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BIRDS IN HAWAII
By Robert L. Pyle
(From THE WESTERN Tanager, June 1962)

The non-professional bird-seeker with a general interest in all the birdlife of Hawaii will find it convenient to divide the species of wild-occurring birds there into four major groups. These are 1) the native landbirds, all but one of which are species endemic to Hawaii; 2) the introduced landbirds which are known to have been brought to Hawaii by man since 1778 when the Islands were first discovered by Captain Cook; 3) the freshwater birds and shorebirds which inhabit marshes, ponds, shorelines or mudflats and 4) the birds of the open ocean which, except for nesting, occur at the Islands only incidentally and which normally range far to sea even during the nesting season.

A birder arriving in Honolulu on his first visit will quickly become acquainted with the commoner species of introduced landbirds which abound in the hotel grounds and in the parks and gardens about the city. During the first week as he ventures farther afield, he may find a few more introduced species in the countryside along the many good roads outside Honolulu. He will likely be directed to, or discover, a pond or mudflat and there see a sampling of freshwater birds and shorebirds, most if not all of them familiar species from the California coast. Along the coastal road he may, with good fortune, record one or two seabirds, usually a Frigatebird or White-tailed Tropic-bird soaring high overhead.

But birders coming to the Islands for a brief visit usually want most of all to see some of the endemic Hawaiian landbirds, and also to see some of the more interesting seabirds, preferably at their nesting or roosting grounds where they may be observed closely and easily. A few native landbirds and some seabirds can be found quite readily on Oahu in the company of an experienced individual or group. Birders visiting in Honolulu should inquire at the Bishop Museum for the phone number of an officer of the Hawaii Audubon Society. The Society schedules two field trips each month, and its members are usually happy to direct visitors to local birding trails, or perhaps accompany them on special excursions. Mainlanders planning a trip to the Islands should study the Society's monthly publication Elepaio.

Twenty-two species of native landbirds are definitely known to exist now in the Islands, while nine other species plus three forms of the Oo have been unrecorded for half a century or more. These are accurately set forth in Peterson's Field Guide to Western Birds. Some species still living on Hawaii and Kauai Islands were formerly represented on other islands by sub-specific forms now extinct. Earlier writers frequently considered each island form to be a separate species, which explains the larger number of extinct species sometimes given in published accounts. Of the 22 living species, at least 4 have only been rediscovered since World War II. In 1960 Frank Richardson found two species in the high mountains of Kauai which had been unrecorded since the early 1900's, and found two others which had been reported by sight or sound only once or twice in that time. On Maui the Parrotbill and Crested Honeycreeper have been

similarly rediscovered within the past 20 years. The Mamo, Oo and Ula-ai-hawane may yet be rescued from the ranks of the extinct by determined field work in the wet forests of Hawaii or Molokai, but the other species formerly inhabiting the smaller islands or the dry uplands of Hawaii Island are probably lost forever.

Of the 22 native landbird species living today, three are large birds (Hawk, Short-eared Owl and Crow) and two others (Millerbird and Laysan Finch) are found only on low uninhabited atolls northwest of the main Hawaiian Islands. It is important to realize that all of the remaining 17 species of small native songbirds are found only at higher elevations in the wet mountain forests or in the dry uplands of Hawaii Island. Even the extinct species were primarily birds of the forested slopes. The earliest visitors to the Islands in the late 18th and early 19th centuries found no birds at all in the lowland areas. Any native species which may originally have evolved to fill the lowland ecological niches must have been extirpated by the Polynesian people who first arrived in large numbers about 1000 years ago and settled in the valleys and coastal areas of the main islands.

The Short-eared Owl occurs on all the main islands and except for the Hawk on Hawaii Island there are no other native predatory birds. As in the United States this Owl is largely diurnal, but may also be encountered after dusk foraging over the lowland sugar cane fields.

On Oahu Island the three "basic" species of small native songbirds, the Elepaio, Apapane, and Amakihi, may be found along the Poamoho, Aiea and other trails ascending the west slopes of the Koolau range, and on several trails in the Waianae range. Two others, the Iiwi and Creeper, are very scarce but are occasionally seen in the same areas.

