

New Zealand Bird Notes



Bulletin of the Ornithological Society of New Zealand.
Published Quarterly.

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Bulletin of the Ornithological Society of New Zealand.

Edited by R. H. D. STIDOLPH, 114 Cole Street, Masterton.

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CONTENTS.

	Page
Society's Annual Meeting	138
Bird Life at Governor's Bay, by E. Dawson and I. D. R. Cresswell	141
Birds of Three Kings, by G. A. Buddle	147
Visit to Little Barrier, by R. B. Sibson	151
Quest for Native Thrush, by A. R. Annabell	156
Bird Life in North-West Otago, by W. A. Watters	157
Contribution to Gannet Census—	
XIV.—Horn Horn, 1948-49, by H. R. McKenzie	159
Blue-Wattled Crow Colony, by R. McKenzie	160
Further Grey Teal Nests, by J. M. Cunningham	161
The Elusive Fern Bird, by S. D. Potter	162
Birds West of Waiau River, by J. V. Dunckley and E. M. Todd	163
Reviews	165
NOTES.—Notice to Members, 137; Starlings Nesting on Tractor, 146; Breeding of Native Pigeon, 146; Northward Movement of Red-billed Gulls, 146; Food of Harrier, 155; Birds of Hakataramea, 164.	

NOTICE TO MEMBERS.

Mr. J. M. Cunningham, hon. secretary-treasurer, will be out of New Zealand for some months. In his absence members are advised that, until further notice, correspondence should be addressed as follows:—

Subscriptions.—All payments for subscriptions, etc., questions relating to subscriptions and notifications of change of address should be addressed to Mr. H. R. McKenzie, Clevedon (acting treasurer).

Library.—Requests for the loan of books and papers in the society's library and return of books at present on loan, should be made to Mr. E. G. Turbott, The Museum, Auckland (acting-recorder-librarian).

Ringling Scheme.—Information regarding the ringling scheme should be sought from Dr. R. A. Falla, Dominion Museum, Wellington.

Other Matters.—Correspondence regarding all other society matters should be addressed to Mr. R. B. Sibson, King's College, Otahuhu, Auckland (acting-secretary).

Personal.—Personal communications for Mr. Cunningham should be sent to 39 Renall Street, Masterton, and marked "Private" on the envelope.

[The illustration of the Notornis which appears on the cover is a reproduction of that on the cover of the second edition of Buller's "Birds of New Zealand."]

SOCIETY'S ANNUAL MEETING.

About 40 members from various parts of New Zealand attended the annual meeting of the Ornithological Society of New Zealand on May 13, 1949, in the Dominion Museum. The president, Mr. C. A. Fleming, presided.

The annual report, which was adopted, stated:—

“During the year the death occurred of Mr Edgar F. Stead, a former vice-president of the society, and his passing will be regretted by all ornithologists. It was not long before his death that he had generously provided for the publication of a special Snares issue of ‘New Zealand Bird Notes,’ and it is a matter of regret that he did not live to complete further publications. The death has also occurred recently of Mr. Gregory M. Mathews, C.B.E. He was a member of the society and an ornithologist of international repute.

“As a result of appeals during the year, a considerable sum has been received in donations and this has enabled ‘New Zealand Bird Notes’ to be enlarged. Support has also continued for our Illustrations Fund. The hon. editor expresses his thanks to those who have contributed to the bulletin during the year.

“It is proposed to create a new class of endowment membership, with a subscription of 10/- per annum, and your committee confidently expects full support for this step, which should ensure the continuance of the finances in a sound and healthy state. Interest in ornithology continues to increase throughout the country, and has no doubt been stimulated by the rediscovery of the takahe and the visits of several prominent overseas ornithologists. This interest is reflected in the expanding membership, which at March 31 stood at 435, including one honorary and 26 life members. Of the remainder, it is of interest to note that 84 had paid their subscriptions in advance, some for several years, and 282 were up to date. Forty-two were removed from the roll through failing to respond to subscription requests.

“Your committee was pleased to appoint Mr. H. R. McKenzie as recorder during the year, and he will be taking over the handling of the society’s library shortly. It is expected that members’ use of this will grow as the library expands, and we are now receiving many of the world’s leading ornithological journals. Several further exchanges have been arranged during the year, and we will in future be receiving the ‘Ibis’ and ‘Condor’ and the ‘Records of the Auckland Institute and Museum.’

“Members continue to donate separates of many of their publications, and thanks are expressed to all those who do so. It would be further appreciated if members would help to make the library more complete by sending copies of their publications not already in the library. Mention may be made here of the generous gift by Dr. R. C. Murphy of the original edition of his book, ‘The Oceanic Birds of South America.’

“Once again Mr. F. E. Wells, A.R.A., N.Z., has kindly audited the books of the hon. secretary-treasurer, and his service is greatly appreciated.”

Officers, as detailed on page 137, were declared elected.

A resolution was passed amending clause three of the constitution to provide for endowment members. The clause was amended by the addition of the following words (after the words “five shillings”): “of endowment members, who will pay an annual subscription of ten shillings.”

The report of the Ringing Committee, which was adopted, stated:—
“The committee is this year able to report very substantial progress, and it is anticipated that rings will be available for distribution in a few months. The financing of the scheme has been satisfactorily

Mr. Cunningham spoke appreciatively of the great co-operation received from members of the committee, and expressed thanks to the Royal Society for the use of its room.

Mr. Fleming said he considered his term of office as president a great honour for him.

Mr. A. A. Boulton made reference to the high standard of the bulletin under Mr. Stidolph's editorship. Mr. Boulton's remarks were heartily endorsed by the meeting.

Dr. R. A. Falla gave a most enjoyable and interesting lantern and film display. He said the lantern section could be regarded as a short memorial to Mr. Stead, as many of his best slides were shown. His own films were of the highest quality and greatly appealed to those present.

EXCURSION TO KAPITI ISLAND.

The excursion to Kapiti Island on the day after the annual meeting gave a number of members the chance to fulfil a long-cherished wish. Many also added new species to their lists of birds seen, or had the chance to become more familiar with uncommon ones. All this, combined with a perfectly calm, warm, sunny day, made the expedition a highly successful and enjoyable occasion. The thanks of all are due to the organiser, Mr. C. A. Fleming, and to those who helped with the transport.

A party of 25 left Wellington on Saturday morning and arrived at Paraparaumu Beach to find the sun shining and the launch already anchored off shore. It took some time ferrying so large a party out to the launch, but even so Kapiti was reached by about eleven o'clock after a very pleasant trip. Spotted and black shags, black-backed and red-billed gulls, grey and paradise ducks and a white-fronted tern were seen on the way over, and even before landing the calls of the tuis and bellbirds on the island were easily heard.

Lunch was eaten early so as to leave as much time as possible free for exploring, and, as the bush round the house was simply alive with birds, most members were to be seen wandering around with sandwich in one hand and field glasses in the other. Tuis and bellbirds were everywhere, whiteheads, red-fronted parrakeets and pied fantails were numerous, while a weka came along the track and shared in the lunch. It formed the target for many cameras and was even tempted to steal a spoon in the hope of providing further action pictures. Afterwards the party split up, a number of members having a steep but most interesting scramble up the bush tracks and one or two of the most active even reaching the summit of the island. The unfamiliar vegetation in the bush was interesting to South Island members, while to meet robins along the track so tame that they would continue to feed within two or three feet of a group of people, and to see kakas and pigeons feeding overhead, was a great thrill. The pied tit and grey warbler seemed to be rarer but they were seen by some members of the party, and calls were heard apparently belonging to the yellow-fronted parrakeet, though the bird was not seen. The only sign of introduced species was the old nest of a blackbird.

When we returned from our scramble a huge kettle was boiling and provided a welcome cup of tea before we reluctantly embarked for the return trip. The sea was even calmer, and the sun finally setting behind the island left a wonderful silhouette against the sky. Black-fronted tern, fluttering shearwater and gannet provided three more species to our list, bringing the day's total to 21, before the excitement of landing and the drive back to Wellington in the dark.—B.J.M.

BIRD LIFE AT GOVERNOR'S BAY, BANKS PENINSULA

By Elliot Dawson and Ian D. R. Cresswell, Christchurch.

Governor's Bay, situated near the head of Lyttelton Harbour, provides a typical example of a locality where certain species of native birds have become completely or almost extinct owing to the opening up of the area by settlement.

The Bay is made even more interesting for ornithologists since it was here that T. H. Potts (1824-88), author of "Out in the Open," lived and made many of his notes and observations on our birds. Potts, a first-class field naturalist, arrived in New Zealand in 1854, moved to Ohinitahi, Governor's Bay, in 1856, and has left us an invaluable record of many interesting birds, especially important notes on their nesting habits. It is of great interest today to note his painstaking observations on rapidly disappearing species.

There are several bush-clad gullies running down, from the hills backing the bay, towards the harbour which here consists mainly of wide mudflats. Between these gullies are open areas of tussock land with rocky outcrops, parts formerly covered with bracken, manuka scrub and flax. The great majority of the trees and shrubs are native, and include: Kowhai, tree-fuchsia, whitey-wood, matipo, golden ake-ake, bush lawyer, ribbon wood, manuka, five-finger and cabbage trees, etc.

The scene in this charming, historic, bay has changed quite markedly since first the Maori and then the pakeha beheld its unspoiled beauty and made their homes there.

Erosion on the "Hills of the Seven Sleepers" above the bay, burning of vegetation, etc., and silt dumping and dredging at Lyttelton, all brought down soil and debris into the bay. All this had its effect on the bird life and several species now no longer frequent the beaches and bush clad gullies as in days of yore.

At low tide the mudflats stretch far out, leaving the 300 yards long jetty exposed. In favourable weather, red and black-billed gulls crowd the shore feeding on scraps thrown to them by picnickers, and when not so favoured, content themselves by delving in the soft mud for crabs, worms and small fish. White-fronted terns sit on the jetty and, as the tide rolls in, swoop in and out of the water, feeding in their turn. When the tide is full the jetty often presents a remarkable picture with two long rows of gulls and terns sitting there and calling lustily when one walks amongst them.

The black-backed gulls nest in various localities, the nearest to the Bay being Manson's Peninsula, while some of the smaller species of gulls nest on cliffs at Quail Island in the harbour. The terns also appear to nest here.

Penguins and shags are often seen as visitors to the Bay. The spotted shags presumably come from colonies around Whitewash Head, Sumner, while the penguins nest in certain little coves round the harbour. Very occasionally, other species of shags drift over from the Lake Ellesmere district also.

In former years, the little gullies, clad in various types of trees and shrubs were the haunts of many interesting native birds. Tuis and bell-birds were very abundant as were fantails, native thrushes, robins, wrens, tits and warblers, while wekas and native quail with a few kakas and many native pigeons could be found. The red-fronted parrakeet was also to be seen in most places here in the early days of settlement.

This area still provides an interesting scene for the close study of native birds, and, fortunately, some species are still as observable as in T. H. Potts's time.

List of species now found at Governor's Bay:—

White-flipped Penguin (*Eudyptula albosignata*)—Stragglers, usually from Diamond Harbour, are observed quite frequently. In previous

years they have been known to nest under sheds in the Bay, but we have no record of nesting sites here in the last few years. Potts mentions that they used to breed in this area in November, December and January, and discusses their nesting habits. We are of the opinion that this species is on the decrease.

Black Shag (*Phalacrocorax carbo*).—Stragglers sometimes visit the Bay, usually in pairs, but not so commonly as in former years, when it bred in the vicinity.

Spotted Shag (*Stictocarbo punctatus punctatus*).—This is a very frequent visitor and provides an interesting spectacle when fishing. Potts records its nesting habits in his "Out in the Open."

Grey Duck (*Anas poicilorhyncha*).—This species is occasionally seen in the slow-flowing creeks of Allandale—ornithologically part of the Bay—but it is not as abundant as might be expected. Needless to say there are more of these birds here in the shooting season, seeking refuge from their hunters.

Harrier (*Circus approximans*).—Numerous, especially around the craggy tops of "The Seven Sleepers." Its main diet is dead sheep and rabbits run over on the Dyer's Pass and Summit roads. Potts remembers "a fine old sage" that used to haunt the neighbourhood "making requisitions on our poultry yard" until he was "converted into a beautiful specimen!"

