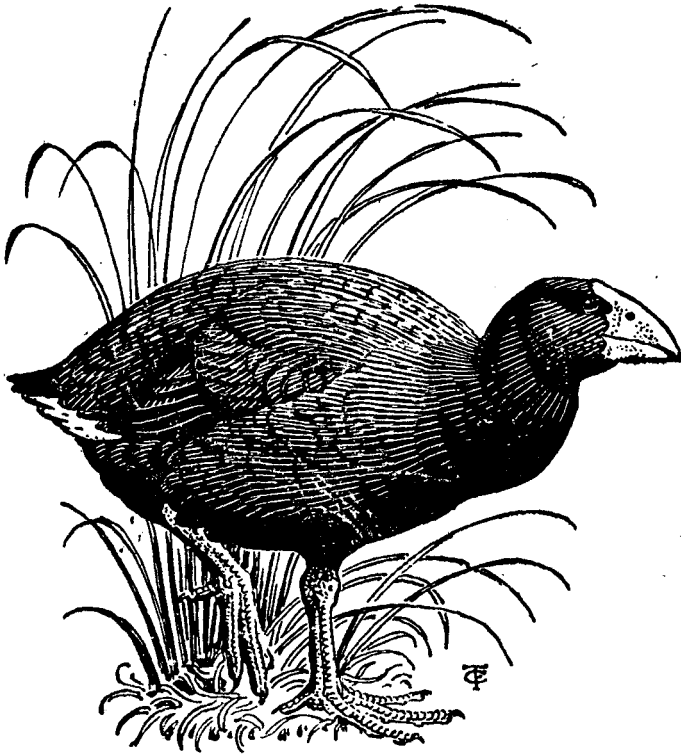


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NOTORNIS

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NOTORNIS

VOLUME EIGHT, NUMBER FIVE

JULY NINETEEN FIFTY-NINE

MARSH SANDPIPER IN MANUKAU — A NEW BIRD FOR NEW ZEALAND

By R. B. SIBSON

In Manukau Harbour the summer and autumn of 1959 were a particularly fruitful time for waders and ducks at the large, shallow pools which were created by the building of two new sea-walls linking Puketutu Island with Mangere to the north and Ihumatao to the south.

On the evening of 24/3/59, I visited one pool which the experience of the past three months had shown was perhaps the most profitable corner of the hundreds of acres of fresh or brackish shallows available. At the head of this pool near the explosion crater which lies below Mangere Mt., there are seepages of fresh water which, as it trickles from the adjacent slopes over the now reclaimed flats, has produced verdant patches of Flannelweed (*Enteromorpha Sp.*), Bachelor's Buttons (*Cotula sp.*) and Sand Spurrey (*Spergularia sp.*). Recent cyclonic rains had increased the flow of the seepages. On this evening some scores of Stilts were gathered at the head of the pool and many Wrybills, Banded Dotterels and at least seven Sharp-tailed Sandpipers were scattered over the swampy seepage area; while a White-winged Black Tern, which from its long stay in the vicinity has some claim to be recognised as the *genius loci*, was passing to and fro catching insects only a few inches above what was obviously an ideal feeding-ground.

As I came within about two chains of the Stilts, with the westering sun behind me, I noticed among them a smallish wader with unusually long legs and a thin, straight bill about $1\frac{1}{2}$ inches long. Its upper parts appeared dark grey contrasting with the clear white of its underparts, throat and face. The legs were much longer than those of a Wrybill or Curlew Sandpiper, but I could not be sure of their colour. It seemed pretty clear that the bird before me was a *tringa* of a kind not previously recorded in N.Z.; and at first I suspected it might be a Wood Sandpiper (*Tringa glareola*), a palaeartic wader which has been widely, though not commonly, reported from Australia (v. Hindwood & McGill, *Emu* 53, 1-13). Fortunately, when it was flushed it flew away from me and showed an almost white tail and a white inverted V up the back, so that I was now certain that the bird was a Marsh Sandpiper or Little Greenshank (*Tringa stagnatilis*). Perhaps I should mention that twenty years ago I was familiar with both Wood and Marsh Sandpipers in Europe, particularly on the islands of the Aegean, where I met the two species together on their spring migration northwards.

Its size and flight-silhouette differentiated it at once from any other wader known in New Zealand. In flight its legs trailed so far behind the tail that with its very white underparts it resembled a miniature Stilt. Because of its disproportionately long legs it is not true to say that the Marsh Sandpiper is a small edition of the Greenshank (*Tringa nebularia*).

After flying a few chains it settled on a patch of ooze where I was able to watch it feeding near some Sharp-tailed Sandpipers. It was interesting to note that as it feeds in very shallow water its long legs cause it to tip its back and tail sharply upwards in what might almost be called a diagnostic attitude. In deeper water it does not hesitate to wade up to its belly in order to feed off the small organisms which are swimming near the surface. I was specially struck by the whiteness of the face, throat and underparts; and from the lack of spotting on the throat which an adult should have at this season, I am inclined to believe that this bird is a juvenile, about nine months old. The real darkness of the wings is best seen in flight, when the downbeat of the wings is strong and incisive and there is a marked pause between strokes.

It was an alert bird. Once it jumped and flew a few yards alone, revealing the white up the back and bobbing nervously with its head when it landed. Though the Marsh Sandpiper is perhaps the most elegant of the smaller waders, for a moment just before settling it has an angular, gangling appearance.

During the ensuing week this bird was generally found in the shallows at the head of the pool among Stilts, which were evidently the company it preferred, though it barely reached up to their bellies. When the Stilts flew in alarm, it went with them, sometimes leading the flight. Only once was it seen to go off on a longish flight independently, but it soon returned. The Marsh Sandpiper is essentially a wader of fresh and brackish pools, not of the tideline.

Not surprisingly, this rare visitor attracted much attention and was well seen by Mr. and Mrs. B. D. Heather, Mr. and Mrs. J. Prickett, Mrs. R. B. Sibson and Peter Skegg, on March 27th and 28th. On Easter Sunday, March 29th, Mr. H. R. McKenzie studied it under most favourable conditions and was able to confirm all the points of identification mentioned above and to add that the colour of the legs was greenish. On April 5th it was under observation for a considerable time by Messrs. E. F. Dodson, J. C. Davenport, A. Ringer, Tim Ledgard and several boys from King's College.

On April 25th, the Marsh Sandpiper was at first a little difficult to find, as it was in deep water on the outer fringe of a multitude of Stilts, but it was eventually well seen by Mrs. L. Fooks, Miss M. C. R. McIntyre, A. C. Hipwell, N. M. Gleeson and myself. It was still present on May 13th, when Peter Skegg and I approached within a chain of it. In the meanwhile photographs had been obtained by Messrs. J. Prickett and D. A. Urquhart.



PRATINCOLE RECORDS IN NEW ZEALAND

By R. A. FALLA

On 14th May, 1959, Mrs. P. Moncrieff, of Nelson, forwarded to the Dominion Museum the body of a Pratincole which had been shot near Appleby and later forwarded to Mrs. Moncrieff by Mr. E. Rogers. Mrs. Moncrieff's tentative identification of the bird as an Oriental Pratincole (*Glareola maldivarum*) is confirmed by an examination of the specimen. It is an adult male in good plumage, the dimensions in

the flesh being: Wing 180 mm., Tail 66 (total), Tarsus 32, Middle toe and claw 25, Culmen 14.5.

On first consideration this appears to be a new record for New Zealand, but it has prompted a re-examination of the evidence for the inclusion of the Australian Pratincole (*Stiltia isabella*), first recorded by Buller (1898), with further elaboration in 1905, and since repeated in all published lists of New Zealand birds. Buller was advised of the securing of the specimen at Westport by Mr. William Townson, and it is clear from the text of Townson's letter quoted by Buller that the bird was in fact *Glareola maldivarum* and not *Stiltia isabella*. "Black line bordering the buff-coloured throat" and the "scarlet margin to the gape" are clear enough to be completely diagnostic. This means that the Australian Pratincole must be expunged from the New Zealand list and the Oriental Pratincole substituted with two records as far apart as 1898 and 1959. It is interesting, however, to note the additional comment by Townson that he heard of a party of five being seen on the beach at Westport a few days after the shooting of the 1898 specimen.

These occurrences are another interesting example of the drift to New Zealand of Asiatic breeding birds migrating regularly to Australia. Most of the high-flying insect-hawking forms common in Australia during the southern summer have now been recorded intermittently in New Zealand.



NARRATIVE OF A VISIT TO THE NEWLY- DISCOVERED EMPEROR PENGUIN ROOKERY AT COULMAN ISLAND, ROSS SEA, ANARCTICA

By H. J. HARRINGTON

DISCOVERY OF THE ROOKERY

The New Zealand Geological and Survey Antarctic Expedition of twelve men left Port Lyttelton on the heavily-laden ice-breaker U.S.S. *Staten Island* on 22nd November, 1958. After a very stormy passage and slow progress in difficult pack-ice a rendezvous was made with the ice-breaker U.S.S. *Glacier* near the south end of Coulman Island on 6th December.

