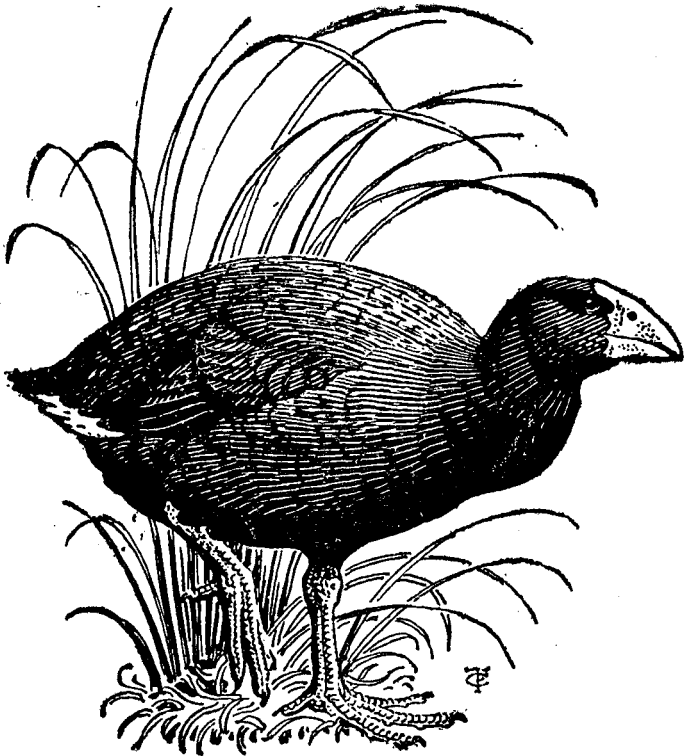


NOTORNIS



QUARTERLY BULLETIN
of the
Ornithological Society of New Zealand



Volume Eight, Number Seven: January, 1960

NOTORNIS

In continuation of New Zealand Bird Notes

BULLETIN OF THE ORNITHOLOGICAL SOCIETY OF NEW ZEALAND
(Incorporated)

Registered with the G.P.O., Wellington, as a Magazine

Edited by R. B. SIBSON, King's College, Auckland S.E.7

Annual Subscription, 10/-; Endowment Membership, £1;

Life Membership, £10 (for members over thirty years of age)

OFFICERS 1959-60

President — Mr. P. C. BULL, 131 Waterloo Road, Lower Hutt
North Island Vice-President — Dr. R. A. FALLA, Dominion Museum,
Wellington

South Island Vice-President — Mrs. L. E. WALKER, 15 Cornwall Street,
Vauxhall, Dunedin

Editor — Mr. R. B. SIBSON, King's College, Auckland, S.E.7

Assistant Editor — Mr. A. BLACKBURN, 10 Score Road, Gisborne

Treasurer — Mr. H. R. MCKENZIE, North Road, Clevedon

Secretary — Mr. G. R. WILLIAMS, Wildlife, Division,
Department of Internal Affairs, Wellington

Members of Council:

Mr. E. G. TURBOTT, Canterbury Museum, Christchurch

Mr. J. C. DAVENPORT, 5 Belfast Street, Hillsborough, Auckland

Mr. A. BLACKBURN, 10 Score Road, Gisborne

Banding Convener — Mr. F. C. KINSKY, Dominion Museum, Wellington

Organiser of Nest Records Scheme — Mr. H. L. SECKER, 14 Clyma St.,
Upper Hutt

Contents of Volume 8, No. 7: January, 1960

The Birds of the Cleddau River Area, Near Milford Sound, Fiordland	185
The Hunter Valley, North-West Otago	189
Rare Fiordland Birds	191
Notes on Some Arctic Waders in the Manawatu	192
Observations on Incubation and Chick Rearing in the Antarctic Skua	194
Obituary: James Sharon Watson	195
Classified Summarised Notes	196
Plate XXIX — Bar-tailed Godwits	207
Plate XXX — Knots and Bar-tailed Godwits	208
Plate XXXI — Bar-tailed Godwit	209
Plate XXXII — Marsh Sandpiper	210
Plate XXXII — Allied Shearwater	210
Annual Locality Reports	215
Field Study Week-end	225
Short Notes — Notes on Some Bones Collected by Dr. Watters and Mr. Lindsay at Chatham Islands; Gray-faced Petrels Over Mt. Maunganui Peninsula; White-winged Black Terns at Hima- tangi Beach and in Marlborough; Colonial Roosting of White- faced Herons	226
Letter	228
9th Annual Report of the Banding Committee	229
Card Committee Report	230
Card Committee Statement of Accounts	231
New Members	232

NOTORNIS

VOLUME EIGHT, NUMBER SEVEN

JANUARY, NINETEEN SIXTY

THE BIRDS OF THE CLEDDAU RIVER AREA NEAR MILFORD SOUND, FIORDLAND

By G. R. WILLIAMS

Early in 1958 and 1959 two departmental expeditions examined some of the valleys in this area in a search for the Kakapo (*Strigops habroptilus*). In the earlier, most of the search was made in the valleys of the Tutoko and the western branch of the Cleddau: in the latter, activities were concentrated in the Tutoko once more and the valleys of the Donne and Gulliver. Dates and personnel were as follows:—

Tutoko & Cleddau (mainly western branch): 28 February -
11 March, 1958, M. M. Small, R. W. Cavanagh, F. L. New-
combe, K. H. Miers, G.R.W.

Tutoko: 21-28 February, 1959, K. S. Sutherland, A. G. Hall,
G.R.W.

Donne & Gulliver: 21-27 February, 1959, N. B. Ewing, M. M. Small.

The observations that follow are those of all the members of these expeditions, and though those concerning the Kakapo are currently the most important, the value of the notes on the other species should increase with time for the Cleddau and its tributaries lie in an area that has so far been modified but little by man or by the browsing mammals he has introduced. It lies within the boundaries of the Fiordland National Park and the only direct changes of any magnitude so far made to the landscape have been the construction of a road from the Homer Tunnel to Milford Sound and the clearing of some small areas for buildings. Few deer have yet penetrated into the valleys because of the formidable natural barriers of ice, precipice and deep water that separate them from other parts of Fiordland, and opossums liberated at Milford Sound last century are not abundant. Stoats and rats also occur but not in large numbers though there were occasional rat plagues last century.

Rainfall is 200 inches a year or more and the topography is equally notorious — the last ice age has carved the ancient Paleozoic rocks into extremely steep and rugged contours, and mountains of between 6000 and 8000 feet are common, the highest in the vicinity, Mt. Tutoko, being 9042 feet. The rivers run in old glacial valleys thousands of feet deep with precipitous sides rising above old avalanche debris. A fairly uniform forest of predominantly silver beech (*Nothofagus menziesii*) covers the valley floors and extends to about 2500-3000 feet on the thin soils of the lower rock walls. At low altitudes the forest floor is covered with a deep carpet of moss and, in more open places, fern which is often waist-high. Scree slopes support a thick growth of small trees and shrubs such as *Nothopanax* spp., kamahi (*Weinmannia racemosa*), broadleaf (*Griselinia littoralis*), tutu (*Coriaria arborescens*), kotukutuku (*Fuschia excorticata*), mountain wineberry (*Aristotelia fruticosa*), *Coprosma* spp., *Olearia* spp., and *Hebe* spp. In more open areas, particularly at some height, there are various prostrate or semi-

prostrate shrubs such as *Gaultheria* spp., *Suttonia* spp., *Carmichaelia* spp., tussock grasses, heaths, mountain flax (*Phormium colensoi*) and mountain tutu (*Coriaria plumosa*). On various parts of the valley floors — particularly near the head of the Tutoko — there are extensive stands of mountain lacebark (*Hoheria glabrata*) above tall and thick expanses of fern, mainly shield fern (*Polystichum vestitum*). Open areas along river banks are covered with a mat of herbs with occasional clumps of toe-toe (*Arundo conspicua*), *Danthonia* tussocks (including *D. cunninghamii* which soon falls prey to moderate deer grazing) and brooms (*Carmichaelia* spp.).

The weather during the expeditions was a fair sample of what Fiordland has to offer in early autumn — fine, calm days interspersed with those in which up to a few inches of rain fell. The 1959 expeditions had the lion's share of better conditions.

NOTES ON THE SPECIES

South Island (Common) Kiwi: Birds caught on two occasions belonged to this species. Others, unidentified, were heard almost every night close to our camps at altitudes varying from about 500 to 2500 feet above sea-level. Feathers were frequently found under bluffs and rocks and bill marks were common in soft ground. Kiwis were obviously not scarce.

Paradise Duck: None seen although a pair was heard calling in the Tutoko and a few moulted feathers found. The species was scarce throughout but suitable habitat is scarce, too.

Blue Duck: A pair was seen in the Tutoko River and one in a pool in the Leader Creek at an altitude of about 2000 feet. As much of the usual habitat could not be examined, these few observations cannot be taken as any indication of true abundance.

Falcon: One heard in the lower Tutoko on 27th February, 1959.

Western Weka: None seen but a few feathers were found in the Tutoko and western Cleddau. One was heard in the latter valley and another in the Gulliver. The species appeared to be scarce during our visits.

Black-backed Gull: In 1958 there was a small flock of adults and young at the Tutoko-Cleddau junction. In 1959 two were seen flying above the headwaters of the Tutoko.

Kereru: Fairly common in forest throughout — from the valley floors up to at least 2000 feet.

Kakapo: There have been a number of reports of this species being seen or heard in the Cleddau system over the last 25 years, the most recent being of "booming" being heard in the Tutoko in early 1952 (Williams, 1956). This last account was one of the main factors deciding the mounting of the present expeditions. Advice of earlier naturalists familiar with Kakapo was accepted and permission was obtained from the National Parks Authority to take trained and muzzled dogs into the area to help in the search. In 1958 a dachshund and a pointer were used and in 1959 a labrador and a pointer-labrador cross. The dachshund had to be retired because of the roughness of the going, but it is fair to say that, without the pointer, the Kakapo would not have been found on the earlier expedition. Because in both years the expeditions took place outside of the main "booming" period (which is between late November and mid-February) the success of the search was

going to depend mainly upon the dogs' and our ability to find signs of the birds' presence in the frequently-described tracks, dust-bowls and feedings signs and, perhaps, feathers, droppings and unfamiliar calls other than "booming." We now know we were fortunate: on the third day of the first expedition, after a search that had been fruitless, the pointer indicated a Kakapo basking in the sun under a large rock. It was captured, photographed in colour (the first colour photographs taken of the species), measured and then released. It struggled savagely while held but was docile enough on release to allow itself to be stroked. The bird was healthy but one eye appeared white and blind. After a short time the Kakapo bounced down a steep rock face and disappeared from sight among the beech trees. An unusual observation was that the plumage smelt strongly and pleasantly of some plant, and so have all feathers found since. This could be a rough criterion of freshness of such material.

There were none of the "classical" signs of Kakapo in the vicinity — only a scrap of white down, two nipped-off pieces of five-finger (*Nothopanax colensoi*); and some thumb-sized, purplish droppings of loose texture. These proved to be the same as those collected during the bird's capture and were later found to consist almost wholly of pulp and seeds of the mountain tutu. Similar droppings were later found in other places and were often associated with feathers. Weathering reduces them to a mass of small seeds loosely held together, and when they have lost their "blackberry jam" texture it becomes difficult to decide whether they have come from Kakapo, Kea or even Blackbird.

The place where the bird was found was under Mt. Syme on a north-west-facing slope at about 2000 feet. Occasional large avalanche boulders are scattered among the silver beech trees and shrubs of *Olearia*, *Myrica*, *Hebe* spp., *Carmichaelia* sp., etc. Mountain tutu was abundant and heavily in fruit, as was the five-finger and various species of prostrate *Coprosma*, *Leucopogon fraseri*, *Pentachondra pumila* and *Cyathodes acerosa*.

Only a few hours were spent in this basin in 1958 and little more sign of Kakapo seen. In 1959, three days were spent here with a Labrador dog, and although Kakapo feathers and droppings were found scattered over a wide area in sites varying from warm and dry to cold and wet (if anything, more common in the latter, under old avalanche debris) and an unfamiliar parrot-like screech was heard twice in a place where feathers were later found, no bird was seen or indicated to us by the dog. Because of the roughness of the terrain and lack of a powerful light, no search was made at night.

Either feathers or droppings (those of the more usual coiled shape and made of fibrous material) were found here and there in the higher parts of the western Cleddau, the Donne and the Gulliver and in places some distance off the Homer-Milford road, but nowhere were they common. In the Gulliver, small balls of chewed tussock were found still hanging on the plant. These were fresh and associated with feathers.

To summarise: Kakapo occur throughout the area examined but probably only in very small numbers. Most evidence of their presence was found at altitudes of about 2000ft. in or about old avalanche debris now covered with vegetation or under sheltering rock bluffs. No clear tracks or dust bowls were discovered and only two calls heard that could

have been from this species. These indications of preferred habitat may be biased for our searches were made mainly in those places where there was better chance for preservation of sign. On the thickly moss-covered and wet floors of the valley bottoms, searching is more difficult and conditions less favourable for preservation. The tussock-clad slopes above the subalpine scrub were hardly examined at all because of their relative inaccessibility, steepness and small extent. As far as the continued occurrence of Kakapo in the Cleddau system is concerned, it may be significant that red deer are still scarce there, for they are known to be fond of both mountain tutu and five-finger — both of which are heavily grazed when moderate deer populations are present and both of which seem to be preferred foods of the Kakapo.

Kaka: Frequently seen in all low-level forest though not abundant.

Kea: Common but not abundant at subalpine level and above.

Parakeets (*Cyanoramphus* spp.): Frequently heard and widely distributed. None was seen closely enough to allow the species to be identified.

Morepork: Apparently scarce as only one was heard — this during the 1958 expedition in the Tutoko.

Rifleman: Common throughout.

Rock Wren: One seen in the head-basin of the Donne in February, 1959.

Fantail: Common. A black one was seen in the Tutoko, another in the Gulliver and two in the western Cleddau.

Yellow-breasted Tit: Abundant at all lower levels.

Brown Creeper: Two flocks were seen in the lower reaches of the western Cleddau; there is one call record from the Tutoko.

Grey Warbler: Common throughout all low level forest.

Songthrush: One heard singing in the lower Tutoko in February, 1959.

Blackbird: Fairly common throughout up to altitudes of at least 2500ft. More usually identified by the "alarm rattle" than seen.

Dunnoek: Occasionally seen and heard in the Tutoko. Probably occurs in the other valleys, too, in spite of being unrecorded.

Pipit: Seen on avalanche fans at the foot of Mt. Tutoko in February, 1959. Though this is the only record made during the expeditions, the species is almost certainly commoner than this scant mention implies. Habitat is rather limited except above the subalpine scrub zone.

Bellbird: Common throughout.

Waxeye: Small flocks were commonly seen or heard in widely scattered areas.

Redpoll: The species was common and flocks were frequently seen and heard, particularly on higher slopes and in the various head basins.

Chaffinch: Common about clearings and along river banks, especially at low altitudes.

REFERENCE

- Williams, G. R., 1956 — The Kakapo (*Strigops habrotilus* Gray). A review and re-appraisal of a near-extinct species. *Notornis* 7: 29-56.

THE HUNTER VALLEY, NORTH-WEST OTAGO

By P. CHILD

The Hunter Valley, lying at the head of Lake Hawea, is at present of interest because the raising of the lake level by 80 feet to provide additional storage for Roxburgh Hydro will extend the lake some eight miles up the valley. The valley runs almost south-north to the confluence of the east and west branches, known as 'the forks,' 30 miles from the lake, and it is a further 10 miles or so to the head of the main (east) branch at Mt. Strauchon (8300ft.) and the extensive Hunter Glacier. The west branch saddles across the Main Divide with the Wills at Wilson's Pass (5040ft.) and with the Landsborough at Studholme Pass (6200ft.). The main valley floor is remarkably level, rising only 800ft. in the 30 miles from the lake to the forks. Below the forks the main tributaries are from the west, saddling with the Makarora and the Wills, while near and above the forks they drain mainly from the east into the east branch and saddle with the south and north branches of the Huxley, main tributary of the Hopkins flowing into Lake Ohau. Most of these side streams come from hanging valleys with gorges, waterfalls or cataracts at their junctions with the main valley. The river flat is some two miles or so wide at the mouth, narrowing gradually to the forks, above which there is little flat country. Successive floods in recent years have increased the size and reduced the stability of the shingle flats, probably to the disadvantage of some ground-nesting birds. The lower ten miles of the valley are characterised by matagauri and tussock flats with a few swampy areas, and manuka and bracken hillsides. Further up beech forest is dominant — mainly mountain beech — with some patches of silver beech, totara and broadleaf.

The region used to be noted for its numbers of red deer; on my 1952 visit, herds of 20 and more were fairly common; however, owing to the activities of professional deer-cullers, there were few deer about this year. A New Zealand record (4100) was shot by Mr. Wattie Cameron and his partner in the 1955-56 season. Chamois appear to be increasing, about 200 having been shot this season already (late January), compared with a total of 114 for the whole of the 1955-56 season. They are fairly rare, only one or two being taken each season. The shrub layer of the beech forest has suffered severely from the browsing of these animals; there is no undergrowth or thin beech saplings whatever, and no evidence of regeneration within the forest, although one or two areas on the open fringes appear to be improving. There is a very marked improvement in the pasture growth on the valley floor over the past seven years, and in many parts of the sub-alpine scrub old deer trails have become overgrown — a rare phenomenon in most of our mountain country.

In view of the extreme dryness of the whole countryside during the 1959 visit it was surprising to find countless swarms of large crane flies in the tussocky basins above the sub-alpine scrub (c. 4000-5000ft.). Another interesting insect which abounded in the beech forest near the lake was the giant green cicada (*Melampsalta cingulata*); the sibilant chirping of thousands of these on a hot afternoon was deafening. The large bluebottle is a pest even above the snowline.

My observations were made during two climbing expeditions to the valley: January 18th to 28th, 1952, and January 16th to 26th, 1959.

(Those given below are for 1959 unless stated otherwise.) I am also indebted to Mr. Cameron for much information — his detailed knowledge of the area and its wild life over four seasons of deer shooting is much more extensive than that obtainable by the casual visitor.

WADERS: A few pairs each of Pied Oystercatcher, Banded Dotterel and Pied Stilt were scattered in typical habitats along the valley floor, but did not appear to be as common as in most river valleys of Otago and Canterbury.

GULLS & TERNS: Black-billed Gulls were fairly common in the lower valley. Black-backed Gulls are comparatively common in small flocks up the side valleys, heads of streams and along the Main Divide. Eight were observed near the extreme head of the west branch, and one flying at a height of at least 8000ft. above the peaks. A few Black-fronted Terns were observed along the main river.

WATERFOWL: A few pairs of Paradise Duck around lower valley areas; there are usually hundreds of these in the main valley but they disperse up the side streams when the duck-shooting season opens.