White-fronted Tern (*Sterna striata*).—It is the only tern found here and is plentiful about the jetty feeding on shoals of small herring. We have found nests of this bird high up on the eastern and north-eastern cliffs of Quail Island. T. H. Potts stated that formerly it bred in several parts of Lyttelton Harbour and was common at Governor's Bay.

Black-backed Gull (*Larus dominicanus*).—It is becoming increasingly common and is the only sea bird nesting in the immediate vicinity. It appears that the gulls nest unusually late here—about late December. They seem to feed on almost any sort of organic waste.

Red-billed Gull (*Larus novaehollandiae*).—Like the black-billed gull, it gets its food in part from the abattoirs and from the picnickers at the nearby bathing resort—Corsair Bay. This gull has always been very abundant on our shores.

Black-billed Gull (*Larus bulleri*).—This bird is surprisingly common here and seems to get a fair proportion of its food from the abattoirs nearby as well as feeding in the mud. Its habits appear to be quite similar to those of the red-billed gull but an interesting point arises. Here, at the head of the harbour, it is as common as the red-billed gull, while at the Lyttelton side of the harbour the latter species predominates. On the opposite side of the harbour from Lyttelton, the black-billed gull is commoner.

Shining Cuckoo (*Chalcites lucidus*).—Present in summer for the usual period, but is difficult to see as it keeps to the tree tops. It feeds on the grubs infesting certain kowhai trees whenever possible. Potts in his diary says: "1 Jan. (1865). The boys brought in a teetotum's nest with a young whistler in it which proves it to be a cuckoo."

Morepork (*Ninox novaeseelandiae*).—Apparently only one colony now, in gum trees behind the hotel, but they are heard in several parts of the area. T. H. Potts says: "For some years but little was known of its breeding habits. Early in the summer of 1871 two young birds were found in an old decayed tree in the forest by Cooper's Knobs (above the bay). . . . An old breeding place at Ohinitahi furnished castings: from an examination of these, which contained remains of mice, cicadae, coleopterae, etc., it appeared probable that spiders taken in their webs formed some portion of their food."

Kingfisher (*Halcyon sanctus*).—There are plenty of these birds around the shore where they nest in clay banks and feed from the mud, collecting crabs, small fish and worms. Potts records in one season that

the first egg was laid on October 10, and the sixth and last on the 17th. In the 1872 season he knew of three nests containing in each seven eggs, one nest with six and another with five.

Pipit (*Anthus novaeseelandiae*).—It is not common and is apparently confined entirely to the tussock-covered steeps. Potts records in 1882 that it was not so plentiful as it was years ago.

Grey Warbler (*Pseudogerygone igata*).—This bird is rarely observed, its call being more often heard than it is seen. We have only seen it three times in two years, both times in the summer, although we have heard its call very frequently and it is probably quite abundant. Potts stated that it seemed purely insectivorous, not troubling the fruit-grower, "very little planting or gardening is needed to attract its presence."

Fantail (*Rhipidura fuliginosa*).—The two phases are very tame although they keep under cover most of the time, preferring the native bush; the pied phase is still the commoner, as it was in Potts's times when it was "fairly abundant and of familiar ways," ridding the houses of flies in the autumn weeks. He believed that it bred two or three times in the course of the season.

White-eye (*Zosterops lateralis*).—Very common, especially in winter when they gather in small groups and keep near the houses, whence they get most of their food in this season. Nevertheless, it is apparent that a large number die during the winter. Potts states that having cleared away large numbers of insects in season, it takes its retaining fee by sampling the tempting ripe fruit.

Tui (*Prothemadera novaeseelandiae*).—This species is probably the most common native bird found here and if it increased much more would probably be disliked on account of its liking for ripe fruit.

Bell-bird (*Anthornis melanura*).—This is another fairly common bird in the area, and, like the tui, is very fearless and tame. Potts records it as a "lover of honey, eater of drupes and berries, yet hath a wondrous relish for insect food!"

Native birds now no longer found in the area or very irregular visitors:—

These birds were all to be found here in the early days of settlement and some of the old identities of the Bay can remember when many of them were abundant, especially the weka.

Mutton Bird (*Puffinus griseus*).—Once haunted our shores and may possibly have nested. On rare occasions other petrels and shearwaters are blown in as stragglers.

Pied Shag (*Phalacrocorax varius*).—Recorded here by Potts as common but less gregarious than the spotted shag. It is now very rarely seen south of the Waimakariri River.

White-throated Shag (*Phalacrocorax melanoleucos*).—This bird often used to come over from Lake Ellesmere in the early days, but is now apparently confined to the area round Lake Forsyth on the south side of Banks Peninsula.

Bittern (*Botaurus poiciloptilus*).—Its "boom" was a familiar sound in the swamp areas in the early days.

Paradise Duck (*Tadorna variegata*).—One of us (I.D.R.C.) remembers, several years ago, when they commonly flew over the area towards evening. T. H. Potts says that they were often "heard in lofty flight."

Bush Hawk (*Falco novaeseelandiae*).—Potts mentions, "amongst the things that were," breeding stations of this bird at Cass's Peak (above the Bay) and also in the Bay itself.

New Zealand Quail (*Coturnix novaeseelandiae*).—This bird was abundant here very many years ago but was regarded as a favourite bird for shooting by the early settlers and they and the clearing of the land with fires are responsible for its extinction here, a few years after colonisation began in earnest.

Weka (*Gallirallus australis*).—Apparently a common sight for most of the latter half of last century.

Pukeko (*Porphyrio porphyrio*).—Presumably driven away by the encroachments of settlers and now found mainly in the more isolated swamps and roadside marshes towards Lake Ellesmere.

Oystercatchers (*Haematopus* spp.).—Very occasionally oystercatchers are seen, but it is rather unusual. Although there is still some doubt, due to insufficiency of material for taxonomic investigation, as to the correct nomenclature of each form, Potts, we find, recorded that the black species (*H. unicolor*) often used to be seen in little rocky coves in the Bay, usually in pairs, but was rare in comparison with the pied species (*H. longirostris*, now known as *H. finschi*) which could be heard often on January evenings.

Dotterels.—These were often to be seen on the shore in Potts's time. Presumably he referred to the banded species (*Charadrius bicinctus*).

Sandpipers.—Potts mentions having shot these on the mudflats. This, we presume to be the Siberian pectoral sandpiper (*Calidris acuminata*).

Godwit (*Limosa lapponica*).—Recorded by Potts as feeding amongst the zoster-covered mudflats as the tide ebbs. Godwits are seen in numbers on the coast near Christchurch but we have never seen them in the Bay.

Stilt (*Himantopus himantopus*).—Common once on the mudflats and now very rarely seen. Its yelping cry could be heard often on summer evenings, according to T. H. Potts.

Pigeon (*Hemiphaga novaeseelandiae*).—This bird may still be present in the very denser parts of the bush but we have never seen or heard of it and we fear that it, too, has departed with the onrush of civilisation, as it is called.

Kaka (*Nestor meridionalis*).—The late Mr. Edgar Stead said that until 1912 it still inhabited the bush on Mt. Herbert, near Governor's Bay, but the increasing numbers of opossums there caused it to depart.

Red-fronted Parrakeet (*Cyanorhampus novaeseelandiae*).—Old identities can remember when large flocks of them were to be seen at times here. It apparently disappeared completely towards the end of last century and is now very rare anywhere in Canterbury.

Long-tailed Cuckoo (*Eudynamis taitensis*).—This bird has become very much rarer over the past few years and is now rarely heard of in the vicinity.

Laughing Owl (*Sceloglaux albifacies*).—This bird was present to some extent here in the early days but rapidly vanished.

Rifleman (*Acanthisitta chloris*).—It was fairly numerous until comparatively recent times. Potts mentions the twittering song of this little bird.

N.Z. Thrush (*Turnagra capensis*).—“Ten years at least have passed since we heard of its occurrence in this neighbourhood.”—Potts, 1882.

Fernbird (*Bowdleria punctata*).—This bird was still to be seen towards the close of last century, but has now disappeared completely.

Yellow-breasted Tit (*Petroica macrocephala macrocephala*).—Potts says of it here that “larvae of grasshoppers, chafers, and beetles form the chief part of their prey.” On April 10, 1949, Mrs. Frances Cresswell reported a pair of these birds in Ford's Bush, in the north-west corner of the Bay. We, ourselves, found, on April 24, two birds, male and female, in the same locality. It appears that we have not lost this interesting bird and there is always the possibility of its increasing somewhat if the bush is kept intact, as we sincerely hope it will be.

Robin (*Miro australis*).—This bird was very common everywhere here very many years ago but has long since gone.

Saddleback (*Creadion carunculatus*).—Commonly met with in the early days but, as the area became deforested, it disappeared quickly.

Orange-wattled Crow (*Calleas cinerea cinerea*).—Present once but driven away very quickly by the approach of colonists.

Introduced birds present:—

The relative rate of increase of the introduced birds is a matter of great interest to the many fruit-growers in this area and a considerable amount of damage would be done were it not for the large amount of protective netting that is erected to save the crops and fruit trees.

Black Swan (*Cygnus atratus*).—They are present in immense numbers on the nearby Lake Ellesmere and occasionally we have seen immature birds on the harbour.

Californian Quail (*Lophortyx californicus*).—There are plenty of these birds here although they keep to themselves under cover, preferring the bracken on the hillsides and are sometimes encountered on the road especially on fine warm days. We have sometimes had the pleasure of seeing the two parent birds running across the road followed by about twelve little chicks. Potts says in his entries, "25 Nov. (1865). E.P. (his wife) brought the pair of Californian quail with her from Mr. Hill; they are beautiful birds."

Rock Pigeon (*Columba livia*).—Commonly seen in flocks of 50-60 about the craggy tops of "The Seven Sleepers." We have not located any nesting sites as yet.

Greenfinch (*Chloris chloris*).—This is to be seen in small groups usually in summer, but is uncommon. Potts records a greenfinch with young on January 29, 1865.

Chaffinch (*Fringilla coelebs*).—Usually seen in pairs about the paths or diving after insects.

Redpoll (*Carduelis cabaret*).—This bird is also common in small groups, keeping more especially to the broom bushes and grass.

Goldfinch (*Carduelis carduelis*).—Quite common, usually being seen in groups of six or eight, especially in summer or early autumn.

House Sparrow (*Passer domesticus*).—It is the commonest exotic bird here and its harmful qualities exceed its beneficial ones. It is often an amusing sight to see residents standing guard over their fowl runs at feeding time to prevent the sparrows from seizing the grain from amongst the fowl.

Yellow-hammer (*Emberiza citrinella*).—Seen amongst the grass in the summer but does not seem to be harmful to farmers, perhaps on account of its smaller numbers.

Thrush (*Turdus ericetorum*).—Common. Usually seen in company with blackbirds although not among the fruit trees in such numbers. Potts says, "27 Nov. (1865). Gave Trounce £5/5/- to buy the cock thrush from that fellow Fitton and after much talk he got it."

Blackbird (*Turdus merula*).—This is also a common bird and although not generally so noticeable as the starling, it is a great pest to the orchardist, eating the ripening fruit in large numbers. It was brought here from sentimental association with the Old Country. Potts apparently was instrumental in procuring the first pair for the area from Melbourne. He also apparently introduced the first chaffinches here.

Hedge Sparrow (*Prunella modularis*).—Rarely seen. Confines itself largely to the gorse bushes and hedges.

Lark (*Alauda arvensis*).—Very common on the farms, especially the hillside grazing paddocks. "Heard and saw the skylark."—(Potts, 11/7/1865).

Starling (*Sturnus vulgaris*).—This bird is all too common in the eyes of most residents, making itself a particular nuisance in the spring when it nests in any available cranny in sheds and houses. Large flocks of

these birds are often to be seen winging their way across the sky towards evening in the summer.

White-backed Magpie (*Gymnorhina hypoleuca*).—Common. They seem to prefer to dwell in the bluegum trees—perhaps because it resembles their Australian conditions.

Black-backed Magpie (*G. tibicen*).—Very rarely seen. We do not think it breeds in the immediate vicinity.

