remedial measures. This emergency action was followed up last year by enactment of the Endangered Species Preservation Act which gives broad authority and policy guidance to the Secretary of the Interior for a comprehensive program for the protection, conservation, and propagation of endangered species of fish and wildlife in the United States, Guam, American Samoa, the Virgin Islands, and the Commonwealth of Puerto Rico. This new and far-reaching responsibility has been vested by Secretary of the Interior in the Bureau of Sport Fisheries and Wildlife. The research aspects of this program are being carried out in the Bureau by the Division of Wildlife Research.

While there is no general agreement on what constitutes a "rare" or "endangered" form of fish and wildlife, both terms connote a need for protection. The Committee on Rare and Endangered Wildlife Species has provided useful definitions, as follows:

Endangered---An endangered species or subspecies is one whose prospects of survival and reproduction are in immediate jeopardy. Its peril may result from one or more causes - loss or change of habitat, overexploitation, predation, competition, disease. An endangered species must have help, or extinction will probably follow.

Rare---A rare species or subspecies is one that, although not presently threatened with extinction, is in such small numbers throughout its range that it may be endangered if its environment worsens. Close watch of its status is necessary.

In determining which species of wildlife are threatened with extinction, the Secretary has consulted with the States and many interested organizations and experts in ecology and vertebrate zoology. The Secretary needs a wide spectrum of sound advice, the determination depending as it does upon a great variety of specific information over a broad geographical area. Consequently, consultation will be continued.

For Hawaii, the Committee on Rare and Endangered Wildlife Species has tentatively listed one mammal and twenty-three birds as rare and endangered, as follows:

Rare and Endangered Wildlife, Hawaiian Islands

Mammal:

Hawaiian Monk Seal, Monachus schauinslandi Matschie

Birds:

Hawaiian Dark-rumped Petrel, Pterodroma phaeopygia sandwichensis (Ridgway)

Newell's Manx Shearwater, Puffinus puffinus newelli Henshaw

Hawaiian Harcourt's Petrel, Oceanodroma castro cryptoleucura (Ridgway)

Hawaiian Goose (Nene), Branta sandvicensis (Vigors)

Hawaiian Duck (Koloa), Anas wyvilliana Sclater

Laysan Duck, Anas laysanensis Rothschild

Hawaiian Hawk, Buteo solitarius Peale

Hawaiian Common Gallinule, Gallinula chloropus sandvicensis Streets

Hawaiian Stilt, Himantopus himantopus knudseni Stejneger

Hawaiian Crow, Corvus tropicus (Gmelin)

Small Kauai Thrush, Phaeornis palmeri (Rothschild)

Nihoa Millerbird, Acrocephalus kingi (Wetmore)

Kauai 'O'o, Moho braccatus (Cassin)

Molokai Creeper, Loxops maculata flammea Wilson

Kauai 'Akialoa, Hemignathus procerus Cabanis

Kauai Nuku-pu'u, Hemignathus lucidus hanapepe Wilson

'Akiapola'au, Hemignathus wilsoni (Rothschild)

Maui Parrotbill, Pseudonestor xanthophrys Rothschild
 'O'u, Psittirostra psittacea (Gmelin)
 Nihoa Finchbill, Psittirostra cantans ultima (W.A. Bryan)
 Laysan Finchbill, Psittirostra cantans cantans (Wilson)
 Palila, Psittirostra bailleui (Oustalet)
 Crested Honeycreeper, Palmeria dolei (Wilson)

In addition, the Green Turtle (Chelonia mydas mydas Linnaeus) is listed by the Bureau as a "peripheral" species in Hawaii - one which occurs as a rare or endangered species in that part of its range which falls within the United States (though not in its range as a whole and requires special attention to assure retention in our Nation's fauna.

It is emphasized that the above listing is preliminary. Confirmation must await further information and evaluation. Research for the compilation disclosed a scarcity of information on many of the species listed. Further work is needed to provide the necessary details.