1 pair of Grey Duck and a pair of Scaup near the forks, and about 20 Scaup near the head of the lake. The Grey Duck are usually seen in greater numbers around the head of the lake in the late evening as they fly off down the lake during the day.

Mr. Cameron has observed a pair of Blue Duck near the head of the east branch.

Several hundred Canada Geese live in the valley and in early January during the moulting season these are often hunted on foot or horseback, but only a limited number of birds are taken each year. The birds are very wily during this period, feeding on the pastures at night and congregating close to the river or hiding in the beech forest during the day. Mr. Cameron states that flappers hide up the side creeks, sometimes being seen above the bushline (about 3800ft.). Despite hunting, they appear to have increased since 1952.

4 of the large Black Shag were seen in the west branch.

FOREST BIRDS: Bellbirds were scattered throughout, being most common about the centre of the main valley (between Lake Creek and Long Flat Creek). The Tui is quite rare, only an odd one or two being seen.

Pigeon: Also very common about the centre part of the valley; a hundred or so may be seen feeding on the scrub berries around this area. Quite common and scattered throughout in typical habitats were the Pied Fantail, Tomtit, Rifleman and Grey Warbler. Two Kaka were seen in the same locality as on the 1952 visit. Mr. Cameron thinks they are more noticeable in late spring, and in the late afternoons, when up to twenty have been sighted. This compares with an average of about 6 in 1955. They seem to be much more active on the wing in the cooler part of the late afternoon and early evening.

Long-tailed Cuckoo: Heard on several occasions.

Morepork: Scattered throughout but mainly in lower valley. Two were heard during the night about 1 mile above the lake.

OPEN-COUNTRY BIRDS: Both the Harrier and the Falcon were fairly common in the lower valley and around the forest fringe. Mr. Cameron considers that the latter takes a greater toll of native birds than does the Harrier, especially Tomtits, Fantails, and the slow-flying Pigeon. The Harrier possibly does more harm to young geese and ducks than the Falcon.

Kea: Not common in the main valley area, only two being seen at an altitude of 5300ft. One bird was observed prising up quite heavy stones with its beak, and seeking insects, etc., underneath. Their numbers appear to fluctuate with the seasons and they are usually more common at high altitudes in the side valleys. Mr. Cameron has found a Kea's nest with young, above bushline (c. 3800ft.) and well concealed several feet in under a rock, beyond arm's length.

Rock Wren: Fairly numerous in some areas, at high altitudes well above beech line.

Skylark: Common on valley floor at low altitudes. A nest with three eggs was found in the middle of a cart track on 19/1/52.

N.Z. Pipit: Common on grassy and shingly areas at all altitudes up to 6000ft. Generally the most frequently noticed bird of the region above the sub-alpine scrub. Often seen well above the snowline. Caterpillars of the Black Mountain Butterfly form part of its diet in this region.



RARE FIORDLAND BIRDS

By JOHN HALL-JONES

This may seem a rather belated account of two expeditions which took place some years ago, but the author asks forgiveness and pleads absence overseas for the past three years.

In 1955 I was fortunate enough to accompany a Canterbury Museum party into unexplored Fiordland country west of Te Anau's southern arm. We were fated with the typically heavy rainfall of this region but some interesting ornithological finds were made.

The McKenzie Burn points the way to the west and under the shadow of its surrounding cliffs we found the solitary metatarsus of a bush moa (*Megalapteryx didinus*). Identification of the bone was later confirmed by Mr. R. J. Scarlett of the Canterbury Museum.

Descending into Lake Te Au, we were greeted by Crested Grebes, Blue Duck, and the now rare Brown Duck. The latter was of particular interest as she was fostering three ducklings.

Two Bush Wrens were seen, and in the vicinity of Coronation Peak, Rock Wrens were relatively common. In the shadow of this peak, amongst typically clipped snowgrass, we discovered some droppings of the *Notornis*. It is interesting to note that this area lies some 25 miles west of Lake Orbell; a considerably further distance when one takes into account the nature of the intervening terrain.

A small party now set off towards Nancy Sound. In a boggy area some three miles outward bound, Hitchings discovered the recent remains of a Kakapo. In the same locality, Bruce found a recently dead Roa (*Apteryx haasti*) with egg.

Homeward bound we noted further *Notornis* droppings as we crossed Robin Saddle, some five miles east of our previous sighting.

Stimulated by our finds of the previous year, Carey, Couzens*, Reid and I decided to visit the Saddle Hill area of George Sound, where Wisely had sighted two Kakapo in 1949.

February, 1956, found us heading westwards from Te Anau's

* Killed on 19/11/59 near Cape Selbourne, in Antarctica, when a snowcat which he was driving plunged into a hidden crevasse. He was serving as a Lieutenant in the R.N.Z.A.C.

middle arm through familiar Fiordland rain and the ever persistent sandfly. The Green Kaka would not appear to be as plentiful as in days gone by and indeed only one bird was noted on this trip. Four days' bush slashing from George Sound brought us to our base camp at the foot of Saddle Hill.

That evening whilst huddled around our campfire, a shadow flew low overhead emitting a most unusual weird cry which might almost be described as maniacal. We had never heard any resemblance to this call before and I have no particular desire to hear it repeated. It could well have been the cry of the Laughing Owl (*Sceloglaux albifacies*).

Poking amongst the boulders at the foot of our hill, Carey discovered some small bones which were later confirmed by Mr. R. J. Scarlett as those of the Kakapo.

The next day Carey and I ascended the leading ridge of Saddle Hill. Nearing the summit the character of our ill-defined track suddenly changed to that of a well kept garden path. The edges had been neatly trimmed and all untidy waste had been removed. Five dust bowls, some two feet wide and six inches deep lined this fifty yards stretch of track. Well defined tunnels led off down through stunted species of *Dacrydium* and *Dracophyllum* to a tiny tarn some 300 feet below.

Descending rapidly to this ledge, we found that our tarn was surrounded by a mass of rolled grass pellets. Further searching revealed a typical spiral dropping of fine grass texture which now resides in the Southland Museum. A night vigil was kept but no Kakapo were seen or heard.

Before leaving our Kakapo haunt we were visited by two wrens which I can only describe as being of a much more vivid green colour than the normal Bush Wren. In a subsequent communication, Dr. Falla suggested that they could have been the recently described Fiordland Wren (*Xenicus gilviventris rineyi*).

Poole, A. L., 1951 — Preliminary reports of the New Zealand-American Fiordland expedition. N.Z. D.S.I.R. Bulletin 103. Govt. Printer, Wellington.
Williams, G. R., 1956 — The Kakapo (*Strigops habroptilus*, Gray). Notornis 7 (2): 29-56.
Falla, R. A., 1956 — Personal communication.



NOTES ON SOME ARCTIC WADERS IN THE MANAWATU

By IAN G. ANDREW

The estuaries of the Rangitikei and Manawatu have extensive areas of tidal flats which are favoured by several species of waders and it is reasonable to expect that many more interesting records will be made in these localities in the near future. The Manawatu is already well known for the regular winter appearance there of a flock of Royal Spoonbills (*P. regia*). Five species of waders which breed in New Zealand occur regularly at both estuaries. These are: South Island Pied Oystercatcher, Northern Oystercatcher, Banded Dotterel, Wrybill and Pied Stilt.

The only arctic-breeding wader which occurs regularly in fair numbers in the Manawatu is the Bar-tailed Godwit (*L. lapponica baueri*). In 1958-1959 the summer populations of these at the estuaries of the Manawatu and Rangitikei respectively were c. 260 and c. 40. The winter population at the Manawatu is usually between 10 and 20. Other arctic waders are relatively rare visitors to the district. A summary of species

recently observed by me is given below. Two of these, Long-billed Curlew and Red-necked Stint, are, I believe, the first records for the district.

Pacific Golden Plover (*C. dominicus fulvus*). After the Godwit, this is the commonest arctic wader in the Manawatu and is probably present every southern summer. Recent counts by Mr. E. Dear and myself are:

Rangitikei estuary: c. 10 on 23/11/58, 26/12/58 and 3/1/59.

Manawatu estuary: 21 on 17/1/59, 1 on 7/2/59.

Long-billed Curlew (*Numenius madagascariensis*). A single bird stayed on the Manawatu estuary over part of the summer. I saw it on 6/12/58, 20/12/58 and 17/1/59, but missed it on 7/2/59 and subsequently. The closest I ever managed to approach was about sixty yards. It was conspicuously larger than a Godwit. Size, very long decurved bill and absence of a median stripe on the crown ruled out the possibility of its being a Whimbrel. At no time was it heard to utter a call of any description.

Turnstone (*Arenaria interpres*). Rarely reported in the Manawatu. Mr. E. Dear and I saw two at the Rangitikei estuary on 23/11/58. They were not seen again.

Knot (*Calidris canutus*). Has been frequently reported in small numbers and may be a regular visitor, but I have rarely found it. At the Manawatu estuary: 1 on 1/10/55; 2 on 6/12/58; 7 on 20/12/58.

Siberian Pectoral Sandpiper (*Calidris acuminata*). Stidolph (N.Z. B.N. 3, 126) has observed this species at Foxton Beach. Last summer I found them in some numbers, viz: Rangitikei estuary, 1 on 23/11/58; c. 6 on 26/12/58; 8 on 3/1/59 (also seen by Mr. E. Dear). Manawatu estuary, 13 on 7/2/59. On 3/1/59, I was able to approach to 20 yards, at which distance they were very wary, although several Wrybills fed fearlessly only six yards from my feet. With 8 x 30 binoculars I particularly noted the following features: bill black; forehead and crown rufous, very much so in some individuals; pale superciliary stripe; breast pale with no clear demarcation from the white abdomen; legs an uncertain shade of yellow. The same features were noted at the Manawatu estuary on 7/2/59, when one bird had conspicuous crescentic markings on the flanks, thus confirming the identification. These crescentic markings were absent or inconspicuous in the other birds, but the pale breast with the colour fading out gradually to the abdomen, in addition to a soft piping call and rufous crown, clearly separated them from the American Pectoral Sandpiper (*C. melanotos*):

Red-necked Stint (*Calidris ruficollis*). The first record known to me of this small sandpiper in the Manawatu is of three which wintered in 1958. I saw these on 8/7/58, 13/7/58 and 26/8/58. Although they were usually watched at not less than fifty yards, their diminutive size compared with nearby Wrybills and Banded Dotterels, the short, straight black bill and black legs, streaked pale gray upperparts and white on the face, indicated that they were *ruficollis* in winter plumage (probably yearlings, Ed.). Dr. R. A. Falla confirmed the identification. In addition the rump and tail were noted as dark centrally and pale laterally, a white alar bar was present and the call-note uttered in flight was a distinctive, rapid, high-pitched "tiu tiu tiu." I again saw Red-necked Stints on 26/12/58, when about six in company with four Sharp-tailed Sandpipers were located in the Rangitikei estuary. The differences between the two species were very marked.

OBSERVATIONS ON INCUBATION AND CHICK REARING IN THE ANTARCTIC SKUA

By GRAEME CAUGHLEY

During an inspection of the Adelic Penguin rookeries at the southern end of the Ross Sea*, it was possible to make incidental observations on the Antarctic Skuas (*Catharacta skua maccornicki*) nesting nearby.

In the spring of 1958, the first skua was seen in the area on the 28th of October. Skua eggs were first observed on the outskirts of the Cape Crozier Adelic rookery on the 28th of November. Several of the nests had two eggs, suggesting that egg-laying had begun at least four days previously. There is apparently a wide range in the time of egg-laying as eggs in two nests were seen to be hatching as late as 24th January, 1959, at Beaufort Island. Stonehouse (1956) gives the incubation period of *C. s. lonnbergi* as thirty-two days and as the time is likely to be similar in this sub-species, the extreme dates of egg laying in this area would be separated by more than a month.

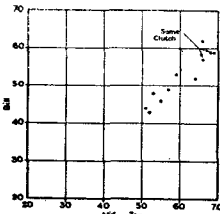


Fig. 1.—Measurements of a random sample of 12 chicks at Beaufort I. on 24/1/59. Measurements are in millimetres.

This staggered egg-laying is reflected in the size range of the chicks. From mid-January it is possible to see them in all stages between newly hatched and having lost their down. At Beaufort Island I measured a random sample of twelve chicks in 24th January, 1959 (see Fig. 1). Although in this sample there is some grouping of the co-ordinates, the newly hatched chick at the bottom of the series does not represent a freak occurrence as three other chicks were seen there at a similar stage of development.

Most predatory birds commence incubating as soon as the first egg is laid (Lack, 1954), and the skua is no exception. Because of this the hatching of the two eggs is asynchronous and one would expect to find two chicks differing slightly in size in each nest. However, it is reported for the Brown Skua, *C. s. lonnbergi* (Murphy, 1936; Stonehouse, 1956) and suggested for the Antarctic Skua (Wilson, 1907) that while two eggs are incubated, only one chick is reared. My own observations support this, for in only one instance did I find a clutch of two chicks. These were between twenty and thirty days old. The only other reference I can find to both chicks of this age being reared is provided by Falla (1937), who records a clutch of two chicks fully three weeks old at Cape Denison.

The question of why the skua should fail to rear both chicks is difficult to answer. Lack (1947) suggests that asynchronous hatching in predatory birds has survival value in terms of the total population as the smaller chick will quickly die if food is in short supply, thereby increasing the chances of the others proportionately.

The nest loses all significance to both the parent and the chicks within twenty-four hours of the second egg hatching, and the chicks seek

* Carried out for D.S.I.R. under instructions from the Dominion Museum

shelter behind any stone or in a hollow (Stonehouse, 1956). It is suggested by Murphy (1936) that after one of the chicks has been fed and the parent has discharged its feeding response, the other chick if not immediately nearby would be regarded as extraneous matter and thus eaten. He thinks that the two chicks produce a conflict between the parental response and the desire to eat. It can be seen that this hypothesis is in conflict with Lack's theory as it is most likely that the larger chick would be first to leave the nest and thus be eaten by one of the parents. Furthermore, the rearing of one chick is not limited to periods of unfavourable conditions but shows every indication of being a constant heritable behaviourism.

Paludan (1951) and Wynne-Edwards (1954) have suggested that mechanisms to reduce breeding potential in sea-birds constitute a density-dependent control on the recruitment rate, but this does not explain infanticide in this case where its extent does not seem to vary with the density of the population. It may be that more detailed work on the life history of this bird in the future will explain this puzzling behaviour.

LITERATURE CITED

- Fallu, R. A., 1937: "Birds" B.A.N.Z. Ant. Res. Exped. Reports Ser. B. Adelaide.
 Lack, D., 1947: "The Significance of Clutch Size," *Ibis* 89: 302-52.
 Lack, D., 1954: "The Natural Regulation of Animal Numbers," Oxford.
 Murphy, R. C., 1936: "Oceanic Birds of South America," New York.
 Paludan, K., 1951: "Contributions to the Breeding Biology of *Larus argentatus* and *Larus fuscus*," *Vjndensk. Medd. fra Dansk. Naturh. Forening*, 114: 1-128.
 Stonehouse, B., 1956: "The Brown Skua *Catharacta skua lonnigeri* of South Georgia," *F.I.D.S. Sci. Rep.* 14: 1-25.
 Wilson, E. A., 1907: "Aves," *Nat. Ant. Exped. (1901-4), Nat. Hist.* 2
 Wynne-Edwards, V. C., 1955: "Low Reproductive Rates in Birds, Especially Sea-birds," *Acta XI Cong. Int. Orn.*: 540-7.



OBITUARY — JAMES SHARON WATSON

The death occurred on August 11th of James Sharon Watson, who was a senior scientific officer in the Animal Ecology Section of the Department of Scientific and Industrial Research.

Mr. Watson was born in Oxford, England, and after attending Rugby School, graduated B.A. in Zoology at Christ Church, Oxford, in 1941. During the war, Mr. Watson carried out important studies on the ecology of rats on behalf of the Port of London Health Authority and later undertook similar work in the Middle East.

In 1949, Mr. Watson came to New Zealand to join the Department of Scientific and Industrial Research and undertook work on the ecology of various introduced mammals — especially the rabbit. He had a life long interest in birds, and, as an undergraduate, was Secretary of the Oxford Ornithological Society. He joined the Ornithological Society of New Zealand soon after his arrival here, and later published an important paper on the recovery of ringed harriers as well as two short notes on mynas and cuckoos. His main ornithological studies, however, remain unpublished. They include a ten-year study of the distribution and abundance of the two colour phases of the introduced magpie and also important contributions on the inter-relationships between cats, rats and birds on Little Barrier Island. Mr. Watson's colleagues hope to have some of this work published in due course.

Mr. Watson, who was 40, is survived by his wife.

— P.C.B.

- N.Z. CRESTED PENGUIN (*Eudyptes pachyrhynchus*) — Wainui Beach, Gisborne, 1 ashore moulting from 8/2/58 to 7/3/58 (A.B.).
- CRESTED GREBE (*Podiceps cristatus australis*) — Lake Pearson, courtship display on 4/9/58 (P.G.).
- DABCHICK (*Podiceps rufopectus*) — Kawerau, 20/1/59, 8 on a small lake (J.P., H.R.McK.).
- WANDERING ALBATROSS (*Diomedea exulans*) — Tyndall's Beach, Whangaparaoa, an immature bird was sitting offshore on 28/3/59, but died later (A.C.). Wellington Harbour, 15 on 9/6/58 (I.G.A.). Muriwai, 1 dead on 11/8/59 (T.G.L.).
- ROYAL ALBATROSS (*Diomedea epomophora*) — Titahi Bay, 1 dead on 1/6/58 (P.C.H.). Aramoana, Otago Harbour, 4 displaying off mole on 28/12/58 (L.E.W.). Kaikoura, 1 corpse on 10/1/59 (R.B.S.).
- BLACK-BROWED MOLLYMAWK (*Diomedea melanophris*) — Island Bay, Wellington, 6 close inshore on 9/8/58; 2 on 20/8/58 (I.G.A.). N. of Tutukaka, 1 on 27/3/59 (A.J.G.).
- GREY-HEADED MOLLYMAWK (*Diomedea chrysostoma*) — Pukerua Bay, 5/10/57, 1 juv. dead; 26/7/58, 1 juv. dead; 2 juv. dead, Sept., '58; Te Horo, 2 dead, 1 adult, 1 juv. on 27/5/58 (C.N.C., P.C.H.).
- BULLER'S MOLLYMAWK (*Diomedea bulleri*) — Muriwai, 2 dead on 17/5/59 (D.E.C., J.C.D.). Foxton Beach, 1 dead on 10/7/59 (I.G.A.).
- WHITE-CAPPED MOLLYMAWK (*Diomedea cauta*) — Muriwai, 1 dead on 25/5/59 (T.G.L.). Himatangi, 1 dead on 10/2/57; Foxton Beach, 1 dead on 19/1/58; Pukerua Bay, 1 dead on 5/10/57; Red Rocks, 1 dead on 8/1/58 and 1 on 14/5/58; Makara, 1 dead on 18/5/58 and 1 on 26/6/58 (P.C.H.).
- LIGHT-MANTLED SOOTY ALBATROSS (*Phoebastria palpebrata*) — Anaura Bay, East Coast, 9/11/58, 1 four miles offshore (A.B.). Rongotea, one picked up alive on 30/5/59 and later released at Wellington (E.D.).
- GIANT PETREL (*Macronectes giganteus*) — Waitemata, 8+ on 29/8/59; Wellington west coast, odd ones often (P.C.H.). Ngahauranga outlet, 60+ in August (I.G.A.).
- CAPE PIGEON (*Daption capensis*) — Bethells, 1 corpse on 30/8/59 (P.D.G.S.). Mt. Maunganui, 1 ashore alive in early August, '58 (A.W.). Foxton Beach, corpses on 21/12/57 and 19/1/58 (I.G.A.). Pukerua Bay, corpses on 20/7/58, 3/8/58, 1/11/58, 8/11/58, 19/11/58 (C.N.C., P.C.H.). Ohiro Bay, 27/5/57, Makara 22/6/58 (P.C.H.). Island Bay, 2 or 3 offshore on 16/8/58; Evans Bay, 1 on 20/8/58 (I.G.A.). 6, a few miles out from Lyttleton on 7/1/59 (R.B.S.).
- SILVER-GRAY FULMAR (*Fulmarus glacialisoides*) — Muriwai, 1 dead on 25/7/59 (R.S.C.). Gisborne, Wainui Beach, 1 ashore dying on 5/4/59 (A.B.). Waitarere, 1 ashore alive on 25/5/59. Pukerua Bay, 1 juv. dead on 27/10/58 (C.N.C.).
- BLUE PETREL (*Halobaena caerulea*) — Muriwai, 2 dead on 27/10/59 (P.D.G.S.). Karekare, 1 dead on 17/5/59 (T.G.L.). Foxton Beach, 1 old corpse on 31/8/59 (I.G.A.). Titahi Bay, 1 freshly dead juv. female on 27/9/58 (P.C.H.).