Thus we have recorded 17 native and 16 introduced birds which are more or less regularly found here, with 27 species, recorded by T. H. Potts and other early residents, which are now either extinct or very rarely grace our shores. So we conclude with an extract from a paper read by T. H. Potts in December, 1872, before the Philosophical Institute of Canterbury, which expresses our feelings also in a better way than we could word them:—

“Living close to the beach in a sheltered nook in Port Cooper (i.e., Lyttelton Harbour) . . . it may be that I have been more than usually attentive to these wandering voices, since few woodland birds now frequent the slopes of our picturesque hills, like many other districts once clothed with stately trees and bright-leaved shrubs. Shade and shelter gone, bare stems with whitened tops remain, and point to the work of the ruthless bushman.”

BREEDING OF NATIVE PIGEON.—A native pigeon (*Hemiphaga novaeseelandia*) has been reared within 40 yards of my house. The nest was built in a young, densely foliated totara tree about 20 feet high and was constructed entirely of small twigs which the adult birds collected from a young rata tree within 20 feet of my house. (Both the totara and rata were planted by myself.) The nest was started early in November. Several months elapsed before I dare climb the totara to investigate for fear of disturbing the birds, and I seldom saw the adults go to the tree. At last, I decided to take a peep, and there was a chick, about the size of a Californian quail with pin feathers coming through on the wings. On March 6 the young bird appeared to be full grown and a friend took a photograph of it. I was away for a week and on my return the young one had flown.—A. R. Annabell, Waitotara.

NORTHWARD MOVEMENT OF RED-BILLED GULLS. — On October 24, 1948, during a visit to the Far North, I noticed for the first time a movement of the red-billed gull (*Larus novaehollandiae*). When we left Scott's Point at about nine in the morning we were passing small flocks of these gulls every few minutes, flying north, in quite a business-like fashion. I did not take any notice for a while as it is usual for birds to move about on the beach, but it became increasingly obvious that it was a definite movement northwards of these birds, so I stopped and watched them. They did not make any attempt to settle but just flew straight along the beach in small flocks from half a dozen to about forty; I estimated that there must have been between 2000 and 3000 pass during the day. No doubt these birds were making for the Three Kings Islands for nesting. A few pairs had nests without eggs on a rock at Scott's Point. Red-billed gulls feeding along the beach made no attempt to join the flocks en route.—R. H. Michie, Kaitiaki.

STARLINGS NESTING ON TRACTOR.—Last year, one or more starlings (*Sturnus vulgaris*) had an urge to nest in the open tool box of the tractor which, at night, is covered with a waterproof cover. Most mornings I would have to throw out a nest, and on one occasion an egg was laid overnight. The fact that the tractor was left in different paddocks did not interfere with the nesting, but I do not know whether the tractor appealed to starlings in different territories or whether the same birds faithfully followed it. Once, after a few idle tractor days, there were four eggs and another time most of the engine was filled with nesting material.—A. J. Hodgkin, Moa Flat, Heriot.

BIRDS OF THREE KINGS AND NEIGHBOURING WATERS

By G. A. Buddle, Auckland.

The following notes made during a recent short visit to the Three Kings are supplementary to the account recently published in a joint paper by E. G. Turbott and myself (Records of the Auckland Institute and Museum, Vol. 3, Nos. 4 and 5, December, 1948).

Landings were made on February 27, 1949, on Great King; March 1, on South-West King; and March 2, on Stella Rock (the westernmost of the Princes Islands). The landings were made in the company of Major M. E. Johnson from his yacht Rosemary, in which we had sailed from Auckland. Stella Rock had not previously been landed on, and proved of little interest from the ornithological standpoint. One bellbird was seen; no gannets nest on this rock and the red-billed gulls had all left with the exception of two or three belated fledglings.. Landings have



Photo: G. A. Buddle.

Approach through the archway, the recently discovered landing place on South-West King, is in the right foreground.

been made on South-West King on two previous occasions, first by the late T. F. Cheeseman in 1889, and secondly by the writer and M. E. Johnson in 1947. Both these landings were made at the extreme S.E. point of the island, which was considered the only possible place. It is very exposed and landing is only possible under very favourable weather conditions, but once ashore access to the top of the island is easy.

On this trip three attempts to land here failed, but a landing was eventually made at the north-west end of the island, at a spot not previously considered as a possible landing place, as it cannot be seen from the sea. It is probably usable at any time except during heavy northerlies or westerlies, so it may be worth while to describe it in detail for the benefit of future investigators. At the foot of the 600-ft. cliff which forms the northern point of the island is a cave about 75 feet wide by 30 feet high, and with five to ten fathoms of water. The

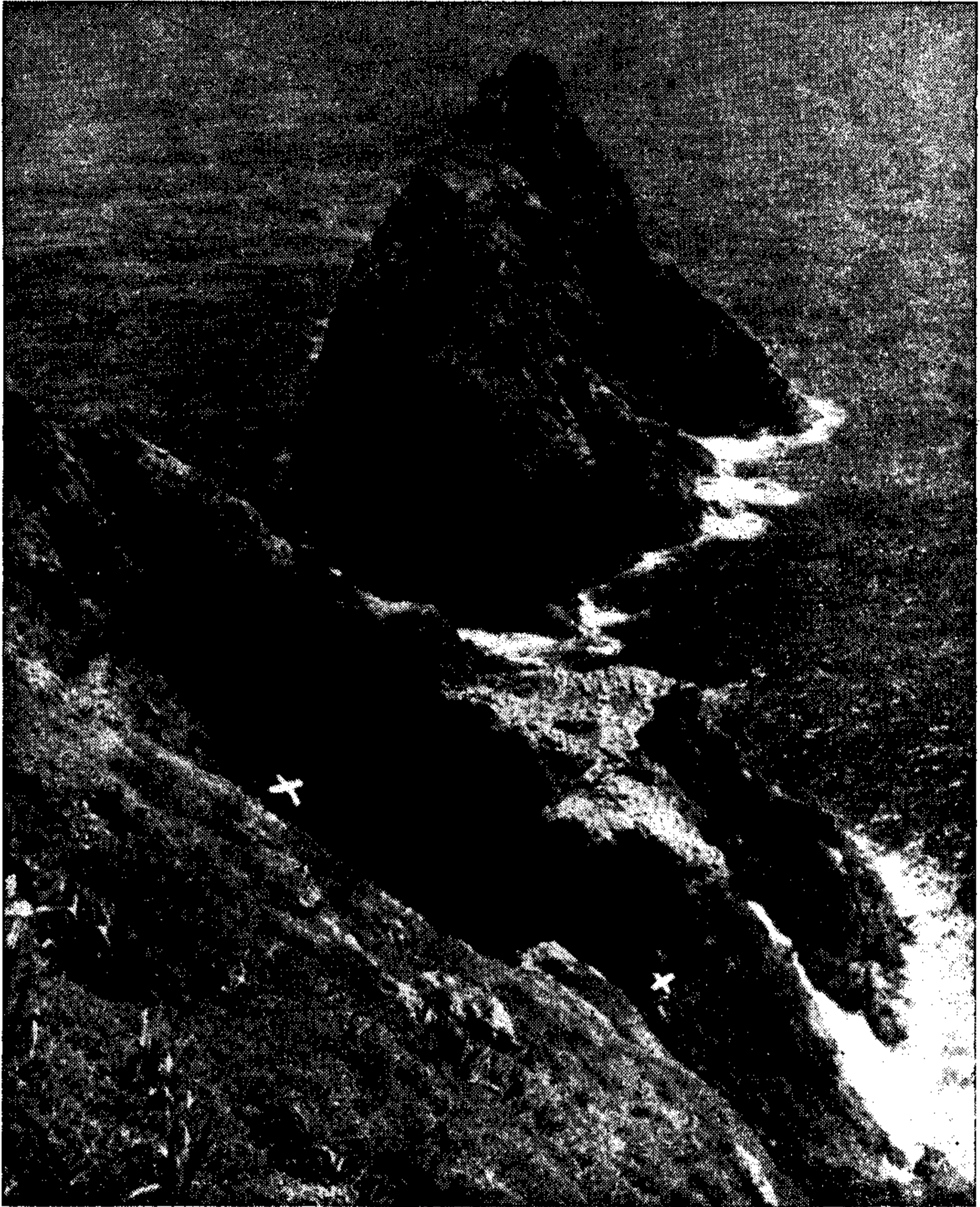


Photo: G. A. Buddle.

The northern part of the South-West King; the archway leading into the boat harbour and the landing marked with a X.

entrance to the cave is flanked on the north-east by a large rock joined by a low saddle to the island, and on the west by several outlying sunken rocks which help to protect the entrance. The cave is parallel to and very close to the eastern face of the island; about 100 feet in from the entrance the roof and outer side have collapsed for a distance of about 200 feet, leaving a sort of breakwater about 30 feet wide and 20 feet high, between the boat harbour and the outer coast, the inner side remaining a vertical cliff several hundred feet in height, and although the surge sweeps in and out of the cave, it does not break, and landing from a small dinghy is comparatively easy. On the other hand, access to the puka grove at the top of the island entails a very arduous and difficult, not to say dangerous, climb of 500 feet up an almost vertical cliff face with patches of ngaio, taupata, flax, etc., and a good deal of loose rock. Unfortunately, it is not possible to make a traverse and come out at a lower elevation.

SYSTEMATIC LIST.

Puffinus bulleri, Buller's Shearwater.—A few ranging birds were seen in the vicinity during the three days spent cruising through the group, but considerably less than I have observed during four previous seasons earlier in the year (December and January). It was noticeable that the numbers increased progressively as we approached the vicinity of the Poor Knights, both from the north and south, but even here, in the neighbourhood of their only known nesting ground, the numbers were only a fraction of those usually seen earlier in the year, giving the impression that the northern migration had already commenced by the middle of March.

Puffinus gavia, Fluttering Shearwater.—None found ashore in the burrows, and few heard calling at night while anchored in North-West Bay; however, at sea they were present in incredible numbers (similarly recorded by Falla at approximately the same date, Records of Auckland Institute and Museum, Vol. 1, No. 5, 1934). On March 2, in the vicinity of West King, we steamed through a close-packed raft of birds which was estimated to cover a considerably greater area than the West King, that is, about 50 acres. They were packed so closely that they had difficulty in rising off the water and assuming only two birds to the square yard, a very conservative estimate, there would be upwards of half a million birds in that particular raft. At the same time, to the north of Princes Islands, there was visible another raft of similar size, bringing the estimated total of birds in the area to about one million. It is of interest that on the return journey to Auckland, which occupied about four days, not more than a couple of hundred birds of this species were noted and of these the majority were in the Hauraki Gulf.

Puffinus carneipes, Flesh-footed Shearwater.—Observed off-shore in about the usual numbers.

Pachyptila turtur, Fairy Prion.—Although not recorded from the Three Kings, it is, during the spring and summer months, not uncommon at sea in this area, and particularly round the North Cape, becoming progressively more plentiful as one approaches the breeding stations at Poor Knights, Bream Island, and Hen and Chickens, but on this trip of about 500 miles, not one was seen. Richdale (Whero, Island of Sea-birds) states "that this species (*titi-wainui*) begins to lay towards the end of October with the early chicks breaking the shell a few days before Christmas. During February all these chicks on any island take flight, and by March 1 not a *titi-wainui* is to be seen." My observations indicate that this also holds good for those colonies nesting on the northern islands. During this cruise very few schools of fish, normally plentiful in this stretch of water, were seen. There had been a prolonged spell of easterly weather during the summer, and possibly the fish, followed by the birds, had moved well out to sea; or perhaps the birds had moved away to their winter feeding range, the whereabouts of which is still a matter requiring further investigation.

Diomedea sp., Albatross.—About a dozen birds, all immature, were noted between North Cape and Three Kings.

Thalassarche sp., Mollymawk.—Twenty plus between North Cape and Three Kings; owing to weather conditions the species could not be determined.

Phoebastria palpebrata, Light-mantled Sooty Albatross.—A particularly fine specimen was seen about five miles east of Three Kings.

Phalacrocorax carbo, Black Shag.—One was seen flying the length of North-West Bay, fairly high up and close to the cliffs, apparently looking for a suitable resting place. (A new record for the group.)