Listing of rare and endangered wildlife is intended to focus attention on these species - to stimulate corrective action wherever possible. This is not a job for the Bureau of Sport Fisheries and Wildlife alone. Every land management agency of Federal, State, and local governments is urged to employ all means available to it toward achieving greater security for all wildlife. Only by united appropriate action will the extinction of existing species be prevented.

Endangered species research in Hawaii is presently being conducted along three different lines of inquiry. Development of a research program on the status, distribution, life history, ecology, and management of endangered species necessarily requires the comprehensive collection and analysis of published information on these subjects. Between 1,500 and 2,000 useful references on Hawaiian avifauna have been collected. This material is being abstracted and incorporated in a system lending itself to information retrieval. This vast body of information is expected to be made available to other interested researchers when completed.

Field surveys are being carried out in cooperation with appropriate State agencies, land administrators, and individuals, to gather information on the present status of endangered species and to delineate habitats used. Twenty areas known to be utilized by endangered species of water birds - Hawaiian duck, stilt, and gallinule - have been identified and basic information gathered on the biological characteristics of each area. It is expected that surveys of habitats to endangered water birds will be completed in 1967. While habitats of endangered upland species are rapidly being put to other uses in Hawaii's booming economy, the wetlands needed by endangered ducks, stilts, and gallinules are disappearing at an even more alarming rate.

The third research objective being pursued is twofold: (1) identification of all the significant environmental factors which contribute toward species extinction in Hawaii, and (2) determination of ways in which information about these elements can be meaningfully gathered and interpreted. Some factors which contribute toward extinction of species, such as habitat destruction, are painfully obvious. Other possible adverse influences, such as competition or predation by introduced exotic wildlife, are more difficult to define but may be equally important in some cases.

Improvement of knowledge is the responsibility of everyone interested in the perpetuation of vanishing wildlife. If you have first-hand knowledge on the current status and distribution of any of Hawaii's endangered species, you can contribute importantly to species conservation by sending the information to the author, Wildlife Research Biologist, P.O. Box 35, Hawaii National Park, Hawaii 96718; or to Office of Endangered Species, Bureau of Sport Fisheries and Wildlife, U.S. Department of the Interior, Washington, D.C. 20240.

READERS' NOTES:

Have you seen the article, "17 Isle Birds Dying Out" in the Sunday STAR-BULLETIN & ADVERTISER, March 19, 1967, page A-15?

The list compiled by the Interior Department was released by Rep. Spark M. Matsunaga. It was the same as Banko's listing with the exception of the following omissions: 1-Newell's Manx Shearwater, 2-Hawaiian Harcourt's Petrel, 3-Laysan Duck, 4-Stilt, 5-Molokai Creeper, and 6-Laysan Finchbill.

Unfortunately, there were some errors. The Hawaiian name for the hawk is 'Io, not ii. The label GALLINULE (Cackling Goose) is incorrect. It is a drawing of the cackling goose and not the gallinule. They are two different birds. The gallinule belongs to the order Gruiformes and the goose to the Anseriformes. Also, 'Akohekohe is more accurately called crested honeycreeper than honeyeater. Ou is ambiguous, because 'Ou is Bulwer's Petrel, Bulweria bulweri (Jardin & Selby) while 'O'u is a honeycreeper, Psittirostra psittacea (Gmelin).

Newspapers are one of the very important media of communication, so it is necessary to print correct information. If you have any suggestions as to how we can help improve the quality of the flora and fauna information passed on to the general public, please write to Kojima, 725-A 8th Ave, Honolulu, Hawaii 96816.

HONOLULU ADVERTISER, October 19, 1966: 'EXTINCT' BIRDS RETURN TO KAUAI
(Ruth R. Rockafellow's contribution)

"Newell's Shearwater, Hawaii's only native seabird, again is appearing on local highways--apparently exhausted and fair game for careless motorists. The foot-long bird, known to ornithologists as 'Puffinus puffinus' and to the early Hawaiians as the 'A'o, was thought to be extinct a few years ago....It was thought the introduction of the mongoose to Hawaii had killed off the bird, named for a Catholic Brother Newell, who first identified it in Hana, Maui....

