NOTES ON THE BIRD FAUNA OF OPEN BAY ISLANDS

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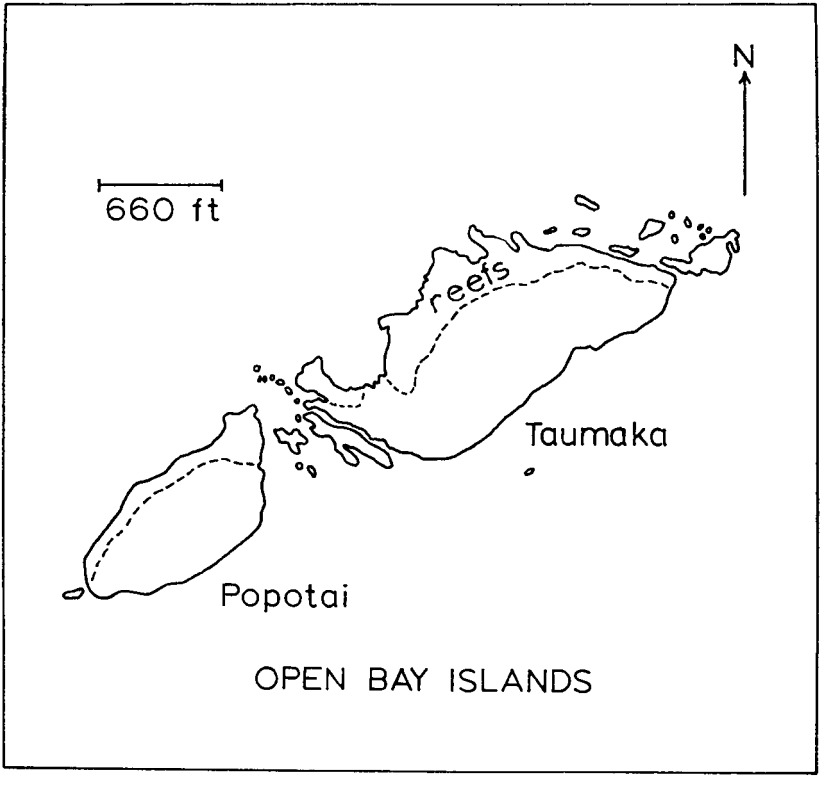
Open Bay Islands lie three miles offshore from the mouth of the Okuru River near Haast, Westland. They are predominantly fine indurated mudstones of Tertiary age covered by a horizontal layer of cemented glacial till and erratics. The soil layer is very shallow, probably less than 12 inches deep over the greater part of the island. Cliffs dominate the southern sides and sloping reefs the northern sides. Figure 1 is a map of the islands.



The vegetation of the island group was first described by Cockayne (1905). Around the edges of Taumaka, and covering the smaller islands is a 3 - 10 foot cover of *Hebe elliptica.* On the smaller islands there are extensive patches of ferns amongst the *Hebe.* The central part of the main islands is covered with a 8 - 10 foot high tangle of Kiekie *(Freycinetia banksii)* (Plate XXVIII).

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Plate XXVIII — Kiekie on Taumaka, Open Bay Islands.

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Plate XXIX — Broken forest on Taumaka.

In two ill-defined valleys, 10 - 20 foot high broken trees of *Schefflera digitata* and *Fuchsia excorticata* supported the Kiekie (Plate XXIX) but no young trees were seen.

On the exposed parts of the island the Kiekie lay on the ground but rotting logs were seen underneath. *Cordyline australis* and *Meuhlenbeckia* were also noted. The area photographed by Cockayne (1905, plate 23) is now bare of peat but covered with *Hebe elliptica* and a thin layer of litter derived from this plant.

Visits were made to Taumaka from 16 - 19 September, 1968, 26 - 30 January, 1969, and 13 - 15 February, 1969. The following bird observations, unless otherwise stated, apply to this island only.

Southern Blue Penguin *(Eudyptula minor)*

In September, five burrows with breeding penguins were located at the base of the glacial till on the N.E. end of the island although there were probably several more. Lice were collected from one individual.

Fiordland Crested Penguin *(Eudyptes pachyrhynchus)*

In September, nests of these penguins were common in the bush just above the lower limit of the bush line on the northern side of the main island. The largest concentration examined consisted of 12 nests in a 30 foot radius. Several were deep under rock overhangs and roots of trees. Of seven nests examined, five had one chick and two had two chicks. The largest chick was about eight inches long. Most penguins seen in January and February were moulting.

Procellariiformes

A few petrel burrows, of three to four inches in diameter, were located in the glacial till on the top of the island but no birds were seen. A search near the camp in September revealed fewer than ten burrows of larger diameter, possibly made by the Sooty Shearwater *(Puffinus griseus)*. Cockayne (1905) records that the soil was " . . . extremely loose, both from its texture and from being honeycombed with the holes of mutton-birds." The peat layer is no longer deep nor loose and the paucity of petrel burrows is probably related to the shallowness of the soil and the hardness of the underlying glacial till.