Morus serrator, Gannet.—The South-West King colony was the only one which it was possible to inspect. This group has steadily increased in numbers during the last three years. In 1947 the nests were all in the open; in 1948 they had encroached about a chain into the short scrub

at the back; this year some nests were a chain or more further inland, under the puka trees, thus entailing a walk of a couple of chains before the birds would be able to take off: A successful breeding season was indicated by the fact that there appeared to be a young one for nearly all the nests. Three young were still in down, but all the rest were fully feathered and ready to fly. The other colonies, on the Princes Islands, appeared fully occupied and showed no appreciable change since last year, but owing to weather conditions no close examination was possible. Reference has been made in previous papers to an apparent retardation of nesting dates for many of the Three Kings birds: further evidence of this is afforded by a count of gannets during the voyage up from Auckland. In the Hauraki Gulf (Horu Horu colony) of 20 plus birds seen, five were birds of the year; in the vicinity of the Poor Knights, 30 plus birds, of which one was immature. In the Three Kings area, over a period of three days, many hundreds were observed on the wing, but all were adult.

Larus novae-hollandiae, Red-billed Gull.—The red-billed gulls had almost all left the nesting areas. On Great King the whole of the S.-E. side was deserted; North-West Bay was deserted except for a few late stragglers in the Crater Head colony. On Stella Rock only two young were still on the nests. When not at sea, the birds were congregated for resting and roosting purposes on bare rocky faces, chiefly on the Princes Islands, at a lower level than the nesting areas.

Catharacta antarctica, Sea Hawk.—A sea hawk was observed in the passage between Great King and South-West King. It circled the yacht quite closely three times, and then flew off and attacked a mollymawk resting on the water. (A new record for the area.)

Porzana tabuensis, Spotless Crane.—On South-West King a young one still in down (probably a week to ten days old) was captured, and after examination released. This is another example of very late nesting: in my experience on the Poor Knights, for example, where the crane is particularly plentiful, laying appeared to have finished by the middle of December.

Pseudogerygone igata, Grey Warbler.—A grey warbler was seen at the old camp site near the depot on Great King. The grey warbler was recorded by Cheeseman on both Great King and S.W. King in 1888 and 1891, but was not recorded either by the Arbutus expeditions or the Internal Affairs goat-killing party. It seems almost impossible that if present it could have been missed by both these expeditions, which combed the island so thoroughly, one in the spring of 1945 and the other in the winter of 1946. The specimen observed would appear to be a straggler from the north coast of the mainland, where the species is common. It is to be hoped that it may prove to be the forerunner of a recolonisation movement due to more favourable conditions brought about by the rapid change in the vegetation since the destruction of the goat population in 1946. Many species of broad-leaved trees, for instance, karaka, puka, rangiora, various species of **Coprosma** and **Pittosporum**, etc., which were virtually non-existent, are now coming up in great profusion all over the island, many of the seedlings already being 4 to 6 feet in height.

Limosa lapponica, Bar-tailed Godwit.—On the afternoon of March 2 a flight of about 400 birds appeared, coming from the E.S.E.; they were flying in the typical V formation with a leader well out in front. They passed over the Great King at a height of about 1000 feet and disappeared in a north-westerly direction. Although the distance was too great for a positive identification, I have no doubt that this was a forerunner of the northern migration due soon to start from Parengarenga.

No further comment is called for concerning other species noted during this trip, which included: Red-fronted parrakeet, bellbird, kingfisher, pipit, harrier, blackbird, chaffinch and starling.

VISIT TO LITTLE BARRIER.

By R. B. Sibson, Auckland.

At the end of 1947 a second visit was made to Little Barrier Island by members of the King's College Bird Club. The party, which contained three members of the O.S.N.Z., was comprised of J. K. A. Commons, J. C. Davenport, M. Draffin, M. C. Hanna, B. D. Heather, M. R. Houghton, G. F. Lamb, W. N. Tucker and the writer. We landed on the island in time for breakfast on December 29 and left eight days later at noon. Our stay was thus nearly a fortnight later than that of the 1946 party (v. N.Z. Bird Notes, Vol 2, No. 6).

A first impression on arrival was that there was much less song than during our visit in 1946. This impression was later confirmed as we moved about the south-west sector of the island. Three trips were made to the summit, the first by all members of the party; the second on New Year's Eve by Davenport, Houghton and Tucker; the last on January 2 by Hanna, Heather and Sibson. An interesting observation was that on the high ridges it was a poor year for the flowering of the yellow flax (*Phormium colensoi*). Consequently no "orange-fronted" bellbirds were seen.

Another marked contrast was in the number of petrels and shearwaters which could be seen daily off the south-west of the island. During our 1946 stay they were exceedingly abundant; during this visit, scarce, except for *Pt. cooki*.

In addition to the ground covered in 1946, Haowhenua, a gully running inland from the Pinnacles, was explored. The stream held some good specimens of native trout in its deeper pools. The bird life of Haowhenua was much the same as that of the other gullies, which we had got to know well.

Ornithologically, perhaps the most important events of the expedition were: (a) The finding and measuring of two eggs of the black petrel; (b) the discovery of a stitchbird's nest; (c) the proving that the rifleman, which some visiting ornithologists have not been able to find on the island, is a flourishing species there.

We are extremely grateful to the Government Tourist Department for permission to visit Little Barrier; to Mr. and Mrs. Terry, on whose ground we camped at Leigh and who proved good friends in numerous other ways; to Mr. H. Warren who successfully took us to and from the island in the "Gunner" with the minimum of discomfort; to Mr. E. G. Turbott, of the Auckland Museum, for advice on several matters readily given, and finally to Mr. and Mrs. Parkin, whose unfailing kindness and understanding contributed so much to the success and pleasure of our stay.

ITINERARY OF VISIT.

- Dec. 29.—5 a.m., left Leigh. Wind, S.-W., light. Flat; Waipawa, Waikohare; Herekohu Pa at dusk.
Dec. 30.—Thumb Track; Summit.
Dec. 31.—Shag Track (duce Houghton) to Pisonias and beyond. Houghton, Davenport and Tucker to Summit for night.
Jan. 1.—Tirikakawa; Awaroa Point; Waikohare.
Jan. 2.—Grafton Gully; Waipawa; Parihakoako; Upper Waikohare. Hanna, Heather and Sibson to Summit for night.
Jan. 3.—Waipawa; Pinnacles; Haowhenua. Some rain.
Jan. 4.—Waikohare; Cow Gully, now East Paddock Gully; Waipawa. Drizzling.
Jan. 5.—Waikohare. Drizzling.
Jan. 6.—C.1.50. Left for Leigh. Corkscrew crossing. Strong variable winds.

Kiwi (*Apteryx australis*).—These must be plentiful. Every night they could be heard calling near the house and some would be foraging on the flat. A juvenile that was a partial albino was caught on January 3. On December 30 one was found hiding among burrows of *Pr. parkin-*

soni only 20 feet below the Summit. On January 2, at 8.11, two called on different sides of the main ridge near the Summit, below the tent, the one apparently answering the other.

Little Blue Penguin (*Eudyptula minor*).—Few were seen at sea. At dusk some usually set up their mournful wail. Few seemed to be coming ashore. One was found in the hay paddock on the evening on December 29. A young penguin was found in a burrow c. 70 feet up a slope near the west landing on January 2.

White-faced Storm Petrel (*Pelagodroma marina*).—Some scores were seen on both crossings. The remains of one (tarsus 40 mm.) were found at the Pinnacles, where black-backed gulls had evidently eaten it.

Flesh-footed Shearwater (*Puffinus carneipes*).—Only a few were seen on either crossing. Compared with last year they were scarce.

Buller's Shearwater (*P. bulleri*).—Only four seen on the way over. A few more on the way back.

Fluttering Shearwater (*P. gavia*).—Some hundreds on the way over. Few on the way back.

Parkinson's Petrel (*Procellaria parkinsoni*).—On 30/12/47 two were found in accessible burrows near the Summit, each sitting on an egg. As these eggs are very scarce in museums and verification of old measurements was needed, they were carefully measured before being replaced under the sitting birds. The measurements were, 71 x 52; and 70 x 52 mm. Both eggs had been laid quite recently, one in particular being a clean white, scarcely at all peat-stained.

On the evening of 31/12/47, Houghton, Davenport and Tucker, camping near the Summit, saw the first *parkinsoni* come in at 8.24 and the second at 8.31 p.m. Eleven came in during the first half-hour and 16 in three-quarters of an hour. It was misty and visibility was poor. On the evening of 2/1/48, Hanna, Heather and Sibson noted the first *parkinsoni* at the Summit at 8.14. There was a strong easterly gale and although there was no moon, visibility was good. Earlier in the evening two black petrels had been found in straight burrows. One could be reached and had no egg. Some birds as they came in circled the Summit as many as six times at a very great speed in the high wind. No sound was heard from birds on the wing. After dark fell the "clack-clack" call was heard from only one burrow. Wing measurements of three sitting birds were 352, 345, 340 m.m. None was seen at sea.

Cook's Petrel (*Pterodroma cookii*).—On both crossings they were easily the commonest petrel at sea, and every day some were visible half a mile or so off-shore from the island. It would appear that during the breeding season Little Barrier has a ring of Cook's petrels around it by day, a ring of several miles thickness, for odd ones were seen within three miles or so of Leigh.

First calls were noted each evening:—December 29, 8.9; Dec. 30, 8.10; Dec. 31, 8.11; Jan. 1, 8.13; Jan. 2, 8.13 (8.15 at Summit); Jan. 3, 8.5, overcast and dark early, many by 8.10; Jan. 4, 8.3, windy, cloudy and rainy, many by 8.10; Jan. 5, 8.7.

Remains of about thirty birds, some of them very ancient skeletons, were cleared from Thumb and Summit tracks. There are very few remnants on the highest ridges. Average wing measurements of 23 birds was 238 m.m. (max. 245, min. 228). A female containing remains of an egg measured 238 in the wing. Houghton thought that the noise at the Summit fell away about midnight but was resumed later as the birds became excited at leaving. Cook's petrel has many distinct calls. Perhaps the most frequently used are the quick "whi-kek-kek" and the goat-like bleating (v. last year's report). There are also a slow, deliberate "kek-kek-kek," and a less seldom heard "hwit-wit." Last year's puzzling "borrr" definitely comes from *cooki*; and there is also a cat-like "purrrrrp."

On January 1 a freshly-killed specimen was found on the track, was preserved and sent to the Auckland Museum. Mr. P. C. Bull examined

the stomach and reported: Sex, male; testes, small and black, scarcely those of a breeding bird, right 3.5 x 2.5 mm., left 4.5 x 3 mm. Gullet, empty; gizzard, numerous cephalopod beaks and small rounded yellowish stones; intestine, contents digested beyond recognition.

Pied Shag (*Phalacrocorax varius*).—These were commonly seen along the coast or flying over the flat. No nests seemed to be occupied by young birds, which were all fledged and flying.

Gannet (*Moris serrator*).—Some could be seen every day off the south coast; seldom more than ten at once.

White-fronted Tern (*Sterna striata*).—A few were fishing off Titoki Point as we arrived. Scarce on both crossings.

Black-backed Gull (*Larus dominicanus*).—No young could be seen at the Pinnacles, where three pairs had nested. A deserted nest along the beach had two eggs.

Red-billed Gull (*L. novaehollandiae*).—Two on the boulder bank when we arrived. Occasional visitors.

Pigeon (*Hemiphaga novaeseelandiae*).—There was no flock on the flat as last year, but pairs were scattered through the bush. On 2/1/48 Houghton found a nest in a tree-fern up Waipawa. It contained a squab.

Harrier (*Circus approximans*).—Just before dusk, as we were crouching out of the wind waiting for the first petrels, the only one seen flew over the Summit a few feet over our heads.

Morepork (*Ninox novaeseelandiae*).—Widely distributed. On 4/1/48 a nest containing one youngster was found in an old tree up Cow-Boatshed Gully. Both adults sat in full view a few yards away, watching Davenport as he climbed to the nest. As he started to climb a soft "hoo" was heard and one bird flew and perched near the tree, where it could watch. Then the other appeared and sat in a tree-fern, also intently watching. Further down the gully a deserted egg was found in a hole.