"Every year at this time, thousands mysteriously appear on Kauai roads. In four or five days they are gone, just as mysteriously....No one knows why they suddenly appear, why they drop exhausted to the highway, where they go or why they are always emaciated. Newell's Shearwater is found nowhere else, and it is suspected it might nest high along the Napali Coast.

"Swedberg recommends that those finding the shearwaters take them home and feed them, then launch them from a high point the next day...."

HONOLULU STAR-BULLETIN, October 13, 1966, page C-2: KAUAI'S FOR THE SHEARWATER BIRDS by Jean Holmes.

This news article had a picture of a shearwater with the following caption, "THE BIRD--This is a Newell's Shearwater."

"Newell's Shearwater, birds once thought extinct, are making their annual visit to Kauai. The black and white birds, who spend most of their time soaring over the Pacific, are being found, exhausted, dropping on Island roads. Evidently mistaking shiny roads and paved areas for water, they make their landings, usually at night, and are unable to take off again.

"Aerodynamically speaking, they have a high glide ratio and a low thrust-to-weight ratio . . . meaning that they are soaring birds that, once on the ground, have a difficult time in getting airborne again if there does not happen to be a good breeze blowing.

"The people of Kauai are asked to protect the birds. When a shearwater drops onto roads and parking lots and sits immobile, it is not dead or dying.

"There are two schools of thought on how to launch a grounded shearwater. One school says to pick up the bird, run rapidly into the breeze, and toss the bird vigorously into the wind. The other less energetic school says to place the bird gently on a body of water...a lake, pond or calm river is preferable than to subjecting the tired creature to the waves of the ocean.

"The Newell's Shearwater once populated the entire Hawaiian chain. Nobody knows much about the birds on why they now select Kauai for their annual visitation. On rare occasions in recent years, the birds have been spotted on Oahu and the

Big Island...."

HONOLULU STAR-BULLETIN, October 31, 1966, page A-6: Letter to the Editor from Warren B. King, Pacific Ocean Biological Survey Program, Smithsonian Institution.

"In reference to your article in the October 13 edition entitled 'Kauai's for the Shearwater birds,' I would like to make a comment or two.

"The photograph is of a Wedge-tailed Shearwater, not a Newell's Shearwater....

"It is unlikely that they mistake paved areas for water. The one thing which all areas where the birds come down have in common is that they are brightly lighted. This is especially true of Kilauea Point where the lighthouse has attracted as many as 25 in one night (on 5 May 1965). They are most likely to come down on heavily overcast, windless nights, indicating that they have become somewhat lost or disoriented, and tired from flapping more than usual without wind to help them.

"The 'tired creatures' would far prefer to fight the waves of the ocean where their food is available to them and where wind would help them become airborne rather than freshwater where neither of these can be obtained.

"This peculiar but appealing creature deserves all the publicity it can get. Its fearlessness of humans is not due to stupidity but to its having evolved in a situation where there were no natural enemies. That it now has numerous enemies in the form of cats, dogs, mongooses, and rats has resulted in a sizable decline in its population in recent times, but due to its habits of nesting in precipitous and often inaccessible terrain it will remain safe from extinction as long as the mongoose is kept out of Kauai and Niihau."

PACIFIC BIRD OBSERVER, February 1967, No. 6, pages 1 and 2: NEWELL'S SHEARWATER-- A RARE BIRD by Warren B. King

Newell's Shearwater is a fairly small, black and white seabird which was believed to be extinct until about 15 years ago. It is known to breed only in the main Hawaiian Islands. In the last century before its population declined, the Hawaiian natives knew the bird well. They called it "'A'o" which describes quite well the eerie wails it makes as it sails in search of its nest site in the dark. The young 'A'o were sought after as a prized meal, fit for a king. In fact, 'A'o flesh was kapu, forbidden, to the common folk.