For native landbirds, however, the islands of Hawaii and Kauai are the places to go, with Hawaii having the edge because the birds there are more accessible. In addition to the three basic species of Oahu, Hawaii has the Iiwi commonly, shares the common Omao and the scarce Akepa and Ou with Kauai, and has four specialties of its own: the Hawaiian Hawk, Hawaiian Crow, Akiapolaau and Palila. The Crow is found only in a restricted area on Puu Waawaa ranch just off the main highway north of Kailua on the west side of the island. The Palila inhabits mamane groves on the dry slopes of Mauna Kea off of the Saddle Road between Hilo and Kona. All the other species are found in and near Hawaii National Park. The Park Naturalist at the headquarters can give more detailed directions on where to find the native landbirds, both inside and outside the park.

Kauai has the five Oahu species, shares three with Hawaii, and also has five specialties: Anianiau, Oo, Akialoa, Nukupuu and Pouaiohi. Besides the three basics, only the Anianiau is easily found. Look for it in the Kokee region at the end of the paved road above Waimea Canyon. The other native species are found only in the high forest wilderness in the central part of the island. This area is in the clouds most of the time and is so wet that a large portion of it is more accurately known as the Alakai Swamp. In this district is the Mt. Waialeale rain gauge which annually measures between 600 and 1200 inches of rain and is a perennial competitor of a certain mountain in Burma for the honor of being the world's wettest spot. To find these scarce native species one must hike in to this forest from Kokee, with no distinct trail, and be prepared to remain out of touch with civilization for at least three days and preferably more. The area is also fascinating botanically, and it is hoped that it can soon be set aside as a permanent wilderness region.

The other islands have the Apapane and Amakihi, but otherwise little to offer in native landbirds. Maui does have two specialties, the Parrotbill and Crested Honeycreeper. However these inhabit isolated forest regions on the northeast slopes of Haleakala and to see them one must be prepared for considerable hiking. A one-day hike on the Olinda trail should yield Honeycreepers, but the best areas require a three or four day round trip, much of it in virtually trackless forest. Access is either through the crater of

the new Haleakala National Park or up the slope from the northeast coast. The Akepa has also been reported from Maui once or twice but its existence there is questionable.

For seabirds one should go to the low-lying atolls of the northwest chain, particularly Midway and Laysan. However there is no commercial transportation, and only those on official business may ride the military plane to the Midway naval base. Lacking an opportune excuse to get to Midway, the next best place for seabirds is along the east coast of Oahu itself. Every birder visiting Honolulu should make a maximum effort through the local Audubon people to arrange a trip to Ulupau Head on the Kaneohe Marine Air Station. Here one may drive a car to within twenty feet of nesting Red-footed Boobies, and may admire the incredibly graceful Frigatebirds circling low overhead or point scopes at roosting individuals inflating their red throat patches on Moku Manu islet. Here also one can count on Brown Boobies, Sooty Terns, Brown and White-capped Noddies, and probably White-tailed Tropic-birds. If fortune smiles, a Red-tailed Tropic-bird or White Tern may wander by. From the high cliffs one can frequently see a huge sea turtle in the clear water below.

Another interesting seabird venture is to visit Popoia, a small low coral islet lying 200 yards off Oahu's east coast where Wedge-tailed Shearwaters and Bulwer Petrels nest. Access can be by swimming or surfboard, but more prudently by small boat. Going over on a summer afternoon, one has time to photograph half-grown chicks in the rock crevices, then enjoy a picnic supper and, as twilight settles, sit quietly while the returning adults gather and mill about giving their queer moaning cries.

Outside of Oahu, one good place to see seabirds is at Kilauea Lighthouse on Kauai where Frigatebirds, Red-footed Boobies and Wedge-tailed Shearwaters are regularly found. The Newell or Manx Shearwater probably nests on Kauai and the Dark-rumped Petrel nests in Haleakala Crater on Maui and perhaps on Hawaii, but it is very difficult to find these birds or their nests even after considerable hiking to reach the nesting sites.

The freshwater birds and shorebirds are primarily North American species and are well-covered in Peterson's western guide. A small flock of the world famous Nene, or Hawaiian Goose, still exists in the wild on the lava slopes of Mauna Loa and Mauna Kea on Hawaii Island. They move about over a broad area but have certain favorite feeding areas and flyways. The Hawaii National Park Naturalist can give current information on one's chances for finding them. The state game farm at Pohakuloa on the Saddle Road between Hilo and Kona maintains a breeding flock and permits visiting and photographing except during the breeding season in winter.