It was planned that the New Zealand expedition would be landed in two parties in the vicinity of Terra Nova Bay and Wood Bay. The ice-breaker U.S.S. *Glacier*, carrying Captain E. S. McDonald, Deputy-Commander, U.S. Naval Support Force, Antarctica, was to assist in the landing operation. The *Glacier*, which was already in Antarctic waters, left *McMurdo Sound* a day after the *Staten Island* left Lyttelton to reconnoitre landing sites and helicopter flying conditions in the Terra Nova Bay district. At Terra Nova Bay a wide lead was found extending northwards and was followed to Coulman Island, where the ship waited several days for the *Staten Island*. During the waiting period a helicopter was flown over the summit of the island near its southern

end. Another helicopter was flown around the island photographing its shores, and the pilot discovered a large Emperor Penguin rookery on the sea-ice near the north-west corner of the island. Two United States biologists who were passengers on the U.S.S. *Glacier*, Messrs. John Dearborn and Hugh Dewitt, were flown to the rookery, and spent about an hour there. They estimated that the population, very roughly, was about 33,000 breeding pairs (pers. comm.). It is apparently the tenth Emperor Penguin rookery to be found, and one of the largest. The discovery caused considerable excitement, and news of it was obtained from Captain McDonald when he flew to the U.S.S. *Staten Island* from the U.S.S. *Glacier* on 6th December.

SECOND VISIT

Permission was given for a party of six men to fly to the rookery that evening from the *Staten Island* to do about twelve hours' work, while the ship moved slowly through pressured pack-ice towards the U.S.S. *Glacier*. The party consisted of Dr. W. Sladen, a British medical officer and biologist who had studied penguins for two years with the Falkland Islands Dependencies Survey, the United States biologist, R. Penney, who was en route to Wilkes Station to study the Emperor Penguins there; the British medical officer and physiologist Dr. R. Goldsmith; the ship's photographer, J. Premzic; and the New Zealanders, E. B. Fitzgerald and the writer. The rookery was circled several times by the helicopter so that Premzic could take photographs, and the party was then landed in two flights at 9 p.m. Work started immediately, with the biologists and photographer banding and observing the birds, while Fitzgerald and the writer commenced a survey and census of the rookery, and made a hasty examination of the geology of the adjacent cliffs. At "mid-night" snow began to fall and at 9 a.m. the following morning development of a storm made further work impossible. Fortunately, we had with us an emergency two-man tent, food, fuel and cooking equipment, and were able to shelter in reasonable comfort despite a lack of ground-insulation and crowding. (The bottom layer of men in the tent became quite lyrical at times in demanding a reversal of positions with the upper layer.) Our only real worry was that the ship's officers might be unduly concerned about our safety, and in fact two attempts to fly helicopters to the camp were made shortly before the storm had eased completely. The weather cleared on the afternoon of 8th December, and work had just restarted at 3 p.m. when two helicopters arrived from the ice-breakers and the party was returned hastily to the ships.

OBSERVATIONAL RESULTS

Coulman Island is a pear-shaped basaltic dome elongated in a meridional direction. It is 19 miles long, 8 miles wide at its southern end, and 4 miles wide at its northern end, which is called Cape Wadworth. At its larger southern end the dome is surmounted by a large ice-filled crater and tuff-ring rising to 7,500ft., but the greater part of the island is covered by an ice-cap flowing to very steep sea-cliffs 1000ft. to 3000ft. high, which completely surround the island. The penguin rookery is distributed over sea-ice for half a mile to two miles from the base of the cliffs on the west side of the island about 2 miles south of Cape Wadworth.

Snow-covered sea-ice completely filled the channel between Coulman Island and the terminal face of the Lady Newnes Ice Shelf 20 miles to the west, and ended to the north on a line from Cape Wadworth to Cape Jones, which is the nearest point on the mainland 8 miles to the north-west. This large continuous area of ice was dotted with bergs broken from the ice shelf in the previous summer, but was unbroken by leads, except near the junction with the Lady Newnes Ice Shelf, where many seals, presumably Weddell Seals, were lying beside a few narrow cracks several miles long. An area of open water extending for 10 miles or more north of the line joining Cape Wadworth and Cape Jones was the feeding area for the Emperor Penguins, and the food supply in it must be very large for no Emperor Penguins were observed foraging further afield among the sea-ice and open leads to the east and north.

The penguin rookery lay 2 to 3 miles south of the sea-ice edge, and the birds were not distributed haphazardly but in a series of fairly distinct arcs or irregular loops. Each arc consisted of dense clusters of birds (creches) linked by thinner lines of birds moving to and fro along the length of the arc. There was no traffic radially from one arc to another. The base of the innermost and smallest arc was surveyed by theodolite and chain, was a mile long and was half-a-mile from the foot of the cliffs of Coulman Island. A second arc looped outwards from the extremities of the inner arc, and further arcs and loops of birds extended outwards more irregularly and less distinctly for 2 to 3 miles. The position of the inner-most arc can be explained because it marked the edge of an area of knee-deep soft snow extending leeward from the cliffs of the island. Probably also, the birds do not congregate closer to the cliffs because of the risks of ice and snow avalanches. The pattern of outer arcs and loops was not so clearly related to the occurrence of patches of soft snow, but was possibly more directly related to broad low undulations and pressure waves in the sea-ice. The lighting during our visit unfortunately approached "white-out" conditions, so that the occurrence of pressure waves could not be verified by eye, but it seems possible that the birds were congregating on the crests of broad low pressure waves up to two feet high in the same way as Adelie Penguins congregate on beach hummocks and ridges at their nesting sites.

At several places the thickness of the firm snow cover over hard sea-ice was found to be about 30 inches and layers of droppings and snow crusts compacted by the birds occurred within it at intervals of a few inches. This indicates that half-a-dozen storms occurred during the nesting season, and it is possible that Emperor Penguins require nesting areas where snow accumulates during storms, rather than areas where snow is removed by wind. Certainly during the storm that we encountered the birds clustered together more closely, and the chicks were almost completely buried by snow, only their beaks being visible. The heads of the adults were showing, when raised. Probably the chicks could easily keep warm beneath the blanket of snow, whereas they might freeze if exposed to prolonged high winds, and this protection is probably most important after the chicks reach the creche stage, especially if both parents are away feeding when a storm occurs. As we left the rookery the adults and some chicks were surfacing and long lines of adults were forming and moving head to tail towards the sea for feeding.

On the soft new surface they were all sledging and not walking.

Before the storm the inner arc of birds was surveyed by theodolite and chain, and the second arc was surveyed by pace and compass methods. The number of chicks in representative creches along each arc was counted. By multiplication and crude estimates of the size of the remaining arcs the population of chicks in the whole rookery was estimated as 50,000, thus agreeing as well as can be expected with the snap estimate of 33,000 breeding pairs made by Dearborn and Dewitt. In several creches the numbers of adult birds and chicks were counted, and the percentage of chicks ranged from 80 per cent. to 90 per cent. of the total at different sites.

About 200 chicks at the northern end of the second arc were banded on the flippers by the biologists. Goldsmith also measured the body temperatures of chicks by causing them to swallow minute thermocouple thermometers and connecting wires, which they did without apparent injury, or even interest in the activity. One chick was killed for food, and its stomach contents were examined by Sladen. Several chicks and adults were collected and taken to the U.S.S. *Staten Island* for further studies, being hand-fed by Sladen, Penney and Goldsmith. After voyaging around the Ross Sea the chicks were changing to adult plumage and were thriving when we last heard of their progress several weeks later.

Several Adelie Penguins were noticed wandering in a lively and aimless manner in the rookery before the storm, and their reaction to the regally impassive Emperor chicks was very amusing. One Adelie in particular for a long time tried to jump above the level of an Emperor chick's head, at the top of each jump uttering a belligerent "arrk," but was quite ignored by the chick, which merely stared at the horizon in a meditative way.

After the party returned to the ice-breakers, attempts were made to obtain a more accurate census of the population of the rookery. A helicopter was fitted with an aerial camera, and made a flight over the rookery to take vertical aerial photographs. Fitzgerald assembled the photographs, but found that the runs did not overlap, and that they covered only part of the rookery so that they were unsatisfactory for census purposes. Later, at McMurdo Sound, arrangements were made for vertical aerial photographs to be taken by a P2V Neptune photo-reconnaissance aircraft on a flight from McMurdo to Hallett Station and the Tucker Glacier on 4th January, 1959. However, no photographs could be taken, the pilots and other observers reporting that open water extended from Coulman Island to the Lady Newnes Ice Shelf, and that the rookery had disappeared.