Kaka (*Nestor meridionalis*).—These were not as much in evidence as last year, when it was impossible not to notice their noisy evening flights. But they were well distributed over the island, and odd birds and pairs were sometimes seen on or high over the flat. On 4/1/48 six were seen flying together.

Red-fronted Parrakeet (*Cyanoramphus novaeseelandiae*).—These were common and seemed to be at home on all parts of the island that we visited. Many young were on the wing. No nests were found.

Shining Cuckoo (*Chalcites lucidus*).—What was probably the same bird was heard every day near the house from the time of our arrival at 7.30 a.m. on 29/12/47 to January 6, when we left. On January 4 it was singing most persistently. None was heard elsewhere on the island.

Long-tailed Cuckoo (*Eudynamis taitensis*).—Seldom seen; often heard, especially on the ridges

Kingfisher (*Halcyon sanctus*).—Though these birds are not conspicuous, two nests were found. (a) In a pohutukawa overhanging the boulders below Parihakoakoa. It contained an egg and a naked youngster. (b) In a pohutukawa well into the bush on the Waikohare side of the Thumb Track and visible from the track. Ten feet below in another hole was a stitchbird's nest! The kingfisher was feeding young, on lizards when it could catch them, breaking them in pieces on a branch.

Rifleman (*Acanthisitta chloris*).—Compared with the scarcity of them last year, they were remarkably ubiquitous. We noted them in the following gullies: Waikohare, often; Tirikakawa, Waipawa, Boatshed; and on Thumb, Summit and Shag tracks. Three were the most seen together.

Grey Warbler (*Pseudogerygone igata*).—For the first week of our stay these were silent and elusive. Very few were seen, though a care-

ful watch was kept for them. Two with two riflemen on Thumb Track, c. 1000 feet, were the highest seen. On 5/1/48 their singing suddenly became obvious—there was a light drizzle much of the day—and again on January 6, I heard at least three singing on the lower kanuka slopes.

White-breasted Tit (*Petroica macrocephala toitoi*).—Ubiquitous from the garden, where one was often singing, to the Summit. Males were much more often seen than females or juveniles. No nests were found.

Robin (*Miro australis*).—Single birds were seen in several gullies; e.g., Tirikakawa, 1 male and 1 female or juvenile; Grafton, Waipawa, ♀ juvenile male, singing a soft limpid song; Haowhenua, 1 male; Cow or Boatshed, 1 female or juvenile. None could be found in Waikohare, though we spent much time there; nor were robins in evidence on the ridge tracks. On 31/12/47 I watched one hopping about on the sun-baked clay of Shag Track. The bird seemed to be finding insects in the dry and dying moss on the track.

Fantail (*Rhipidura fuliginosa*).—Present in all types of country from flat to Summit.

Whitehead (*Mohoua ochrocephala albicilla*).—I still think this the commonest bird on the island. Small parties were everywhere. To study their many notes and calls would be a full-time task in itself.

Silvereye (*Zosterops lateralis*).—Remarkably scarce. They were seen, four being the most together, only about the garden and orchard. Competition with the larger honey-eaters may be too much for them.

Tui (*Prothemadera novaeseelandiae*).—We were a week later than last year. The pohutukawa far back in the bush were in flower, so that there was not the concentration of tuis in the coastal zone. I saw very few tuis actually feeding on pohutukawa. There was scarcely any song from the birds on the flat, but markedly more from those in the high country. Young birds were on the wing. No occupied nests were found.

Bell Bird (*Anthornis melanura*).—Very little song was heard. Two nests in the garden each contained three young when we arrived; one in a grape vine, one in the hedge. The young in the grape vine nest by the back door were being fed largely on insects. They left the nest about January 3. Bell birds were all over the island, from the undercliffs to the highest ridges.

Stitchbird (*Notiomystis cincta*).—Cocks, with their gay, conspicuous plumage, were noted frequently: December 29, Waikohare; Dec. 30, two on the Thumb Track, one below the steep boulder slope, the other on the ridge just below the Thumb; two on the Summit Track below the junction with a large interval between them; January 2, two, one being in worn plumage, in the vicinity of Parihakoakoa, 1 in upper Waikohare; 1 at the steep section over slippery boulders on the Summit Track. Females and young on the wing were more elusive than last year. High on the Thumb Track I thought I glimpsed three juveniles together travelling through the tree tops, and at 6.20 a.m. on January 3 an inquisitive female inspected us as we struck camp on the Summit Ridge.

Perhaps the greatest excitement of the trip was reserved till near the end. On January 4, Hanna and Heather found an occupied stitchbird's nest; the first nest, we believe, found for more than a quarter of a century. The stitchbirds had taken over an abandoned kingfisher's hole, 8ft. 6in. from the ground, in the rotten seam of a great pohutukawa which was growing a chain off the Thumb Track near the top of the slope of Waikohare and about 200 feet above sea level. An added interest was a kingfisher's nest, still in use, in another hole ten feet higher up the same tree. A kingfisher was seen to bring a lizard and to break it into small pieces before feeding it to its young..

The stitchbird's nest contained four well-feathered young, showing yellow at the gape. Near the nest the adults were most unobtrusive, the male scarcely appearing at all. The feeding seemed to be done entirely

by the female, who, as she approached the nest, besides the typical "tzit" also uttered sometimes a soft "whit." When I saw her approach no food was visible in her beak; elsewhere it has been mentioned that young bellbirds receive a liberal diet of insects; Guthrie Smith had already noted that young stitchbirds seemed to be fed on nectar. Once after entering the hole she remained inside for two hours. On another occasion Houghton timed her nectar-collecting round, if that is what it was, as 11 minutes.

Watching the stitchbird's nest took up much of our time during the last two days. Fairly persistent drizzle and a poor light made photography difficult. However, Heather succeeded in getting one quite good picture of the female stitchbird on the pohutukawa trunk just above the nesting hole, a sight we are not likely to forget for many a long day.

INTRODUCED BIRDS.

Chaffinch (*Fringilla coelebs*).—On my first walk round the garden and flat, I counted ten singing males. This excluded the east paddock, where there were probably 4/5 pairs. A chaffinch was singing near Awaroa Point along the undercliff. There was still plenty of vigorous song when we left.

Sparrow (*Passer domesticus*).—There seemed to me an increase over last year. They are numerous on the boulder bank.

Thrush (*Turdus ericetorum*).—Faint snatches of song were heard on December 31 and January 4. A nest placed on a clump of *Astelia* on a kanuka in Waikohare had newly-hatched young on December 29. Away from the flat, a thrush was seen along the undercliff towards Hao-whenua.

Blackbird (*T. merula*).—Young left a nest in the garden on January 6; and a nest in a tree-fern well into the bush near the matai and Maori pits off the Thumb Track contained a single well-feathered youngster on January 5. At least four males were heard singing, (a) garden, (b) Waikohare, (c) inland cliffs, (d) Shag Track. Near the garden a blackbird sang finely most of the morning of December 31 and even at noon when it was very hot. There was a marked decrease in singing during the ensuing days, but I heard two blackbirds singing in the evening of January 4. None was heard on January 5 and 6.

Hedge Sparrow (*Prunella modularis*).—There was plenty of full song, particularly noticeable during the drizzle of January 4 and 5. Dunnocks were noted at (a) Cow Gully, (b) orchard and garden, (2) 200 yards up Waikohare, (d) near Titoki Point, (e) inland cliffs in Grafton Gully, (f) mouth of Waipawa. Five-six pairs is a conservative estimate for the population of the flat.

Starling (*Sturnus vulgaris*).—A flock of c. 200 was frequenting the flat; their chatter recalling hay meadows. Parties were sometimes noted flying along the cliffs.

Skylark (*Alauda arvensis*).—One was seen on December 29. No song heard.

FOOD OF HARRIER.—In the late afternoon at Waimumu, on November 24, 1947, I watched a harrier (*Circus approximans*) hunting along a gorse hedge. It circled a number of times around a gorse bush separated from the hedge, and after two or three attempts to catch something, was successful. It tore its victim to pieces and ate it, and on visiting the site of its kill, the few feathers that remained revealed its catch to have been a young blackbird (*Turdus merula*).—Mrs. I. Tily, Dunedin.

QUEST FOR NATIVE THRUSH.

By A. R. Annabell, Waitotara.

An expedition to explore portion of the Rawhitiroa State Forest of 36,000 acres in the hope of finding the native thrush or piopio (*Turnagra capensis*) was made from February 26 to March 5, 1949. The area searched was near the headwaters of the Waitotara River and included the Pokeka Stream, a tributary, and portion of the Omaru Stream, another branch of the Waitotara River, in Southern Taranaki. The Pokeka Stream is a fairly large one; running through flat ground several chains wide for seven miles, with many open spaces growing niggerhead, stinging nettle, wineberry, etc., and unfortunately, ragwort. The side streams and valleys are beautiful places for the robin (*Miro australis*) and should be ideal country for the native thrush. The search failed to find the thrush but the robin was the most common bird in the forest. It was here that I saw my first robin, in 1919, but no more than three were seen on that or any subsequent trip; now the robin is everywhere: sixteen were seen or heard in one day. I was amazed at the great increase in the numbers of this bird.

My father, who was a surveyor and who was in the field in this country, having "trigged" it in 1887, found the robin and the native thrush present in about equal numbers—neither was plentiful. He secured several native thrushes in 1887, but these were the last he obtained. Later, the Dominion Museum got some skins from him in 1900 and the label on these skins reads, "J. R. Annabell, Waitotara, 1900." But he secured these birds in 1887, not 1900.

One of the most interesting discoveries of the expedition was a shaggery of the white-throated shag (*Phalacrocorax melanoleucos*). Eighteen nests were counted, six in one small coprosma (karamu) and eight in a tutu. One was placed on a rocky ledge. All of the nests were directly above a deep pool and the young, when they left the nests, dropped over the edge into the water and dived like a fish. After swimming in the water for a few minutes they climbed out of the water at the back of the pool and entered a cave about 2 feet above water level and disappeared. All the young birds except two in the nests in the karamu had tumbled into the pool and two half-digested bullyheads and a crayfish were seen in one nest, evidently having been vomited by one of the young. An adult shag was seen to circle the pool, land, and walk into the cave, which was about 4 or 5 feet high and about the same width. Altogether, 24 chicks were counted. Returning three days later, the young that had left their nests were seen sunning themselves on a log. On this occasion several adults arrived and fed the young in the nests; one adult fed two chicks at one session.

Four blue ducks (*Hymenolaimus malacorhynchus*) were seen; two preceded the party down a stream for five miles. The calls of the kiwi (*Apteryx australis*) were heard at night; the dried skin of one was found on a ridge. Other birds recorded were the kaka (*Nestor meridionalis*) which were heard every evening; pigeon (*Hemiphaga novaeseelandiae*), rifleman (*Acanthisitta chloris*), grey warbler (*Pseudogerygone igata*), pied tit (*Petroica m. toitoi*), whitehead (*Mohoua o. albigilla*), tui (*Prothemadera novaeseelandiae*), bell bird (*Anthornis melanura*), and bush hawk (*Falco novaeseelandiae*).