In January and February, up to a hundred petrels could be seen at dusk returning to burrows in the dense brush above the southern cliffs.

Spotted Shag *(Stictocarbo punctatus)*

In September these shags were abundant and nested along the cliffs on the southern sides of all islands and stacks to the north and south. The total breeding population was not counted but there were over 50 pairs on a 100 foot long section of cliff on the N.W. end of Taumaka. Seven nests examined had two eggs each in them. Only 20 - 30 birds were seen in the same area in January and February.

White-faced Heron *(Ardea novaehollandiae)*

One individual was seen feeding on the northern reefs in February.

White Heron *(Egretta alba)*

One individual was seen standing on a rock on the south side of Taumaka in February.

Weka *(Gallirallus australis)*

The wekas are of the *australis* subspecies and were introduced to the northern island only, possibly twice, between about 1905 and 1912 (B. D. Bell, Wildlife Branch, pers. comm.). They are now abundant on the main island and one was seen on Popotai. We found one shag nest with eggs pillaged by Wekas and suspect they may interfere with penguin eggs as well. They also eat meat from seal carcases. The soil surface is also much disturbed by Wekas; scratched areas and cavities under stones and logs formed by probing with the beak are everywhere in evidence. The ground fauna is noticeably poor and this may bear direct correlation with the Wekas' activities. Land Leeches — Open Bays Islands and the Snares Islands are the only known places in New Zealand where these animals are recorded — were not found; the ground wetas *(Zelandrosandrus)* are rare as are many other arthropods except Amphipoda and Isopoda. Tree dwelling wetas *(Hemideina thoracica)* and slugs are still abundant.

In our opinion, the Wekas are modifying the natural fauna of the island to an extent that would justify their removal.

Black Oystercatcher *(Haematopus unicolor)*

In September, flocks of up to 23 of these birds were seen feeding in the intertidal zone of the northern reefs. Only one of the pied form was seen in September. During February a flock of 25 was seen, of which eight or nine were young of the year. Two of the adults and one of the chicks were pied.

Black-backed Gull *(Larus dominicanus)*

Only 20 - 30 were seen around the northern reefs in September but no evidence of breeding was recorded. However, in January, 50 - 100 chicks were found on the northern reefs.

Red-billed Gull *(Larus scopulinus)*

In September, about 60 - 100 birds occupied a large rock N.E. of the main island. It was a well used roost and appeared to be a breeding colony although it was too early to be able to see any eggs. In January there were several chicks there and over 100 on the northern reefs.

White-fronted Tern *(Sterna striata)*

About 20 birds were seen in September but no evidence of breeding was recorded.

Morepork *(Ninox novaeseelandiae)*

At least one bird was heard calling at night in September but none was seen.

Fantail *(Rhipidura fuliginosa)*

Both the black and pied colour phases of these birds were seen during September and we suspect they breed there although none were seen in January or February.

Fernbird *(Bowdleria punctata)*

These birds were abundant in the bush of the main island.

Silvereye *(Zosterops lateralis)*

One bird was seen in January and about 8 - 9 in a flock during February by R. East.

Starling *(Sturnus vulgaris)*

In September, three birds were seen flying in the vicinity of the shag nests. In February, a flock of 500 - 1,000 was seen at dusk by R. East. Fishermen report this is a regular evening flight from the mainland to roost on the island.

No sign of mice, rats, stoats, or introduced domestic species of mammals were seen.

We are particularly grateful to Mr. A. T. Marley, Dick Marley, and their crews for transporting us to and from the islands; B. D. Bell and R. East for use of unpublished data; and to Carters Consolidated Ltd. for the use of the hut at Jacksons Bay.

LITERATURE CITED

COCKAYNE, L., 1905: Notes on the vegetation of the Open Bay Islands. Trans. N.Z. Institute, 36: 368 377.

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SHORT NOTE

BROWN BOOBY ON SOUTH CANTERBURY COAST

On 29/3/69 at 12.45 p.m. a large bird, first thought to be a Gannet *(Sula bassana serrator)*, was seen flying over the beach at St. Andrews, ten miles south of Timaru. On reaching the beach I quickly located the bird and focused my binoculars (10 x 50) on it.

The body was slightly smaller than a Gannet's, with upperparts, head and chest coloured a rich chocolate brown. There was a clear cut border between the brown chest and the white underparts, while the underwing was pure white with a brown border on each edge. The underwing and line of demarcation on the breast were the most conspicuous parts of the bird's plumage. The bill appeared to be light grey but the feet were not observed.

The bird appeared to be much more at leisure than any Gannets I have seen in the area, and by this time I was without doubt that it was a Brown Booby *(Sula leucogaster)*. It continued, for the next ten minutes, to glide in circles and semicircles and frequently dive into the sea, after which it rested on the water, apparently devouring its prey. Gradually the Booby moved in a northerly direction and further out to sea. The weather had been fine for the last fortnight and on the day of observation was overcast, but the sun was shining through the clouds.

— R. J. PIERCE

[This note records the most southerly sighting of a Brown Booby in New Zealand waters.—Ed.]