COMMENTS ON FURTHER WORK

It is inevitable that biologists will attempt more extended work at this rookery, but it will be difficult to achieve, and great caution should be exercised in planning it. Access by sea during the breeding season is possible only by ice-breaker, and the fact that during our visit the U.S.S. *Glacier*, the most powerful and modern ice-breaker in the western world, damaged both propellers so severely that it had to return to Wellington for their replacement, is a measure of the difficulty of approach by sea. Several ships, including two ice-breakers, have been damaged

in the last few seasons in the heavy pack-ice on the Coulman Island-Cape Hallett coast. An approach overland or by sea from the McMurdo Sound district is impracticable, if not impossible. An approach from Hallett Station along the coastal sea-ice would be very difficult because the sea-ice in that region is in a chaotically pressure-ridged state, the ridges being closely spaced, and rising commonly to more than 12ft. in height. In that type of terrain it would be foolhardy to attempt to use over-snow motor vehicles. Borchgrevink, in the spring of 1900, attempted to sledge down the coast from Cape Adare to the Possession Islands over similar sea-ice with dog teams, and found progress almost impossible. Even if dog teams succeeded in getting south from Cape Hallett, it would probably be found that access to the rookery was cut off by the area of open water between Coulman Island and Cape Jones which probably opens every year quite early in the breeding season. A determined and experienced party might be able to take dog teams overland from Cape Hallett via Football Saddle and the Whitehall Glacier. In the 1957-58 season the writer travelled over part of this route, and observed that it would be difficult to take sledges over the lower northern end of Whitehall Glacier where it joins Tucker Glacier. The use of dog teams near a penguin rookery is of course not to be encouraged for obvious reasons. Essentially the most practicable means of approach is by air, using R4D aircraft from McMurdo, or alternatively Otter aircraft or large helicopters from Hallett Station, but air approach would have hazards that might not be accepted by pilots and others, and would not put biologists in the field at the start of the breeding season in winter. If a party does succeed in getting to the rookery for an extended period of work, it will face problems in establishing a secure camp until it can be removed by sea later in the season, or until it can return overland to Hallett Station via the Whitehall Glacier. The rookery extends westwards from the cliffs of Coulman Island. The cliffs are steep, and at their base there are only short narrow stretches of "beach" which consist of steep cones of rock that have fallen from the cliffs and avalanche chutes above. All beaches were apparently menaced by avalanches from ice bluffs at the tops of the cliffs and no suitable camping area was noticed. In fact geological work on the cliffs was done very rapidly after we noticed one of them swept by a large ice avalanche a few minutes after we landed. A suitable camping area could be found however, on snow slopes to the west and south of Cape Jones, 6 to 7 miles from the rookery. It should be noticed also that the sea ice at the rookery had disappeared when a P2V aircraft reconnoitred the area on 4th January. It would seem that brief visits might be possible at times on an opportunist basis, but that attempts to do extended work are unjustified at present, especially as many of the biological problems can be studied more easily at Wilkes Station, or at Cape Crozier. There is a possibility of building a hut at Cape Crozier to provide a winter base for studying both the Emperor and Adelie Penguin rookeries there (as Dr. E. A. Wilson intended to do on Scott's second expedition).

OTHER EMPEROR PENGUIN ROOKERIES IN THE ROSS SEA

The rookery at Cape Crozier was studied by Dr. E. A. Wilson during the two Scott expeditions early in this century.

Captain J. Cadwallader of the U.S. Naval Support Force informed

me that a group of roughly 100 Emperor Penguins had been noticed on the sea-ice as the U.S.S. *Glacier* passed Cape Washington and the entrance to Wood Bay en route to Coulman Island, late in November, 1958. He agreed that this might indicate that there is an Emperor Penguin rookery in the vicinity of Wood Bay, in addition to the Adelie Penguin rookery on the north flank of Mt. Melbourne. He added that in earlier seasons he had noticed groups of a dozen or more Emperor Penguins in the vicinity of Marble Point in McMurdo Sound, which suggested that there might be other small Emperor Penguin rookeries along the Victoria Land coast. In the 1957-58 season he had noticed an Emperor chick, still partly in down, on an ice-floe in McMurdo Sound, and he did not see how it could have drifted there from Cape Crozier or Coulman Island.

In the narrative of the National Antarctic Expedition of 1901-4, Captain Scott and Dr. E. A. Wilson recorded that many thousands of Emperor Penguins were observed from a distance on sea-ice near the junction of King Edward VII Land and the Ross Ice Shelf. So it is likely that a large rookery exists in that area. Scott also noticed from the vicinity of Cape Jones, that there were many penguins on the ice near the north-west end of Coulman Island, but did not investigate the occurrence closely.

Flights from McMurdo Sound by photo-reconnaissance aircraft, at dates recommended by biologists, would be the most effective way of searching for new rookeries, and obtaining a record for census and other purposes of the known Emperor and Adelie Penguin rookeries in the Ross Sea. The aircraft could make one high-level sweep over each rookery to obtain general vertical aerial photographs, and another lower-level sweep to obtain vertical photographs for census purposes. The height of the lower sweep could be calculated in advance, as a function of the height of a penguin and the focal length of the camera lens, to ensure that individual penguins could be distinguished and counted.



NOTES ON THE BIRDS OF THE POOR KNIGHTS ISLANDS

By F. C. KINSKY and R. B. SIBSON

During the last decade much has been written about the birds of the outer islands of the Hauraki Gulf and reports on ornithological investigations on Little Barrier, Mokohinau and Hen and Chickens have appeared from time to time in *Notornis*. The Poor Knights, however, perhaps because of their general inaccessibility, have hardly been mentioned at all; and for many years the only authoritative account of the avifauna of this distinctive group has been a couple of papers (*Emu* 41. 56-58 and 45. 315-318) by Major G. A. Buddle, who camped on Aorangi in December, 1938 and November, 1940, and on Tawhiti-Rahi in January, 1943. We found these two papers an invaluable guide and they are likely to remain so for all future visitors to the Poor Knights who are interested in their natural history. In January, 1956,

the Auckland University Field Club spent a week at the islands, as a result of which Bruce Chambers published some useful notes in *Tane* (Vol. 7. 66-67). In 1958 Messrs. B. D. Bell and D. Graham were put ashore at the southern end of Aorangi on August 4th and taken off and transferred to Tawhiti-Rahi on August 6th, but were only able to stay for two days. Mr. Bell kindly offered us his notes and asked us to include them in this paper.

The Poor Knights lie in a north-south line about sixteen miles off the coast of Northland and due east of Tutukaka. There are two main islands, Tawhiti-Rahi (318 acres) rising to a plateau nearly 600ft. a.s.l., and just to the south of it Aorangi (163 acres), which at its highest is 680ft. a.s.l. Close to the two big islands are several rugged islets; and a few miles to the south are the three Poor Knights' Rocks, one of which is a gannetry, and Sugarloaf, which is also a gannetry (v. *Notornis* V. 51-53). Since Buddle's visits ecological changes have occurred on both the big islands. The last pigs on Aorangi, reminders of the former Maori occupation, were exterminated in 1936 and Buddle noticed a remarkable improvement in the return to natural conditions even between his two visits in 1938 and 1940. About 1923 the southern portion of Tawhiti-Rahi was burnt, but the ravaged area is now deep in a vigorous, resurgent vegetation.

Here, with Dr. O. F. Lamb and twelve boys from King's College, we were able to spend five days, Dec. 17-21, 1958; permission to land and camp having been courteously granted by the Commissioner for Crown Lands at Auckland. Sailing from Tutukaka at 6 a.m. on Dec. 17th in Hugh Going's deep-sea fishing-launch, *Kitty Vane*, we were going ashore on Tawhiti-Rahi by 8 a.m. Most of the coast of this island rises in sheer cliffs from deep water and there is hardly a vestige of a beach; but the landing is not difficult — unless a nor-wester is blowing — in a bay near the southwest corner of the island, where a steep but easily climbable slope interrupts the line of abrupt cliffs. Without a doubt, this was the landing-place most commonly used by mutonbirders during the Maori occupation of Aorangi. Camp was pitched amongst the sheltering scrub of a hanging valley, near the place where the one stream on the island goes over a 60ft. cliff in a waterfall. Thanks to a wet spring and the choking of its bed with flax, there was a steady run of water in the stream. During its last ten yards before it plunges over the cliff, the rocky stream bed has evidently been hollowed in a succession of holding pools, which proved most helpful. In a dry season there is said to be no water in this stream. This would be a cogent reason why there was no permanent Maori settlement, but the early Maoris were evidently frequent visitors, for flakes of obsidian were commonly found and stones appeared to have been piled to form crude walls, as on Hen Island.

The portion of the island which was burnt a quarter of a century ago lies to the south of the stream. Toetoe now dominates the slopes which rise gently from the stream to the top of the cliffs from which one looks across the intervening channel to Aorangi. The acres of toetoe seed-heads, waving in the breeze or bending under the weight of eager Red-fronted Parakeets were a pretty sight, not easily forgotten. Interspersed among the toetoe are flax, ngaio, koromiko, cassinia, bracken, mingimingi, native broom and a few small cabbage-trees. Near the

southern cliff top are scattered dense patches of Poor Knights' Lily and wind-stunted kanuka. Scattered pohutukawa and karo already 10-12ft. high and rising above the other plants give some indication of what trees will eventually dominate this slope. Although compared with the rest of the island it is still open country, we found no sign of the Brown Quail or Skylarks which Buddle reported.

North of the stream the island rises steadily to the plateau. Pohutukawa forest covers most of this slope. Parapara is quite common and, to judge by the abundance of seedlings, will become more so. There are also mahoe, karaka, houpara, kohekohe, wharangi, tawapou, towai. A big-leaved kawakawa is plentiful and of the twiggy shrubs *Suttonia divaricata* forms dense patches. Whau and Scotch thistles have colonised a small slip.

