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NATURE NOTES FROM MOLOKAI

By Noah Pekelo, Jr.

While leading a recent expedition of entomologist friends into the remote Central and East Molokai forest areas, I had the opportunity to gather much valuable information on the habitat and distribution of the birds of Molokai. Included in our group were Dr. D. E. Hardy, Chairman, Department of Entomology, University of Hawaii; Dr. Lynn Throckmorton, University of Chicago; and Dr. Ian Thornton, a senior scholar at the East-West Center. Our expedition began in the forest back of Halawa Valley and terminated on the dry slopes of Central Molokai.

Included here are some of the more significant observations made on the trip; the following excerpts are taken from my field notes:

July 15, 1963, "the drive up the steep ridge north of Halawa Valley gave us an excellent view of the West Maui range and the Northern sea cliffs of Molokai. As we proceeded to Kanupa and our proposed campsite at the end of the ridge road, the following birds were seen along the way:"

1. Ring-necked Pheasant (Phasianus colchicus) two males.
2. Green Pheasant (Phasianus versicolor) one male.
3. Mynah (Acridotheres tristis) numerous at low elevation.
4. White-eye (Zosterops palpebrosus japonicus) common lowlands and forest.
5. House Finch (Carpodacus mexicanus frontalis) abundant.
6. Ricebird (Munia nisoria) common lowlands and open forest.
7. House Sparrow (Passer domesticus) common Halawa Valley.
8. Red-billed Leiothrix (Leiothrix lutea) common in the forest.
9. Gray Francolin (Francolinus pondicerianus) two birds in Halawa Valley.
10. Black-crowned Night Heron (Nycticorax nycticorax) two birds in Hipuapua Stream.
11. Amakihi (Loxops virens wilsoni) four birds in forest.
12. Apapane (Himatione sanguinea) eleven birds in forest.
13. White-tailed Tropicbird (Phaethon lepturus) common along the sea cliffs occasionally soaring above the ridge tops.

July 16, 1963, Kanupahu, the forest regression of East Molokai, "We are disappointed at the scarcity of native insects and birds in this area. The condition of the forest here is a duplicate of conditions noted on trips back of Mapulehu, Kainalu, Moanui, and Keopukaloa. The ramains of what were once stately Pritchardia palms stand as frondless sentinels in the swirling fog, dead and dying Cibotium ferns appear as ranks of headless soldiers, gnarled skeletons of Cheirodendron and Metrosideros trees break through the carpet of Digitaria grass that covers the boggy ridge tops and gentle slopes. Only along the steeper slopes and in the deep gulches can one find the typical native forest--a fraction of the total area. One cannot overlook the significance of this condition, thousands of

acres of forest habitat is slowly being reduced to a'boggy desert', a study should be made to determine the cause of this condition before it creeps into the forest of Central Molokai."

July 17, 1963, Puu Haha, on the Southwest slope about 300 feet from the top of the Puu. "After lunch I spotted two birds of a species that is on the verge of extinction on Molokai, the Molokai Thrush (Phaeornis obscura rutha); observed both birds for about five minutes. Both birds were brown to olive-brown above, wing and tail feathers brown, chin, throat, neck and breast feathers a pale gray becoming whiter beneath the abdomen, undertail coverts a buffy white, tibia and toes brown, bill dark brown. As I watched these birds they would occasionally droop their wings and tremble. Common here are the Apapane, Leiothrix and White-eye, only three Amakihi were counted. Reaching this area required three hours of continuous cutting of dense Uluhe fern with a machete atop Kapulei ridge."

July 19, 1963, Albinism in Ricebirds (Munia nisoria) "While driving along Kupaia ridge below Kamoku flats at about 2,500 feet elevation, Dr. Hardy called my attention to a couple of small white birds that he had seen fly into a mamani tree about twenty-five yards away; observation with binoculars revealed the birds to be albino Ricebirds (Munia nisoria); they were in a flock of about twenty-five birds. Besides the two pure white birds, five others also displayed the following phenotypical characteristics: pale whitish yellow bills and feet, light gray plumage and light brown speckled with white plumage, the birds remained on the tree for about ten minutes before flying away, giving us an excellent opportunity to have a good look at them. We remained in this area for the remainder of the day and came across several flocks of Ricebirds but did not see any more albinos."