Even in the old days in Hawaii when 'A'o were plentiful, it took determination and sometimes bravery to find them. They prefer to nest on the faces of precipitous cliffs where they burrow into the earth to construct a tunnel which may be several feet long. At the end of the tunnel they lay their one egg and the young are hatched and grow up in near darkness and total privacy. The Hawaiians found that a long branched stick would catch in the downy feathers of young birds and in this manner they could be extracted from their burrows.

Toward the end of the nineteenth century the mongoose was introduced to the Hawaiian Islands at the insistence of the sugar cane growers in the hope of controlling rats. The mongoose has a broad appetite, however, and ground-nesting birds undoubtedly form a large part of its diet. It is more than just coincidence that Kauai, the only main island on which the mongoose was not introduced, now is the only remaining stronghold of the Newell's Shearwater, and for 50 years no records of its occurrence were made public.

Due to the efforts of the Hawaii Fish and Game Service and the Pacific Ocean Biological Survey Program, the Newell's Shearwater is once more well known. The birds have received publicity in Hawaii's newspapers because of their curious habit of "falling" out of the sky at night from May to October in areas which are strongly lighted. Actually, the birds are attracted to the lights only on cloudy or moonless nights when they have difficulty finding their way into the mountains to their nest sites. Evidently the lights disorient them because they are known to strike windows, cars, and lighthouses. Since the birds feed exclusively at sea where the trade winds blow, they are dependent on the wind to make their graceful banking and gliding flight efficient. They have evolved long thin wings which makes this kind of flight possible at the expense of maneuverability and control at slow speeds. As a result they "brake" poorly before landing and tend to crash-land more often than not.

We have attempted to relocate their nesting sites and over 50 birds have been

banded and released. Observations of their distribution at sea have shown that they disperse widely after their breeding cycle is completed. They have been recorded on Johnston Atoll, Wake Island, and the Marianas. The exact limits of their migration are still unknown, but we suspect they head mainly southeast from Kauai in October and return in April.

Newell's Shearwater is more likely to be seen at sea than on islands. It may be told from other seabirds by its black upper parts, white underparts and greyish hooked bill. In flight it holds its wings stiffly and intersperses rapid wing-beats with graceful glides. Care must be taken not to confuse this bird with the more common shearwaters or petrels of the Pacific. Because it has become rare, its range and movements are of special interest to ornithologists. Any information on this bird is of great importance to us.

HONOLULU ADVERTISER, March 10, 1967: NENE FUND BOOSTED BY \$10,000
(Margaret L. Smith's contribution)

"...Sen. Fong said if Congress appropriates the additional money, it will be used for a scientific study of the methods of releasing the birds to the wild. Last year, the budget for nene research was \$15,000. The increase will bring it to \$25,000....He said 69 young nene were raised at Pohakuloa in 1966, the most successful year so far. Of the 350 nene raised there during the last 10 years, 178 have been released on the Big Island and 18 on Maui.

"He said the Department of the Interior informed him 'we are a long way from knowing what is actually happening to the nene after they leave the release pens, and to what extent, if any, they are bolstering wild population.'"

LETTERS: From Netty Hansen, Kalaheo, Kauai, March 18, 1967:

You requested members to share our experiences regarding birds and nature. Perhaps you would be interested in our findings.

Last Sunday at Koke'e, in our garden, we saw one mature 'Amakihi and two young 'Amakihi. (These may be 'Anianiau.) We also counted fifteen 'Apapane. They are plentiful in our garden as they love an orange flowered bush which we have planted in order to attract the native birds. We also heard an 'I'iwi, but they never come around the flowers. They usually stay in the Koa trees.