We scarcely reached the plateau proper, much of our time being spent on the slopes leading up to it. Here under the bigger trees where the soil is soft and the shearwaters find easy burrowing, extensive areas are almost devoid of ground vegetation. Tuataras are extraordinarily plentiful. On one excursion there was scarcely a niche among the boulders or a burrow in which we did not find one. Most of our ringing of Buller's Shearwaters was done here; yet despite the persistent searching of a team of schoolboys whose energy seemed inexhaustible, we were unable to find a burrow in this area occupied by any other species of petrel.

Several species which may usually be found on the northern offshore islands are rather surprisingly missing from the Poor Knights. They are: Morepork, Kaka, Pigeon, Grey Warbler and Silvereye, all of which are reasonably common on the Chickens Islands some twenty-five miles distant. The Tui is only a casual visitor, Mr. E. G. Turbott having once noted one there. The lack of suitable landing beaches may explain the absence of the Little Blue Penguin. Nor have some of the European passerines which are so common on the mainland, yet succeeded in establishing themselves. The southern portion of Tawhiti-Rahi now appears to be an ideal habitat for the Hedge-Sparrow, but we were unable to find it there. Skylarks may have bred for a few years after the fire, but have evidently been driven away by the robust regeneration of the native flora. Another surprising absentee, since it is firmly established on the Chickens, is the Chaffinch. Yet as we sailed up Tutukaka harbour in the evening after an absence of five days, two of the most striking sounds for an ornithologist's ear were the songs of Chaffinch and Hedgesparrow, coming clearly across the water from the forested shores.

The sea being very calm on Dec. 20th, Dr. Lamb took us in his out-board driven dinghy on a trip right round the southern island, Aorangi. No landing was made as a drizzle was setting in. Numerous Red-fronted Parakeets were flying about the cliffs. South-east of Aorangi between the two outliers Mammoth and Aorangaia, we had the unique experience in N.Z. of cruising within a few feet of three Tasmanian Muttonbirds as they sat on the unruffled sea among Red-billed Gulls. On Dec. 21st our stay on Tawhiti-Rahi was cut short by the threat of bad weather, which did indeed materialise just as we got ashore from *Kitty Vane* at Tutukaka a little before dark.

LIST OF SPECIES

FAIRY PRION. In August, Bell noted them as coming ashore in moderate numbers on both islands. We saw plenty at sea. Buddle reported very small numbers on Tawhiti-Rahi and we succeeded in finding only one downy chick, which had a damaged wing that appeared to have been chewed. Few were coming in at night. Aorangi evidently is still the main breeding island.

FLESH-FOOTED SHEARWATER. Fairly plentiful at sea. No evidence that any were coming ashore on Tawhiti-Rahi.

BULLER'S SHEARWATER. None seen by Bell in August. On our two crossings these shearwaters outnumbered all other species of petrel put together. All the best slopes on Tawhiti-Rahi are honeycombed with their burrows and we believe that the aggressiveness of *bulleri* is the reason for the scarcity of other breeding petrels on this island. Burrows are often shared with tuataras and the partnership is not always a peaceful one. On one occasion we came upon a *P. bulleri* and a tuatara matched in fierce combat. The tuatara was severely torn about the neck. On another occasion we found a large tuatara lying dead on a slope riddled with burrows.

On the ground *P. bulleri* is nimble and swift. We sometimes found these shearwaters moving about by day, leaving their burrows and gliding down to the sea. Recolonisation of the once burnt area is going on, some burrows being among flax and toetoe rather than in the soil. Competition for good nesting sites must be keen, for many eggs are found exposed and punctured. The contents always seem to have been cleanly eaten. The hole in the side of some empty shells was not big and looked as if it might have been made by a bird's beak.

The average of twelve eggs measured was 64.2 x 42.9 m.m.; maximum length 69.9, minimum length 58.8; maximum width 45.5, minimum width 40.9. Buddle's average for fourteen eggs, 66 x 43.5, was slightly larger than ours. All Buddle's eggs were longer than 60 m.m.; two of ours were shorter.

The first incoming shearwaters in the evening appeared before 8 p.m. At first they were very silent. Generally about an hour elapsed before they became noisy. Some birds were sitting in burrows without eggs. One bird found incubating in a burrow near our camp on Wednesday morning had not been relieved on Saturday. The number of adult Buller's Shearwaters which were banded was 152.

SOOTY SHEARWATER. Chambers reported one coming ashore at night. We found a bird with an egg in a tunnel between big boulders above our landing. The bird, which was sitting on Wednesday morning, was relieved by its mate on Friday night. In the course of investigating hundreds of burrows we found no others.

TASMANIAN MUTTON BIRD (*P. tenuirostris*). On the evening of 20/12/58 three were seen sitting on the sea just off the south-east

corner of Aorangi. They were among Red-billed Gulls, and in the dinghy we approached literally within two yards of them. Even at a distance their size, colouration and slender bills marked them as something different from the shearwaters which are normally seen in N.Z. waters. When we forced them to fly by nosing the dinghy right up to them, they did not go far. The increasing number of these shearwaters reported dead from the beaches of the Hauraki Gulf and the Bay of Plenty seems to indicate that they are regular summer visitors to these waters.

FLUTTERING SHEARWATER. Only moderate numbers seen at sea. Buddle found several well-grown young on Aorangi; but failed to locate any on Tawhiti-Rahi. We were no more successful.

ALLIED SHEARWATER. The Poor Knights are not mentioned in the Checklist in the list of known breeding-islands of this rather elusive bird. A single corpse of the robust race *aurakiensis* was found up near the plateau. Also found were two eggshells, whose contents had been eaten, not hatched, and whose condition was consonant with their having been laid some months previously. Their measurements, 51.2 x 38.15 and 53.05 x 37.7 m.m., agree closely with those given by Oliver for eggs of *assimilis* from Mokohinau. These small shearwaters being winter-breeders might get away to a good start on Tawhiti-Rahi but find it hard to maintain possession of their burrows when the powerful Buller's Shearwaters returned in the spring. In August, Bell, who had met with the Allied Shearwater on the Alderman Islands, heard calls on Aorangi which he thought might be coming from these shearwaters.

We are not entirely happy that the two small eggs which we found belong to *P. assimilis*. In some respects they resemble the eggs of a *pterodroma*, especially *cooki*. They are too large for *Pt. pycrofti*.

GREY-FACED PETREL. Buddle was able to find only one on Aorangi. In August Bell was surprised that he neither saw nor heard any. It was our turn to be surprised when we failed to find a single chick or any sign of incoming adults at dusk, though at the Hen and Chickens chicks are plentiful at this season. Even these large petrels may be unable to stand up to *P. bulleri* on its chosen stronghold.

PYCROFT'S PETREL. Buddle records the finding of a scattered colony near the centre of Aorangi. At night we heard a few soft 'titi' or 'kek-kek' calls which may have been made by Pycroft's Petrels.

WHITE-FACED STORM PETREL. Not recorded in August by Bell. Buddle captured one on Aorangi. Chambers mentions that one was attracted by the campfire on Tawhiti-Rahi. We saw a few at sea, not enough to indicate a large local breeding population.

DIVING PETREL. On Aorangi Buddle found them nesting near the cliff-tops, and Bell reported fair numbers coming ashore around the coast. On Tawhiti-Rahi we found the old remains of several

at Harriers' plucking or roosting places. At sea they were quite numerous.

GANNET. The numbers seen on the two crossings hardly suggested colonies of the size reported (*Notornis* 5. 51-53) on Gannet Stack and Sugarloaf. Apart from single birds only one small string was seen.

Single Gannets habitually visited our bay, which was often teeming with fish. One day when a big school of blue maomao was near the surface, a Gannet appeared cruising round the cliffs at about 100ft. The maomao seemed to spot the Gannet and would dive in a flurry of spray as their tails whisked the surface. The Gannet did not waste time diving after them; nor did it seem interested in shoals of big trevally and of other bright red fish near the surface.

PIED SHAG. Not mentioned by Buddle. Chambers reported two and Bell one. We counted six on the rocks between the two main islands. It is likely that they are visitors from Tutukaka where there is a flourishing colony near the entrance to the harbour.

REEF HERON. Bell found one on the northern end of Aorangi.

HARRIER. A nest containing one youngster and three addled eggs was found among flax and toetoe. On the adjacent slope were several plucking or roosting places, from which it was possible to form some idea of what the Harriers were eating, though most of the remains were old. There were many tails and claws of the Giant Weta (*Deinacrida heteracantha*), one small Tuatara (c.9 inches), one parakeet, one Fairy Prion and at least four Diving Petrels. The immediate neighbourhood of the nest was very clean. No remains of either of the two geckos (*H. pacificus* and *H. duvauceli*), which are common on the island, were found.

BANDED RAIL. Buddle found these rails on Tawhiti-Rahi and proved that they bred there. From the tangled stream-bed one evening we heard creaky calls that sounded like Banded Rails.

SPOTLESS CRAKE. Buddle stressed the rarity of this small dusky rail on Tawhiti-Rahi as compared with its abundance on Aorangi. The A.U. Field Club were lucky to find two or three pairs on the northern island, but quickly located six pairs on Aorangi. Brian Bell, in August, had fleeting glimpses of one crane on each island. In our party only Julian Bell had the opportunity of watching one, as it fossicked on the open forest floor under pohutukawas about 150ft. above the landing.

