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| Honolulu Audubon Society | February,<br>VØL.1- | ,1941. |
|                          | VOL.1-              | #9     |
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## BIRDS OF HAWAII and Adventures in Bird Study Bird islands off the coast of Oahu By George C. Munro

To anyone not acquainted with the Hawaiian language the word moku attached to so many names of islands and also to a ship is somewhat puzzling. Moku in Hawaiian means an island or a piece broken off. A ship was called a moku because it was thought to be an island.

Before going further with the birds it might be well to furnish some information about this interesting chain of islands which run southeastward along the shore of Oahu from Mokapu Point to Makapuu Head. They are: Moku Manu, Mokulea, Popoia, Mokulua, Manana and Kaohikaipu. Moku Manu and Mokulua are each composed of two islands. The Hawaii station of the Bureau of Biological Survey bird-banding system comprises a number of substations, each a separate island, designated to fit in with the report schedules by letters of the alphabet. The eight islands with which these papers will to a great extent deal start the Hawaii series and run from A to H.

Moku Manu West which starts the series lies less than  $\frac{1}{2}$  of a mile from Mokapu Point. It is the most interesting but least accessible of the chain. As its Hawaiian name implies it is a bird island. Its two parts are separated but very close together; the western is A and the eastern B. I have traversed A on five different occasions but have never climbed to the top of B, though some of a party which . once accompanied me did so. A is about a quarter of a mile long and less than one eighth of a mile wide. About 200 feet high, it is precipitous except on the south side where it can be climbed without difficulty. It is fairly level on top which portion is covered with many thousands of sooty term in the breeding season. There is also a sprinkling of several hundred red-footed boobies where there is Vegetation for them to nest on. Frigate birds about equal in numbers

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to the boobies sit around the edges of the top and on the sides. I have not yet found their nests. Noddy tern and brown boobies are on the south side and noio or Hawaiian tern favor the caves as usual. The wedge-tailed shearwater burrows wherever there is suitable ground or lays in the shelter of rocks and shrubbery. A Christmas Island shearwater (Piffinus nativitatus) was found on the top in 1937 which I took as a specimen for the Bishop Museum to establish the record of this species being found in the main group. It had not been reported before nearer here than the French Frigate Shoals. I saw several more in 1938 and banded one. It is to be hoped it becomes established there. B is very much smaller and even more precipitous. It also is covered with birds.

Mokulea is a small steep rocky islet. The small space on top is the habitat of a few hundred noddies and the west side is covered with Hawaiian tern. There are no caves so they lay on open ledges of rock.

Popoia is different from all the others. It is a portion of raised coral reef not more than 10 feet above the water; about two acres in extent and fairly level. There are many shallow depressions on its surface, these allow access by the birds to the channels by which it is honeycombed.

Hawaiian plants of 17 species are on the island. A thick growth of milo trees about six feet high cover a third of it. Portulacca and morning glory vines of several species claim a good deal of the surface Capparis, the maiapilo of the Hawaiians, rare in other places, covers a considerable ares and presents a pretty sight when the flowers open in the evening. Wedge-tailed shearwaters burrow in the sandy places and nest in the channels in the coral and some on the surface. Bulwer's petrel which formerly nested there has been almost killed out by rats in the last few years. Popoia is an interesting island, close to the

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shore, landing is easy in almost any weather and the birds take no harm from the presence of human beings unless wilfully disturbed. It could easily be made more attractive if a shelter from sun and rain were erected there and a pathway made around the shoreline.

Mokulua, as the name indicates, forms two islands. The one on the north is substation E and the one on the south F. Both are volcanic small and high with a wonderful series of dykes showing on the bare east side. The west side, not so precipitous, is vegetation covered. Both harbor a number of Bulwer's petrel. Most of their nests are on the ground under Scaevola shrubbery. They do not seem to be much molested though a few clean picked skeletons of this bird have been found on the top of E, indicating that there may be a predatory rat there. The Hawaiian duck nests on the steep grassy sides of both. The wedge-tailed shearwater digs shallow burrows in the hard soil of the term and rock pigeons have been known to nest there in small numbers. Landings are uncertain. Sometimes E is easy of approach while F is inaccessible. At other times it may be too rough to land on E when on F the landing is comparatively easy.