The name of the bush with orange flowers is called *Streptosolen jamesonii*. The 'Apapane and 'Anianiau are always drinking nectar from this plant. They also enjoy *Abelia* and *Fuchsia*. The adult 'Amakihi never goes near the *Streptosolen* flowers. This bird prefers an orange honeysuckle.

I suggested to Gerry Swedberg that the Dept. of Fish and Game should plant more of these plants for the native birds, as this plant would supplement food when the 'Ohi'a completed blooming. We have a great many more 'Apapane around our cottage after the 'Ohi'a have bloomed.

Dr. Andrew Berger may be interested in knowing that we saw what we believe to be the Collared thrush in our former Lihue garden. It is a beautiful bird almost the size of a large dove. Its breast was apricot and it had a dark band around its neck which ended below the breast. Every time we saw them, the other birds - Shama and Chinese thrush - flew over to a nearby branch and watched these birds. Their wings and tail were an olive-brown, the same as the Chinese thrush. They stayed in the tree for about an hour and returned on several occasions.

We moved to Kalaheo last August, and we are protecting the birds on our homestead with "No Shooting" signs. It is a treat to hear and see the Meadow lark. Also Pueo, Pheasant, Cardinals. The Pheasant sometimes fly on our roof.

Just read Gerry Swedberg's article in the April ELEPAIO, so I called Gerry as his description of the Collared thrush's breast was entirely different. I told Gerry I was only five or six feet away from the bird and had an opportunity to observe its coloring at close range. He said he trapped one and that I was 100% right. The first time he saw them they were too far away to see the pale apricot

coloring.

Last year, in the Spring, we were watching the Jungle fowl eating grain and three small pigs arrived and ate with the chickens. Later on a Pheasant joined them. Every week-end when we went to Koke'e as soon as we fed the chickens the three pigs arrived. We have pictures of them.

April 9, 1967: We didn't see any unusual birds at Koke'e, but we saw six 'Apapane on the Streptosolen bush on Sunday morning. The night before, just about dark we observed two 'Anianiau on the Streptosolen along with two small olive green birds. I would say they are the same color as the 'Amakihi, but they are much smaller and do not have the long curved beak. There was one 'Apapane and he stayed on the bush until 7:00 p.m.

The weather was windy and rainy up at Koke'e. It was cold! In our garden a mother hen (Jungle fowl) sat in the middle of the garden on six chicks. She did not try to find shelter and she looked like a wet rag with her feathers dripping water. I could see the chicks' heads sticking out from under the wings.

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Editor's Note: Please compare these notes with your field notes and tell us about the similarities or the differences.

Collared thrush or the White-throated laughing thrush, Garrulax albogularis (Gould)

From INDIAN HILL BIRDS by Salim Ali, page 25:

Size: Rather larger than the myna.

Field characters: A crestless olive-brown and rust-coloured (ferruginous) laughing thrush with white cheeks and throat. Broad white terminal band to tail conspicuous in flight, especially when spread out for alighting. Sexes alike. Flocks or "sisterhoods" of 8 to 10, usually in trees on well-wooded hillsides.

Habits: It is a common species at most of our west Himalayan hill stations between about 4,000 to 9,000 feet elevation. Flocks of 8 to 10 birds are usually met with in hill oak forests....They keep more to trees-hopping about from branch to branch in search of food--and are less addicted to rumaging on the ground. The members of a flock keep in touch with one another by means of a peculiar short, rather high pitched ke ke notes when disturbed they explode into the typical laughing choruses... with a mixture of peculiar hissing and squealing calls. The flocks keep together even in the breeding season.

Nesting: The season is mostly from about early April to the end of June. The nest varies from a deepish cup to a shallow saucer. It is made of coarse grass, creepers, dead leaves, moss etc. sometimes unlined, at others lined with finer roots. It is placed in the horizontal fork of a branch in a small tree or shrub, 3 to 10 feet from the ground--occasionally between two upright stems of seedlings. The normal clutch consists of 3 eggs; exceptionally 4. They are an intense deep blue without any greenish tinge; long ovals in shape with a fine texture and beautiful gloss.