The Hawaiian Duck is now found only on the larger streams of Kauai. From time to time the state game department introduces a few individuals on ponds at the Kahana Refuge on Maui and at Hilo, Hawaii, but one cannot yet count on seeing them there.

The introduced landbirds are also treated thoroughly by Peterson. Many of the species are from eastern Asia, although all continents are represented except Antarctica (no one has tried to introduce penguins yet). The highest seniority among non-native species is held by the Jungle Fowl, "introduced" by the early Polynesians an undetermined number of centuries before Captain Cook's arrival. One of the most recent introductions is the Cattle Egret, now rapidly becoming an ornithological status symbol for many of the fifty states. Oahu has the most species including a number of specialties, with Kauai a close second. The other islands have fewer introduced species, all of which (except for a few gamebirds) are also found on Oahu.

No discussion of the birdlife of Hawaii would be complete without mention of the fine large collection on display at the Honolulu Zoo. The mild climate allows the birds to remain the year round in outdoor cages with naturally growing plants from their homelands. The collection of birds-of-paradise is perhaps the finest in the world. Here one may also see and photograph some of the native Hawaiian species including the Hawk, Owl, Crow, Nene, Hawaiian and Laysan Ducks, Night heron and Stilt. The Zoo

grounds are also one of Honolulu's best places to see the common introduced landbirds.

Finally, no visitor to the islands should miss seeing the Bishop Museum, which not only has skins and mounted display specimens of practically all Hawaiian birds including the extinct endemics, but also has fascinating modern exhibits showing authentic feather cloaks and many other phases of the history and culture of Polynesia and Hawaii.

THE GUAM EDIBLE NEST SWIFTLET

By John Bowles

On May 15, 1962, approximately 175 Guam Edible Nest Swiftlets (Collocalia inexpectata bartshi Mearns) were released in Niu Valley by the State of Hawaii Fish and Game Department. The birds were collected by mist net on Guam and flown to Hawaii where they were released in one large mass at about 3 p.m. All of the birds survived the trip. There was also a broken egg found in the crate. A previous sample of 12 birds had been thoroughly studied for parasites, etc., and all tests showed negative. The project was sponsored and paid for by the Hui Manu organization in Honolulu. The following is a brief description and discussion of the bird from the few accounts that have been written about it.

The Guam Swiftlet belongs with all swifts to the Order Apodiformes. The Swift group as a whole is very fast in the air and spends much of its active hours flying. The legs are very weak and thus the birds are usually helpless on the ground. Because swifts are helpless on the ground, most activities such as food gathering, courting, mating, are done on the wing. When roosting, the birds usually find a vertical ledge or surface from which they can easily take off. The Guam Swiftlet, according to Bryan (1936) rarely seems to alight, even in caves where it nests.

The swifts, in general, have a greatly enlarged salivary gland but in the nest swiftlets, Collocalia, of the Indo-Australian area, it has great significance for the nests are made primarily of saliva. In some species such as the one concerned, C. inexpectata, the large amounts of saliva are used to glue sticks together and to fasten the whole cup-like nest to the sides and roofs of caves. Some birds are reported to nest on walls of over-hanging cliffs or inside hollow trees (Delacour, 1947), but Woodside found the swiftlets on Guam only in caves of limestone. The bird seems to prefer lowlands, particularly the seacoast since it has been observed flying over fields and woodland openings (Baker, 1951), and over coastline and valleys (Woodside). Marshall (1949) found the birds generally feeding in large flocks in canyons where the vegetation was somewhat sparse, avoiding densely forested areas. There were some small flocks or pairs which tended to gather together to feed in a very large flock in the evening. It can thus be seen that the Guam Swiftlet is both diurnal and crepuscular (twilight) in its feeding habits and thus shows the typical food habits of swifts in that it feeds primarily on flying insects caught on the wing. The song of a single bird is a variety of chirps but a somewhat musical noise can be heard from a flock of birds (Woodside).

This swiftlet is about 4 to 4½ inches in length (not including the tail) and has a total wing span of about 8 inches. The bird is sooty black above with silvery-gray throat and underparts. (Baker, 1951) Its range is listed as the Marianas Islands although close relatives are found throughout India, Indo-China, Malaysia, and Palau. The Guam Swiftlet is a non-migratory bird.