BLACK-BACKED GULL. None was seen during trips round the islands in the dinghy. A single adult visited our bay just as we were leaving.

RED-BILLED GULL. None breed. Flocks appear over shoaling fish and seem to be specially attracted when the water is thick with protoplasmic ribbons of ova, as it was on December 20th.

WHITE-FRONTED TERN. Chambers recorded a single straggler.

Bell noted a few roosting on rocks off each island. We saw two. There are no breeding colonies of any size on the outer islands of the Hauraki Gulf.

RED-FRONTED PARAKEET. During our stay many were feeding on the seedheads of toetoe which has sprung up in such profusion on the once-burnt area. Sometimes at the passing of a Harrier, 40-50 could be seen in the air together. These acres of toetoe were attracting parakeets also from Aorangi. Many parakeets appeared to be in family parties and it is likely that the main breeding season was past. Few were seen in the pohutukawa forest. Holes in trees suitable for breeding are scarce and we concluded that on the Poor Knights most of the parakeets must breed in holes among the rocks or on the cliffs.

Flax pods had already been stripped. These insular parakeets are fond of feeding on the short shore plants which thrive within reach of the salt spray. One was watched as it ate the centres out of the flowers of the native ice-plant (*Mesembryanthemum australe*).

KINGFISHER. There were certainly two pairs and possibly three on the southern part of Tawhiti-Rahi. A single bird was seen at the southern end of Aorangi.

PIED FANTAIL. Not recorded by Buddle or by us. One was reported by Chambers and three by Bell from near the top of Tawhiti-Rahi.

PIPIT. Buddle found a "few pairs" frequenting the burnt area. Bell recorded Pipits from both islands. The only one we saw rose from the cliffs to mob a passing Harrier.

BELLBIRD. All visitors to the Poor Knights have commented upon the abundance of Bellbirds. We found Bellbirds in all types of country. There was little song. A late nest was found in rather an interesting situation. It was close to the ground in the dead leaves at the heart of a flax plant, completely covered and with a small entrance. It contained a chick about four days old and one addled egg. In the gloom of the forest a Bellbird was seen searching for food on the forest floor and at first was mistaken for a Spotless Crake!



INTRODUCED BIRDS

SONG THRUSH. Bell saw one on Aorangi. One was sometimes singing near our camp on Tawhiti-Rahi.

BLACKBIRD. According to Bell, they are present in small numbers on both islands. We found that on Tawhiti-Rahi, as on other offshore islands, they are shy, and did not force themselves on either eye or ear. In the end, four singing males were located, though song was fading and infrequent.

STARLING. Four were the most seen together, though Bell mentions 'small flocks.'



[Photo by F. C. Kinsky

XVII YOUNG HARRIER AND THREE ADDED EGGS in a nest on Tawhiti-Rahi, Poor Knights. A few pairs of Harriers breed on the small outer islands of New Zealand.

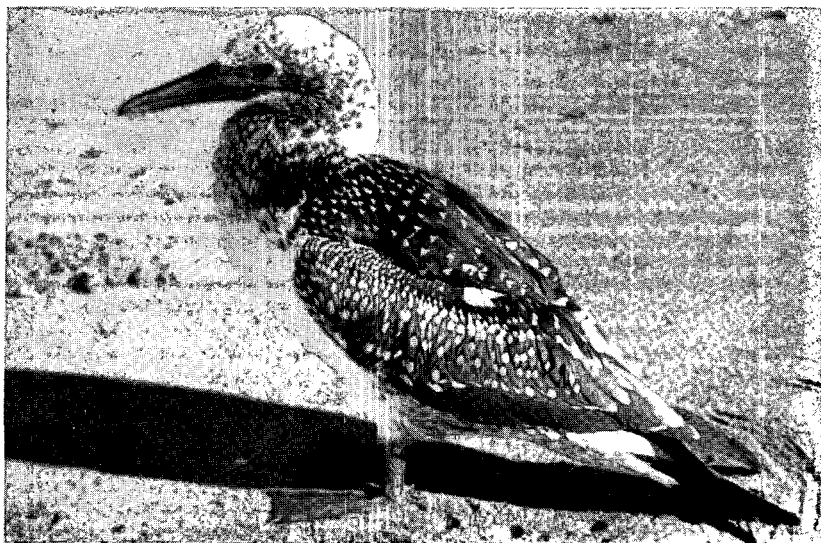


XVIII BULLER'S SHEARWATER, called the Grey-backed Shearwater, in Alexander's Birds of the Ocean, at its nesting burrow on Tawhiti-Rahi. These large shearwaters breed in immense numbers on the Poor Knights.
 (Photo by F. C. Kinsky)



[Photo by F. C. Kinsky]

- XIX On Tawhiti-Rahi Tuataras are very numerous and habitually share the same burrows as the Buller's Shearwater. The length of the largest Tuatara measured was 25 inches.



XX **Top:** YOUNG GANNET ASHORE in January at Sandy Bay, Northland. This picture shows the plumage in which young Gannets leave the nest and set out on their journey across the Tasman Sea to Australian coastal waters.

[Photo by T. G. Ledgard

Bottom: VIEW FROM A HELICOPTER of the outermost arcs of Emperor Penguins at the rookery on Coulman Island, 6/12/'58.

[Photo by J. Premzic, U.S.N.

STOMACH CONTENTS OF A
NORTH ISLAND KIWI
(*Apteryx australis mantelli*)
FROM THE RAETIHI DISTRICT
By P. C. BULL *

INTRODUCTION

The following details of the stomach contents of a kiwi from the Raetihi district supplement the information supplied by Gurr (1952) who reported on the stomach contents of a kiwi from near Waihi and also summarised the limited information then available on the food of the North Island kiwi.

The present bird, an adult female weighing 2450g., was killed by dogs on 24th November, 1956; the body was sent to the Dominion Museum. Being unsuitable for mounting, the specimen was made available to Dr. F. B. Shorland (Fats Research Laboratory, D.S.I.R.), who was studying the nature of fat deposits in various animals. The stomach of the bird was supplied to the writer and the skeleton returned to the Dominion Museum.

In the laboratory, the stomach was cut open, the contents scraped into a petri dish, and the volume of the main constituents measured by displacement. Food items that seemed sufficiently complete to be identified were sorted into tubes and sent to specialists. The remaining material was examined under a binocular microscope for the presence of earthworm chaetae.



RESULTS AND DISCUSSION

The stomach contained about 70 cc. of material of which about 40 cc. was identifiable insect remains (Table 1). The balance consisted of small fragments of rock and wood, shells from two large native slugs (*Schizoglossa novoseelandica*), remains of a spider (*Porrhothele antipodiana*), 2 hinau seeds (*Elaeocarpus dentatus*), a leaf of *Coprosma tenuifolia* and a considerable quantity of finely divided plant and animal remains among which were numerous earthworm chaetae. Cicada nymphs (70) formed the main food item, but the stomach also contained the remains of at least 51 beetles of various kinds (7 of them adult, the rest larvae), 10 moth caterpillars, 2 fly larvae and a weta.

Qualitatively, the stomach contents of the Raetihi kiwi resemble those of the bird reported on by Gurr but the slugs, the Tenebrionid beetles and the Tipulid larvae are new records. The Waihi material had been washed prior to examination so no earthworm chaetae were found, but Gurr quotes Buller as having found several earthworms in kiwis from the Pirongia Ranges. The Raetihi bird contained no large pieces of earthworm, but the presence of numerous chaetae, only visible with the microscope, indicated that earthworms had been eaten recently. The present bird also differs from Gurr's one in the great preponderance of cicada nymphs and scarabaeid larvae.

It is clear from the information now available that the North Island kiwi eats a wide range of animal and plant material, some of it, berries for instance, presumably being obtained from the surface of the ground rather than from under it. This probability should be taken into account by anyone planning to use poisoned baits for the control of noxious animals in areas where kiwis occur.

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ACKNOWLEDGEMENTS

The author's part in the present contribution was small. The stomach was supplied through the courtesy of Dr. R. A. Falla (Dominion Museum) and Dr. F. B. Shorland (Fats Research Laboratory, D.S.I.R.), and the main work, that of identifying the items found in the stomach, was undertaken by several specialists. The insect remains were identified by Messrs. B. B. Given, E. S. Gourlay, D. C. F. Perrott and Dr. J. S. Timlin (all of Entomology Division, D.S.I.R.), the slugs by Dr. R. K. Dell (Dominion Museum), the spider by Dr. R. R. Forster (Otago Museum), the leaf and seeds by Miss Ruth Mason (Botany Division, D.S.I.R.), the earthworm chaetae by Mr. K. E. Lee (Soil Bureau, D.S.I.R.) and wood and rock fragments by Dr. J. J. Reed (Geological Survey, D.S.I.R.). The author records his sincere thanks to all these people.

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REFERENCE

Gurr, L.: 1952. Some Food of the North Island Kiwi (*Apteryx australis*).
Notornis 4: 209-10

* Animal Ecology Section, D.S.I.R., Wellington

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OBITUARY — LADY GUNSON, O.B.E.