FOR JUNIOR MEMBERS:

Field Notes from Jonathan Hegele: Na Laau

On the afternoon of March 13, Unoyo Kojima and I visited Na Laau Aboretum on the makai side of Diamond Head. It was the mellow hour as I like to term the time of day, rich in golden sunlight that pours softly over the dry, dusty earth and filters its way through the Koa-haole to pause now and then perhaps as a warm glow on a Wiliwili bloom. Not far from the entrance of the trail Kojima said she heard a mockingbird and so we stopped, and sure enough it came winging through the Koa-haole and alighted on a Kiawe tree. It was silhouetted against a light patch of sky and consequently showed as a dark shadow which may have contributed to the fact that I just couldn't see it. Other birders may have had this problem at times; scanning the tree or bush as the case may be, with your disarming bird chirping, singing sweetly or just plain sitting there, while your patience for your feathered friend wears to a thin point.

Anyway I picked it out when it flew which really wasn't all as good as it might have been.

Continuing our walk we reached the beautiful clearing among the Kiawe where the water fountain and the plaque dedicated to Munro stand. The view from there was quite pleasant, and we enjoyed seeing both the view and a bushy plant growing below the wall. It was Sandalwood but probably of a different species, since the leaf structure is somewhat different.

Then we discovered something unusual. A little farther on Kojima saw what looked like two or three finches sitting close together on a Koa-haole branch. Aid from a field glass proved them to be two Orange-cheeked waxbills. It was the first time I had seen the actual bird, in captivity or the wild, but the interesting thing that both Kojima and I wondered about was whether the Orange-cheek was propagating itself successfully. Would sightings outside their original habitat tend to confirm successful propagation of the species or merely a movement of the present population? If new birds consistently appeared in the territory over Diamond Head and surrounding areas of suitable location, then perhaps the former would appear to be in order, but at any rate it would be interesting and fun if the whole complex of waxbills and other finches or birds existing under Diamond Head conditions and surrounding habitats could be studied and compiled.

At this time in the shadowy Koa-haole which bordered and covered the path, many Cardinals could be heard singing and chirping as indeed they could from the very start of the trail. Little by little as we proceeded, evidence began to accumulate that we were approaching the heart of finch-country for probably no natives were more restless--even at night--than these Na Laau birds. At first there were only California linnets, then small groups of mysterious tiny finch-like birds flying fairly high overhead and finally we were through the Koa-haole, past a row of fleshy leaved succulents and out into a grassed, rock scattered, cactus bordered area dotted with clumps of bushy Kiawe trees.

I expected something really fantastic to develop after all that suspense, but after the sound of our footfalls had died away, we realized that it was very quiet. The sun shone warmly and for a moment there was no finch movement of any kind. In the distance, muffled shouts from some baseball players in Kapiolani Park reached us and with explosive force, several big doves took off from a leafless Wiliwili tree across the clearing and opposite from Kojima and me. This particular tree had a few blossoms left on it, but what was more conspicuous were the numerous pods hanging from the branches. I wondered if the Lacenecks were feeding on them or just sitting there enjoying the height. I have also seen Mejiros in the same Wiliwili but I rather think they weren't feeding on the entire seeds.

At this point we left the trail and infiltrated the mountainside in quest of the finches. The peeping, singing and calling started again in the Kiawe bush above us. We had almost reached our destination when we were surprised by a somewhat querulous call from behind us. Turning, we at first could not locate the source of the call, but finally vigilance prevailed and we discovered a small bluish finch with a bright red cheek patch sitting and singing a vigorous song high on a Kiawe branch. Undoubtedly a Cordon bleu. It stayed for a while, but for the length of time in which we viewed the bird it remained mostly silent giving vent now and then to a series of strong vibrant notes. Finally it flew off taking with it, of course, any chances for an extra look.