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At present, there have been no authenticated sightings of this bird and it is hoped that all persons concerned will report any sign of it.

OBSERVATION ON CATTLE EGRET - OAHU - JULY 1962

By Alan Thistle, Head
 Division of Plant Industry
 Department of Agriculture
 Honolulu, Hawaii

The Oahu resident population of CATTLE EGRET in July 1962 exceeded one hundred and fifty (150) individuals.

Most of these birds were observed in the area surrounding the West Loch at Pearl Harbor.

On 16 July, over one hundred and forty (140) Egret were observed in and around a shallow pond which is part of the old Waipahu Fish Pond. Oahu Sugar Company is currently filling this pond with sugar cane mill debris, and wash water, etc. The birds are apparently feeding on a species of horn-tailed fly maggot in the water and possibly adults of this and other flies. There are no cattle or other large animals in the immediate vicinity. A few of the birds appeared to be starting to develop mating plumage.

On 24 July, (a) ninety-three (93) Egret were in the pond noted above. (b) Approximately ten (10) Egret were in a Kahua Slaughterhouse paddock below the haul-cane road at Honouliuli. Four of these birds were in a large Opiuma Tree and may be establishing nesting territory. One large loosely constructed nest of twigs was observed in this tree next to one of the birds. These birds appeared to be in mating plumage. The other birds were feeding with and on foraging cattle. (c) Forty-five (45) Egret were feeding in a newly cut alfalfa field near Hawaii Meat Company's pen-feeding operation at Iroquois Point. They follow closely behind the mowers apparently feeding on ground beetles, roaches, grasshoppers and other insect species disturbed by the mowing operation. (d) Three birds were observed in Mangrove which forms a peninsula into West Loch below Waipahu Village and Ewa of Waipahu dump. It is believed that these birds are building nests or nesting because they come and go frequently. An effort will be made to observe this area from closer range. (e) Two of the three Egret at Honolulu Zoo are in mating plumage although their beaks are still yellow and their legs are still dark brown.

ALBINO CARDINAL

Two years ago we had an albino female Kentucky Cardinal in our yard. Later she appeared with three young - all darker colored. This summer we have one male and a couple of females which are extremely light colored, so we think she transmitted at least a trace of albinism to her descendants.

Mabel R. Becker, Kailua, Oahu

NOTES ON THE BARN OWL IN HAWAII
By P. Quentin Tomich

The barn owl, Tyto alba, is a new and seemingly welcome addition to the Hawaii bird list. Eight separate releases totaling 74 birds were made on the islands of Kauai, Oahu and Hawaii between 1958 and 1961. A record of early shipments has already been published (Elepaio, 1958, v. 19, pp. 43-44), but it seems in order to tabulate these along with the later ones.

<u>Date</u>	<u>Number</u>	<u>Source</u>	<u>Release Site</u>
April, 1958	3	San Diego Zoo, California	Kukuihaele, Hawaii
June, 1958	5	San Francisco Bay Area, California	Kukuihaele, Hawaii
October, 1958	7	San Diego Zoo, California	Kukuihaele, Hawaii
April, 1959	21	San Antonio Zoo, Texas	Kukuihaele, Hawaii
June, 1959	18	San Antonio Zoo, Texas	Kilohana, Kauai
September, 1959	7	San Diego Zoo, California	Hauula, Oahu
October, 1960	11	San Antonio Zoo, Texas	Hauula, Oahu
October, 1961	2	San Diego Zoo, California	Kilohana, Kauai

The barn owl introduction program is under direction of Alan Thistle of the Plant Industry Division, State Department of Agriculture, and its object is to establish this owl as an effective avian predator of rodents which damage agricultural crops. Mr. Thistle kindly supplied the above tabular data and other notes on May 24, 1962. He explained that zoos accumulate barn owls because many are presented to them by persons who capture young birds in the nests and later tire of them or are unable to care for them. The five owls from Northern California were obtained through the California Department of Fish and Game; Paul L. Breese, Director of the Honolulu Zoo, made contacts for delivery of the several shipments of these birds.