We regret to announce the death at the age of 82 of Lady Gunson. After a busy life of public service, Lady Gunson joined the Ornithological Society in 1946. Whenever she was able, she attended the annual meetings and enjoyed the excursions which followed them. Those who met her on such occasions will remember her especially for her enthusiasm. Despite her three score years and more than ten, she would climb the slippery tracks through the beech forests above Wellington's eastern bays and in 1953, when a tremendous southerly was blowing in the Wairarapa, she defied the atrocious weather and battled her way along the beach to see a huge sperm whale which was stranded there.

The appeal of birds to her was mainly aesthetic. When the Fiordland Wren was discovered and specimens reached the Dominion Museum, she asked in her gentle way that she might be allowed to make sketches of them. An ardent conservationist, she believed that all New Zealand children should receive instruction in the natural history of their native land and that such knowledge would make them better citizens.

In remembering her with affection, the Ornithological Society offers its sympathy to Sir James and his family.

— R.B.S.

TABLE 1
IDENTIFICATION OF STOMACH CONTENTS
INSECTS

Order and Family	Subfamily or Tribe	Genus	Stage	No. of Specimens	Identified by
ORTHOPTERA Tettigoniidæ	Stenopelmatinæ	Probably <i>Onosandrus</i>		1	E. S. Gourlay
HEMIPTERA Cicadidæ	Tibicininæ	?	Nymphs	70	D. C. F. Perrott
COLEOPTERA Carabidæ	Pterostichini	<i>Megadromus</i>	Adult	1	E. S. Gourlay
"	Broscini	<i>Mecodema</i>	"	1	
"	Pterostichini	<i>Holcaspis</i>	"	1	
"	?	?	"	1	
Elateridæ	?	?	"	1	
"	?	?	Larvæ	?*	B. B. Given
Tenebrionidæ	?	?	Adult	1	
"	?	?	Larvæ	?*	
Scarabæidæ	Melolonthinæ	<i>Costelytra</i>	Adult	1	
"	"	"	Larvæ	31	
Lucanidæ(?)	?	?	"	6	
LEPIDOPTERA Hepialidæ	?	?	"	4	J. S. Timlin
Agrotidæ	?	?	"	6	
DIPTERA Tipulidæ	?	?	"	2	D. C. F. Perrott

* Some of the Elaterid and Tenebrionid larvæ could not be separated; the total for these two groups together was 7.

OTHER MATERIAL

MOLLUSCA	<i>Schizoglossa novoseelandica</i>	—	2	R. K. Dell
ARACHNIDA	<i>Porrhothele antipodiana</i>	—	1	R. R. Forster
OLIGOCHÆTA		chætæ	many	K. E. Lee
PLANTS	<i>Elæocarpus dentatus</i>	seeds	2	R. Mason
	<i>Coprosma tenuifolia</i>	leaf	1	R. Mason
Wood fragments	—	—	12	J. J. Reed
Rock Fragments	Sandstone		2	J. J. Reed
	Pumice		1	
	Spherulitic rhyolite		1	

ANNUAL MEETING

The Annual General Meeting was held in the lecture theatre of the Canterbury Museum, Christchurch, on the evening of May 15th. In the absence of the President, who was a sudden victim of influenza, the chair was taken by Dr. R. A. Falla. About fifty members were present, including representatives from as far afield as Northland, Auckland, Westland, Otago and Southland.

A full programme of business, which reflected the healthy state of the society's various activities, occupied the early part of the evening. After an interval for supper, members were shown the Edgar Stead Hall of Birds under the proud and expert guidance of Mr. E. G. Turbott.



NINETEENTH ANNUAL REPORT FOR THE YEAR 1958 - 59

OFFICE-BEARERS FOR THE YEAR

President: Mr. P. C. BULL

N.I.V.P.: Dr. R. A. FALLA

S.I.V.P.: Mrs. L. E. WALKER

Secretary: Mr. G. R. WILLIAMS

Treasurer: Mr. H. R. MCKENZIE

Editor: Mr. R. B. SIBSON

Assistant Editor: Mr. A. BLACKBURN

Members of Council: Mrs. O. SANSOM, Mr. E. G. TURBOTT
Mr. J. C. DAVENPORT

After the last Annual General Meeting the office of North Island Vice-President was left unfilled. Therefore Council (as empowered by the Constitution) appointed Dr. R. A. Falla to this office and filled the place his elevation left among Council members by Mrs. O. Sansom. An Assistant to the Editor was decided on by Council and Mr. A. Blackburn was appointed. This was very convenient, because he lives in Gisborne, where *NOTORNIS* is at present being printed. We are grateful to Mr. Blackburn for accepting this post (which, by the way, does not include membership of Council).

As demanded by the Constitution, three members of Council retire at this Annual General Meeting. These are Mrs. O. Sansom, Mrs. L. E. Walker and Mr. J. C. Davenport. Nominations were called for to fill these vacancies and the following were received: Mrs. L. E. Walker, Mr. J. C. Davenport and Mr. A. Blackburn. No ballot was therefore needed and I have much pleasure in declaring these three elected. The Society is much indebted to Mrs. O. Sansom, who retires from Council this year and who did not seek re-nomination. She has given long and valuable service to the Society as well as to Council, and I should like to thank her wholeheartedly on behalf of us all.

Council and Society business was carried on by six Council Circulars during the year. Among the matters dealt with were: Appointment of Regional Organisers, Printing of *NOTORNIS*, preliminary plans for the publishing of a Society's Field Guide to the Birds of New

Zealand, and arrangements for holding this Annual General Meeting (for the facilities for which we are very much indebted to Dr. R. S. Duff, the Director of the Canterbury Museum, Mr. E. G. Turbott, the Assistant-Director, and Mr. J. R. Jackson, the Regional Organiser for Christchurch). Other matters dealt with by your Council were making of preliminary plans for the 1959 Study Week-end, the Society library and, as always, finances. This list by no means exhausts the topics. You will hear the outcome of much of the Council's work as this meeting proceeds.

There has been an increase in membership this year and it is interesting to see what has happened to our membership over the last ten years. It has increased by exactly 300 but the rate has not been even. In the first five-year period the rate of increase averaged 55 a year. But over the last five years the rate has dropped to such an extent that the gain of new members over deaths and resignations has averaged only six per year. A large drop in membership between 1954-55 and 1955-56 is mainly responsible for this poor average.

Over the ten-year period ending 1957-58, Ordinary Members have increased at the rate of 17 per annum, Endowment Members at 7 per annum and Life Members at 4 per annum. The discrepancy some of you may notice between this total of 28 and the total yearly average of about 30 is accounted for by the small number of Junior Members.

This financial year, thanks to the Presidential Appeal, and as you will hear in some detail from the Treasurer, there has been a remarkable increase in Endowment Members who now, for the first time since the Endowment Membership scheme was introduced ten years ago, almost equal the number of Ordinary Members.

The Society enters its new financial year in good heart. We are sure all Members will make a special point of fostering membership of this Society, so increasing the standard, scope and intensity of the study of ornithology in New Zealand.

The Society is grateful to Mr. B. D. Bell, Mr. P. C. McNab and other Blenheim members for making our first Study Week-end a success. This has encouraged us to plan for another this year.

G. R. WILLIAMS, Hon. Secretary



TREASURER'S REPORT, 1958 - 59

The membership of the Society has increased to 784, being Hon. Life 1, Life 70, Endowment 330, Ordinary 354 and Junior 29. Of these, 33 are in arrears and 15 are resigning as at 31/3/59. 50 new members joined during the year.

Our financial position is now good and we have been able to increase the size of our journal "*Notornis*." The change to Te Rau Press Ltd. at Gisborne has been most satisfactory in regard to the printing price. The Ringing Report for last year was so large that to print all of it was felt to be beyond our resources. However, we were most fortunate in receiving a £40 grant from the Dominion Museum

enabling us to print in full. We are very grateful for this fine gesture. Another great help to us, for which we tender sincere thanks, was the taking over of the purchase of all metal rings used in our ringing scheme by the Wildlife Branch of the Internal Affairs Department. The rapid growth of the ringing scheme could hardly have been maintained on our own resources.

The sale of back numbers of "*Notornis*" and of other publications is being vigorously pursued by Mr. J. C. Davenport and has added £40/19/9 to the profit this year.

The Christmas Card Scheme has again been successful and will be reported on by Mr. B. S. Chambers.

The Presidential Appeal for 1958-59 has succeeded in its object of getting us out of our immediate financial difficulties. The figures shown do not quite agree with the accounts for 1958-59 as some members anticipated the Appeal and made payments towards it in the 1957-58 year. Life subscriptions and endowments from the Appeal, plus £13/1/- from Appeal donations, made up £200 which was invested at 5 per cent. The members who increased their subscriptions from 10/- to £1 and 5/- to 10/- have made up an extra £69, practically accounting for the profit shown for the year. Donations from all sources were £144/15/5. £13/1/- was transferred for investment, leaving £131/14/5. This has been kept apart for the time being to meet extra expenses, and, if necessary, to meet general costs until the subscription is raised. It is felt that the Appeal, in postponing an increase in the subscription, has enabled members of modest means to continue in the Society. Many thanks are due to all who have helped, particularly to those who gave large amounts.