- BROAD-BILLED PRION** (*Pachyptila v. vittata*) — Corpses found at Waikanae, 27/10/57; Pukerua Bay, 14/12/57 and 30/11/57 (P.C.H.). 30/5/59, 2 (C.N.C.). Muriwai, none during winter, 1959. Foxton Beach, occasionally found dead in summer months (I.G.A.).
- LESSER BROAD-BILLED PRION** (*Pachyptila s. salvini*) — Muriwai, single corpses on 15/5/59, 25/5/59, 1 on 25/7/59 (P.D.G.S., T.G.L., R.S.C.). Foxton Beach, 1 on 10/7/59 (I.G.A.). Te Horo, 1 on 31/5/58 (P.C.H.). Pukerua Bay, 3 on 30/5/59 (C.N.C.). No great numbers reported ashore anywhere during 1959.
- ANTARCTIC PRION** (*Pachyptila desolata*) — Muriwai, 3 ashore in mid-May (D.E.C., J.C.D., R.A.A.R., P.D.G.S.), Foxton Beach, 1 dead on 20/4/57; 1 on 10/7/59. Waikanae, 1 dead juv. on 27/10/57; Makara, 1 dead adult on 26/6/58 (P.C.H.).
- SOUTH GEORGIAN PRION** (*Pachyptila desolata banksi*) — Te Horo, 3 dead on 27/7/58, 2 adults and 1 juv., identification confirmed by R.A.F. (C.N.C., P.C.H.).
- NARROW-BILLED PRION** (*Pachyptila belcheri*) — Foxton Beach, 1 freshly dead on 1/6/58 (I.G.A.). Pukerua Bay, single corpses on 27/10/57, 20/7/58, 26/7/58. Te Horo, 1 corpse on 31/5/58 (P.C.H., C.N.C.).
- FAIRY PRION** (*Pachyptila turtur*) — Duder's Beach, 1 corpse on 26/8/59 (A.E.G.). Mt. Maunganui coast, odd birds are usually washed ashore in winter (M.H.). Muriwai, Bethells, Karekare, only small numbers ashore during winter, '59 (D.E.C., J.C.D., R.A.A.R., T.G.L., P.D.G.S., R.B.S.). Pukerua Bay, corpses common between August-December, '58 (C.N.C.). c. 250 recorded ashore from 1956-Jan., '59 (P.C.H.). Foxton and Himatangi, frequently ashore at all seasons (I.G.A.).
- FLESH-FOOTED SHEARWATER** (*Puffinus carneipes*) — East Coast, 9/11/58, numerous from Whangara I. to Anaura Bay (A.B.). Muriwai, 19/12/58, 2 dead (C.N.C.). Large Trio I., 21/11/58, 10 nesting (D.M., B.D.B.).
- BULLER'S SHEARWATER** (*Puffinus bulleri*) — Plentiful Dec.-Feb., '59, in Hauraki Gulf beyond Rangitoto (A.J.G., A.T.T.C.). Corpses: Muriwai, 12 on 19/12/58 (C.N.C.); 1 on 25/5/59 (T.G.L.). Pukerua Bay, single birds on 15/11/58; 29/11/58; 30/5/59 (C.N.C.). Waikanae-Titahi Bay, 3 Dec., '57; Paraparaumu, 1 on 12/4/58 (P.C.H.).
- SOOTY SHEARWATER** (*Puffinus griseus*) — Tapuwae, Gisborne, 30/11/58, c. 3000 feeding $\frac{1}{2}$ -mile offshore and at Wainui Beach, 7/12/58, c. 5000 feeding offshore (J.W.B.). 9/12/58, many corpses ashore here (A.B.). Motukiekie, Bay of Islands, 1 dead on 1/1/59 (A.J.G.). Muriwai, 19+ ashore in mid-May (P.D.G.S., T.G.L., D.E.C., J.C.D., R.A.A.R.). Many of these shearwaters were reported ashore dead, especially young birds, along the N.Z. coastline, at the time when they were starting to move north. Foxton and Himatangi, frequently ashore in early summer; 1 just dead on 8/7/58 (I.G.A.).

- TASMANIAN MUTTONBIRD** (*Puffinus tenuirostris*) — Mid-Kaipara, 1 on 3/5/59 (R.B.S.). Muriwai, 2 ashore dead on 19/12/58 (C.N.C.); 1 on 15/5/59 (P.D.G.S.); 1 on 17/5/59 (J.C.D.); 4 on 25/5/59. Karekare, 3 on 17/5/59 (T.G.L.). Himatangi-Foxton, 1 on 10/2/57; 1 on 14/12/57; 1 on 11/1/58. Pukerua Bay, 2 in mid-May, '58 (P.C.H.) and 1 on 29/11/58 (C.N.C.). Makara, 2 in mid-May, '58 (P.C.H.).
- FLUTTERING SHEARWATER** (*Puffinus gavia*) — Wellington Harbour, 9/6/58, 60+ (I.G.A.). North and Large Trio Is., 21/11/58, eggs and young, also on Haystack off Chetwode I. and on Bird Rock off Forsythe I. (D.M., B.D.B.). Corpses, as usual, were found around the coast in many places. c. 4000 close inshore, Kaikoura, mid-Jan., '59 (R.B.S.).
- HUTTON'S SHEARWATER** (*Puffinus huttoni*) — Pukerua Bay, Jan., '58, 1 freshly dead (P.C.H.). Kaikoura, 1 corpse, 10/1/59 (R.B.S.).
- ALLIED SHEARWATER** (*Puffinus assimilis*) — Pukerua Bay, 19/11/58, 1 male recently dead; possibly of the small race *tunneyi* (P.C.H.).
- GREY PETREL** (*Procellaria cinerea*) — Muriwai, 19/12/58, 1 fresh corpse (C.N.C.).
- BLACK PETREL** (*Procellaria parkinsoni*) — Titahi Bay, '56, 1 decayed corpse (P.C.H.).
- WESTLAND BLACK PETREL** (*Procellaria westlandica*) — Titahi Bay, 24/5/58, 1 corpse; first N.Z. beach record away from breeding grounds (P.C.H.).
- WHITE-CHINNED PETREL** (*Procellaria aequinoctialis*) — Himatangi Beach, 10/2/57, 1 corpse (I.G.A.).
- WHITE-HEADED PETREL** (*Pterodroma lessoni*) — Karekare, 1 dead on 26/10/59 (T.G.L.). Foxton Beach, 1 old corpse on 22/12/56 (I.G.A.). 10 found ashore between March and November, '58 between Te Horo and Titahi Bay (C.N.C., P.C.H.). Palliser Bay, 27/4/58, 1 male ashore alive (P.C.H.).
- MOTTLED PETREL** (*Pterodroma inexpectata*) — Muriwai 19/12/58, 1 dead (C.N.C.). Foxton Beach, 28/12/57, 1 old corpse (I.G.A.). Titahi Bay, 15/2/58, 1 dead; Sinclair Head, 14/5/58, 1 recent corpse (P.C.H.).
- KERGUELEN PETREL** (*Pterodroma brevirostris*) — Himatangi Beach, 2/9/58, 1 fresh corpse, now a skin in Dominion Museum (I.G.A.). Te Horo, 16/8/58, 1 old corpse (P.C.H.). Wellington west coast, 1 ashore and released alive in early July, '59.
- COOK'S PETREL** (*Pterodroma cooki*) — Auckland to Little Barrier, on 17/2/59, first seen about 15 miles from Little Barrier (A.T.T.C.). Kaipara Flats, 20/9/58, first heard flying over (F.P.H.).
- WHITE-FACED STORM PETREL** (*Pelagodroma marina*) — Muriwai, 1 dead, 19/12/58 (C.N.C.).
- DIVING PETREL** (*Pelecanoides urinatrix*) — Tolaga Bay, many feeding 3 miles offshore on 9/11/58 (A.B.). South and Large Trio Is., 21/11/58, chicks (D.M., B.D.B.). Pukerua Bay, 13 ashore dead between April and November, '58 (P.C.H., C.N.C.). Foxton Beach, dead birds come ashore at any season (I.G.A.).

RED-TAILED TROPIC BIRD (*Phaethon tubricauda*) — Dr. and Mrs.

Lopdell reported that as they sailed on the Matua in February, 1945, they saw two of these birds, which they knew well, in Rangitoto Channel (R.B.S.).

GANNET (*Sula bassana serrator*) — Auckland to Little Barrier and back 17/2/59 and 25/2/59, c. 12 sightings of young birds in different stages of brown mottling, only one being very dark (A.T.T.C., H.R.McK.). Whangarei Harbour, 29/3/59, c. 30 speckled young fishing in school of kahawai half way up harbour in main channel. We were trolling among them. No adults present. 29/3/59, 3 flying together. 11/4/59, 1 speckled with white breast (Mrs. W. (Katie) Reynolds), Hatfield's Beach, 31/1/59, 2 immature birds making shallow dives in the Bay (J.C.D.). Tapuwae, Gisborne. 30/11/58, 300+ fishing offshore (A.B.). Himatangi Beach, 6 offshore on 10/2/57; Island Bay, Wellington, 22/3/58, 1 immature with mottled brown head and upperparts (I.G.A.). Farewell Spit, 3 fishing offshore 22/1/59 (R.B.S.). Westport, at Tauranga Bay Beach, 9/5/59, 1 mottled young alone feeding along breakers (H.M.McK., E.H.S., H.R.McK.). Greymouth, 1 on 8/8/59 (P.G.). Kaikoura, 1 on 11/1/59 (R.B.S.).

BLACK SHAG (*Phalacrocorax carbo novaehollandiae*) — Rurimu Rocks, 8/11/58, some at Pied Shag colony (W.T.P.). L. Repongaere, Gisborne, 1 pair nesting among White-throated Shages, 3/11/58 (A.B.).

PIED SHAG (*Phalacrocorax varius*) — Urupukapuka, Bay of Islands: 9/1/59, roost with 30 birds; Motukiekie, 12 (A.J.G.). Little Barrier, June, '59, building and breeding. July gales caused abandonment of colony and it was restarted 100 yards further east. August, some sitting on nests (R.H.B.). 14/1/59, 2 nests and c. 20 birds in a stranded tree on the Wairau lagoons, Blenheim (B.D.B., R.B.S.). Tomahawk Lagoon, Dunedin, 1 on 10/2/59, first record of this shag at this lagoon (A.B., L.E.W.).

LITTLE BLACK SHAG (*Phalacrocorax sulcirostris*) — Paihia, 5/8/59, c. 60 feeding close to beach, followed by 5 Reef Herons and many gulls (A.B.). Pt. Albert, 10+ on 3/5/59 (D.A.U., R.B.S.). Orakei Basin, often present on jetty, e.g. 10 on 28/3/59 (P.D.G.S.). Tamaki, near Otahuhu, 40+ on 13/7/59 (R.B.S.). Matata lagoon, usually present (R.V.McL., R.B.S.). Ohiwa Harbour, 1/1/59, three nests in a tree on a rock (2 with eggs, 1 with 2 eggs and 2 chicks), all destroyed by Black-backed Gulls (W.T.P.). L. Whangape, Feb., '59, flocks of up to 30 seen daily (D.M., B.D.B.).

LITTLE SHAG (*Phalacrocorax melanoleucus*) — L. Repongaere, Gisborne, 3/11/58, 16 pair nesting (A.B.).

SPOTTED SHAG (*Stictocarbo punctatus*) — Papanui Pt., Orere, Clevedon, 8/8/59, c. 120 (A.E.G.). Kawhia, 13/5/59, 1 feeding close to wharf, the first recorded here (W.S.S.).

LESSER FRIGATE BIRD (*Fregata ariel*) — One appeared at South Kaipara Head during the March cyclone (M.W.).

WHITE HERON (*Egretta alba*) — Rangaunu Bay, 18+ in winter (R.H.M.). Matakoho, Kaipara, 1 mid-winter per K.C.B.C. Muriwai, 17/5/59, 1 seen flying south over the surf. At the south end of the beach it appeared to gain height before it was lost to view (D.E.C., J.C.D.). Whau Estuary, those which had been present for more than a year, had all gone by December, '58. After a gap of six months up to three were seen from June to October (J.P.). Whitford, 1 on 15/6/59 (A.B., H.R.McK.). Muriwai Lagoon, Gisborne, 27/9/58, 1 (J.W.B.). Little Waihi, B.o.P., 1 on 2/9/59 (P.D.G.S.), Matata, 1 on 27/9/58 (W.T.P.). Waimea rivermouth, Nelson, 1/11/58, 1 with heavy plumes and reddish yellow bill with darker streaking; 2/11/58, 3; 8/11/58, 1 (H.M.McK., H.R.McK., S.C.W.). Blenheim, 3 on upper Wairau lagoons 1/10/59; 1 Taylor River, 15/10/59 (B.D.B.). Westport, 2/5/59, 1 (H.M.McK.). Saltwater Creek, Canterbury, 13/5/59, 1 (H.R.McK.). L. Forsyth, 1/6/59, 1 (D. MacM., E.H.S., H.R.McK.). Timaru, 18/5/59, 1 (H.M.McK., H.R.McK.). Merton, 1 on 14/5/59; Waihotā, reports of 2, May '59 (L.E.W.).

LITTLE EGRET (*Egretta garzetta*) — Nelson, Waimea rivermouth, 1 on 1/11/58, plumes from back of head, down back and on breast (H.M.McK., H.R.McK.).

BLUE REEF HERON (*Egretta sacra*) — Tauranga Harbour, one or two in every estuary and inlet (R.V.McL.). Several fly to roost at night on Rabbit Island. Mt. Maunganui (A.W.). 11 in one inlet at Ohiwa Harbour (W.T.P.). Gisborne, 1 at Muriwai lagoon 21/3/59; 1 at Turihaua, 10/4/59; 1 in harbour 16/5/59 (I.W.B.). Bird Rock, off Forsythe I., 24/11/58, nest with young (D.M., B.D.B.). Pukerua Bay, 12/10/58, nest with 3 eggs; Castle Point, 5/1/59, 8 nests, one still with 3 nestlings (C.N.C.).

WHITE-FACED HERON (*Ardea novaehollandiae*) — Kaipara Flats, 2 flying young surprised on 17/10/58 (F.P.H.). Rangitoto I., 1 on 9/5/59; occurring regularly in Tamaki estuary and also visiting Orakei Basin (P.D.G.S.). Clevedon, regularly seen in August, probably breeding in bush near river (M.J.B.). Athenree, B.o.P., 2 on 25/5/59 (R.B.S.). Gisborne, Muriwai lagoon, 3 on 27/9/58; Opoutama, 5 on 8/3/59 (I.W.B., A.B.). Rongotea, 1 young in nest in *C. macrocarpa* on 11/10/59 (E.D.). Manawatu estuary, often present: 1 adult on 15/12/56 with bright orange legs; Rangitikei estuary, 3 on 3/1/59 (I.G.A.). Nelson, Nov. '58, numerous (H.R.McK.). 32 in air together at Collingwood on 19/1/59; 3 on 16/1/59, up Wairau between Wash Bridge and Tophouse (R.B.S.). Doubtful R., east of Lewis Pass, c. 1500ft., 1 flying on 1/5/59 (H.R.McK.). McKenzie Bird Sanctuary, Cheviot, 16 on 9/1/59; Mapua, 6 on 14/1/59 (L.E.W.). Nesting in Dixon Park, Greymouth, 25/2/59 (P.G.).

NANKEEN NIGHT HERON (*Nycticorax caledonicus*) — Blenheim, 13/1/59, 1 in adult plumage 30ft. up in an elm overhanging water (B.D.B., R.B.S.).

AUSTRALIAN WHITE IBIS (*Threskiornis aethiopica strictipennis*) — Arahura, 2 in the vicinity for some months, 12/7/58 (P.G.).