Over its entire range in North America, which extends from Canada south to Guatemala, the barn owl is represented by a single subspecies, T. a. pratincola (A.O.U. Check-list, 1957, pp. 272-273). Thus one would expect only small morphological differences in the Hawaiian stocks which originated in such widely separated states as California and Texas. The birds set free on Oahu were at first designated for Kauai, but since they arrived in poor condition they were released immediately at Hauula as noted. There seems to be no further record of these owls. Those liberated at Kilohana on Kauai are said to have dispersed nearly to Hanalei and into Kokee, distances of about 13 and 18 miles.

My observations of barn owls are from the Hamakua Coast of the Big Island. When I moved to Honokaa in September, 1959, I soon learned of the owls, but made no specific searches for them. My first direct encounter with the bird came only on December 30, 1961, when Nixon Wilson shot one at dusk in Waipio Valley. This was a fat adult weighing 484 gm; sex was not determined. On January 23, 1962, in the early morning darkness Manuel Silva of Honokaa struck and killed a barn owl with his car as he drove along the Belt Highway through Laupahoehoe Gulch. This specimen was a sexually inactive adult male (testes 7 mm long) weighing 415 gm. Dr. Wilson saw a barn owl in flight over cane fields one-half mile east of Honokaa before dark on January 26. I detected this species for the first time near my home one-half mile southeast of Honokaa on March 17 when one uttered three rasping screams at 9:50 pm from a position in the gulch behind the house. About 20 seconds later this bird or another screamed again, apparently in flight over the low ridge toward the town. On April 15 a barn owl screamed in the same vicinity at 3:30 am and on July 4 I heard another at the same time of day.

Two boys hiking in lower Waipio Valley on May 30 found a freshly dead specimen which was routed to me by Robert H. Baker for examination. It was an emaciated adult female weighing only 270 gm, and had evidently struck some sharp object which injured the right side. The wound had healed, encapsulating a knot of down feathers forced into the flight muscles, but the bird had meantime apparently starved. Of the three

specimens recovered, one each was prepared as a study skin by Wilson and myself, and the other was mounted for Mr. Baker.

On June 21 I spent the night in Waipio Valley beside Hiilawe Stream. Between 7:45 and 8:00 pm a barn owl screamed twice farther up the valley, indicating at least one still present. The next evening in Waimanu Valley I watched an owl foraging in the beach area along the edge of the marsh where grasses were locally sparse, and the characteristic rasping scream of the species sounded several times in the night. On the return trip from Waimanu our party camped the night of June 23 on the forested ridge between Haweleau Gulch and Papala Gulch at an elevation of 1280 feet. At dusk a barn owl made two turns over camp at tree-top level. In the night I heard screams on three occasions but slept through another flight and two more cries of an owl right over camp at 2:30 am, which one of our party described next morning. Apparently the owls in this area forage regularly in a forest habitat.

These records show that from the 36 barn owls released at Kukuihaele, survivors or offspring have moved at least 24 miles toward Hilo (to Laupahoehoe) and 5 miles toward Kohala (Waimanu Valley). Richard M. Frazier of the Honokaa Sugar Company has reported seeing barn owls repeatedly in the vicinity of Puuwaawaa, some 30 miles southwest of Kukuihaele, at an elevation of about 1500 feet in dry range country.

Certainly an interesting and adaptable bird has been added to the Hawaiian fauna. However, I am aware of no evidence that the barn owl is established anywhere in the islands as a breeding bird. Imported owls were not banded so they cannot be distinguished from those which may have hatched here. Food habits have not been investigated in Hawaii, but it is generally assumed the owls are subsisting on rodents. Discovery of nest sites, and roosts where regurgitated food pellets may be collected for analysis, is highly desirable for evidence on these two points.

Honokaa, Hawaii
July 15, 1962

A hearty welcome to the following new members:

Mrs. C.C.S. Christopher, P.O. Box 229, Koloa, Kauai.

Dr. Alden D. Hinckley, Koronivia Research Station, Nausori, Fiji.

SEPTEMBER ACTIVITIES:

- September 9 - Field trip to see shore birds, led by Mike Ord.
Meet at the Library of Hawaii at 8:00 a.m.
- September 11 - Board meeting at the Auditorium of the Honolulu Aquarium at 7:30 p.m.
All board members are urged to attend this meeting as important decisions must be made about the publication of the new bird book.
- September 17 - General meeting at the Auditorium of the Honolulu Aquarium, 7:30 p.m.
Mr. David Woodside, Chief of the Wildlife Branch, Division of Fish and Game, will tell us about the work of his Branch.

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