Our thanks are due again to Messrs. Chambers, Worth and Chambers for auditing the books free of charge.

H. R. McKENZIE, Hon. Treasurer



ANNUAL REPORT OF THE LIBRARY, 1958-59

During the year, 73 separates have been added to the library, and periodicals received on exchange have continued to come regularly.

Twenty-seven items were borrowed during the year by members.

Circulation of journals has continued, and there are four circuits now operating.

I wish to express my deep appreciation of the work that Miss M. McIntyre has done during the past few months. She has devoted a considerable amount of time to the library and much work has been done that would otherwise have been impossible.

Perhaps it would be an appropriate time to mention some of the library's needs. We shall soon need another bookcase. Mr. Sibson made two, which we thought would be ample for a considerable time, but with so many journals coming in regularly, the space soon gets eaten up. It is not a matter of immediate urgency, but it would be desirable to have another case within the next year. Also, the catalogue

cards are housed in shoe boxes. These are quite satisfactory from a functional point of view, but not from an aesthetic one. I'm sure the Society's library committee would consider shoe boxes hardly worthy of its library, so if at any time the Society (or some generous member of it) feels it could run to steel drawers (cost £3/17/6) it would be very nice.

ENID A. EVANS, Hon. Librarian



NEST RECORDS SCHEME

Annual Report for Year Ending 31st March, 1959

Accessions this year compared favourably with 1958. As will be seen, there are now nearly 1,700 records and several new species have been added to the list. Dr. M. F. Soper and Mr. D. Merton deserve special mention for each supplying more than 100 cards. Mr. E. W. Crack supplied more than 50 records from 3 acres in Ashburton County. Contributors for the year and present accessions respectively follow as under:—

Miss M. R. Trower, Miss P. M. Lewis, Mesdames L. E. Walker, A. Secker, Messrs. H. R. McKenzie, F. W. Behrent, Dr. M. F. Soper, D. J. Lewis, E. W. Crack, H. L. Secker, B. D. Bell, B. Swale, P. Morrison, D. Arthur, N. Ewing, D. Merton, I. Hogarth, R. St. Paul, W. R. Silcock, W. T. Parham, J. R. Jackson, P. D. G. Skegg, N. B. MacKenzie.

Stewart Island Kiwi (1) Great Spotted Kiwi (1) Yellow-eyed Penguin (4) Little Blue Penguin (12) White-flipped Penguin (7) Fiordland Crested Penguin (1) Little Grebe (1) Fairy Prion (4) Fluttering Shearwater (5) Fleshy-footed Shearwater (1) Grey-faced Petrel (4) Diving Petrel (3) Gannet (3) Black Shag (11) Pied Shag (4) Little Black Shag (1) Little Pied Shag (1) King Shag (5) Spotted Shag (1) Reef Heron (7) White-faced Heron (4) Bittern (2) Mute Swan (2) Black Swan (11) Paradise Duck (3) Grey Teal (9) Brown Duck (2) Grey Duck (9) Mallard (7) Shoveler (3) Black Teal (3) Harrier (34) Bush Hawk (2) Pheasant (4) Californian Quail (5) North Island Weka (3) Pukeko (15) Black Oyster-catcher (10) Variable Oyster-catcher (5) Pied Oyster-catcher (15) Spur-winged Plover (2) Banded Dotterel (43) N.Z. Dotterel (17) Pied Stilt (48) Black-backed Gull (39) Red-billed Gull (11) Black-billed Gull (14) Black-fronted Tern (8) Caspian Tern (3) Fairy Tern (2) White-fronted Tern (30) Bush Pigeon (3) Rock Dove (43) Kaka (1) Red-fronted Parakeet (2) Shining Cuckoo (2) Morepork (1) Kingfisher (11) Rifleman (2) Skylark (27) Fantail (34) Pied Tit (8) Yellow-breasted Tit (2) Northern Robin (10) Southern Robin (1) Brown Creeper (1) Whitehead (4) Grey Warbler (23) Songthrush (313) Blackbird (267) Hedgesparrow (52) Pipit (13) Bellbird (7) Tui (5) White-eye (39) Greenfinch (36) Goldfinch (137) Lesser Redpoll (20) Chaffinch (42) Yellow hammer (15) House-sparrow (51) Starling (56) Mynah (5) White-backed Magpie (7).

H. L. SECKER, Organiser

BALANCE SHEET AS AT 31st MARCH, 1959

150

LIABILITIES		ASSETS	
Sundry Creditors	110 18 0	Cash Bank of New Zealand ..	6 0 2
Subscriptions in advance ..	43 0 0	Cash Post Office Savings Bank	400 0 0
Provision for Index for Vol. 8	12 0 0	Sundry Debtors	29 19 0
	165 18 0	Subscriptions in arrears, estimated to produce ..	9 0 0
Life Subscriptions and Endow- ments Reserve Account—			444 19 2
Balance 1/4/58	240 5 0	Stocks on hand:	
Add paid 1958-59 (Appeal)	146 14 0	Printing and stationery ..	28 5 0
From Donations	13 1 0	"Notornis" back numbers, Re- ports & Bulletins, Sundry publications	450 19 6
	400 0 0		479 4 6
General Reserve:		Plant at cost less Depreciation	
Balance 1/4/58	589 8 6	Addressograph & Accessories	17 4 10
Add further stock brought in	4 17 0	Library, Purchases to date ..	27 17 8
Add Presidential Appeal Fund Donations	130 12 8	Investments (Life Subs. & Endowments):	
Add excess of income over expenditure	78 10 0	Auck. El. Pwr. Brd., Stock, 1969 at cost	200 0 0
	803 8 2	Auck. El. Pwr. Brd., Stock, 1970 at cost	200 0 0
			400 0 0
	£1369 6 2		1369 6 2

NOTORNIS

Vol. VIII

INCOME AND EXPENDITURE ACCOUNT FOR YEAR ENDED 31/3/59

EXPENDITURE		INCOME	
Printing "Notornis"	389 17 7	Subscriptions for year ..	500 4 4
Less Grant Dominion Museum	40 0 0	Add arrears estimated to produce	9 0 0
	349 17 7		509 4 4
Postages	59 0 11	Blenheim Field Week-end, Surplus	23 18 2
Printing and Stationery ..	35 11 7	Profit on sale of back numbers of "Notornis," etc.	40 19 9
General Expenses	30 2 5	Interest	22 9 9
Cost of Ringing Scheme less donations, £4	37 12 9		
Depreciation	5 16 9		
Excess of income over expenditure	78 10 0		
	596 12 0		596 12 0

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

D. N. CHAMBERS, Auditor.

INCOME & EXPENDITURE ACCOUNT

EXCURSIONS

The pleasant custom now seems to be firmly established that the members of the host city arrange local excursions on the two days which follow the annual general meeting. This year the thanks of the visitors go to Graham Turbott and Dick Jackson, whose careful planning enabled them to see something of the great numbers of shore-birds and wildfowl which in winter haunt the Canterbury lagoons and estuaries.

On the morning of May 16th, while there was a kindly break-in the prevailing gray, it was possible from the comfort of cars to watch the waders and ducks in the Heathcote-Avon estuary as a rising tide pushed them first towards the shores and then to a central sandbank. As we were driven round the estuary, the cars drew up near a long line of ducks, more than half of which were Shovelers. Next we walked out to the spit, disturbing a flock of Banded Dotterels and noting with interest a group of ten Pied Shags, visitors perhaps from Motunau. This is a species which seems to be regaining the ground lost by persecution. Unfortunately the full tide was not quite big enough to dislodge the 4000+ Pied Oystercatchers and 400+ Godwits from their central roost. To northern eyes 60+ Black-fronted Terns were especially attractive. Shags, of course, were numerous and among them one Little Pied Shag perhaps merits mention. Foreign fowl, too, were well to the fore. Many Mallard and Black Swans and a single Mute Swan were enjoying the sheltered waters of the estuary. Shag Rock was not exactly adorned by a couple of White-backed Magpies. Flocks of feral Rock Doves were passing along the cliffs of Banks Peninsula. Goldfinches and Redpolls were flitting from one bed of *salicornia* to another. As the tide fell, at least fifteen White-faced Herons flew down and stalked among the ducks and the few Pied Stilts.

At noon the sun disappeared and a freshening southerly brought a return of the raw weather. Visits to the Waimakariri at the bridge, at Brooklands and near the estuary added nothing to the morning's tally.

Though Sunday morning broke cold, wet and blustery, a gratifying muster of members reported at 9.30 a.m. for an excursion towards L. Ellesmere. Four Rooks near Halswell were greeted with cheers. It was a relief to the sentimental to know that some of the famous Canterbury colony had not succumbed to 1080.

As the shooting season was not yet finished, impressive flights of Black Swans and one skein of Canada Geese were not unexpected. Widespread floods had attracted large numbers of Black Swans and a few Paradise Ducks. Two groups of White-faced Herons about a mile apart contained 39 and 27 birds. Lunch was taken in the shelter of a surviving patch of the once rich forest of Bank's Peninsula. Bellbirds and a Black Fantail were a change from the birds of the marshes. There were many enigmas for the botanically minded.