For the most part our trip into the forest was a success, with the exception of one rainy night; we worked under clear skies during the days spent in the field. Although we covered a large part of Molokai by road, the actual area we worked on foot amounted to a strip twelve miles long and two hundred yards in width.

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LETTER from William Kaup, Chairman of PHAINOPEPLA, San Fernando Valley Audubon Society, Woodland Hills, California, Sept. 5, 1963:

"... Thank you for your letter of August 21st--even if it did point out an error /There are no barn owls in New Zealand or in the islands of Oceania, such as Hawaii./ in the PHAINOPEPLA article on Owls. My only consolation is that I am wrong in good company, at least. It also proves that one cannot depend upon any bird book, in toto, since the birds don't read the books, and consequently don't know that they aren't where they actually are. (Nothing prepared our group for sighting a Brazilian Cardinal in Orange County, but one was seen and positively identified by at last 5 people. Probably an escaper from a nearby bird farm.)

"As you are undoubtedly aware, a request to reprint is a high degree of flattery, ... We will be most pleased to see the owl article in the ELEPAIO...."

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OWLS ARE INDEED THE ODDEST BIRDS
From PHAINOPEPLA, April, 1963

Subject of legend andmyth down through the centuries....elevated as the symbol of wisdom ..... dreaded as birds of ill omen, harbingers of disaster ..... the actual owl is far different from most of the stories about it -- but quite as odd and

interesting.

That at least is the impression left with me after reading about owls in one of the handsomest and most interesting books on birds I have come across. It is the third volume in the World of Nature series published by Doubleday -- "Living Birds of the World", by E. Thomas Gilliard, Associate Curator of Birds, American Museum of Natural History. Practically everything which follows is bold-faced borrowing from Gilliard's pages.

OWLS (Strigidae)

There are 133 species of owls around the world, ranging in size from that of a sparrow to great birds two to two and a half feet in length. All are carniverous, feeding on crustaceans, amphibians, small mammals, arthropods and birds. The smallest owls are great insect catchers, as well. Their diet is one reason so many species nest near man's habitations, or even in them -- the full dinnerpail represented by the hordes of rodents which swarm wherever man lives. Most hunt by night, but not all; some hunt by day as a matter of preference. And, to dispose of one old legend -- many owls see quite well by daylight. They simply find the hunting better at night. One peculiarity of the owlish anatomy is the outer claw on each foot: usually directed backward, it is completely reversible and can be directed forward with equal efficiency.

Most owls have soft plumage, with fragile filaments on the edges of the flight feathers which enable the birds to fly in almost perfect silence. But not all owls are so equipped; the day-hunting owls, like the Hawk Owl and the Pygmy Owl, have hard body plumage, and are noisy in flight.

The most astonishing thing about owls is the modification of the head to accommodate the bird's highly specialized and enlarged sight and hearing structures. The ears, which often are of different size, one much larger than the other, are so highly developed that some species can find their prey and carry out successful attacks on it in total darkness. The characteristic flat facial disc, of feathers with a peculiar, hard wiry texture radiating outward from the bill and eyes, probably serves an acoustic function, somewhat like a radar scope.

Few people, in all probability, know that the owl's large, staring, forward-directed eyes are fixed in their sockets. An owl cannot shift his eyes to look at something, but must turn his whole head to direct his gaze at something which catches his attention. This is the reason for the 'impossible' effect of the owl's head appearing to circle freely and continuously as it watches someone circling its perch, or walking around the bird in circles as it sits on the ground. A question at this point. Does anyone know just how many degrees of movement the owl has for its head, before it snaps round in that lightning shift which the human eye can hardly follow. Gilliard does not mention this figure, and I have been given three different figures, and cannot tell which is correct.

Females are considerably larger than the males, which may be one reason why owls mate and remained paired for long periods of time. It may be a lifetime mating, but ornighologists have not yet determined this point. Like so much about the life cycle and ecology of many birds, this is an unknown quantity.

Owls display two peculiarities in their breeding habits, both considered to be mechanisms of survival. One is the phenomenon known as "Staggered birth". Owls start incubation with the first egg laid and, since they apparently do not necessarily lay an egg each day, it is not uncommon for an owl pair to be caring for good-sized nestlings while there are still eggs being incubated in the nest. All owls lay round white eggs, with the set varying from two to twelve. The sets grow larger as we go north, with the largest sets being produced by owls in the arctic regions. The incubation period is from 25 to 35 days.