- ROYAL SPOONBILL (*Platalea levcorodia regia*) — Rangaunu Bay, up to 6 winter '59 (R.H.M.). Okahukura, mid-Kaipara, 4 on 3/5/59 (J.P., R.B.S., D.A.U.). L. Wahi, lower Waikato, 26ft/59, 1 seen daily for several weeks (D.M.). Manawatu estuary, 2 present throughout summers of '56-'57 and '58-'59; 20 on 21/5/59; unconfirmed report of max. of 22 in winter (I.G.A.).
- CANADA GOOSE (*Branta canadensis*)—Waipaoa R., Gisborne, 10/10/58 1 (A.B.).
- MUTE SWAN (*Cygnus olor*) — Apparently 5 pairs occupying distinct territories on L. Pupuke, 1959 (R.B.S.).
- BLACK SWAN (*Cygnus atratus*) — L. Repongaere, Gisborne, 24/7/59, 25 pairs nesting (A.B.). L. Whakaki, 1/5/59, 3000+ day before shooting (R.St.P.).
- PARADISE DUCK (*Tadorna variegata*) — Waikaretu, a few miles south of Waikato estuary, 1 pair apparently resident per K.C.B.C. Ruapuke, Raglan, Sept., 1958, 2 males reported (C.R.B.). Minginui, usually a pair; parties of 9 on 23/1/59 and 6/6/59 (R.St.P.). L. Repongaere, Gisborne, 24/7/59, c. 1000 (A.B.). Maungapohatu, 10/9/59, 1 pair (R.A.C.). Tauranga, Wairoa rivermouth, 3/9/58, 1 male (M.H.).
- BROWN TEAL (*Anas chlorotis*) — Kaeo, early in 1958, 80+; then for some time 42; none seen since recent floods (W.M.G.).
- SHOVELER (*Anas rhynchotis*) — Matata, 150+ on 23/5/59 (R.B.S.). L. Repongaere, Gisborne, 17/9/59, c. 70 in flock just arrived. A few pairs breed (A.B.). Whakarongo, 12 on 2/6/57; Hokowhitu Lagoon 2 on 19/5/59 (I.G.A.). Borstal Farm pool, Invercargill, c. 30 (H.R.McK.).
- BLUE DUCK (*Hymenolaimus malacorhynchus*) — Raukoroa, Gisborne, 8/9/58, pair with 3 young three weeks old (A.B.). Gouland Downs, Oct. '58, present in small numbers (D.M.).
- N.Z. SCAUP (*Aythya novaeseelandiae*) — Hora Hora Br., L. Karapiro, 4/1/59, 10 in flock; also 2 ducks, each with 4 ducklings: Matata lagoon, 23/5/59, 15+ (R.B.S.). Atiamuri end of L. Whakamaru, up to 36 (D.G.). Kawerau, 20/1/59, 8 on small lake (J.P., H.R.McK.). Invercargill Borstal Farm, 6 on 22/5/59 (H.R.McK.).
- HARRIER (*Circus approximans*) — Clevedon, Oct. '58. J. Duder saw one forced down by large pack of Pied Stilts, which had many young. It sat back to defend itself with its feet, saw J.D. and flew out over the sea pursued by the Stilts (H.R.McK.).
- BUSH HAWK (*Falco novaeseelandiae*) — Moumoukai, Clevedon, 16/5/59, 1 near manganese mine (G.M.M.). Atiamuri, 1 occasionally (D.G.). Minginui, 1 or 2 at any season (R.St.P.). Tuakau Rd., East Coast, 8/12/58, nest with eggs in cabbage-tree stump, 4ft. from ground. One seen at intervals over Gisborne suburb (A.B.). Mt. Victoria, Wellington, 6/4/57, 1 (I.G.A.). Mt. Avalanche, 1/3/59, 1 at 6000ft. feeding on a chamois corpse (J.R.I.).
- BROWN QUAIL (*Synoicus ypsilophorus*) — Tauranga Harbour, parties in rough ground frequently (M.H.). L. Whakaki, H.B., 3/5/59, 9 in a covey (R.St.P.).

BANDED RAIL (*Rallus philippensis*) — Whangaroa-Kaco, often seen (W.M.G.). Clevedon, 21/10/58, pair with 4 chicks (Miss K. Browne). Waimapu inlet swamp, Tauranga; heard most of the year (M.H.). Mangatu, Gisborne, 20/11/58, 1 killed in trap (A.B.). Tasman, Nelson, 1 ran in front of car, 14/1/59 (L.E.W.). Kaihoka, N.W. Nelson, 1 flying; reported plentiful (H.R.McK.).

WEKA (*Gallirallus australis*) — Gisborne, particularly numerous after favourable breeding season last year (A.B.). Goulard Downs, plentiful Oct. '58 (D.M.). Pelorus Bridge, 2 fighting, indifferent to spectators from nearby camps (L.E.W.). Cronadun, 27/10/58, 1 running down main highway at noon (P.G.).

MARSH CRAKE (*Porzana pusilla affinis*) — Cape Runaway, 20/8/59, 1 killed by cat (A.B.).

COOT (*Fulica atra australis*) — L. Pupuke, Takapuna, 1 seen on 2/8/59 (A.B., H.R.McK., R.B.S.). Tinwald Domain, 3 miles from Ashburton, 1 diving for weed on pond, 5/7/59; still present on 9/8/59 (E.W.C.).

S.I. PIED OYSTERCATCHER (*Haematopus ostralegus finschi*) — Ruakaka, 15 on 22/12/58 (R.B.S.). Pt. Albert, 3/5/59, 19; mid-Kaipara, many hundreds (R.B.S., D.A.U.); 600+ on 9/8/59 (B.D.B.). Muriwai, Gisborne, 1 on 21/3/59 (J.W.B.). Foxton Beach, c. 25 throughout winters of '58 and '59; c. 20 on 17/1/59 (I.G.A.). Picton, 1 on 27/1/59; Tahuna, Nelson, c. 40 on 18/11/59; Motueka, 80+ on 19/1/59; Collingwood, 500+ on 19/1/59; Farewell Spit, scattered all along the open western beach on 22/1/59; Elterwater, 11 on 13/1/59; Kaikoura, 2 on 11/1/59; Heathcote-Avon estuary, 1000+ on 7/1/59 (R.B.S.). Karamea, c. 60 on 5/5/59; Westport, c. 80; Tauranga Bay, Westport, 71 (H.M.McK., E.H.S., H.R.McK.).

N.I. (VARIABLE) OYSTERCATCHER (*Haematopus unicolor reischeki*) — Paua, 11 on 11 and 12/9/58; Ruakaka, c. 12 on 22/12/58; Maketu, 6 (4 black) on 23/5/59 (R.B.S.). Farewell Spit, 1 on 5/11/58 (H.R.McK.). Kaikoura, 1 on 11/1/59 (R.B.S.).

BLACK OYSTERCATCHER (*Haematopus u. unicolor*) — Bland Bay, Whangaruru, 5 on 10/1/59 (A.J.G.). Muriwai Lagoon, Gisborne, 20/12/59, pair with eggs; also on Pourewa I., East Coast, 9/11/58 (A.B.). Palliser Spit, 22/11/58, nest, 1 egg (C.N.C.). Large Trio I., 22/11/58, 2 nests with eggs and 1 on Bird Rock, off Forsythe I. (D.M., B.D.B.). Farewell Spit, c. 12 on 22/1/59, some being breeding pairs (R.B.S.). Karamea, 5/5/59, 2; Tauranga Bay, Westport, 1 (H.M.McK., E.H.S., H.R.McK.).

PACIFIC GOLDEN PLOVER (*Charadrius dominicus fulvus*) — Waitotara, 2 on 25/1/59, 1 on 15/2/59; Manawatu, c. 15 on 26/3/59 (M.J.L.). Farewell Spit, 2 in flight, 5/11/58; Nelson, Richmond-Waimea tidal flat, 3 on 8/11/58 (S.C.W., H.R.McK.); 2 on 15/1/59 (L.E.W.). Wairau Bar, Blenheim, 9 on 28/9/59 (J.R.E.).

BANDED DOTTEREL (*Charadrius bicinctus*) — Mid-Kaipara, 30+ on 3/5/59 (R.B.S., D.A.U.). c. 40 on 9/8/59 (B.D.B.). Whenuapai aerodrome, 230+ on 21/7/58 (W.W.R.); 50+ on 14/5/59 (R.B.S.). Whatipu, Manukau Heads, 4 pairs breeding, Oct. '59 (I.G.L.). Tamaki estuary, 50+ on 7/5/59 (P.D.G.S.). Athenree, 21 on 25/5/59; Rangitaiki estuary, 10 on 23/5/59 (R.B.S.). Tauranga aerodrome, a winter feeding ground (K.C.B.C.). Foxton Beach, c. 200 on 13/7/58; c. 140 on 17/1/59 and 21/5/59; none seen on 10/7/59; 32 on 31/8/59 (I.G.A., M.J.R.). Nelson, 1/11/58, 1 male east end of boulder bank; Waimea estuary, 1 pair; Richmond flats, 1 pair; 6/11/58, Paturau rivermouth, 1 pair (H.M.McK., H.R.McK.). 8 on 20/1/59, Collingwood, odd birds (? on passage) mid-Jan. '59 (R.B.S.). Karamea, 28+ on 5/5/59; Westport aerodrome, 8+, Tauranga Bay, 9 (H.M.McK., E.H.S., H.R.McK.). Wairau Bar, Blenheim, 14/1/59, few (R.B.S., B.D.B.). Kaikoura, 16 on 12/1/59 (R.B.S.). Heathcote-Avon estuary, c. 30 on 16/5/59 (O.S.N.Z. excursion); New Brighton, 2/5/59, an egg found containing a well developed embryo at the edge of the tide (J.R.J.).

RED-BREASTED DOTTEREL (*Charadrius obscurus*) — Bethells, 1 pair on 25/10/59 (O.S.N.Z. excursion); Whatipu, 2 pairs (T.G.L.). Bland Bay, Whangaruru, 5 on 10/1/59 (A.J.G.). Otumoetai and Wairoa flats, Tauranga, up to 3 seen (M.H.). Maketu, 28/1/59, 3 at rivermouth, including chick (H.R.McK.). Rangitaiki estuary, 1 pair on 23/5/59 (R.B.S.). Ohope, 1 on 29/3/59 (D.G.). Muriwai Lagoon, Gisborne, 1 on 21/3/59 (J.W.B.). Raglan, Te Horea, 1 on 20/3/59 (M.S.).

WRYBILL (*Anarhynchus frontalis*) — Mid-Kaipara, c. 220 on 3/5/59 (R.B.S., D.A.U.); 120+ on 9/8/59 (B.D.B.). Tamaki estuary, 6 on 15 and 28/3/59 (P.D.G.S.). Gisborne, 2 on 26/1/59 (A.B.). Waitotara estuary, 1 on 25/1/59 and 15/2/59 (M.J.I.). Rangitikei estuary, 12 on 3/1/59. Foxton Beach, 20+ on 2/3/57; 15+ on 15/2/58; c. 8 on 17/1/59; 9 on 17/5/59; c. 12 on 21/5/59 (I.G.A., M.J.I.).

LONG-BILLED CURLEW (*Numenius madagascariensis*) — Farewell Spit, 5/11/58, 13 on outer beach (H.M.McK., H.R.McK.). During the 1958-59 summer more Long-billed Curlews were recorded in New Zealand than ever before (v. Annual Locality Reports):

ASIATIC WHIMBREL (*Numenius phaeopus variegatus*) — Bowentown, B.o.P., 5 on 27/12/58 (H.R.McK.).

BAR-TAILED GODWIT (*Limosa lapponica baveri*) — Paua, 12/9/58, c. 500 (R.B.S.). Mid-Kaipara, 200+ on 9/8/59 (B.D.B.). Tamaki, 51 on 7/5/59 (P.D.G.S.). Turanga Creek, Whitford, c. 160 on 15/6/59; Waikopua, 230 on 20/6/59 (H.R.McK.). Kawhia, 1959, more than usual wintering (W.S.S.). Tauranga, Rat Island, 143 on 25/12/58; c. 232 on 13/3/59 (50 reddish); 270+ on 14/3/59, during cyclone; 20 on 18/5/59 (R.V.McL.). Sulphur Pt., summer population c. 600; winter numbers 260+ in 1959, which is more than usual. A new sandspit in Waikareo estuary is now a roost since Dec. '58. Up to 200 have been seen at high tide near Lever's Crescent,

- Wairoa River (M.H.). c. 70 on 14/7/59 near Maungatapu (R.B.S.). Ohiwa Harbour, 22/11/58, few (W.T.P.). Manawatu estuary, '57-'58, c. 120; '58-'59, 200+; max. seen was c. 280 on 6/12/58 (I.G.A.); main departure from here between 26 and 30/3/59; 200+ on 26/3/59; c. 12 May-June '59 (M.J.I.). Muriwai Lagoon, Gisborne, 26 on 7/12/58; Kopuawhara estuary, 38 on 8/3/59 (A.B.). Nelson, 1/11/58, 1500+ at east end of boulder bank; c. 400 on Richmond-Waimea flats on 2/11/58, were probably part of this flock; Motueka estuary, c. 450 on 4/11/58; Parapara Inlet, 14; Farewell Spit, 5/11/58, c. 3500 at base on east side; c. 1000 along 16 miles of outer beach; eastern flats, many too distant to count; Westhaven, 6/11/58, c. 540; Takaka, 7/11/58, c. 160 (H.M.McK., H.R.McK.). Collingwood, c. 200 daily in mid-Jan. (R.B.S.). Cobden, 1 on 10/10/58 (P.G.). Kaikoura, 7 on 11/1/59; Waimakariri estuary, 60+ on 9/1/59; Heathcote-Avon estuary, 2000+ on 7/1/59; Kaituna lagoon, c. 200 on 8/1/59 (R.B.S.).
- TURNSTONE (*Arenaria interpres*) — Paua, Parengarenga, c. 50 on 12/9/58 (R.B.S.). Mid-Kaipara, 20+ on 9/8/59 (B.D.B.). Muriwai Lagoon, Gisborne, 4 on 7/12/58 (A.B.). Farewell Spit, 3 on outer beach on 22/1/59 (R.B.S.). Wairau Bar, Blenheim, 1 on 14/1/59; Kaikoura, 20+ on 11/1/59 (B.D.B., R.B.S.).
- KNOT (*Calidris canutus*) — Paua, l. 200 on 12/9/58 (R.B.S.). Manawatu estuary, 2 on 4/4/59 (M.J.I.). Nelson to Farewell Spit, 1-5/11/58, none seen; 5/11/58, outer side of Farewell Spit, c. 30; no doubt large numbers on distant flats east of Spit (H.M.McK., H.R.McK.).
- SHARP-TAILED SANDPIPER (*Calidris acuminata*) — Waitotara estuary, 2 on 15/2/59 (M.J.I.). Richmond tidal flats, 2 in muddy creek, 8/11/58 (H.R.McK.).
- RED-NECKED STINT (*Calidris ruficollis*) — Mid-Kaipara, 4 on 9/8/59 (B.D.B.). The numbers of Stints in New Zealand in 1958-1959 were quite exceptional (v. Annual Locality Reports).
- PIED STILT (*Himantopus leucocephalus*) — Little Barrier, 16/8/59, one on storm-water pools on flat (R.H.B.). Whangaparaoa Peninsula, near Tindal's Bay, 4 nests each with 4 eggs in shallow rushy swamp on 7/9/59 (per K.C.B.C.). Whatipu, Oct. '59, c. 6 pairs appeared to be breeding (T.G.L.). Moumoukai, Clevedon, 30/8/59, party flying over at night at c. 1400ft. (G.M.M.). Maketu, 28/1/59, c. 70; Little Waihi, c. 250 (D.P.). Ohiwa, 4/1/59, 40+ (W.T.P.); 19/1/59, 130 (R.V.McL.). L. Whakaki, c. 250 on 3/5/59 (R.St.P.). Manawatu estuary, c. 150 on 17/1/59; c. 100 on 21/5/59; c. 50 on 31/8/59; small groups often present on Manawatu riverbed near Palmerston North (I.G.A.). Nelson to Farewell Spit, Nov. '58, not common, only 26 and 6 chicks seen (H.M.McK., H.R.McK.). Near Collingwood, a breeding colony of a few pairs in a swamp; one brood of 3 flying young, 21/1/59 Karamea-Westport, 1-10/5/59, scarce; 14 near Karamea; only odd pairs elsewhere (H.M.McK., H.R.McK.).
- ARCTIC SKUA (*Stercorarius parasiticus*) — Auckland, Little Barrier, 4 on 17/2/59; 10 on 25/2/59, all inside Tiri (A.T.T.C.). Foxton Beach, 1, light-breasted, on 21/3/59 (M.J.I.). Greymouth, 16/2/59-12/4/59, birds of both phases seen (P.G.). Kaikoura, at least one, 11/1/59 (R.B.S.).

SOUTHERN BLACK-BACKED GULL (*Larus dominicanus*) — Rurimu Rocks, 8/11/58, 41 nests; Ohiwa Harbour, 9 nests; White Island, 6/12/58, one seen (W.T.P.).

RED-BILLED GULL (*Larus novaehollandiae scopulinus*) — Mt. Maunganui coast, 29/12/58, two nesting colonies, one on Rabbit I. (Motu-o-tau), the other on rocks to north of it (R.V.McL.). Rurimu Rocks, 8/11/58, c. 50 nests on cliff face. White I., 6/12/58, nesting and stealing food from Gannets. Whakatane Heads, colony abandoned (W.T.P.). Whanarua Bay, 22/2/59, pair with 2 young, one eating taupata berries with apparent enjoyment. Local fishermen report that these gulls nest on nearby rocks (M.S.). Large Trio I., 22/11/58, 50 nests; Bird Rock off Forsythe I., 24/11/58, 500+ nests; Kaikoura Pen., 27/10/58, 800 breeding pairs; L. Grassmere, 27/10/58, 200 nesting; Stephens I., 18/11/58, large nesting colony (D.M.).

BLACK-BILLED GULL (*Larus bulleri*) — Murphy's Beach, Gisborne, 19/1/59, 6 pairs nesting at edge of large colony of White-fronted Terns (A.B.). Himatangi Beach, Jan.-Feb. '57 and '58, usually 20-40 (I.G.A.). Manawatu estuary, c. 20, April-June '59 (M.J.I.). Picton, 26 and 27/1/59, the dominant gull along the esplanade (R.B.S.). Nelson, 1-8/11/58, none seen; 5/11/58, Puponga, 21 in flock; 6/11/58, Westhaven, 2 (H.M.McK., H.R.McK.). Blenheim, mid-Jan., plentiful and following the plough up the Wairau valley (R.B.S.). Karamea, 2-10/5/59, 68; Tauranga Bay, 17; Westport, a few mixed with Red-billed Gulls (H.M.McK., E.H.S., H.R.McK.).

BLACK-FRONTED TERN (*Chlidonias albostratus*) — Rangitaiki estuary, 18 on 23/5/59 (R.B.S.). Manawatu estuary, 2 juv. on 7/3/59 were the first seen for the autumn; max. c. 12 on 26/4/59 and 1/6/59, only two being in adult plumage (M.J.I.). Farewell Spit, 22/1/59, 2 only up the western beach; Wairau River, 4+ above Wash Bridge on 16/1/59; Wairau Bar, 6+ on 14/1/59 (R.B.S.).

CASPIAN TERN (*Hydroprogne caspia*) — Bland Bay, Whangaruru, 10/1/59, 100+ (A.J.G.). Ohiwa, 11/12/58, 12 nests with young hatching (D.M.). Palmerston North, 9/9/56, one over Manawatu, 20 miles inland (I.G.A.). Picton, c. 30 on 26/1/59 (R.B.S.). L. Grassmere, 27/10/58, c. 20 nesting (D.M., B.D.B.).