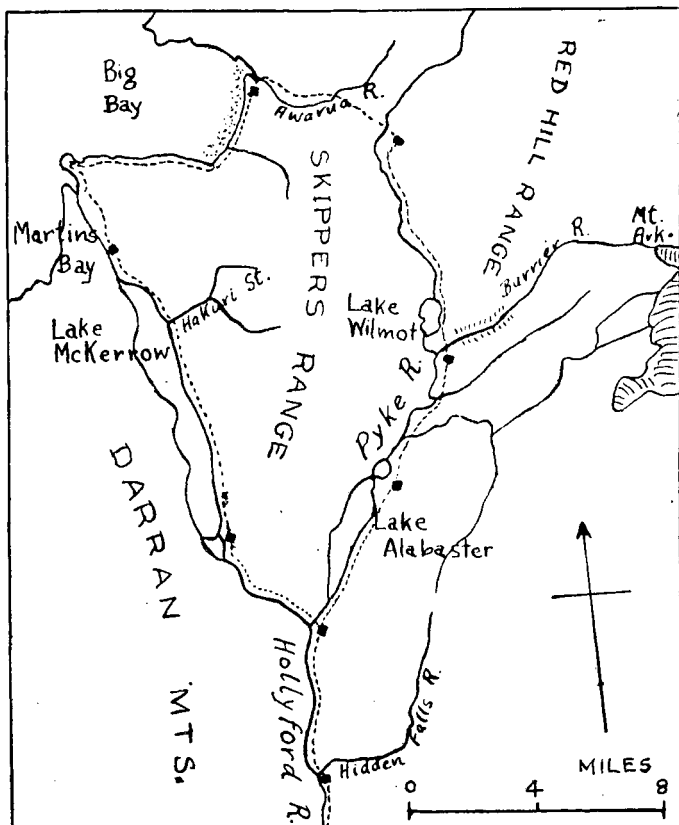
The creeks in the area are full of big eels and we saw many swimming slowly in broad daylight—more than I have ever seen before. A huge eel was seen in the pool beneath the shaggery swimming towards us. He was cut nearly in two with a slasher—he was a 20 pounder. I wondered how long that tuna had lived in the pool and if he was there to collect any chicks that might drop overboard. Eels were seen elsewhere eating alive a wounded pig which was disabled in the water. Wild cattle were so tame that one came up and sniffed me.

BIRD LIFE IN NORTH-WEST OTAGO.

By W. A. Watters, Dunedin.

The following notes represent in abbreviated form the daily observations taken of the birds seen in the region along the valleys of the Hollyford, Pyke and Barrier rivers, north-west Otago, during an extended tramping trip in February, 1947. Most of this area is clothed in dense wet beech forest with an increasing entry of various pines, especially rimu and kahikatea, as the West Coast is approached.

Many small, irregular, and often swampy, patches of tussock and low scrub occur along the rivers, whilst above the Barrier River the forest gives way to open tussock-covered alps and sub-alpine meadow. The accompanying sketch map shows the main features mentioned in the text.



BIRDS OF THE RIVER-BEDS AND HIGH TUSSOCK FLATS.

Black Shag (*Phalacrocorax carbo*).—Five were seen flying above the Pyke Valley near the junction of the Barrier River on 7/2/47. On 17/2/47 between 15 and 20 were seen, mostly in ones and twos, along the beach at Big Bay. On the succeeding two days several were noted along the Hollyford River above its mouth, and on Lake McKerrrow.

White-throated Shag (*P. melanoleucus*).—A small shag, probably this species, was seen flying from a log on the Pyke River, above Lake Wilmot, on 15/2/47.

Paradise Duck (*Tadorna variegata*).—All along the Hollyford and Pyke valleys these birds were noted very commonly, mainly in ones and twos. On 16/2/47, two pairs were seen on the beach at Big Bay. Twenty were seen (12 males and 8 females) beside a lagoon near the south end of Big Bay. On the same day a large flock, estimated at 200, was seen on the lagoon at the mouth of the Hollyford River. Odd birds were noted on this river between its mouth and Lake McKerrow, where a few were also seen. At least 20 were reported up the Hakuri Stream, flowing into Lake McKerrow, on 18/2/47.

Grey Duck (*Anas poicilorhyncha*).—One heard near the Upper Pyke Hut on 16/2/47. Only six or seven were seen on the Hollyford River, two miles above its mouth.

Blue Duck (*Hymenolaimus malacorhynchus*).—On 9/2/47, two were seen on the Barrier River, about half a mile above its gorge. We were very amused to watch them descending, with perfect ease, the rather spectacular rapids in parts of this river. On the succeeding two days, two more were seen on the south branch of the Barrier River. Also reported by I. C. McKellar from Trinity Creek, at the head of the Pyke River.

Banded Dotterel (*Charadrius bicinctus*).—One was seen on the wide gravel strand inland from the Big Bay beach, 17/2/47. Probably a greater population of these birds exists here, but limited time prevented us from looking further.

Black-backed Gull (*Larus dominicanus*).—Two recorded above the middle Hollyford River on 1/2/47. Between 10 and 12/2/47 one was seen several times flying over the alp below Mt. Ark. Probably 100 were seen along the Big Bay beach on 17/2/47.

Kea (*Nestor notabilis*).—Odd birds were heard calling above the bush near Marion Camp and at the northern end of Lake Alabaster. However, they were seen commonly along and at the head of the Barrier River. In the Barrier Gorge two flew on to a tree above us and remained for about five minutes. On the flats above the gorge they appeared to be the commonest bird, and there were always two or three screeching near our camp. Only two were noted on the alp below Mt. Ark.

Pipit (*Anthus novaeseelandiae*).—These were noticed in one locality only, on the high tussocky alps between 3,000 and 4,000 feet below Mts. Ark and Little Ark. On 11 and 12/2/47 several calls were heard and a pair seen.

BIRDS OF THE COAST BETWEEN BIG BAY AND MARTIN'S BAY.

Two small penguins, possibly crested penguins, were seen in fading light on the rocks at the mouth of the Hollyford River, 17/2/47.

Black Oystercatcher (*Haematopus unicolor*).—Three were seen at the mouth of the Awarua River, 16/2/47. On the following day two pairs were seen, and four also noted at the south end of Big Bay.

White-fronted Tern (*Sterna striata*).—Six or seven seen flying above the beach at Big Bay.

Red-billed Gull (*Larus novaehollandiae*).—Thirty to forty were congregated at the mouth of the Awarua River, and a few small scattered groups along the Big Bay beach.

FOREST BIRDS.

Four bush hawks (*Falco novaeseelandiae*) were seen frequently at the north end of Lake Alabaster during 6 and 7/2/47. One was heard near the Upper Pyke Hut on 16/2/47, whilst several days later one was seen on a tree near Martin's Bay.

The pigeon (*Hemiphaga novaeseelandiae*) was commonly seen. For example, at least seven were seen and others heard on the track between Lake Alabaster and the Barrier Hut (6 miles) on 7/2/47. On 16/2/47, 20 to 25 were noted in the bush between the Pyke River and Big Bay.

It was pleasing to see the kaka (*Nestor meridionalis*) frequently. From 1 to 6/2/47 one or two were seen each day in the bush between

Marion and the Barrier Hut. Several were heard in the bush above Lake Alabaster. On 13/2/47 we were accompanied for some little distance through bush at the head of the Barrier River by six or seven of these birds, which flew and hopped among the trees 15 to 20 feet above our heads, continually uttering a harsh, rasping call, interspersed with beautiful bell-like notes. One or two were heard in the bush beside Lake McKerrow on 18-19/2/47.

Parrakeets (*Cyanoramphus* spp.) were heard not uncommonly in the bush of the Hollyford and Lower Pyke valleys. Calls were noted near Marion, Hidden Falls River, Pyke Hut, Barrier Hut, Lake Alabaster and Lake McKerrow.

The morepork (*Ninox novaeseelandiae*) was heard calling frequently, at Hidden Falls, Pyke River, Barrier Hut, Lake Alabaster and the Upper Barrier River.

The distinctive call of the long-tailed cuckoo (*Eudynamis taitensis*) was noticeable in bush on the Upper Barrier River, 9 and 13/2/47.

The smaller birds call for little comment. Grey warblers (*Pseudogerygone igata*), yellow-breasted tit (*Petroica macrocephala*), fantails (*Rhipidura fuliginosa*), and wax-eyes (*Zosterops lateralis*) were seen or heard in all forested areas commonly. Perhaps the commonest bush bird is the rifleman (*Acanthisitta chloris*) noted particularly in the high beech forest at the head of the Barrier River on 10/2/47. Brown creepers (*Finschia novaeseelandiae*) were recorded definitely only once, at the head of the Barrier River. Three were seen and others heard.

Bellbirds (*Anthornis melanura*) were heard very frequently every day. Their singing was especially noticeable in the Lower Pyke Valley, and my note-book records their dawn chorus at the head of Lake Alabaster, 5-7/2/47.

INTRODUCED BIRDS.

Unfortunately, introduced birds were not accorded a great deal of attention. A few black swans (*Cygnus atratus*) were seen on Lake Alabaster, whilst a large flock, 200-300, was present with the paradise ducks at the Hollyford mouth. The blackbird (*Turdus merula*) was a common inhabitant of the Hollyford Valley above Lake McKerrow, and of the Pyke Valley. Calls were frequent and their early morning singing with bellbirds was noted in the Lower Pyke.

CONTRIBUTIONS TO GANNET CENSUS.

XIV.—HORU HORU, 1948-1949 SEASON.

By H. R. McKenzie, Clevedon.

On 12/12/48 Mr. G. K. McKenzie took a party in his launch and effected a landing on Horu Horu in rough conditions. The writer had to stay on the launch about 50 yards from the island. Ferried to the island by member D. J. Shaw members G. K. McKenzie and D. A. Urquhart worked together from the mainland end and Messrs. N. L. Anderson and W. Wipani worked from the seaward end. No attempt was made to tally the adults but they were roughly estimated at 1,500 plus. Every chick was counted but only the later nests could be identified as such. All the earlier nests had been trampled out of recognition.

It was estimated that not more than 5% of the chicks were going into the juvenile plumage. The seaward section of the colony had the greater proportion of advanced young. The count is:—

	1	2	3	4	5	Total
Large Chicks	69	261	82	20	64	496
Small Chicks	3	6	0	0	6	15
Chicks Hatching	0	0	0	0	4	4
Nests with Eggs	15	58	6	7	25	111
Nests, no Eggs	0	4	?	3	12	19

I have seen a copy of Mr. Stein's report of 21/1/49 and he has grouped our No. 3 and No. 4 sections into one.

BLUE-WATTLED CROW COLONY.

By R. McKenzie, Thames.

On March 20, in company with Mr. H. Morgan, of Paeroa, I spent a day in some large areas of native bush in the Colville Range between Waitekauri and Paeroa. Mr. Morgan had told me in the course of a conversation some time previously that one day two years ago when he was working in that area he had seen some large birds hopping about vigorously in trees near the track. These birds, he and his brothers in their young days, knew as crows. He had never heard them utter any calls or song and knew them as silent birds.

I had been pursuing various trails for 15 months past in my search for the blue-wattled crow (*Callaeas cinerea wilsoni*) which is regarded as a rare bird, and as Mr. Morgan might be the man to lead me to success, our journey of March 20 was arranged.

I left Thames at 6.50 a.m. and on reaching Paeroa at about 7.30 found Mr. Morgan ready. Off we went to Waitekauri where we left the car and started on foot up a track. After climbing gradually and investigating and listening at intervals, we came to a clearing of some acres on the top of the range at about 1800 feet above sea level. It was 11.45 a.m., so we decided to lunch, and while Mr. Morgan went to get water for tea I wandered down to the edge of the bush and sat down to listen and watch.

I could distinguish many familiar bird calls, but presently I heard some which were quite new to me. Actually, I was expecting a song like that of the tui or bell-bird, but what I heard was quite different or sounded something like the chatter of a whitehead mingled with calls which sounded like "kio-kio," not very musical but reminiscent of some notes of the kaka. Presently the unfamiliar notes ceased, so I went back to the place where we had decided to lunch. After lunch it was agreed to investigate a patch of bush near a large rimu, where I had heard the strange notes. We were not more than a hundred yards into the bush, travelling with care, when Mr. Morgan drew my attention to a large tawa tree fifteen yards away. Its base was below us so that we were nearly level with branches some 20 feet up, and there presenting a side view was a beautiful big blue-wattled crow, with its typical outline, eyeing us curiously. We froze and gazed for perhaps 30 seconds, when it bounded away to another branch, and went on feeding, I think on the tawa berries which were ripe and luscious, and it continually tore off twigs with leaves attached. These were constantly being dropped. It went on feeding and moving about with great rapidity, bounding from six to ten feet, sometimes using its wings, and finally, when we moved to get a better view, it flew away rapidly and with apparent ease.