When Birdling's Flat was reached, two Spartans were unable to resist the call of beachcombing and from a walk to the base of the cliffs, returned with the remains of a Yellow-eyed Penguin and six young Sooty Shearwaters. This season many young Muttonbirds have been driven ashore, dying of starvation as they start their northward migration.

Meanwhile the rest of the party were watching the thousands of

wildfowl which were sheltering on L. Forsythe, but the cutting wind did not help observation from a stony railway embankment. Shovelers were plentiful and a single Grey Teal showed up in flight. An early afternoon tea was taken at Hilltop, after we had passed through a wet snow storm to get there. One car-load decided to push on to Akaroa, as a result of which the organiser of ringing saw his first Brown Creeper. It was feeding in a silver birch with Silvereyes and Redpolls. On the Akaroa side of the pass a common percher on jetties and rafts was the Spotted Shag. Every inlet had its quota of White-faced Herons so that the day's tally for this progressive species was over ninety. In fact they outnumbered the Pied Stilts of which only one flock of about fifty birds was seen.

As we motored back past L. Forsythe in the gathering dusk, it was estimated that 1600 Canada Geese were now grazing over the marshy turf. It had been a rewarding week-end for those who were prepared to face sub-antarctic conditions, in search of the birds of shore, lake and estuary.

—R.B.S.

★

SHORT NOTES

KINGFISHERS EATING BLOWFLIES

One or two pairs of Kingfishers (*H. sanctus*) may usually be found about Ball's Clearing, Puketitiri. They have been seen eating tadpoles, worms, skinks and blowflies. On 15/6/57 one was found dead under a clothesline. The stomach contained at least seven crushed blowflies. Not long after another was found drowned in a drum of sour milk over which it had been seen regularly catching blowflies.

PAM M. LEWIS

[Oliver (1955) in a lengthy note on the varied diet of the Kingfisher in New Zealand calls the bird omnivorous, but does not mention blowflies among the prey taken. However, in his book 'Focus on N.Z. Birds, Moon has a photograph (p. 65) of a Kingfisher bringing a blowfly to the nest. Ed.]

★

EXHAUSTED NELLY FED BY HAND

On 3/12/58 a Giant Petrel (*M. giganteus*) came in on the tide at Orua Bay, South Manukau Heads. It was very weak but eagerly took some piper and sprats from fishermen who were drawing a net. After that it became very tame, so that when it was called, it came up to our bach for scraps and fish. Often it just waited around for a feed.

On December 6th it flew again for the first time, using the head-wind to take off. It did not go very far and was quickly exhausted. As it walked up the beach, it sat down for a rest every few yards. It became so tame that it would take fish from our hands and made no attempt to peck.

On December 7th it was flying about much more, but it came in for a feed of fish from the net and took all it was offered. Later some children joined the Nelly, which was just sitting, not interested.

S. C. RUTHERFURD

BANDED RAILS AT COLLINGWOOD

The Banded Rail (*R. philippensis*) is acknowledged to be a scarce bird in the South Island and a perusal of the classified summarised notes in *Notornis* reveals only four reports in recent years, the localities being Weheka in South Westland (1949), Takaka (1953), Onekaka (1953) and Picton (1955). The following note therefore may be of some interest.

In January, 1958, I spent a week with my family at Collingwood, which is situated on a spit at the mouth of the Aorere. This river, together with some other streams, reaches Golden Bay through an extensive delta of marsh and saltings. Towards dusk, when the rollicking calls of Wekas (*Gallirallus australis*) became more frequent on the scrub-covered slopes above the estuary, my wife and I used to walk beside the saltings and invariably we heard creaky calls "swit swit," such as we would unhesitatingly have attributed to Banded Rails if we had heard them coming from the mangroves or saltmarsh vegetation of northern New Zealand. The call which has been likened to the creaking of a fence-wire when someone puts his foot on it, has considerable carrying power and on still evenings we were able to hear it at 200-300 yards. The calls usually began about 8 p.m., while the last Thrushes and Blackbirds were still singing, and increased as night came on. On one walk I estimated that I heard at least eight birds, and six were calling at the same time.

Although we were unable to get a single glimpse of a Banded Rail, I have no doubt about the correctness of our identification, which is supported by the specimens from Takaka and Onekaka, only a few miles away. Two encounters with Wekas are perhaps worth recounting. One was seen to cross a road at dusk and to make for the tideline. Another was found swimming in a quiet backwater. However, no Wekas were heard calling from the saltings proper and it would appear that *rallus* and *gallirallus* are co-existing, without serious competition or overlap of habitat, *rallus* in the tidal marshes and *gallirallus* among the scrub of the drier country.

Along the coast of Golden Bay there is plenty of saltmarsh and estuarine cover suitable for Banded Rails, so that this elusive bird may well be more numerous than is suspected in the northern part of the South Island.

R. B. SIBSON



CAPE PIGEON TAKING FOOD FROM HAND

Late in the winter of 1958 a solitary Cape Pigeon (*Daption capensis*) used to come to a beach near Whangarei Heads seeking fish offal with Red-billed Gulls. It became so tame that it would eat from my hand. When the feed was over, it would fly away strongly to open water.

L. W. DELPH

[This bird probably lost its fear of man in more southerly waters; where, like the Fulmars (*Fulmarus glacialis*) in the north Atlantic, Giant Petrels and Cape Pigeons are tending to concentrate more and more around fishing vessels and whaling stations, attracted by supplies of easy food. Ed.]

SPARROW'S FISHY END

On 30/7/58 a large kahawai was caught off the wharf at Orua Bay. When it was opened for cleaning, several crabs were found inside, and also a whole sparrow (*P. domesticus*) recently swallowed, feathers, claws and all.

S. C. RUTHERFURD



SEDENTARY BEHAVIOUR OF AN ALBINO STARLING

An albino Starling (*Sturnus vulgaris*) has been consistently seen at Tikokino, Hawkes Bay, since August, 1956, that is for two and a half years. It is without doubt the same bird, as I have seen no other albino among the many flocks of Starlings that visit the farm. The strange thing is that during all that time I have never known the bird to frequent more than three paddocks, in all an area of about 100 acres. During January and February, 1959, I could guarantee to see this bird by day at any time that I cared to look. Of course, it was impossible to say whether it was the flock numbering about a thousand birds that kept to these strict territorial limits or the bird itself which might have joined any flock that had been visiting the area. Unfortunately, I had not the time to spend on a lengthy watch on this bird, to study its movements at dawn and dusk or to find out where it roosted.

R. W. STEVENS



LETTER

Sir,

May I correct an error which I made inadvertently over the date when I photographed the Kiwi in Stewart Island? It was not in August but in September, 20-23 inclusive.

I would like also to make one comment on the sex of the bird in the burrow. If, as I understand, it is the male that has the high-pitched screaming call (the female's call being hoarser), then it was definitely the male that called from outside the burrow each night and the female which came out of the burrow and answered with the hoarser note.

M. F. SOPER

Queenstown.

REGIONAL ORGANISERS

If you are seeking information on the ornithology of your district consult your Regional Organiser.

Each R.O. has a roll of his members and can put visiting members in touch with them.

FAR NORTH: Mr. D. G. McMillan, *c/o* District High School, Kawakawa.

NORTHLAND: An appointment is pending.

AUCKLAND: Mr. R. A. Ringer, 39 Powell St., Avondale Auck. S.W.3.
'Phone 87-634.

SOUTH AUCKLAND: Mr. H. R. McKenzie, Box 45, Clevedon, 31 D.

WAIKATO: Vacant.

BAY OF PLENTY: Mrs. R. V. McLintock, 90 Edgecumbe Rd., Tauranga.

ROTORUA - TAUPO: Vacant.

GISBORNE - WAIROA: Mr. A. Blackburn, 10 Score Rd., Gisborne.

TARANAKI: Vacant.

WANGANUI: Rev. H. W. Austin, 89 Karaka St., Castlecliff.

MANAWATU: Mr. E. Dear, Kopane R.D., Palmerston North.

WAIRARAPA: Mr. Keith Cairns, 37 Waltons Avenue, Masterton.

WELLINGTON: Dr. K. E. Westerskov, Wildlife Branch, Internal Affairs Dept., Box 8007, Wgtn. Office 'phone 70-279 Ext. 75.

MARLBOROUGH: Mr. L. K. Clark, Middle Renwick Rd., Springlands, Blenheim.

NELSON: Mrs. S. C. Webber, 74 Halifax St., Nelson. 3552.

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CANTERBURY: Mr. J. R. Jackson, 153 Sparks Rd, Christchurch, S.W.2.

OTAGO: Mr. B. A. Ellis, 30 Middleton Rd., Dunedin, S.W.1.

SOUTHLAND: Mrs. O. A. B. Smith, 1 Home St., Winton. 297.

STEWART ISLAND: Mr. R. H. Traill, Half Moon Bay, Stewart Island.

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:— J. C. Davenport, 5 Belfast Street, Hillsborough, Auckland S.E.5.

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.

CLASSIFIED SUMMARISED NOTES

Contributors are reminded that the year for these ends on June 30th; and they should be in the hands of the Editor or Regional Organisers by August 31st.

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