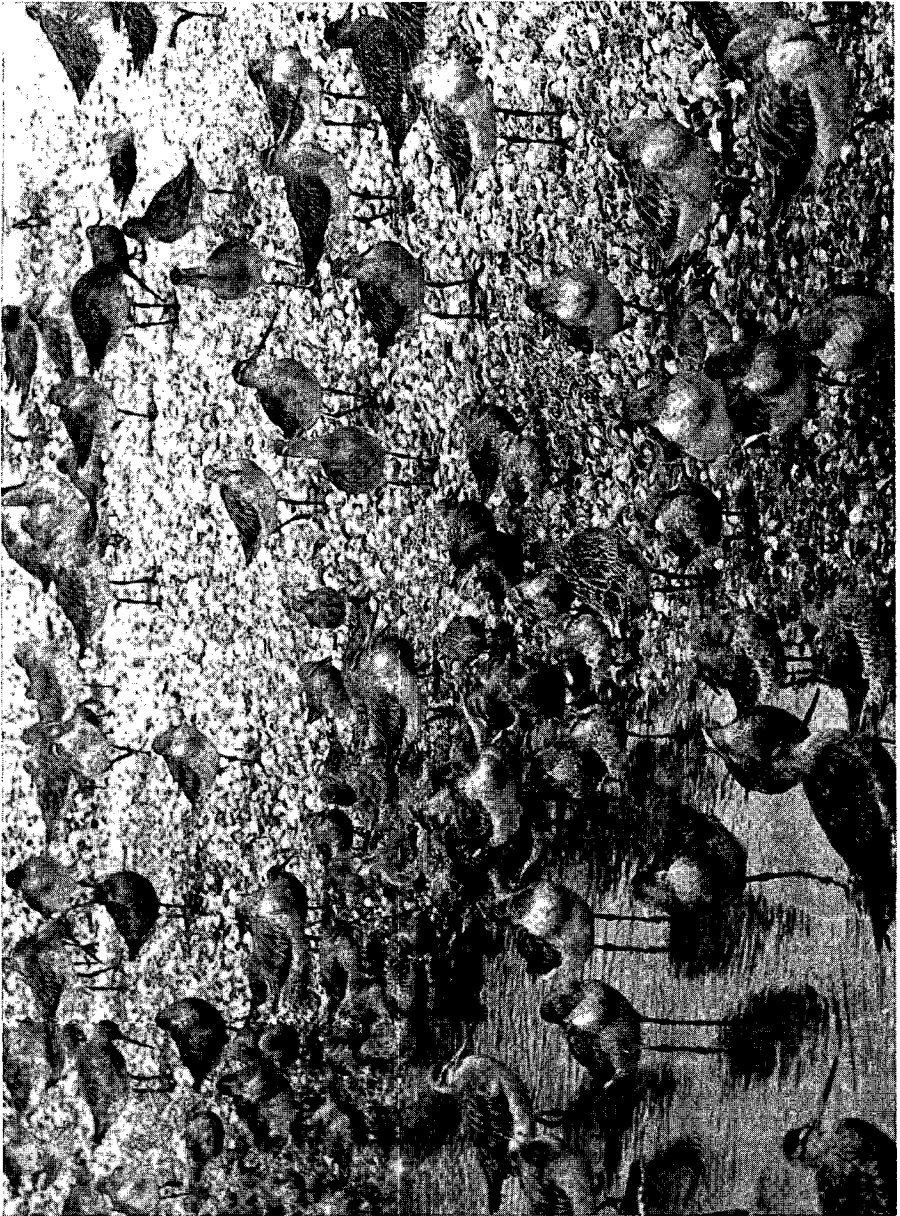
WHITE-FRONTED TERN (*Sterna striata*) — Crusoe I., Waiheke passage, 28/9/58, flourishing colony with many fresh eggs (J.C.D.). Whanarua Bay, 27/2/59, large flock; Te Horea, Raglan, 7 on 20/3/59 (M.S.). Rurimu Rocks, 8/11/58, 6 nests (W.T.P.). Murphy's Beach, Gisborne, 19/1/59, c. 250 pairs with young (A.B.). Foxton Beach, 400+ on 17/1/59 (I.G.A.). c. 750 on 4/4/59; c. 550 on 21/3/59; 600+ on 26/4/59 (M.J.I.). Kaikoura Pen., 14/11/58, c. 5000 nesting; Stephen I., 21/11/58, several hundred nesting, also on Bird Rock, off Forsythe I., and Jag Rocks (D.M.). Farewell Spit, many hundreds on 22/1/59 (R.B.S.).

TERN (*Sterna albifrons/neréis*) — Opoutama, 8/3/59, 1 not in adult plumage (A.B.).



[Photo by F. C. Kinsky

XXIX For some years D. A. Urquhart has had a hide on one of the Karaka shellbanks in Manukau Harbour. It has been available to any bird-photographers who wished to use it and many fine studies of shore birds have been obtained. A typical view from the hide at full tide, showing part of a flock of Bar-tailed Godwits at the end of February.



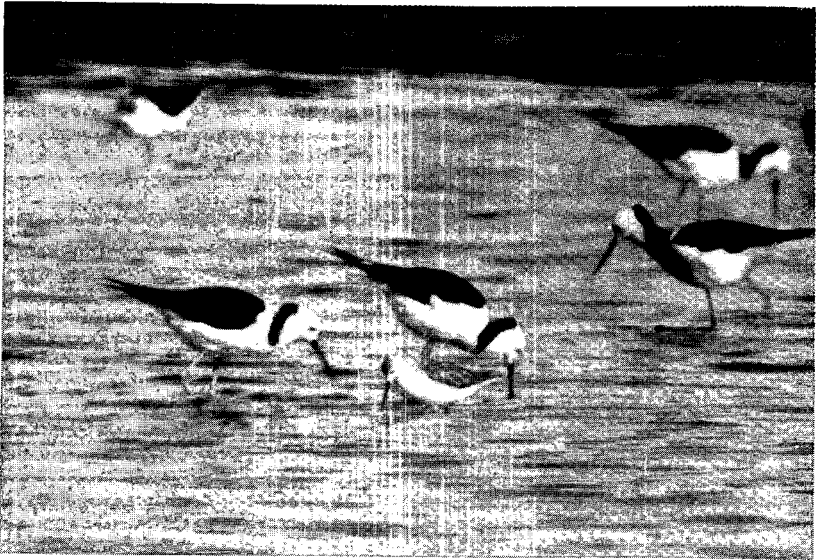
[Photo by F. C. Kinsky

XXX Part of a mixed flock of Knots and Bar-tailed Godwits. In many of these birds the moult into red breeding dress is well advanced.



[Photo by F. C. Kinsky

XXXI Bar-tailed Godwit, not showing any sign of reddening at the end of February, probably a young male less than a year old. In non-breeding dress, males can be distinguished from females by their smaller size and markedly shorter beak.



[Photo by D. A. Urquhart

(Top) XXXII The first Marsh Sandpiper (*Tringa stagnatilis*) to be found in New Zealand, caught by the telephoto lens among Pied Stilts near Puketutu in Manukau Harbour (v. Notornis VIII, 125-126).



[Photo by R. H. Sibson

(Bottom) XXXII An Allied Shearwater (*Puffinus assimilis*) found breeding at the Alderman Islands in September, 1959. This small shearwater, being a winter breeder, is one of the best known of our shearwaters. Small numbers are known to breed on several islands off the northern coast and unknown nesting stations are still being discovered. The Alderman Islands are evidently a stronghold of the Allied Shearwater in the Bay of Plenty.

N.Z. PIGEON (*Hemiphaga novaeseelandiae*) — Kaipara Flats, the late Alf Clements found a chick in the bush, reared it and kept it as a pet in a cage 25 x 6 x 7ft., on his verandah, where it lived for 20 years (F.P.H.). Tauranga, odd birds have visited an Otumoetai garden in winter for at least twenty years, feeding on exceptionally fine puriri trees (M.H.). Whakatane, fairly common in river valley (W.T.P.). Minginui, 1958-59, Aug.-Dec., odd ones; Jan., up to 12; Feb.-Mar., 80-150; April, up to 40; May, up to 24; June-July, up to 9. Food: Aug.-Sept., miro and green maire fruit; Nov., maire, passion vine and lacebark leaves; Dec., leaves; Jan., fuchsia fruit; Feb.-Mar., mixed fruit and leaves; April, miro, kahikatea and matai; May-June, miro; July, supplejack in high areas, puta-puta-weta low areas, lacebark leaves. Numbers: Feb.-Mar., best for many years. 70 seen at once on two small miro trees. One flight of 100. Many came in from long flights, very hungry. A wild cat killed at least 3 at one drinking pool (R.St.P.). Maungapohatu, 10/9/59, 7 in poor condition (R.A.C.). Waimata R. Valley, Gisborne, 8 in flock feeding on kohekohe (R.A.C.). Pehiri, Gisborne, 18/1/58, nest 6ft. up in young pinus, increasing well in this area; Upper Ruakituri R., several thousand reported in March, 1959, feeding on makomako, many hundred present in same area 30/8/59 (A.B.). Akaroa Domain, 17/5/59, 1 watched eating laburnum leaves (R.B.S.).

KAKA (*Nestor meridionalis*) — Little Barrier, 7/4/59, numerous after an apparent scarcity (R.H.B.). Auckland, one was trapped in a North Shore garden, where it had been eating tree tomatoes, and released in the country. Moumoukai, Clevedon, a few resident on Kohukohunui; odd ones fly towards Clevedon and perhaps to the Waitakeres (J.W.St.P.). Redhill, Papakura, April '59, 1 near houses for some days (Mrs. Seward per H.R.McK.). Minginui, present throughout '58-'59; up to ten. Food other than grubs noted: Jan., green matai fruit; Feb.-April, matai; May-June, miro; 14/5/59, 7 on one miro tree (R.St.P.). Maungapohatu, 10/9/59, 9 on 12 miles of track (R.A.C.).

[**GALAH** (*Kakatoe roseicapilla*) — Clevedon, 7/1/59, two stayed for several weeks. Quite shy, so perhaps had been captured in Australia and liberated from a ship near Auckland (H.R.McK.).]

EASTERN ROSELLA (*Platycercus eximius*) — Kaeo, mid-winter, '59 (R.T.A.).

RED-FRONTED PARAKEET (*Cyanoramphus novaezelandiae*) — Maungapohatu, 10/9/59, 4 (R.A.C.).

YELLOW-CROWNED PARAKEET (*Cyanoramphus auriceps*) — Little Barrier, 1 seen on three days in mid-Feb. on Summit Track, c. 550-800ft.; a second bird present once (A.T.T.C.). Several seen just below the ridges and, in May, one near the house (R.H.B.). Minginui, usually 2-8; 10 on 11/8/58 (R.St.P.). Chetwode I., 23/11/58, plentiful (D.M., B.D.B.).

- SHINING CUCKOO (*Chalcites lucidus*) — First song, Whangarei, 11/10/58 (O. Cullen); Moumoukai, 28/9/58 (J.W.St.P.); Clevedon 1, 2, 6, 8, 9, 13, 14/10/58 (several observers). Pako-ka, Aotea Hr., 26/9/57 and 2/10/58 (C.R.B.). Minginui, 1/10/58, 2 (R.St.P.). Palmerston North, 11/10/56 (I.G.A.). Clevedon, 17/10/58, many long songs during darkness, longest 98 notes (A.J.G.). Minginui, Nov., up to 10 seen in one day, 4/2/59, last heard; 21/3/59, 2 seen, silent (R.St.P.). Last song, Clevedon, 4/3/59 (H.R.McK.). Moumoukai, 2/2/59 (J.W.St.P.). Late sightings, 10/3/59, 2 near Tauranga (M.H.). Moumoukai, 1/5/59, 1 seen and heard, fine day. (G. M. Maning). Palmerston North, 16/1/57, two young birds being fed by one pair of Grey Warblers (I.G.A.). Vauxhall, Dunedin, first song on 30/10/58; one seen sitting near a House Sparrow's nest and calling on 5/11/58 (L.E.W.).
- LONG-TAILED CUCKOO (*Eudynamis taitensis*) — Clevedon, 20/10/58, 3 calls at 1007 hours (Miss K. Browne). 23/12/58, 2 calls at 0530 hrs. (H.M.McK., H.R.McK.). Minginui, 6/11/58, first seen and heard; 25/1/59, last seen and heard (R.St.P.).
- MOREPORK (*Ninox novaeseelandiae*) — Wellington Botanical Gardens, 14/6/58, one started hunting at 4 pm. (rather dull day); and at 4.30 p.m. caught, plucked and ate a yellowhammer (I.G.A.). Pelorus Bridge, calls heard through the night 17-18/1/59 (L.E.W.).
- KINGFISHER (*Halcyon sancta vagans*) — Minginui, 13/9/58, first influx of breeding birds; Feb. '59, breeding over and most leave, only odd birds staying through winter (R.St.P.).
- KOOKABURRA (*Dacelo gigas*) — Kaipara Flats, 1/10/58, 3 came and were very noisy. Two left after ten days and the other made friends with a magpie — or seemed to (F.P.H.).
- N.I. RIFLEMAN (*Acanthisitta chloris granti*) — Little Barrier, 4 on Thumb Track, 2 on Summit Track, Feb. '59 (A.T.T.C.). Minginui, 4/4/59, 3 pairs in beech; 1/6/59, 4 and odd ones near Minginui at lowest altitude for four years. It is hoped that Riflemen here are recovering from the disastrous snowfall of 1956 (R.St.P.). Maungapohatu, 10/9/59, scarce, only 11 seen (R.A.C.).
- S.I. RIFLEMAN (*Acanthisitta c. chloris*) — Lewis Pass, 12/5/59, only 1 seen despite diligent search (H.R.McK.).
- S.I. BUSH WREN (*Xenicus l. longipes*) — Milford Track, 10/2/59 (A.B.).
- ROCK WREN (*Xenicus gilviventris*) — Mt. Goul, N.W. Nelson, 15/10/58 1 near summit (D.M.). Mt. Avalanche, Crow Valley, 1 pair on 4/10/58 (J.R.J.).
- FANTAIL (*Rhipidura fuliginosa*) — Ness Valley, Clevedon, 22/6/58, a white bird, seen by R. J. Maloney from 13/6/58 on his farm. Not quite pure white, with slightly darker shading on chin "cheeks," and upper head, also a streak down centre of upper side of tail. The primaries were the whitest part of the bird. It had a frilly, fairy-like appearance as it hawked for insects (H.R.McK. et. al.). Minginui, moult noted in July and August; Blenheim, 28/10/58, 3 young (black) left nest, 1 parent pied, 1 black (R.St.P.).

- PIED TIT (*Petroica macrocephala toitoi*) — Parakao, Northland, present in Hauto Bush and Mangakahia Bush (R.T.A.). Little Barrier, 1959, plentiful (R.H.B.). Moumoukai, now seldom seen and feared to be fading out (J.W.St.P.). Minginui, usual numbers (R.St.P.). Whakatane, 13/7/58, 1 in garden (W.T.P.). Maungapohatu, 10/9/59, 8 pairs along track (R.A.C.). Kaimanawas, 10/9/59, March '59, common throughout forest at all altitudes (I.G.A.).
- YELLOW-BREASTED TIT (*Petroica m. macrocephala*) — 16/1/59, noted among the exotic pines of Golden Downs, Nelson (R.B.S.). Powder Creek, Dunedin, 27/12/58, 3 males seen (L.E.W.).
- N.I. ROBIN (*Petroica australis longipes*) — Little Barrier, 1959, well distributed (R.H.B.). Kinleith, 14/4/59, strong song heard in pine plantations about $\frac{1}{2}$ mile from mills (J.C.D.). Minginui, always present; more numerous deeper in the bush (R.St.P.).
- S.I. ROBIN (*Petroica a. australis*) — Chetwode I., 23/11/58, pair nesting; Goulund Downs, 10/10/58, only 1 seen in 3 weeks (D.M.). Lewis Pass, Murchison, Karamea, Westport, May '59, plentiful (H.M.McK., E.H.S., H.R.McK.).
- FERNBIRD (*Bowdleria punctata*) — Tauranga Hr., calling all winter (M.H.). Waimapu swamp, 16/4/59, several heard and seen (M.S., D.P.). L. Whangape, 13/2/59, 1 pair (D.M.). Minginui, 27/2/59, first seen for some years; 21/3/59, pair in another area (R.St.P.). Goulund Downs, 19/10/58, present at 2500ft. (D.M.).
- BROWN CREEPER (*Finschia novaeseelandiae*) — Mt. Goul, N.W. Nelson, 15/10/58, seen up to 4000ft. (D.M.). Okutu valley, Little River, Canterbury, 1/6/58, 8 (D.MacM., E.H.S., H.R.McK.). Akaroa Domain, 8/1/59, perhaps 12; singing well, though apparently in family parties (R.B.S.). Arthur's Pass, 7/4/58, a fledgling in a flock of 12 was continually begging and being fed (J.R.J.).
- WHITEHEAD (*Mohoua o. albicilla*) — Little Barrier, plentiful; noted feeding on insects in pohuehue along coast (R.H.B.). Minginui, up to 35 in spring; up to 70 after breeding season; noisy, but quieter May-June and nearly silent in July (R.St.P.). Maungapohatu, 10/9/59, flock of 6 and odd birds (R.A.C.). Kaimanawas, 27-30/3/59, not common, heard at 3500ft. (I.G.A.).
- GREY WARBLER (*Gerygone igala*) — Minginui, Dec. '58, feeding young Shining Cuckoos; June-July, no song (R.St.P.).
- SONG THRUSH (*Turdus ericetorum*) — Paihia, 31/1/59-8/2/59, song heard occasionally, but not so strong as that of Blackbirds (J.C.D.). Clevedon, 13/1/59, last song; 8/4/59, first song; steady song from 16th April (H.M.McK., H.R.McK.). Bay of Plenty, late song noted between 21 and 28/1/59 (H.R.McK.). Minignui, song ceased 12/2/59; song began 29/7/59 (R.St.P.). Still singing strongly 8 p.m. on 21/1/59 at Collingwood (R.B.S.).
- BLACKBIRD (*Turdus merula*) — Paihia 31/1/59-8/2/59, strong song throughout the day (J.C.D.). Clevedon, 26/12/58, last song; 29/7/59, first song; steady song from 7/8/59 (H.M.McK., H.R.McK.). Minginui, 12/8/58, first song; 12/2/59, last song; 14/3/59, 60 feeding at once on fruit in one matai tree (R.St.P.). Kelburn, Wellington, 27/7/58, first song (I.G.A.). Collingwood, strong evening song, 21/1/59 (R.B.S.).

HEDGE-SPARROW (*Prunella modularis*) — Minginui, first song 17/9/58; song ended early Feb. (R.St.P.).

PIPIT (*Anthus novaeseelandiae*) — Maungapohatu, 10/9/59, 2 pairs in clearing (R.A.C.). Tauranga, 28/8/58, first one seen for a long time (M.H.). Murchison. 2/5/59, one at front door of hotel in main street. Many about township and dry areas of riverbed. No pipit hill-country near. 5/5/59, Westport-Karamea, numerous (H.M.McK., E.H.S., H.R.McK.). Temple Basin, present in deep snow, 27/8/58 (P.G.).