We separated slightly and moved on in the direction in which the bird had flown. Within 50 yards I saw another bird, so settled down under cover to watch and listen. Presently, after a quiet spell of about ten minutes, I heard directly above me the mysterious call "kio-kio" which was answered from another tree close by, and within a few minutes there were at least 12 birds within say, two chains, all calling "kio-kio," and various other calls which I cannot repeat. Then they started to sing and now I heard the famous song that I had so often read about. So far as I can remember there was no real similarity to the song of the tui or the bellbird. It was more broken, some of it melodious, inter-mixed with calls which seemed to consist of expressions of satisfaction and sheer joy—maybe for the warm sunshine, maybe for the abundance of ripe berries. Most of this time I could see only one bird, which was sunning itself, although there were at least a dozen around me moving about noisily with much flapping of wings on leaves, feeding and calling out. Of these, only fitful glimpses were obtained. It was noticeable that whilst hopping around and feeding in a tree they continually gained height so that when they moved to another tree they flew with a gliding motion, slowly losing height.

After perhaps half an hour several obviously younger birds flew into a tree within ten yards of me, and in full view they commenced feeding, moving rapidly with long hops and fluttering of wings, sometimes breaking off bunches of berries and holding the twig in one claw whilst feeding on the berries. These birds were only about half the size of the one first seen, and were much darker in colour. I would describe their colour as a dull dark brown—darker than a female blackbird. They all appeared very lively and flew without obvious effort. Their flight was not noisy like that of the pigeon and tui—there was no buzzing sound that these birds make, but whilst feeding and using their wings to help their long hops they frequently hit leaves and twigs with the wings, causing quite a stir in the trees. In all, I saw ten or twelve birds, about half of which were adult, and Mr. Morgan, from a position about 40 yards away, saw five or six more. He did not see any young ones.

The young ones I saw were all on one tree, feeding on small berries that I did not succeed in identifying, but they might have been horoeka (*Pseudopanax crassifolium*) or tarata (*Pittosporum eugenoides*) which were plentiful in the area. When we made any noise the birds became invisible and remained motionless, but when we took cover and remained still they soon started to call and move about.

On one occasion I noticed that two birds in separate trees sang on two occasions about five notes in unison. Several times the deep organ notes were uttered, but only a few of the birds appeared to be in full song. All of them were vocal, however, and they seemed to be having a wonderful time. We stayed under them for two hours when we had reluctantly to leave for home. As soon as we moved and commenced to talk the birds remained silent, and we saw and heard them no more.

FURTHER GREY TEAL NESTS.

By J. M. Cunningham, Masterton.

Until the nesting of the grey teal (*Anas gibberifrons*) becomes more familiar than at present, it seems desirable to give full details of all records. On October 2nd, 1948, I found a nest, the third of this species I have had the good fortune to see. The first nest recorded in New Zealand was described by Mr. R. H. D. Stidolph (*Emu*, 45, April, 1945), and I described another containing a freak double-yolked egg in *New Zealand Bird Notes* for January, 1949 (Vol. 3, No. 4). The present nest was found within a few yards of the nest described by Stidolph at Carter's Bush, near Masterton, and resembled it almost exactly. The top was formed of dry grass, about 18 inches above shallow water, on a ridge between two niggerhead (*Carex*) clumps, though it was not so heavily screened. While I was examining the nest, I heard a sort of moaning sound from a duck which was swimming a few yards away. Before it swam under cover I was able to see that it was neither a grey nor mallard. I have not previously heard any species of duck make this sound, which gives the expression "like a dying duck" some reality. A few minutes later I heard the sound again, this time in the air, and a grey teal flew over and circled me several times. I have little doubt that it was the owner of the nest.

The nest contained six eggs, of which only two looked in any way typical. One was obviously larger, and being greenish in colour, was undoubtedly either a grey duck or mallard egg. The next two in size were the buff brown of the teal, rounded almost equally at both ends, and the other three seemed ridiculously small, and were quite pointed at the narrower end. Collectively, the clutch looked ludicrous. There was no down on the nest, which appeared to be fresh, and it did not appear as if the teal had laid in what was a deserted grey duck nest. It was kept under observation for some time but the eggs were not incubated. I believe it probable that it was deserted after the laying in it by a duck of another species. The egg measurements were (in

millimetres): 58.2 x 43.9 (? grey duck); 53.2 x 40.9; 54.6 x 40.6; 49.6 x 33.3; 48.9 x 33.3; 48.9 x 32.9.

On October 3 another nest was found nearby. This nest was not screened in any way, being on top of a niggerhead with barely any shelter above, and was for a moment thought to be a pukeko's (*Porphyrio melanotus*) so similar was it. This nest had apparently been used successfully, though there were two eggs left, one being addled and the other containing a dead chick. Again, both ends were rounded almost similarly, and the sizes were 49.8 x 36.5 and 49.3 x 36.4. The late Edgar Stead informed me that these two were rather smaller than examples from Australia in his collection, though Oliver ("New Zealand Birds," 1930) gives 46 x 34 and 45 x 33 as typical. However, there seems to be an extraordinary amount of variation in the sizes of these eggs in New Zealand, and it is odd that of the four recorded nests, two should contain eggs which were obviously freaks.

THE ELUSIVE FERN BIRD.

By S. D. Potter, Auckland.

Although not by any means rare in many suitable areas and comparatively tame, the fernbird (*Bowdleria punctata*) is decidedly elusive when it comes to efforts to ascertain its habits. This is, of course, due to the fact that it seldom flies and inhabits swampy areas.

At one time I heard calls repeated several times from a large but solitary tea-tree bush. Moving to a point only a few yards from it I watched for several minutes and although some movement was visible from time to time I never actually saw the bird. I then decided on another method and tossed several lumps of earth into the bush, and although the bird protested once or twice it still remained hidden. The only thing left to do was to examine the bush branch by branch, and even then I very nearly lost, for the bird remained stationary on a twig not two feet from my face.

On another expedition Mr. C. A. Fleming and I were determined to find a nest even if it took us the whole day. By carefully searching several small areas of swamp not so very far from Auckland, a pair of fernbirds was finally traced to a certain area of some ten square yards. In this area the rushes were thick and in places were partly flattened. By patient watching the field was again reduced to some five square yards and we took a line on the area where the nest seemed certain to be placed. However, although both birds at different times alighted within a few yards of us they worked so cleverly and silently through the reeds that we were still uncertain of the exact location of the nest, so rather than run the risk of destroying it we retreated a few yards and again waited.

In due course the adults returned with food (insects) and worked silently through the reeds. Usually the only trace of their progress was the occasional quiver of a reed. Presently came the faint whispering of young and it was by that that the nest was found.

It was remarkably well concealed in a dense tangle of reeds screened by others which were semi-prostrate and was about one foot above the water level. It was made entirely of reeds without any lining whatever and contained three dark-skinned youngsters three or four days old and an infertile egg.

We took several photographs and while standing not more than four feet from the nest both adults came a number of times and immediately three yellow gapes would open. On each occasion the adult brought a small moth and usually picked up a piece of excreta and flew away, dropping it while in flight. It is a revelation to find that the fernbird which seems so shy is in reality very tame. These birds ignored both of us and the disturbed surroundings.

The flight is very limited and I doubt if 20 yards is often exceeded in one effort. The wings work rapidly but the pace is slow and has a "tail-heavy" appearance. The call is "tick! tick!" in a somewhat metallic note and occasionally "u-tick!" At times the male utters a loud bell-like note of "toick!" which his mate answers immediately with "tick!" Seen side by side, the male may be distinguished by the larger amount of russet in his plumage.

BIRDS WEST OF THE WAIU RIVER

By J. V. Dunckley, Dunedin Naturalists' Field Club,
and C. M. Todd, Dunedin.

In November and December, 1947, and January, 1948, notes were recorded of birds seen west of the Waiau River, Southland. The birds listed at Lake Hauroko (at the south end) represent a complete avifaunal list for that locality on December 17, 1947.

Shag (believed to be the spotted *Stictocarbo punctatus punctatus*, a small species, grey with whitish front).—A small colony at Sandhill Point, Dec. 8; another colony reported at the mouth of the Waiaurahiri River. Two shags (probably a different species), Lake Hauroko, Dec. 17.

Paradise Duck (*Tadorna variegata*).—Pair with young, Sandhill Point, Dec. 6; single bird near mouth of the Hutburn, Dec. 8; several pairs of birds, four with young, Lillburn Valley, Jan. 10 to Feb. 12.

Grey Duck (*Anas poicilorhyncha*).—Six south end of Lake Hauroko; one feeding in Waiaurahiri River about six miles south of Lake Hauroko, Dec. 19; one feeding at the mouth of the Hutburn, Nov. 14.

Grey Teal (*Anas gibberifrons*).—Four, Lake Hauroko.

Black Swan (*Cygnus atratus*).—Two with cygnets on Lake Hauroko.

Harrier (*Circus approximans*).—One, Hump Ridge, Dec. 17.

South Island Pied Oystercatcher (*Haematopus finschi*).—Common on beach Te Waewae Bay between Waiau mouth and mouth of the Waikoau.

Black Oystercatcher (*Haematopus unicolor*).—Several at Sandhill Point, Dec. 6.

White-fronted Tern (*Sterna striata*).—Sandhill Point, Dec. 6.

Black-backed Gull (*Larus dominicanus*).—Several were observed at Sandhill Point on Dec. 6, and occasionally at the mouth of the Waikoau River.

Wood Pigeon (*Hemiphaga novaeseelandiae*).—Fairly common throughout the whole of the west Waiau area, but seemed to prefer bush with a sheltered aspect.

Kaka (*Nestor meridionalis*).—Common throughout area west of Blue Cliffs. Particularly common around Port Craig, where they were observed flying in flocks (one of twenty-nine) in the early mornings and evenings. Numbers here were probably due to plentiful food in rotten logs in cut-over area. Rimus frequently seen with loose bark stripped off them. Abundant in Waiaurahiri Valley, around Lake Hauroko and on the lower eastern slopes of the Billows, west side of the Lillburn Valley.

Kea (*Nestor notabilis*).—Two, Hump Ridge, Nov. 17; five, one lame, Hump Ridge, Dec. 14.

Parrakeet (*Cyanorhampus novaeseelandiae* (?)).—Lake Hauroko, two. One, track halfway between the edge of bush and lake.

Shining Cuckoo (*Chalcites lucidus*).—None seen, but heard, Port Craig area, Nov. 29 and Dec. 8; Francisburn, Nov. 30; Bluecliffs, Dec. 22 to Jan. 10.

Long-tailed Cuckoo (*Eudynamis taitensis*).—One, Bluecliffs, Jan. 1; one chased by a bellbird near the mouth of the Humpburn, Jan. 3.

Morepork (*Ninox novaeseelandiae*).—Heard Lake Hauroko.

Little Grey Owl (*Athene noctua*).—One seen at dusk on spur running S.W. of south end of Hump Ridge, Dec. 19.

Rifleman (*Acanthisitta chloris*).—One, Track Burn, two miles from the coast, Nov. 30; few, Lake Hauroko; one south end of Hump Ridge at about 700 feet, Dec. 19.

Bush Wren (*Xencius longipes*).—Two seen western side of Hump Ridge at 1000 feet, Dec. 17.

New Zealand Thrush (*Turnagra capensis*).—Two near Lake Hauroko, appeared to be identical with specimens in the Otago Museum.

Grey Warbler (*Pseudogerygone igata*).—Several, Lake Hauroko; general, but not common, in low level bush.

Yellow-breasted Tit (*Petroica m. macrocephala*).—Plentiful, Lake Hauroko.

Robin (*Miro australis*).—One, Lake Hauroko. Common in bush round Lillburn Valley, January-February, both young and old birds being seen. These birds were not observed near the coast.

Fantail (*Rhipidura fuliginosa*).—Pied fantails were common at Lake Hauroko. No black fantails were noted. Fantails common elsewhere here and there in patches of bush.

Yellowhead (*Mohua o. ochrocephala*).—Four, Francis Burn, Dec. 5 and 6; several, Upper Hutburn Valley, Nov. 18, and also between Lake Hauroko Track and Upper Lillburn clearing.

Silverye (*Zosterops lateralis*).—Noted on the south coast, Te Wae-wae Bay.

Tui (*Prothemadera novaeseelandiae*).—Two, Lake Hauroko; common on south coast, Dec.-Jan., feeding on flax and rata flowers.

Bellbird (*Anthornis melanura*).—Plentiful, Lake Hauroko. Near mouth of Humpburn ("Stony"), Jan. 3; one observed aggressively chasing a long-tailed cuckoo. Generally common on south coast feeding on rata and flax flowers.