Gilliard comments that the second mechanism of survival, the tendency to vary the size of clutches, verges on the unbelievable. In years when there is an abundance of rodents or other game, many owls will lay very large clutches of eggs -- some will double their usual set. Conversely, in very poor years, some species will make no attempt to nest and raise young.

Most people interested at all in birds are aware of the owls' habit of regurgitating the bones and other indigestible parts of their prey, and that biologists have found these owl pellets of great aid in determining not only what the owl's diet is, but a great deal more about the size, variety and relative abundance of small animal life in the area. But few people know that pellets from owls under four weeks of age yield practically no information of this sort. Apparently the very young owl can digest bones, perhaps as a source of calcium for its own skeletal growth, suggests Gilliard.

Study of owl pellets has also shown that at certain times of the year owls remain in quite small hunting territories. During the nesting season, our western Great Horned Owl stays in an area of about a square mile, or even less. I had always assumed, somehow, that this great bird was an American native, so it was a surprise to learn that there are 11 species of the Great Horned Owl around the world. On the other hand, the Screech Owl is indigenous to this continent -- but it has fifteen known subspecies, ranging in color from pallid desert types to ones almost black in wet areas, with some races having two color phases; reddish and sooty-gray.

A bird of the true Arctic regions is the great Snowy Owl, which Gilliard calls one of the most splendid of all birds. More than two feet long, they are snow-white, with 'varying amounts of black in the plumage, and blend into the terrain like a ptarmigan'. They are to be watched for in winter, since food scarcity sometimes drives them far to the south of their usual haunts. And then there are the:

BARN OwLS (Tytonidae)

These are the owls with the heart-shaped faces, sometimes known as the 'monkey-faced' owls. Anatomically, they differ enough from the rest of the world's owls to require a family of their own. For one thing, in Barn Owls, the tail is renewed from the center outward; in all other owls, it is from the outer feathers inwards. (Nobody knows why.) There are no barn owls in New Zealand or in the islands of Oceania, such as Hawaii.*

Like other owls, Barn Owls remain paired for long periods, and return to breed in the same places. Their offspring appear to settle where they spend their first winter.

Betwixt and between the true owls and the Barn Owls is a creature called the Bay Owl. Why the name Bay is hard to say, since it is a strictly nocturnal inhabitant of dense forests in India, Ceylon and parts of Malaysia. It merits comment because of what one observer wrote: "During the breeding season (this was in India) they outdo all other owls in the appalling nature of their outcries."

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*Editor's note: The barn owl is a new addition to the Hawaii bird list. Eight separate releases totalling 74 birds were made between 1958 and 1961. The release sites are as follows:

Kukuihaele, Hawaii

April, 1958	3 birds	Kilohana, Kauai		Hauula, Oahu	
June, 1958	5	June, 1959	18 birds	Sept., 1959	7 birds
Oct., 1958	7	Oct., 1961	2	Oct., 1960	11
April, 1959	21				

The National Audubon Society announces that "THE AUDUBON CAMP OF THE WEST" is returning to Wyoming (Wind River Range) in 1964. There will be three (3) Sessions: June 21 to July 3 - July 5 to July 17 - July 19 to July 31. The Session fee is $125 with a deductable Registration fee of $25. EARLY requests for reservations are recommended. Address: P.O. Box 3666, El Monte, California.

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ALOHA to our new members:

William Carney, 103 Beard Ave., Hickam Air Force Base, Honolulu, Hawaii
Mrs. Karl H. Struve, 99-014 Lohea Place, Aiea, Oahu, Hawaii

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OCTOBER ACTIVITIES:

October 13 - Field trip to see shore birds.
Meet at the Library of Hawaii at 7:00 a.m. (PLEASE NOTE TIME)
Leader: Mike Ord, 587-328.

October 14 - Board meeting at the Auditorium of the Honolulu Aquarium at 7:30 p.m.
Members are always welcome.

October 21 - General meeting at the Auditorium of the Honolulu Aquarium at 7:30 p.m.
Program for the night: Lewis Mowbray, who has been in charge of the Bermuda Aquarium in Hamilton since 1918 and who has exchanged positions with Spencer Tinker for one year, will give us a talk and a conducted tour of the Aquarium.

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