Manana or Rabbit Island (G) is volcanic with **a** well define**d** orater. Its southeast rim is high and the northwest low. The interior of the crater is soil-covered as is also the western slope. The earth is loose and favorable for the burrowing shearwaters. The ground is riddled with their burrows which, however, never seem to run into one another. The rim of the crater and southeast slopes are covered with thousands of noddy tern. A few sooty tern are to be seen sometimes on the wing but so far do not nest there. It is hoped that some time they will be there in numbers as they are on Moku Manu in the nesting season. Frigate birds sometimes fly overhead but I have never seen ... them stop at the island. A few Bulwer's petrel nest in holes in the

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cliffs. Plover used to roost in large numbers on the island but few are to be seen there now. A small flock of turnstones frequent the crater and a wandering tattler can be seen occasionally on the rocks by the surf.

An owl is often in the crater but whether it makes the island its permanent home is doubtful. A few mynah birds watch for a chance to steal eggs and some nest there.

Mr. Alona, a skilful Hawaiian boatman, runs a launch service to Manana and will make a landing when such is possible.

Kaohikaipu or Goat Island is a small low volcanic island with the remnant of a crater in the water on the south side. Alona says that the original Hawaiian name of the island was Mokuahope. There is a large accumulation of loose rocks in an elongated pile on the west side. This is a suitable refuge for Bulwer's petrel where their young can be raised in perfect safety. So far there does not seem to be any animal on the island likely to molest the birds. On my last visit there on June 18 this year we banded a Bulwer's petrel that was sitting on an egg under a loose stone in the middle of the island. Shearwaters dig burrows on a grassy slope near the top and clear nesting places under stones in other places. A few Hawaiian tern nest in a cave on the land side of the old crater. One had its spotted egg on a little ledge there on June 18.

Landing is fairly easy in calm weather though one has to jump from the boat on to the rocks. The difficulty of landing on most of these islands has made them safe refuges for the seabirds. Rats rarely gain access to an island where a boat cannot be brought close to the shore. Fortunately most of these islands are so surf-washed that a boat can only momentarily touch them. Consequently rats and mice do not get ashore.

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It will be noted from the copy below of a letter from the director of the Fish and Wildlife Service of the Dept. of the Interior that our **mi**gratory shore birds and ducks come under the Migratory Bird Treaty Act and are therefore protected in Hawaii by Federal law.

> UNITED STATES DEPARTMENT OF THE INTERIOR Fish and Wildlife Service WASHINGTON

October 29th 1940

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Mr. J. d'Arcy Northwood, 130 Kealohilani Avenue, Honolulu, Hawaii.

Dear Mr. Northwood,

Receipt is acknowledged of your letter of September 11th in which you ask why the Territory of Alaska is included under the Migratory Bird Treaty Act regulations and the Territory of Hawaii excluded.

When the Treaty and the Act of Congress were drafted and Consummated no thought was given to the applicability of either to Hawaii, so none of the provisions of the Treaty or of the Act was framed with reference to Hawaii. This is attributable to the fact that the great bulk of birds sought to be protected by the Treaty are confined to this continent. It is recognized that a few species that nest in Alaska and neighboring regions in Canada pass regularly in their migrations to Hawaii. On the whole, the numbers both of species and individuals that do migrate there is negligible when compared with our continental supply of these birds.

The legislature of Hawaii has ample authority to put such restrictions as it sees fit upon the hunting of all birds, or to totally forbid the killing of any particular species or any or all birds in any particular region.

It is the opinion of the Service that the Migratory Bird Treaty Act does apply to Hawaii, and as no regulations have been provided for this Territory allowing the taking of game birds protected under the Act, it would appear that the birds you have named (with the exception of the curlew, numenius tahitiensis) may not be legally taken under Federal regulation. The curlew found in Hawaii does nest in Alaska, but is not a species of bird protected under the Treaty with Great Britain or the United Mexican States, although protected by Territorial law until July 1941. If and when the Territorial Legislature enacts laws permitting the taking of migratory game birds, consideration will be given to the promulgation of appropriate regulations under the Migratory Bird Treaty Act.

Sincerely yours,

(signed) Ira N. Gabrielson

Director

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