House Sparrow (*Passer domesticus*).—One fairly elderly bird was about the camp at Bluecliffs in Nov., Dec., and Jan.

Blackbird (*Turdus merula*).—One, Lake Hauroko. Not nearly as tame as the native birds.

One stoat was seen at the south end of Lake Hauroko. Red deer were common throughout the area. Wild pigs also were found throughout the area. Would this be the reason why no ground birds such as wood-hens were observed?

BIRDS AT HAKATARAMEA.—On our bird observation list we have listed the following birds:—Harrier, song thrush, blackbird, greenfinch, pukeko, waxeye, grey warbler, skylark, ground lark (pipit), fantail, starling, chaffinch, goldfinch, redpoll, yellow-hammer, hedge sparrow, bittern, grey duck, gull, pied oyster catcher, stilt, black shag, paradise duck, banded dotterel, magpie, quail and owl. Nests of several of these species have been under observation.—Bruce Robertson, Form 2, Hakataramea School.

REVIEWS.

A Handbook of the Birds of Western Australia, by D. L. Serventy and H. M. Whittell, 1948. Pattersons Press, Ltd., Perth; 365 pp., 2 col. plates and 32 text figs. (15/- Aust. currency.)

Two leaders of ornithology in West Australia offer a book which "they wished had been available to them when beginning the study of local birds." Introductory sections cover history of exploration and bird geography, a valuable synthesis. The detailed treatment of each of 355 species includes aboriginal and other names, outline description, detailed distribution in West Australia, nesting and habits, migration. Separate indices cover history, vernacular names, native names, and scientific names. The format is attractive and the text crammed with useful and interesting matter: important field characters are italicised for emphasis. Subspecies are not dealt with, references to literature are generally omitted and there is no bibliography; perhaps such technical trimmings are out of place in a beginner's book any way. The illustrations are mostly good but lamentably few. But as the Emu reviewer concluded, "there are really 'no complaints'" and our chief reaction is envy—when will a New Zealand ornithologist find time, inclination, and a publisher to offer us something like this?—C.A.F.

The Three Kings Islands: New Zealand's Northern Outliers. Records of the Auckland Institute and Museum; Vol. 3, Nos. 4 and 5; pp. 189-341; December, 1948. (Special Three Kings Number, containing 15 papers on the natural history of the archipelago.)

New Zealand naturalists are so accustomed to waiting long years for the scientific reports of expeditions to see the light of publication that they will welcome this meaty volume containing the results of some six visits to the Three Kings Islands by parties or individual officers of the Auckland Museum staff between 1934 and 1948. Because the Museum "Records" may not be readily accessible to all who are interested in Three Kings birds, this review is an attempt to summarise the relevant parts of the publication, which includes contributions on chronology of exploration, geography, rocks, Maori carvings, flora and vegetation, the effect of goats, land invertebrates, lizards and birds.

The Three Kings Islands, 35 miles north-west of Cape Reinga, lie "east and west in a serrated line," and access is hindered by "precipitous coast, strong tidal currents and the heavy swell." A new map of the group (courtesy Lands and Survey Department) appears as a frontispiece, but it lacks scale, latitude and longitude, and even an author to blame for these not unimportant omissions! Great Island (1000 acres), once clothed in coastal forest, has "undergone profound changes during early Maori settlement (before 1840) and later as the result of the influence of goats"; the three other sizeable islands are "still covered except on the most rocky cliffs, by dense forest and scrub." Cheeseman listed the birds observed on Great and South West Islands in 1887 and 1889, and a few later records for Great Island have been published. The group was declared a sanctuary in 1930. The intrepid landings from a yacht on North East, South West and one of the Princes Islands by M. F. Johnson and G. A. Buddle in 1947 and 1948 provided data to supplement bird observations made on longer visits to Great Island by E. G. Turbott, P. C. Bull and G. A. Buddle, particularly on the "Arbutus" (1945) and Internal Affairs Wild Life Branch (1946) expeditions.

G. A. Buddle (The Outlying Islands of the Three Kings Group, pp. 195-204) gives a modest account of his landings on the smaller islets, with notes on the plants and birds of these precipitous rocks. Everyone will read between the lines of his restrained narrative of the assault on North East Island. We can all envy the experience of two enthusiastic naturalists setting foot where none has gone since Maori times.

The Internal Affairs Expedition, accompanied by E. G. Turbott, camped five weeks on Great Island and succeeded in exterminating the goats, 393 or 398 in number (authorities differ, but no matter). The first significant results of vegetational regeneration are recorded. Turbott (Effect of Goats on Great Island, Three Kings, with Descriptions of

Vegetation Quadrats, pp. 253-272) describes vividly the "all-invading *Leptospermum ericoides* (kanuka) communities" due to Maori clearing and "the selective effect of grazing and browsing" by goats. Pathetic relict groves of the original distinctive coastal forest (with its interesting endemic element) were "of but impermanent status" when the goats were exterminated, the individual trees with trunks often ringbarked and with foliage always browsed and denuded below the reach of goats. "The island has a greatly impoverished land bird fauna" and four of the eleven species recorded were no longer present in 1946, a result attributed to "continued modification by goats." Comparison with other offshore islets suggests that the original fauna may have been more diverse. Bellbird, pipit and morepork are, in that order, the most abundant species. Goats have also limited the distribution of breeding seabirds. Painstaking accounts of surveyed "quadrats" will allow precise study of the regeneration of vegetation, a noteworthy addition to New Zealand's scant list of works on the ecology of outlying islands.

Birds of The Three Kings Island, by E. G. Turbott and G. A. Buddle (pp. 319-336) includes a section on ecology and distribution and a systematic list of the following species (those marked * are breeding, and those marked † are believed extinct): Blue penguin, *diving petrel, white-faced storm petrel, flesh-footed, Buller's, allied, *sooty and *fluttering shearwaters, *grey-faced petrel, *black-winged petrel (*Pterodroma hypoleuca nigripennis*), *an unidentified petrel heard at night (*Pterodroma* sp.), pied shag, *gannet, white-fronted tern, *red-billed gull, *banded rail, *spotless crake, pukeko, *brown quail (*Synoicus* sp.), *harrier, *morepork, *red-fronted and yellow-fronted parrakeets, long-tailed cuckoo, *kingfisher, *pipit, †fernbird, †grey warbler, *pied fantail, silver-eye, †tui, *bellbird, and self-introduced *chaffinch, redpoll, goldfinch, sparrow, yellow hammer, *thrush, *blackbird, *hedge sparrow and *starling.

The discovery of the black-winged petrel was briefly noted in N.Z. Bird Notes (vol. 2, p. 11); on December 3, 1945, P. C. Bull saw the birds by torchlight, flying erratically and chasing in pairs, uttering "a shrill piping and moaning note" in the air, a croaking note on the ground where they landed about 9.30 p.m. At least 12 pairs were observed, eight birds were measured and photographs taken, but not published here. (This would have been a welcome addition.) In April following, burrows had recently been vacated and breeding season is inferred to be the same as for the Kermadec Island population: laying from late December and departure of young in mid-April. Of other petrels, *Puffinus carneipes* and *P. bulleri* are suspected to breed; Cheeseman's record of *P. assimilis* has not been confirmed, but a burrow with feathers suggested this species.

The Three Kings form perhaps the largest breeding station in New Zealand for the red-billed gull, "but no estimate of the total numbers is attempted." Spotless crakes are rare on Great, fairly plentiful on South West Island. The brown quail is not identified specifically because of Falla's hitherto unpublished suggestion that *Synoicus* inhabiting offshore islands may be remnants of an indigenous race living in New Zealand prior to the introduction of Australian forms of *Ypsilophorus* (1867-71). Parrakeets have decreased since 1934 and the yellow-fronted species present in 1934, is regarded as extinct, as also are the fernbird, grey warbler and tui, recorded by Cheeseman. Three of four fantails from Great Island are of a mutant form with "a particularly wide and distinct band of white-tipped feathers between the black foreneck and the buff underparts," which, moreover, are "yellowish buff." The establishment of this mutant is attributed to the "Sewall Wright effect" in a population of "not more than fifty." The silvereye has been observed in late years only as small straggling non-resident flocks.

The Three Kings bellbird (*Anthornis melanura obscura*, Falla), known to be distinct since 1934, is at last described in a short contribution by R. A. Falla (A New *Anthornis* from the Three Kings Islands, pp. 337-338). Compared with the nominate form, the new race is slightly

larger, with dull olive green male plumage, lacking the yellowish olive traces of the underparts, with dull violet instead of bright purple gloss on head, and white, instead of yellowish, pectoral plumes and under-tail coverts—characters readily apparent in the field and said to be “as well marked as, indeed in some respects more marked than” those of the Chatham Island bellbird. In a useful table of measurements, the North and South Island birds are not separated subspecifically, but the Auckland Island *incoronata* is given specific rank—this last surely a lapsus.

This volume is a symptom of a healthy policy of constructive conservation on the part of Auckland Museum officers, which, implemented by the action of the Department of Internal Affairs, has saved Great Island from the fate of St. Helena. The Museum hopes to record future recovery of the vegetation and fauna in future publications.—C.A.F.

Inbreeding Among Birds in the Wild State, by L. E. Rochdale, Dunedin.
Emu, Vol. 48, May, 1949, p.p. 282-290; one illustration.

Further results of an intensive study of breeding yellow-eyed penguins are apparent in this article, in which the author publishes his conclusions after twelve years' of observations of this species on Otago Peninsula. Out of a total of 386 separate annual matings of banded birds, 398 fledglings entered the sea and all these birds were marked. Of the latter number, 162 were seen subsequently and from the foregoing data the author discusses the incidence of inbreeding in this species. He showed that the chances of inbreeding between parent and offspring, or between brother and sister were decidedly remote. The only case of inbreeding recorded among these penguins is between a brother and a sister. From the literature available he can find only four other instances on record of inbreeding in other species of birds in a wild state, probably due, he states, “to lack of opportunity, largely because of the poor return of young to their exact place of hatching.” If it did occur, it did not appear to be harmful.—R.H.D.S.

Notornis Rediscovered, by E. A. Falla, Dominion Museum, Wellington.
Emu, Vol 48, May, 1949, pp. 316-322; five illustrations.

The story of the dramatic rediscovery of the notornis or takahe (*Notornis hochstetteri*) by Dr. G. B. Orbell, of Invercargill, and subsequent observations of the bird's habits by the author of this paper in an area west of Lake Te Anau, is placed on permanent record in this article. After a brief historical survey of the species and the events leading up to the rediscovery of the takahe on November 20, 1948, by Dr. Orbell and his party, the author gives first-hand information of the bird's habits, gained on a later visit to the area in January, 1949.

Salient points of Dr. Falla's paper are: The birds inhabit an area of about 500 acres—the basin of a valley 2,000 feet above the level of Lake Te Anau (which is 684 feet above sea level). There is little variety of food for bird life, nor is it in abundance. A takahe was seen stripping flowers and seeds of *Danthonia* (snow-grass) by running the stalks through its bill. The succulent bases of *Carex* (sedge) and the stripped fleshy stalks of *Aciphylla* (spaniard) are also eaten. The droppings of the birds are remarkable and characteristic, and provide a good clue to the presence of this species. The solid cylindrical faeces are half an inch in diameter and up to six inches and more in length. Some droppings composed of moss were found in one area. Not unlike the weka in its movements and general stance, the takahe flicks its tail at almost every step, and runs well. It has a loud call, somewhat like that of the weka “and not unlike a powerful version of the Californian quail”; when calling a chick, “cowp-cowp-cowp”; a scream when pairs are separated and an alarm note of “boomp-boomp.” The nest is built on the ground between tussocks of snow grass, being constructed of grass. An egg seen by the party was dull cream, with brown spots and faint mauve blotches and measured 73.5 x 48.3 millimetres. The chick somewhat resembles a pukeko chick. An estimated total of 100 birds in two

neighbouring valleys is suggested, though this may be on the high side. Stoats and deer are present in the area; a plan to ease predator pressure is already in operation by officers of the Internal Affairs Department.

In order to protect the colony the Government has closed an area of 435,000 acres of Fiordland National Park to entry by the public, except by special permit.

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