However, even this clearing wasn't the best as far as finches were concerned. We crossed a small mosquito infested dip nearly choked by dense Koa-haole with sticky webs of hungry abundant spiders, but finally made it across to the next clearing (much the same as the first) where in rapid succession we saw three Firefinches, a few more Orange-cheeked waxbills, 4 Green singing finches, 4 Gray singing finches, several Linnets and another male Cordon bleu. We also observed a number of birds which looked much like English sparrows, only larger. I guess these could either be male weavers out of color or Linnets, although these birds seemed too bulky for Linnets.

On the early Saturday afternoon of March 18 I went back to Na Laau and observed

finches again, but I also saw a few nests. There were two shaggy nests completely domed over and with slightly protruding entrances. By one of the two nests in a Kiawe tree, I saw a Green singing finch, but whether or not the nest belonged to the bird I do not know. There were about four other nests, but I couldn't see if they were roofed over or had protruding entrances, even with the aid of binoculars, since they were either too far inside a Kiawe tree or were too high in a tree to observe. Here is the list of birds that I saw on March 18: 7 or 8 English sparrows, 4 male & 4 female Linnets, at least 3 Ricebirds, both Laceneck and Barred doves, 2 Brazilian cardinals, 3 male & 1 female N.A. cardinals, 6 Majiros, 2 Lavender finches which uttered buzzing notes as they flew about in a large Kiawe tree, 1 Firefinch, 4 Gray singing finches, 1 female Cordon bleu, 1 Green singing finch, 1 Bishop weaver, 1 immature Orange-cheeked waxbill indicating perhaps this particular waxbill is breeding successfully.

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Have you had any interesting experiences? As of April 17 all of the plover I am watching have handsomely donned their breeding plumage, and they are busily feeding to prepare for the long trip back to Alaska. Are yours still here? How are they behaving?

Are you watching any nesting birds? The linnets and cardinals are still busily building the nests. Have you noticed the fledgling mynah begging for food and the solicitous behavior of the parents? Please share your experiences with other members by writing to Kojima, 725-A 8th Ave, Honolulu, Hawaii 96816.

FIELD TRIP to Waipio Peninsula and Kahuku to study shore birds, March 12, 1967.

The March field trip took in shore and pond areas of Waipio Peninsula and Kahuku to observe shore birds and waterfowl as the time approaches for migration to their breeding grounds.

The filter beds on Waipio Peninsula have been altered greatly in the past few months and are now drained and heavily overgrown with grasses, making them very attractive to seed-eating finches, if not to water birds. Several hundred Black-headed Mannikins predominated, with a few Ricebirds, Strawberry Finches (in the brown winter plumage), and House Finches also present. The Mannikins are highly gregarious, and flocks of 500 to 1000 have been seen in this area. Along with the Black-headed Mannikins were spotted three Tricolored Mannikins - similarly colored but with white sides and flanks. This is the first known recording for Oahu and undoubtedly represents a recent release of caged birds. Water birds were absent here except for Golden Plover, Stilt, and Cattle Egret. However, two Mockingbirds were seen, and the flight song of a Skylark and the crowing of a Pheasant were heard.

Across from the Navy's Inactive Service Craft Facility five Pueo were in sight at one time, coursing over the fields--a noteworthy occasion in any location--here or on the Mainland.

At Kahuku both shore birds and waterfowl appeared to be gathering for the flight north. About 40 Pintails were seen along with 5 to 10 Shovellers, American Widgeons, and Green-winged Teal. The most exciting catch of the day was a male Garganey--a teal which breeds across northern Eurasia and normally winters south to Africa, India, S.E. Asia, the Phillipines, and New Guinea.

A large flock of approximately 200 Golden Plovers, Ruddy Turnstones, and Sanderlings were seen on the old airstrip. And at the various ponds we were able to pick out three Pectoral Sandpipers, a Dunlin, a Lesser Yellowlegs, and a Gallinule! One "peep" Sandpiper was observed but the species was not determined.