BELL-BIRD (*Anthornis melanura*) — Moumoukai, Clevedon, not seen for many months; feared gone from area (J.W.St.P.). Ohope Beach, feed on flame tree; 9/5/59, numerous along Waimana (W.T.P.). Whanarua Bay, 3/3/59, 3 seen (M.S.). Minginui, rose from 8 in one day in Aug. '58 to about 400 in April '59; down to 200 in May and 6 in June. Food: Oct-Dec., mostly fuchsia flowers; Jan-Feb., fruits of fuchsia, wineberry and kaikomako; March, fuchsia, matai, kahikatea; April, matai, kahikatea; May, kahikatea, puta-puta-weta (R.St.P.). Maungapohatu, c. 2000 estimated in second growth of Rua's clearing, 10/9/59 (R.A.C.). Kaimanawas, common throughout at end of March; Orongorongo Valley, common in mid-April (I.G.A.). N.W. Nelson, 6/11/58, many in cut-over bush at Westhaven and in bush round Kaihoka lakes (H.M.McK.), H.R.McK.). Weka Pass, 30/4/59, 1 in willows and poplars along gully bottom; hardly any other growth (E.H.S.).

TUI (*Prothemadera novaeseelandiae*) — Wayby, 4/2/59, brood of 3 flying young; one took spider from web on tree by house (H.R.McK.). Clevedon, one feeding on a flame tree, dived to ground with fluttering wings; on investigation it had killed a sparrow (M.E.McK.). Minginui, rose from up to 10 in Aug. '58 up to 400 per day in March-April; then declined sharply to about 4 per day in July. Food: Aug., puta-puta-weta and whau-whau-paku fruit; Oct., kowhai and fuchsia flower; Nov-Dec., fuchsia; Jan., wineberry, fuchsia, cicada; Feb., matai and kaikomako fruit; Mar-April, matai and kahikatea; May, kahikatea and puta-puta-weta; June-July, puta-puta-weta, with supplejack in high areas later. 14/2/59, 12 on one kaikomako tree (R.St.P.). Maungapohatu, 10/9/59, estimated 30 per acre in 200 acres of second growth; Waimata Valley, Gisborne, very numerous (R.A.C.). Kaimanawas, 27-30/3/59, none seen or heard in Waipakihi Valley (I.G.A.).

STITCHBIRD (*Notiomystus cincta*) — Little Barrier, well distributed and evidently thriving. 24 and 25/2/59, on bush edge of orchard, female feeding four flying young. 29/8/59, on a trip to summit, six males seen, others heard (R.H.B., A.T.T.C.).

SILVEREYE (*Zosterops lateralis*) — Clevedon, appeared more numerous in winter, 1959. Feeding in garden from flowers of red-hot poker, grevillea, karo, koromiko, abutilon (M.J.B.). Minginui, Aug., small lots up to 15; Sept-Dec., nil; Jan., up to 6; Feb., 200; March, 250; April, 400; then down to 6 in July. In Feb., noted eating ripe blackberries (R.St.P.).

GREENFINCH (*Chloris chloris*) — Minginui, scarce; odd ones and up to 9 in winter. A few small flocks towards Rotorua (R.St.P.).

- GOLDFINCH** (*Carduelis carduelis*) — Minginui, none in spring and summer; May, up to 100; June, c. 70; July, up to 12. Winter food: dried thistle, ragwort, groundsel (R.St.P.). Gisborne, 15/8/59, c. 800 in flock (A.B.). Karamea Bluff, bush road, 5/5/59, small lots along road away in heavy bush. Similar occurrences in Lewis Pass (H.M.McK., E.H.S., H.R.McK.).
- LESSER REDPOLL** (*Carduelis flammea*) — Paua, Parengarenga, 10/9/58, 30 in roosting flock (R.B.S.). Minginui, usually some; one flock of c. 200 in Feb. (R.St.P.). Hanmer, 1000+ in turnip field feeding on fathen, some partly pink on breast (H.M.McK., E.H.S., H.R.McK.).
- CHAFFINCH** (*Fringilla coelebs*) — Moumoukai, scattered throughout, including heavy bush; other finches rather scarce owing to regeneration in water reserve (J.W.St.P.). Minginui, plentiful; flocks of 120 in March and May on riverbed; 5/9/58, first song (R.St.P.). Temple Basin, 27/8/58, six cocks (P.G.).
- YELLOW HAMMER** (*Emberiza citrinella*) — Auckland, 27/9/58, 1 in flock warbling softly (R.B.S.). Tauranga and Whakatane, flocks in winter about streets and newly sown grass plots (E.V.McL., W.T.P.).
- CIRL BUNTING** (*Emberiza cirius*) — Lower Awatere, Marlborough, 30/10/59, 1, possibly a pair (B.D.B.). Hoon Hay Valley, 2/6/59, 1 male closely studied and another less coloured in a party of Yellowhammers (H.R.McK.).
- STARLING** (*Sturnus vulgaris*) — Tauranga, 29/6/59, several thousands flying to roost at old site on Rabbit I. (Motu-o-tau) (M.H.). Westport-Karamea, 5/5/59, particularly numerous (H.M.McK., E.H.S., H.R.McK.). Palmerston North, 4/1/58, 5 anting on lawn (I.G.A.).
- MYNA** (*Acridotheres tristis*) — Bay of Plenty, increasing everywhere (R.V.McL., W.T.P.). Minginui, a few resident; many at Kaiangaroa and Rotorua (R.St.P.). Utiku, 21/2/58, 3 (J.S.W.). Palmerston North, a few pairs present in 1959; numbers not noticeably altered over last six years (I.G.A.).
- ROOK** (*Corvus frugilegus*) — Tolaga Bay, 22/7/59, 1 (A.B.).
- KOKAKO** (*Callaeas cinerea wilsoni*) — Moumoukai, Clevedon, usual numbers but much less song. Only two songs heard this winter (J.W.St.P., G.M.M.). Mt. Colenso, Oct. '58, several present; identity confirmed from feathers collected (R.T.A., R.A.F.).

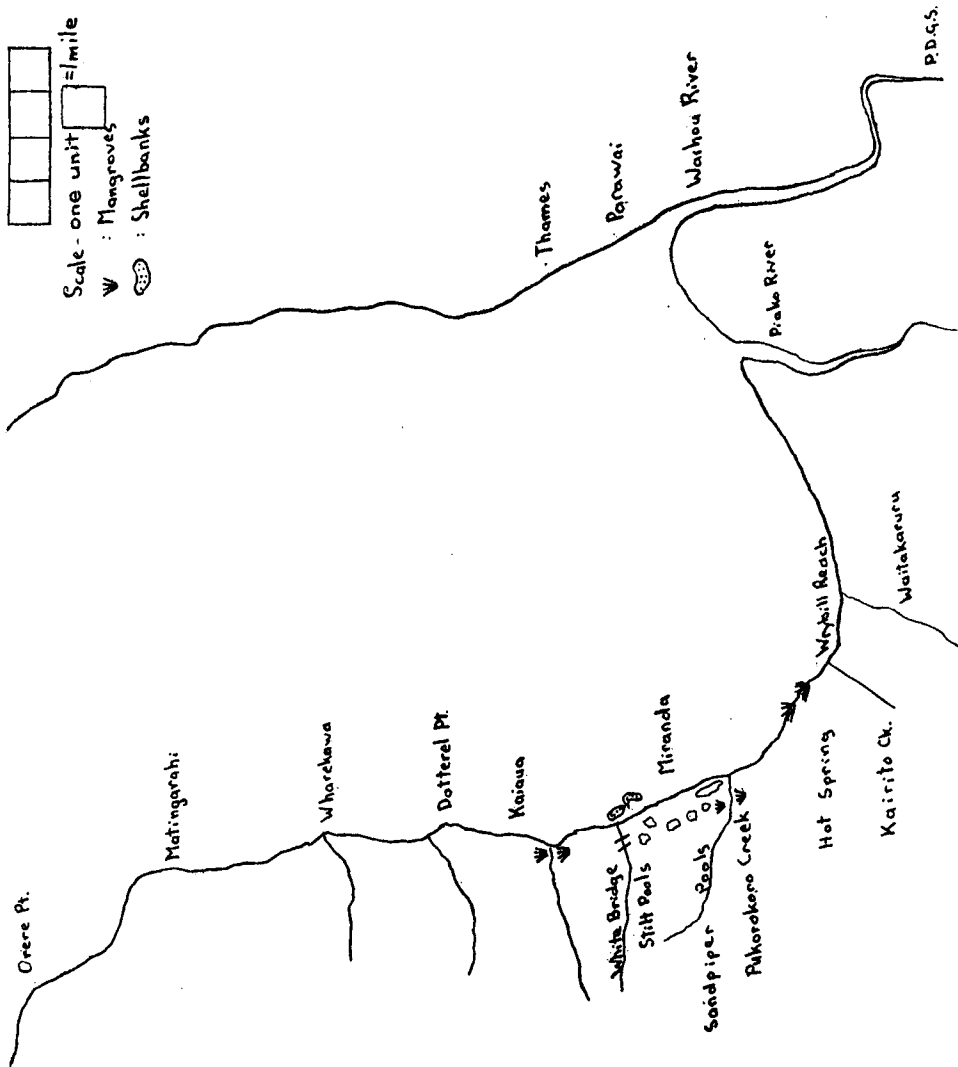


ANNUAL LOCALITY REPORTS

At the request of several visiting ornithologists, two sketch maps are inserted. Where possible, Maori place-names have been used, but some features, both natural and man-made, have had to have names invented for them. These names are not intended to be official, but they have served local naturalists well for many years. Thus Leschenaulti Rock was an obvious landmark just off the original Puketutu causeway, and the name commemorates the fact that the first example of *Charadrius leschenaulti* to be recorded in New Zealand used it as a high-tide roosting place. For the most part the 'invented' names speak for themselves and have become common parlance among local naturalists.

FIRTH OF THAMES

- SOOTY SHEARWATER — 1 dry corpse at White Bridge on 2/1/59.
- FLUTTERING SHEARWATER — Corpses on 30/1/59 and 26/4/59.
- DIVING PETREL — 1 freshly dead near White Bridge on 13/12/58.
- LARGE BLACK SHAG — An autumn influx is indicated by 120+ on 25/4/58 and 200+ on 26/4/59.
- SPOTTED SHAG — With the increase of Spotted Shags around Waiheke and Ponui, some are now penetrating the Firth and resting with other shags on the rocks off Matingarahi and Wharekawa, e.g., c. 40 on 13/7/59 in breeding plumage (T.G.L.). 9 on 22/8/58, 57 on 21/9/59.
- WHITE-FACED HERON — Single birds or small groups — up to 5 — are always to be found now along the Miranda coast. It is a safe inference that a few pairs are breeding. 3 at Kaiaua on 26/9/59.
- BITTERN — A few survive despite the decrease of suitable breeding swamps.
- GREY DUCK — 5/7/59, in a flock of c. 700 ducks, c. 25% were Grey, 75% Mallard and hybrids.
- SHOVELER — A few pairs breed locally. 7 brown birds, probably a family party, on Miranda pools on 30/12/58. 6 at the creek mouth on 16/6/59. Pair on pools 26/9/59.
- S.I. PIED OYSTERCATCHER — c. 98 still present on 21/9/58. 82 on 5/11/58 were probably summering. 80+ on 30/12/58. Rapid build-up of numbers after the New Year to c. 735 on 15/2/59. Some of these may have moved on, but most wintered, 650+ on 16/6/59. At Piako, J.C.D. reported 125 on 26/7/59. There were usually 30-40 at Thames. c. 300 still at Kaiaua on 22/8/59 and 150 on 21/9/59.
- N.I. PIED OYSTERCATCHER — Odd birds are often present but in recent years none has ever looked like breeding. 2 on 26/4/59.
- BLACK OYSTERCATCHER — 2 on Kairito shellbank on 5/11/58 among S.I. Pied Oystercatchers. Otherwise several reports of a single bird, still present on 22/8/59. One at Thames on 26/7/59.
- PACIFIC GOLDEN PLOVER — 20+ on 13/12/58. c. 166 on 15/2/59 is the biggest count so far made. They were standing in a long scattered line on the mud, well back from the tide-line in the manner characteristic of this plover in N.Z. Only one was showing firm blackening on the belly. c. 30 on 28/3/59, in flight with Turnstones. The leading Golden Plover was a superb specimen in almost full breeding dress.
- BANDED DOTTEREL — The breeding population continues to decline. 21/9/58, 2 pairs on territory, one nest with 3 eggs found; 19/10/58, 2 pairs, acting as if with young lost; 13/12/58, c. 14 + 2 flying young; 30/12/58, 1 pair still on territory, agitated, perhaps with small young, and on Miranda lagoon a flock of c. 25, indicating an influx; 15/2/59, four small flocks totalling 54 birds; 28/3/59, c. 80 at White Bridge — the Miranda lagoon is now overgrown with glasswort and orache and does not now attract them. None seen on 26/4/59; 16/6/59 and 22/8/59.



Scale - one unit = 1 mile
W : Mangroves
☉ : Shellbanks

P.D.S.

RED-BREASTED DOTTEREL — There are usually one or two birds somewhere between Kaiua and Miranda. 3 on 26/4/59; 2 splendidly red, on 26/9/59.

WRYBILL — c. 300 still present on 21/9/58; 46 on 19/10/58; 16+ 13/12/58; 200+ on 30/12/58; almost certainly indicating that the post-nuptial influx was well under way; c. 620 on 15/2/59; no satisfactory mid-winter count; but 1,500-2,000 on 13/8/59 and c. 800 on 22/8/59 point to a wintering population of 2000+. 21/9/59, 400+.

LONG-BILLED CURLEW — Evidently more arrived in the spring to join the 10 which spent part of the 1958 winter at Pukorokoro Creek. Here 16, the biggest flock so far recorded in N.Z. were closely watched on 30/12/58. 8 on 28/3/59; 2 on 26/4/59; 3 at Piako on 26/7/59 (J.C.D.).

WHIMBREL — The only record is of 2 at Piako on 26/7/59. (J.C.D.).

BAR-TAILED GODWIT — 6000+ mostly near Waitakaruru on 19/10/58; c. 3,500 on 13/12/58 at Miranda but even at big tides large flocks now stay on the Waitakaruru-Piako stretch. On 15/2/59 a few males were already very red and many were reddening. 500+ had flown into the sodden Hot-spring Marsh with Pied Stilts on 14/7/59. 690 in field by Kairito Stream on 13/8/59, all wintering birds.

ASIATIC BLACK-TAILED GODWIT — 2 visiting the pools at Miranda on 19/10/58, and perhaps a third seen in flight; 2 on 13/12/58; 4 on 28/3/59 and 3 on 26/4/59 when they were photographed in colour by J.P. One was reddening, but this was a late date for birds which were intending to migrate still to be here, and the four evidently wintered, one being seen in Hot-spring Marsh on 13/8/59 and four again on the Miranda pools on 21/9/59 all in winter plumage. The white underwing with narrow dark border was clearly seen at close quarters on each of the last four by D.H.B. and H.R.McK.

TURNSTONE — 5 on 21/9/58; 32 on 15/2/59; 18 on 28/3/59; 3 on 26/4/59; 4 on 16/6/59; 9 on 13/7/59; 21 on 22/8/59.

KNOT — 450+ on 21/9/58 6,000+ on 19/10/58; c. 5,000 at Miranda lagoon only on 13/12/58; none could be found on 26/4/59; 4 on 16/6/59; c. 20 on 13/8/59.

SHARP-TAILED SANDPIPER — 2 on Miranda pools on 21/9/58, one being in worn breeding dress; 8 on the pools and 9 south of Pukorokoro Creek on 30/12/58; 14 on 2/1/59; 17 on 28/3/59, two being in breeding dress; 2 on 26/4/59; 3 on 21/9/59; 7 on 26/9/59.

RED-NECKED STINT — 20 which wintered were still together on 21/9/58; after which more arrived till in December and January at least 26 were present. Only 3 remained on 26/4/59, two having very red necks and richly mottled mantles; and one being pale. This may have been the single bird recorded in winter, e.g. with Wrybills on 13/8/59 and 22/8/59.

CURLEW SANDPIPER — 6 on 21/9/58; 2 on 19/10/58; curiously, none seen in summer and autumn; 21/9/59, an early migrant showing red at Wrybill Reach.

PIED STILT — The breeding population is difficult to assess. As usual, flocks of non-breeders were present throughout the nesting season.

- ARCTIC SKUA — A few seen during the summer. 2 on 26/4/59, one light-breasted, one dark-breasted.
- BLACK-BACKED GULL — The Kairito colony increases. In 38 nests, 19/10/59, only one egg had been laid. Of 48 nests on 5/11/59, 18 had three eggs, 13 had two, 6 one, and 11 were empty. A few pairs are now nesting between White Bridge and Miranda.
- BLACK-BILLED GULL — 200+ on 3/8/58; c. 180 on 21/9/58; 3 on 13/12/58; 18+ on 15/2/59; c. 200 on 28/3/59; c. 375 on 16/6/59. These gulls now occur from Kaiaua to Waitakaruru, usually near the tide-line. Small groups may easily be overlooked.
- CASPIAN TERN — No evidence of breeding. 37 on 21/9/58; 28 on 15/2/59; 50 on 26/4/59; 28+ on 22/8/59 scattered along several miles of coast.
- WHITE-FRONTED TERN — A few between Kaiaua and Miranda on 3/8/58 and 18/10/58. The Kairito shellbank was not used for nesting; but on 13/12/58 there were c. 400 nests, about half with eggs and half with small chicks, on the shellbanks north of Miranda lagoon. On 2/1/59, 66 chicks were ringed in the third section of this colony, after the first and second sections had been flooded out. One of these ringed birds was subsequently reported from Australia. On 15/2/59, 79 well feathered chicks were ringed from the south and last section of this colony, where c. 150 flying young were present. These terns were numerous in the Firth on 26/4/59. 300+ on old nesting ground on 22/8/59, playing at breeding, courting and making scrapes.
- TERN (*Sp.? albifrons/nereis*) — A few were again present during the summer, viz, 2 off Kairito Creek on 5/11/58 and 5+ at Miranda lagoon on 13/12/58.
- WHITE-WINGED BLACK TERN — Early in February one was found by N.M. on the Miranda pools, where it spent the winter, during which it was seen by many observers. It was evidently a first-year bird. It did not moult into breeding plumage and on 26/9/59 looked much the same as when it first appeared. It often settled and rested quite happily among Pied Stilts.
- MANUKAU — (a) UPPER MANUKAU
- BLUE HERON — 1 on 28/3/59 near the bridge.
- WHITE-FACED HERON — 2 on 2/3/59 at Harania Creek.
- BITTERN — 1 in Westfield swamp on 9/5/59.
- S.I. PIED OYSTERCATCHER — c. 120 on 23/12/58 near the bridge; c. 50 on 8/11/58 at Tararata Creek.
- BAR-TAILED GODWIT — This remains a favoured feeding ground in summer. 2000+ on 29/10/58; c. 3000 on 13/11/58.
- HUDSONIAN GODWIT — One of two known to be wintering in Manukau was reported three times near Tararata Creek and may have fed there regularly.
- KNOT — c. 500 on 12/3/59 at Harania Creek. c.80 on 8/10/59.
- PIED STILT — Fewer non-breeders than usual during spring, many having been lured away to the new Puketutu pools. c. 1500 on 17/4/59 at Harania Creek. Mid-winter census, 4020 between Onehunga Bridge and Westfield.

WHITE-WINGED BLACK TERN — One, in obviously worn breeding plumage but still very black, at Harania Creek on 22/10/59, 8 and 9/11/59.

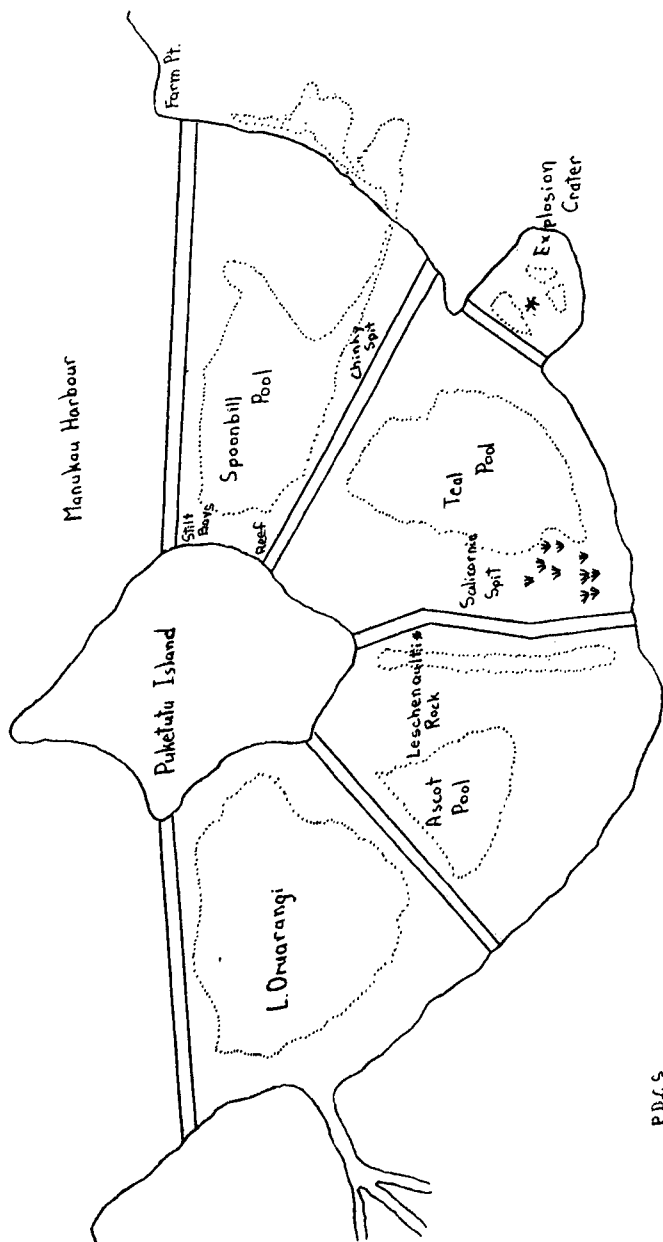
MANUKAU — (b) PUKETUTU - IHUMATAO

Since the last annual report on the birds of this corner of Manukau was made, there have been more changes near Puketutu where the reclamation of tidal flats has continued as Auckland's huge scheme for the disposal of drainage and sewage nears completion. North of the old causeway the big lake which was formed in 1957 by the building of the first new sea-wall, was cut in two when a massive earth-wall was built to block the channel between Puketutu Reef and Chinky Spit — if one may use the names coined by local bird-watchers over the years. Names have now had to be bestowed upon the two attractive sheets of water so formed, and it is proposed to call the inner Teal Pool and the outer Spoonbill Pool. These names commemorate ornithological events of some local significance. On the one pool was found the first spring of Gray Teal (*A. gibberifrons*) to be recorded near Auckland, while the other pool was visited by three Royal Spoonbills (*P. regia*) in November, 1957, and has since become a favoured haunt of Shoveler or Spoonbill Ducks (*A. rhynchotis*).

Puketutu Island is now linked to Ihumatao by a new sea-wall. By mid-November, lorries were able to cross at low tide, and by December a big new lake, fed by the Oruarangi Creek, had been sealed off behind it and tidal water was virtually excluded. During the winter of 1959 an earth causeway was pushed across the middle of this lake from Puketutu towards Ascot. It is proposed to call the two new pools which lie to the south of the old causeway Ascot Pool and Lake Oruarangi.

Heavy rains in the summer and autumn freshened the pools just when the wide expanse of shallows was beginning to shrink; and as most of the area was quiet and sheltered it proved especially attractive to ducks and waders. All the species which have normally flocked to this area in summer and autumn were present in undiminished numbers, some in far greater numbers than usual. The first Marsh Sandpiper (*Tringa stagnatilis*) to be recorded in New Zealand stayed for two months. An unusual visitation of Black-tailed Godwits has been described in *Notornis*. Two species of arctic sandpipers were actually present in small flocks. Ducks were quick to use such an obviously rich feeding ground. The arrival of a Dabchick was a big surprise.

These ideal conditions were abruptly terminated in May by the aerial spraying of insecticide. After a very wet April, which greatly enlarged Teal Pool and inundated the seepage area at its head, there were complaints of a plague of flies and mosquitoes in Mangere and the authorities decided — overhastily in the opinion of some critics — that the edges of the pools were the origin of the infestation. The spraying was carried out by aeroplane, the Explosion Crater and Teal Pool receiving especial attention. Neither of these places has been the same since. The aquatic organisms were killed. Ducks and Stilts were driven away from the sterile, contaminated water and were still shunning it in October.



P.D.G.S.

Auckland ornithologists could count themselves very lucky to have such an exciting artificial lakeland on their door-step. They were only too happy to be able to show some of the rare birds mentioned in these notes to visiting ornithologists, among whom were Mrs. Avis Acres, J. W. Bain, B.D. Bell, F. C. Kinsky, E. G. Turbott. Nor did Spoonbill Pool belie its reputation when a host of ornithologists bore down upon it on 26/10/59 during the Field Study Week-end.

DABCHICK — One was found on Teal Pool on 29/3/59 and was still there on 10/5/59; an interesting example of autumn wandering, as the nearest known waters where Dabchicks breed are thirty miles away — unless the Waitakere reservoirs have been colonised.

SOOTY SHEARWATER — 1 old corpse on 5/7/59.

TASMANIAN MUTTONBIRD — 1 freshly dead on 8/5/59.

BLUE HERON — Single birds appear from time to time.

WHITE-FACED HERON — Now present at all seasons, gathering into flocks in autumn and winter. 8 on 20/5/59. 23+ on 21/6/59 on L. Oruarangi.

BLACK SWAN — Some remained on Teal Pool after other ducks and waders were driven away by the spraying of insecticide. Max. on pools 40 on 18/6/59.

GREY TEAL — Up to 6 (? 8) present between 2/2/59 and 25/4/59. This appears to be the first record of this small duck near Auckland.

SHOVELER — 2 pairs on the Explosion Crater on 2/11/58 were the first recorded in this part of Manukau for many years. There was a post-nuptial influx, c. 20 on 2/2/59; c. 60 on 12/2/59. Smaller numbers during the winter. 2 drakes and a duck on 11/10/59 suggest breeding.

S.I. PIED OYSTERCATCHER — c. 120 on 8/10/58; 500+ on 2/2/59; c. 1,400 on 29/3/59 beside L. Oruarangi. Numbers varied during the winter according to the tides. 100+ still present beside Spoonbill Pool on 30/9/59.

BLACK OYSTERCATCHER — A single bird noted on several occasions between 11/4/59 and 30/9/59; 3 on 17/10/59.

PACIFIC GOLDEN PLOVER — 42, the biggest flock so far recorded in this area on 5/2/59 and 4/3/59; on 8/2/59 some were showing a few first black streaks of nuptial dress. 13 on 28/3/59. 2 early return-migrants beside Spoonbill Pool on 9/9/59, one still with much black on the underparts.

BANDED DOTTEREL — c. 500 on 5/2/59; winter numbers were rather fewer. On 19/4/59 some were already in almost full breeding dress. The wintering flock, e.g. c. 400 on 21/6/59, especially favoured the vicinity of Chinky Spit, now growing green with a thin cover of vegetation, especially sand-spurrey; c. 200 still present on 8/8/59. A few lingered into September, but presented a plumage problem, e.g. on 16/9/59, of eight birds, two seemed to be a pair in normal breeding dress, but the other six were not paired, none was properly banded and some showed scarcely a trace of a band. They had not the warm golden look of young birds of the current season. Were they therefore late youngsters from last season?

WRYBILL — c. 600 on 8/2/59; 650+ on 29/3/59 and throughout winter; 500+ still present on 16/8/59; c. 100 on 4/9/59; 73 on 15/9/59; 21 on 27/9/59. A few lingered till October.

- ASIATIC WHIMBREL — 4 on 2/11/58; 6 (? 7) on 13/11/58. As seems to be the way with these birds, they moved on and were not reported again.
- BAR-TAILED GODWIT — 5000+ on 2/11/59 and throughout summer coming in to Spoonbill Pool or L. Oruarangi when tides were big. On 5/2/59 one very red male was noted and many were reddening. Unusual numbers, 7000+, wintered in Manukau, of which at least 5000 sometimes roosted beside L. Oruarangi.
- HUDSONIAN GODWIT — As reported in *Notornis VIII*, 161-162, one was present over the summer and two were seen on 13/5/59, evidently wintering. Further records of single birds were made on Spoonbill Pool on 21/6/59 and 9/9/59.
- ASIATIC BLACK-TAILED GODWIT — As reported in *Notornis VIII*, 161-162, a single bird frequented Teal Pool in February and March; and three more arrived apparently with the autumn influx of waders from the south; so that on 13/5/59 four were present on Spoonbill Pool and two on 9/9/59. A comparison of dates shows that these four *melanuroides* must be distinct from four which were seen during autumn and winter on the Miranda coast of the Firth of Thames.
- MARSH SANDPIPER — As reported in *Notornis VIII*, 125-126, one frequented Teal and Spoonbill Pools between 24/3/59 and 13/5/59. The contamination of the shallows by spraying seems to be the reason for its disappearance, after it appeared to have settled in for the winter.
- TURNSTONE — 30+ on 5/2/59; c. 50 on 4/3/59; c. 24 on 28/3/59; 9 on 25/4/59; 5 on 10/5/59; 1 on 13/5/59; 1 on 9/9/59.
- KNOT — 1000+ on 2/11/59; plentiful throughout summer; 2000+ on 5/2/59; 4000+ on 29/3/59; 6 on 25/4/59; c. 50 on 13/5/59; c. 20 on 30/9/59.
- SHARP-TAILED SANDPIPER — 2 on 2/11/58; 4 on 13/11/58; 7 on 1, 3 and 4/3/59; 8 on 15 and 29/3/59 and 5/4/59.
- AMERICAN PECTORAL SANDPIPER — 1 from 1/3/59 to 15/3/59, kept near the Sharp-tails, but rather apart by itself and evidently left before them.
- CURLEW SANDPIPER — 9 on 1/3/59, one being well reddened; 5 on 4/3/59; 2 on 28/3/59, just starting to redden on the breast; 1 on 25/4/59, reddening.
- RED-NECKED STINT — 1 seen several times between 1/3/59 and 15/3/59 with Wrybills.
- PIED STILT — Unusual numbers of non-breeders throughout the spring, attracted away perhaps from Harania Creek; c. 500 on 8/10/59; 800+ on 13/11/58; c. 1000 on 27/11/58 and later; 1500+ on 25/4/59; c. 1800 on 21/6/59; Stilts avoided the Explosion Crater and Teal Pool, which had been favourite haunts, for several months after the spraying and had not returned to them at the end of September.
- CASPIAN TERN — Only c. 60 counted on mid-winter census. One ringed as a chick at Palliser Spit on 8/1/59 was reported dead from Mangere on 4/6/59.
- WHITE-WINGED BLACK TERN — One was present throughout the summer, preferring Teal Pool, but occasionally feeding elsewhere. By 5/2/59 it was virtually in full breeding dress. Many observers saw it up till 19/4/59, when it was feeding in the evening over the shallows of Spoonbill Pool.

MANUKAU — (c) KARAKA-PUHINUI

- GANNET — A few often penetrate Pahurehure Inlet; 1 dark youngster on 15/3/59.
- WHITE-FACED HERON — 3 the most seen together.
- ROYAL SPOONBILL — Up to 6/10/58, 6 were often seen near Weymouth; then 3 up to December and perhaps till early February; from then on 2 ranging from Kidd's Bay and up the creeks nearly to Papakura and Drury.
- S.I. PIED OYSTERCATCHER — c. 160 on 28/9/58 and 18/10/58, evidently intending to summer; c. 500 on 27/2/59; c. 800 on 27/3/59; c. 700 on 21/6/59.
- ASIATIC GOLDEN PLOVER — 11 flying inland on 18/10/58; 66+ on 12/1/59; 105+, a few starting to blacken, on 8/2/59; exact count of 110 on 27/7/59; 60+ on 10/3/58 and 27/3/59.
- BANDED DOTTEREL — 3 on 18/10/58; c. 12 on 12/1/59; c. 250 on 8/2/59; numbers counted in autumn fluctuate according to where the birds are feeding; sometimes more being seen; 350+ on 24/4/59; c. 490 on 21/6/59.
- RED-BREASTED DOTTEREL — 2 on 10/3/59; 5 on 8/4/59; 7 on 24/4/59; 7 on 21/6/59.
- WRYBILL — 23 on 18/10/58; 127+ on 12/1/59; c. 600 on 8/2/59; c. 900 on 27/3/59; c. 700 on 24/4/59; c. 1050 on 21/6/59.
- LONG-BILLED CURLEW — 2 on 18/10/58; 5 on 10/3/59.
- BAR-TAILED GODWIT — c. 5000 on 18/10/58 and probably throughout summer, though counts varied because of poor tides. Only c. 600 on 10/3/59 and c. 200 on 24/4/59; but c. 2200 on 21/6/59, when a mid-winter census of waders in Manukau revealed remarkable numbers present.
- GREENSHANK — 1 on Karaka shellbank on 10/3/59, with Pied Stilts, studied at ten yards (H.R.McK.).
- GREY-TAILED TATTLER — 1, almost certainly the same bird as recorded previously, was present throughout the summer up to 26/4/59.
- TURNSTONE — c. 200 on 18/10/58 and throughout summer; possibly more in late February and March; still 150+ on 8/4/59. One of the characteristic waders of the southern shore of Manukau; but not noted on a mid-winter census on 21/6/59.
- KNOT — Again scarce in spring. 5 on 28/9/58 with 2500+ Godwits; 300+ on 12/1/58; 1000+ on 8/2/59 and 10/3/59; 20+ on 24/4/59.
- RED-NECKED STINT — 12 on 18/10/58; 14 on 27/2/59, some reddening slightly on the neck; 13+ on 10/3/59; 10 on 8/4/59, 2 having really red necks; 2, pale, on 24/4/59; 1 on 21/6/59, wintering.
- PIED STILT — During the summer months few are seen on the open coast, those that remain preferring the muddy creeks. Midwinter census c. 1400 from Weymouth to Clark's Bay.
- CASPIAN TERN — There was the usual post-nuptial influx, only c. 15 being present in mid-December. Then 40+ on 10/3/59; c. 60 on 24/4/59. c. 240 in mid-winter between Weymouth and Clark's Bay.
- WHITE-FRONTED TERN — c. 30 on 12/1/58; c. 40 on 8/2/59; 120+ on 27/3/59.
- TERN (Sp?) — Two small terns (*albifrons/nereis*) were again noted in late summer and may have been present all along as they are easily

overlooked. On 27 and 28/2/59 one, which was slightly larger than the other, was changing colour. On 10/3/59 it was in full breeding plumage typical of *albifrons*, but the smaller bird appeared as before. They were not seen on subsequent visits.

FERNBIRD — 2 or more seen and heard along Kidd's Bay on 21/6/59 and 9/10/59.

★

FIELD STUDY WEEK-END

The field study week-end held in Auckland on 24th to 26th October last was attended by about 30 members, and was considered by those present to be completely successful. This was the second such week-end held in the month of October, and the value of the field work, and of the closer contacts between members of the Society from all parts of New Zealand should lead to such study periods becoming an established part of the Society's activities. The smooth running of the organisation was due to the efforts, both before and during the week-end, of Mr. A. Ringer, R.O. for Auckland, and of Mrs. Ringer and a band of helpers from amongst Auckland members.

Members gathered on the evening of Friday, 23rd October, to be informed of arrangements, and to view an interesting collection of colour slides shown by Mr. R. B. Sibson. The following morning an early start was made for Miranda on the Firth of Thames, to observe wading birds. In spite of showery weather and a poor high tide, the day produced much of interest. In addition to large numbers of Bar-tailed Godwits, Knots, South Island Pied Oystercatchers and a few Wrybilled Plovers, a flock of 16 Turnstones provided a new bird for some members, and a group of six Asiatic Black-tailed Godwits (*L. limosa melanuroides*) was a thrill for everyone. "The Pools" produced a White-winged Black Tern (*Chlidonias leucopterus*), a resident of many months' standing, but somewhat confusing in its generally white plumage with black margins on the underwing. In this area were also observed 20+ Sharp-tailed Sandpipers, several Banded Dotterels and a male New Zealand Dotterel in its beautiful full breeding plumage. Other birds of interest seen during the day were a Black Oystercatcher amongst the S.I. Pied Oystercatchers, and a further pair of New Zealand Dotterel. Members met again in the evening to hear a talk on the Islands of the Hauraki Gulf by Mr. R. B. Sibson, this being illustrated by an excellent series of colour slides, including many from a recent expedition to the Alderman Islands. This was followed by supper provided by some Auckland lady members.

On Sunday, 25th October, a projected launch trip to see the gannet colony on Horuhoru Island was cancelled on account of the state of the sea. In its place, a trip was made to Bethell's Beach, on the west coast, to observe the Spotted Shags nesting on the Ihumoana cliffs. Most of the adult birds were found to be in post-nuptial plumage, with fully-fledged young; but at least one nest of small young birds was seen, and one or two adults were in nuptial plumage. Glorious weather added greatly to the pleasure of the drive over the Waitakeres and of the day's outing. A pair of New Zealand Dotterel presented themselves for fairly close inspection just before departure, and the return trip was made the more interesting for some by sightings of Eastern Rosellas, Pied Tit and Pigeon.