J. Richard Gauthey

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Tricolored Mannikin, Munia malacca malacca, 4 $\frac{1}{2}$ inches.

From CAGE BIRDS IN COLOR by G. Mandahl-Barth, page 111:

This mannikin ranges from central and southern India to Ceylon and lives in

open country, feeding on seeds of grasses and other plants including rice and other crops. The spherical nest is built of grass and other plant material, being placed in reeds and occasionally bushes. Four to seven white eggs are the clutch. The sexes are rather alike, the female being of a duller color.

From BUNTINGS, CARDINALS, LOVEBIRDS & MANNIKINS by P.M. Soderberg, page 74:

Tricolored Mannikin...has never been a common bird in aviaries in this country.

The three colors which are found on this bird make it most attractive in appearance, for it has a black head, throat and belly, with all the rest of the plumage chestnut except that the breast and flanks are a pure white.

It is in size a little larger than the Black-headed Mannikin, but is just as gentle in its behavior towards other birds, and never makes a nuisance of itself.

Garganey, Anas querquedula, 15 inches.

From A FIELD GUIDE TO THE BIRDS OF BRITAIN AND EUROPE by Peterson, Mountfort, and Hollom, page 33: ...Male distinguished in flight by pale blue-gray fore-wing, sharply contrasting brown breast and white belly; easily identified when at rest by conspicuous curving white streak from eye to nape, also by long drooping black and white scapulars; in eclipse resembles female but is always distinguishable by blue-gray shoulders....Behaviour and feeding habits more like Shoveler's than Teal's. Flight very rapid and agile. Male makes peculiar dry rattling or grating noise....

Excerpts from the minutes of the general meeting of the Hawaii Audubon Society, February 20, 1967: ...President Ord gave a brief report on two field trips to Kahuku. One trip, on January 21, 1967 was taken by Michael Ord, Robert Pyle and Eugene Kridler. They were hoping to catch the poachers seen on previous trips. There were no poachers, but there was very good birding. The highlight was an unprecedented 8 species of ducks--Pintail, American Widgeon, Shoveller, Green-winged Teal, Gadwall, Scaup, Hooded Merganser, and either a Blue-winged or Cinnamon Teal in female plumage. Two of these species, Gadwall and Hooded Merganser, were possibly the first sightings of these ducks in Hawaii. Unusual shore birds seen were 1 Dowitcher, 1 Dunlin, and 1 possible Least Sandpiper....

ALOHA to our new members:

Donald Brock, 5840 Seminary Court, Oakland, California 94605.

Norman Foster, 207 11th Street, Hickam AFB, Hawaii 96553.

Mrs. Clyde K. Stroborg, 2835 Kalmia Place, San Diego, California 92104.

Haleakala National Park, P.O. Box 456, Kahului, Maui 96732.

CONGRATULATIONS to David Woodside and HSPA Experiment Station for becoming LIFE members.

MAY ACTIVITIES:

May 8 - Board meeting at the Honolulu Aquarium Auditorium at 7:30 p.m.

Members are always welcome.

May 14 - Field trip to Palikea Trail to study forest birds. Bring lunch, water, and if possible, your car. Transportation cost (\$1.00) to be paid to the drivers. Meet at the Library of Hawaii at 8:00 a.m.

Leader: Mike Ord, telephone 968-771.

May 15 - General meeting at the Honolulu Aquarium Auditorium at 7:30 p.m.

Speaker: Dr. John R. Hendrickson, Director of the Oceanic Institute.

Topic: Giant Tortoise and the Iguana of the Galapagos Islands.

HAWAII AUDUBON SOCIETY EXECUTIVE BOARD:

President-W. Michael Ord, Vice Presidents-Dr. Andrew J. Berger & Jack L. Throp

Secretary-Mrs. Robert L. Pyle, Treasurer-Carl F. Frings

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