On the third day a visit was made to Lake Pupuke to see the nesting Shags. Very close-up observation was possible of many Pied Shags (*P. varius*) and White-throated Shags (*P. melanoleucos brevirostris*), all nesting with young in various stages, and the colonies contained a few Little Black Shags (*P. sulcirostris*), not nesting. About equal numbers of the two forms of *melanoleucos* were observed, each form nesting separately, except for two mixed pairs seen at the nest, and some intermediate adult forms were also seen. Other parts of the lake produced several juvenal Large Black Shags (*P. carbo novaehollandiae*), many Black Swan, feral Mute Swan and numerous Grey Duck, including two only of a Grey-Mallard cross. Some Eastern Rosellas caused many of the party to interrupt their lunch. In the afternoon the party proceeded to the drainage ponding areas between Puketutu Island and the mainland. Interest was first concentrated on several Shoveler Duck amongst numbers of Mallard and Grey Duck on water which was previously completely depopulated by spraying operations carried out by the drainage authority. As the tide rose later in the afternoon, waders were in evidence in numbers. Bar-tailed Godwit (c. 2500) and South Island Pied Oystercatcher (c. 200) came in from the outer mud-banks, the latter including one Northern Oystercatcher. Also observed were 7 Sharp-tailed Sandpipers, including a coloured juvenal, 7 Turnstones, 15 Wrybilled Plover, and a Little Stint. Of very special interest, even to the more hardened observers of the Auckland wading birds, was a Curlew Sandpiper in brilliant colouring.

Auckland has much to offer in migratory waders all round the year, and members attending the field study week-end were satisfied that they had been treated to a fair cross-section of all that the area can produce.

— A.B.



SHORT NOTES

NOTES ON SOME BONES COLLECTED BY DR. WATTERS AND MR. LINDSAY AT CHATHAM ISLANDS

The bones from this deposit were collected from Whenuatara, Pitt Island, on 2/2/57. They are embedded in or caked with a yellowish consolidated sand. The following have been identified:

Royal Albatross (*Diomedea epomophora*). The collection consists mainly of wing bones of several individuals, portion of a skull, tibiae, metatarsi, femora, and other bones. One or two of the bones are immature, but most of them are mature and have a size range not far short of the average of specimens available from Campbell Island. The breeding birds of the Sisters and Forty-fours Islets are to-day slightly smaller and darker winged than the breeding birds of Campbell Island, but there are not sufficient bones of the existing Chathams birds available to enable a useful comparison to be made with the sub-fossil bones.

Some of the dimensions of the latter are:

Tarso-metatarsi	123 mm.	124 mm.
Tibia	225	
Femur	97	
Radius	100	
Carpal	135	

Extinct woodhen (*Gallirallus minor*). There is one cranium and upper beak of this species, and one tibia and a metatarsus which are large enough to belong to the same bird or one like it. These have the normal ralline character of leg-bones, however, and are unlike existing *Gallirallus*.

Maxilla 38 mm. Tibia 79 mm.

Small Rail (*Rallus dieffenbachi*). Much smaller than those described above, but the same shape, are a tibia and metatarsus which fall within the range accorded to *R. dieffenbachi*.

The remaining material consist of bones of smaller perching birds which have not yet been precisely identified.

R. A. FALLA



GRAY-FACED PETRELS OVER MT. MAUNGANUI PENINSULA

From time to time accounts of petrels flying over the mainland appear in *Notornis*, so I have thought that the following observations which concern Gray-faced Petrels (*Pterodroma macroptera*) near Mt. Maunganui, Tauranga, are worth recording.

For some days in September, 1959, I was staying near the open coast on the Mt. Maunganui peninsula, south-east of the Mount; and on every evening these petrels were noted over the land at dusk between 6 p.m. and 6.15 p.m. I first saw them at 6.13 p.m. on the evening of September 9th, when the main flock was about one mile south-east of Mt. Maunganui itself. They had evidently come from the east. The numbers were most impressive and I estimated that more than 3000 flew north-westwards over the peninsula, not calling but making a mighty rushing sound with the whirring of their powerful wings. No calls were heard.

On the next four days these petrels were watched about this same time a little closer to the Mount. The first to appear came in small, fairly compact groups of about ten birds. Then the flocks increased to about 200, before the main body swung seawards.

Oliver (1955) states that Mt. Maunganui (761 ft.) is a breeding place of the Gray-faced Petrel, but it is doubtful if many breed there successfully now. After two thorough searches, I could find no occupied burrows, although old burrows were numerous in suitable ground.

P. D. G. SKEGG



(The Gray-faced Petrel is the common 'muttonbird' of Maori tradition in the Bay of Plenty. It is still abundant on most of the uninhabited islands, though curiously scarce on Mavor, where pigs may be the cause of the decline. Small colonies are still said to survive on some mainland cliffs. A party of ornithologists who camped on the Alderman Islands from September 2-8 noted the first incoming Gray-faced Petrels every evening between 6.15 and 6.25. It might be expected that at this time (dusk) and season (early September) most breeding Gray-faced Petrels would be either incubating or heading for their burrows. It has therefore been suggested that the great numbers seen flying along the Mt. Maunganui peninsula in mid-September were immature non-breeders, not yet attached to a breeding site.—Ed.)

WHITE-WINGED BLACK TERNS AT HIMATANGI BEACH AND IN MARLBOROUGH

On 26/1/57 I observed a strange marsh-tern resting on the sand by the outlet of the Kaikokopu Creek at Himatangi Beach. It was identified as a White-winged Black Tern (*Chlidonias leucopterus*) in eclipse or late juvenile plumage. It was almost identical in plumage details with terns of this species which were seen at Waikanae in 1954 (Fleming, *Notornis* 6, 69), but the legs were very dark. It was with a flock of White-fronted Terns (*S. striata*) and Black-billed Gulls (*L. bulleri*) but did not associate closely with them, and flew independently. It has not been seen since. This seems to be the only recorded occurrence so far of this species in the Manawatu.

IAN G. ANDREW

Over the past two years there have been two sight records of the White-winged Black Tern in Marlborough. Both birds were in almost full plumage. The first was seen in October, 1957, by J. R. Eyles at Wairau Bar. The second record was by G. Holdaway from lower Dillons Point, Blenheim, where he observed the bird on the morning of 30/5/59. This bird circled over the paddock he was ploughing for about half an hour. He rang me and described the bird and its behaviour. There was no doubt about its identity.

BRIAN D. BELL

★

COLONIAL ROOSTING OF WHITE-FACED HERONS

Large numbers of White-faced Herons (*A. novae-hollandiae*) utilise the pine plantation behind Havelock at the head of Pelorus Sound, Marlborough. The birds feed on the exposed mud-flats at the head of the Sound and along the edges of the Pelorus River at low tide. The herons can be seen plying to and fro across the town and at times are very noisy. On 2/10/59, F. O'Leary and K. Rowe were able to observe at least five herons in this plantation from their hotel room during an overnight stay. Local residents claim that they breed in the plantation but there is no definite evidence of this.

BRIAN D. BELL

★

LETTER

Sir,

Moho-au or *moho-wao*

I was interested to read the note by Mr. W. J. Phillips in your April, 1959, issue concerning the traditional Maori name for *Notornis* in the Horowhenua district of the North Island. I had also heard this variant of the generalised ralline name *moho* from Hector McDonald, but believe that it has been wrongly transcribed.

The true name, I am sure, is not "*moho-au*," but "*Moho-wao*," literally "rail of the forest," *wao* being the old Polynesian name for forest. My interpretation is confirmed by Williams' dictionary, 5th edition, which gives the secondary meaning, "man of the woods or barbarian" to *moho-wao*. I have included the hyphen for clarity.

ROGER DUFF

Canterbury Museum,
Christchurch.

9th ANNUAL REPORT
OF THE BANDING COMMITTEE
For the Year Ending 31st March, 1959

The full report of the Banding Committee, as read in part at the Annual General Meeting of the Ornithological Society of New Zealand in May, will, this year, be published as a separate publication and, it is hoped, will soon be available in print.

To keep members informed of the activities of the Society's banding scheme, it was decided to publish the following shortened report:

Twenty-eight of the 44 banding-permit holders were active this year and banded 8,448 birds of 47 species, which brings the grand total of birds banded in New Zealand up to 40,637. This year 560 recoveries and 818 repeats were reported. Some recoveries of particular interest are mentioned in detail.

Selected Recoveries

ROYAL ALBATROSS: One of the Royal Albatrosses (No. 15177) banded by Mr. F. Abernethy off Cape Campbell on 15/10/57, was reported (report dated 7/9/58) found exhausted and killed on a beach near Huoiocola; Dept. de Union, *Chile*.

LIGHT-MANTLED SOOTY ALBATROSS: No. 6A banded by Mr. J. H. Sorensen as an adult bird on a nest on Campbell Island on 2/12/42, was found nesting at the same place on 30/12/58, i.e. over 16 years after banding.

GIANT PETREL: No. 36539, banded as an adult bird, by Mr. C. Huntly at the Tory Channel Whaling Station on 17/7/58, was recovered on Macquarie Island on 21/8/58, i.e. approximately 1000 miles S.W. and only one month and four days after banding.

CAPE PIGEON: No. 38431, banded as an adult bird off Cape Campbell by Mr. F. Abernethy on 27/6/57, was recovered off Cape Malheureux, *Mauritius*, on 18/8/58.

and

No. 41239, banded as an adult bird at the Tory Channel Whaling Station by Mr. C. Huntly, on 19/7/58, was found breeding in December, 1958, on Paterson Island, Windmill Group, Wilkes Land, *Antarctica*.

FLESH-FOOTED SHEARWATER: Three of our Flesh-footed Shearwaters, recovered this year, all banded by Mr. F. Abernethy off Cape Campbell in 1956, 1957 and 1958 respectively, were recovered in the Bay of Plenty and one on Muriwai Beach.

AUSTRALIAN GANNET: This year recoveries of Gannets were as follows:

Originally banded on Cape Kidnappers: 8 recoveries from Australia; 50 recoveries on nesting colony.

Originally banded at different places in the Hauraki Gulf: 10 recoveries from Australia; 5 recoveries from New Zealand; 47 recoveries on nesting colonies.

SOUTHERN BLACK-BACKED GULL: No. 22192, banded by Mr. J. C. Davenport on Rangitoto Island as a chick on 4/1/53, was found dead at Upper Hutt on 20/10/58.

No. 26181, banded as a chick on Kapiti Island on 31/12/57, was found dead at Ongaonga, Hawke's Bay on 17/5/58.

RED-BILLED GULL: Very interesting information was obtained this year about the early and wide dispersal of Red-billed Gulls from their nesting colony.

Recoveries from a large number of birds banded at Kaikoura Peninsula were reported from as far north as the Hutt Valley and from as far south as **Oamaru**.

CASPIAN TERN: A novel method of recovery was experienced by No. 30142, banded as a chick on South Kaipara Head on 30/12/55 by Mr. M. A. Waller. This bird was killed by an aeroplane above Whenuapai on 6/3/59.

Birds Banded Overseas and Recovered in New Zealand

GIANT PETREL: Eight Giant Petrels, all banded as chicks on Signy Island in the South Orkneys (some 6000 miles from New Zealand Atlantic Ocean) during February, March and April, 1958, were recovered in New Zealand between June and October, 1958.

CAPE PIGEON: One Cape Pigeon wearing the band "Vogelwarte Helgoland, Germania, No. 590753," was caught and released again on 5/8/58. This bird was banded as an adult in the Weddell Sea from a German Whaling ship on 7/1/1938.

This recovery is a particularly interesting one, not only because of the distance from where banded, but mainly because of the age of the bird, which wore the band for over 20 years.



CARD COMMITTEE REPORT

For the Year Ended 31st March, 1959

It is now four years since this Society began to produce Christmas Cards for its members and friends. Throughout this period the project has received considerable support and on behalf of my committee I wish to thank the Society's members, and the Forest and Bird Protection Society, for the interest which has been shown. Over the past year the Committee has had to face increased costs in the production of cards with the result that our net profit was not as high as in the previous year. It is pleasing to note, however, that the expenses incurred in making the sales remained approximately the same as in the previous year.

During the year we converted further of our stocks on hand into cash and it is hoped that this year, with your help, we will be able to further reduce the stocks of bookmarks and calendars which we are holding. As the result of the improved cash position we were able to repay the sum of £50 to the Society. A donation of £20 was paid with the approval of Council to the Forest and Bird Protection Society in appreciation of the help and support which that Society and its members have given this Committee.

It is fitting at this time to make acknowledgement to Mrs. Avis Acres, who painted the designs for last season's cards. The cards proved as popular as ever and we look forward to seeing the new paintings for the coming season. At the same time I wish to thank all helpers who handled the complete packaging of the cards: a very considerable task. Throughout the year I have had the help of Mr. Bull, Mr. McKenzie and Mr. Sibson and this help, which has been so freely given, has been greatly appreciated.

B. S. CHAMBERS, Convener

CARD COMMITTEE

PROFIT AND LOSS ACCOUNT FOR YEAR ENDED 31st MARCH, 1959

If we deducted the cost of cards, etc., sold, from the sales total, we are left with a gross profit of		423 11 9
From this we deduct the expenses incurred in making the sales:—		
Advertising	124 3 9	
Depreciation	9 7 6	
Donation	20 0 0	
General Expenses	9 8 6	
Printing and Stationery	13 1 0	
Postages	38 17 5	
Packing	12 10 0	
Sundry Services	25 12 0	
Giving Total Expenses of	253 0 2	
Leaving a Net Profit of		£170 11 7

BALANCE SHEET AS AT 31st MARCH, 1959

We have—		
Cash in the Bank	337 10 10	
Stocks	305 0 0	
Printing Blocks valued at	40 0 0	
Giving Total Assets of		682 10 10
From this we deduct money owing to sundry creditors		79 13 0
Leaving a balance assets we own of		£602 17 19
This is made up as follows:—		
Balance last year	449 0 11	
Add this year's net profit	170 11 7	
		619 12 6
Less Taxation	16 14 8	
Balance as above		£602 17 10

I report to the members of the Ornithological Society of New Zealand Incorporated that I have examined the books, accounts and vouchers of the Card Committee for the year ended 31st March, 1959, and certify that the above balance sheet is properly drawn up to show the true financial position of the Society at that date. I have accepted the values placed by your Convener on "stocks on hand."

CHAMBERS, WORTH & CHAMBERS
Auditors

CORRECTION

A whole line was omitted from the first paragraph of the review on "The Waders of Sydney," p. 183. As it stands, the third sentence makes nonsense. Between the phrases "transequatorial migrants" and "from New Zealand" there should be inserted "and one, the Banded Dotterel, is a regular visitor."

★

NEW MEMBERS to 19/10/59

Appleby, M., Maraetai Beach
 Booth, D. F., C/o Bank of N.Z., Box 13, Auckland
 Collins Bros. & Co. Ltd., Wyndham Street, Auckland
 Dixon, Dane, 132 Kohimarama Road, Kohimarama, Auckland E.1
 George, D., Pah Road, Kawaha Point, Rotorua
 Gibson, Cedric T., 276 Elliott Road, Upper Westtown, New Plymouth
 Hogg, H. W. M., 147 Fitzroy Street, Dunedin
 Kennington, S. R., Box 40, Seddon, Marlborough
 Le Huquet, Edward, 16 Raroa Road, Kelburn, Wellington
 Le Lievre, Frank, Campbell Road, R.D. 1, Tokoroa
 McDonald, J. G., 9 Ponsonby Road, Auckland, W.1
 Macdonald, R. W., 67 Methuen Road, Avondale, Auckland, S.W.3
 McGrath, D., 14 Homewood Avenue, Karori, Wellington
 McKellar, Dr. M., 2 Roseneath Flats, 23C Maida Vale Rd., Roseneath, Wgtn.
 Maning, M., Clevedon
 Nilsson, Ron. J., Iona Road, Havelock North
 Robinson, Ian S., Blue Lake Holiday Camp, Box 292, Rotorua
 Robinson, Mrs. M. A., Blue Lake Holiday Camp, Box 292, Rotorua
 Sather, Kenneth L., Round Lake, Minnesota, U.S.A.
 Southerill, E. H., 13 Hoon Hay Road, Christchurch, S.W.2
 Sutton, Roger R., P.O. Lorneville, Invercargill
 Templer, Mrs. M. L., R.D. 4, Newstead
 Trewheela, R. J., 21 Vista Crescent, Beverly Hills, Glendowie, Auck., E.1
 University of Kansas, Lawrence, Kansas, U.S.A.
 White, D. W., Students' Hostel, Lincoln College, Christchurch
 Winter, J. W., C/o Mr. A. M. Ward, Box 19, Hawea Flat, Central Otago
 Wood, A. J., Maraetai Beach
 Woods, Lionel, Fairfax, R.D. 10, Invercargill

NEW MEMBERS to 18/11/59

Armstrong, Mrs. J. S., "Clova," 3 Titiraupenga Street, Taupo
 Boesen, B. W., Box 6402, Te Aro, Wellington
 Graham, John, Maude Street, South Oamaru
 Logan, B. P., 18 Second Avenue, Tauranga
 McKean, John L., 5 Hoyt Street, Hampton, Melbourne, S.7
 MacKenzie, M., 7 Ngatai Street, Otumoetai, Tauranga
 Popplewell, W. T., 140 Clermiston Avenue, Corstorphine, Dunedin
 Ross, Malcolm, Motukiore, Horeke, Hokianga
 Thatcher, Miss Barbara, 33A Edenvale Road, Mt. Eden, Auckland, S.1
 Varney, K. W., Grove Road, Haumoana, Hastings
 Williams, Murray, 21 Richmond Street, Fitzroy, New Plymouth

NOTICES

BACK NUMBERS OF "NOTORNIS"

Members are reminded that back numbers of *Notornis* and the earlier *N.Z. Bird Notes* are obtainable from the Society. Enquiries about costs and the parts still held in stock should be made to:— O.S.N.Z., Box 45, Clevedon, Auckland.

Other publications available are: *Checklist of New Zealand Birds, 1953* (10/6); *The Takahe* (5/-); *Identification of Albatrosses* (1/-); *Reports and Bulletins, 1939-1942*, with Index (12/-), Index Alone 1/6. These precede Vol. I of *N.Z. Bird Notes* and record the first three years of the Society's work.

NEST RECORDS SCHEME

Members are requested to send records for the current nesting season to the Organiser, Mr. H. L. Secker, 14 Clyma Street, Upper Hutt, by 29th February, 1960.

STORY OF POU PUKEKO

By F. A. Hodgson

FOR YOUR YOUNGER CHILDREN

★

Exciting illustrated story about Pukeko chick.

Price 1/6

On Sale at — WHITCOMBE & TOMBS LTD.

FIELD STUDY WEEK — FAREWELL SPIT, 1961

It is proposed to hold a week's course with special reference to the study of waders in late January, 1961, at Farewell Spit, Nelson. This preliminary notice is given to enable prospective participants to make the necessary holiday arrangements. This course will replace the usual annual event held over Labour Week-end. Further particulars will be published in next "Notornis."