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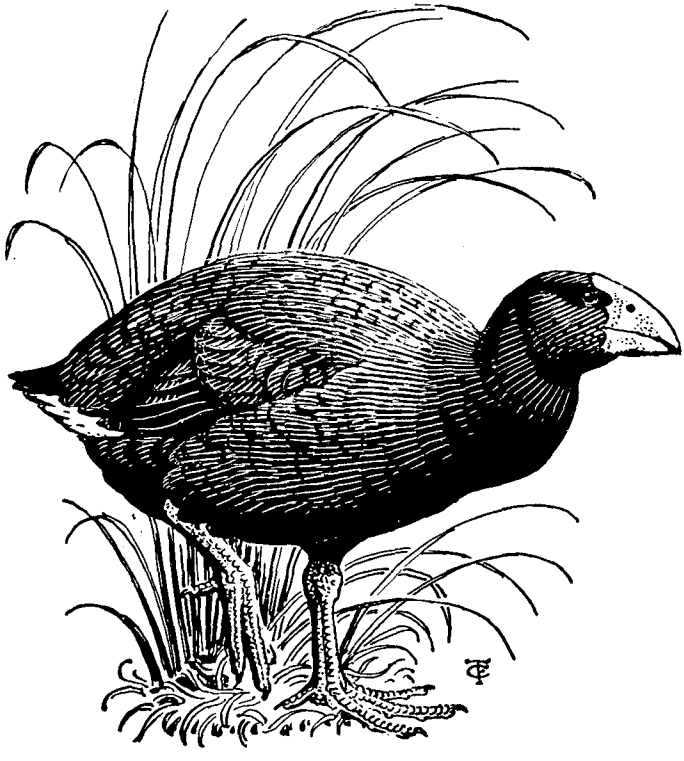
NOTORNIS



BULLETIN OF THE ORNITHOLOGICAL SOCIETY
OF NEW ZEALAND.

PUBLISHED QUARTERLY.

NOTORNIS

In continuation of New Zealand Bird Notes.

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CONTENTS.

OFFICERS, 1954-55.—Members will have received the notification required by the society's constitution calling for nominations for the positions of president, treasurer and secretary. These positions will be vacated by the present holders at the next annual general meeting, subject to their eligibility for re-election.

ANNUAL GENERAL MEETING.—In accordance with the council's recent decision, this year's general meeting will be held in Auckland on the evening of Friday, May 21, 1954. Full details of place and time and also of the field excursions will be notified later. It had been hoped to hold the meeting in Dunedin, but the gathering of scientists in Auckland from May 17 to 21 for the Science Congress of the Royal Society of New Zealand made the latter city a more convenient choice.

ELEVENTH INTERNATIONAL ORNITHOLOGICAL CONGRESS. This will be held at Basel, Switzerland, from May 29 to June 5 1954. The Society will be officially represented by Mr. E. G. Turbott. Any member who will be in Europe at that time and could attend the Congress is invited to write to the secretary, Mr. F. M. Brookfield, for details.

THE MAHUKI GANNET COLONY.

By R. V. Roberts, Wellington.

In the October, 1952, issue of "Notornis," No. 14, page 54 is an account of the Mahuki gannet colony by C. A. Fleming and K. A. Wodzicki. As I made a visit to the colony on the afternoon of January 7, 1953, the following notes may be of interest. The gannets were approached from the landward side via the narrow promontory which connects the colony with the grasslands of the island. About half an hour was taken from the time we first saw the birds until we were resting on the narrow isthmus watching the birds at close quarters. All hats and coats were removed so that there would be nothing to frighten the birds. As only one person approached the colony at any one time the precautions taken resulted in a series of very interesting photographs, the gannets taking no notice of the human invaders.

On the occasion of my previous visit to the colony on December 26, 1950, a landing was made from the seaward side, and by the time we reached the plateau all of the birds that could fly had left, leaving only a few young birds in the down stage. There were no eggs in any of the nests. The birds at that visit were wild in the extreme. Dr. W. M. Hamilton, in his report of a visit on 27/12/1946, stated that the gannets were extremely wary on that date

On January 7, 1953, the birds were still sitting close on eggs, young were seen from the "powder-puff" stage right up to immatures able to fly; three of the latter were seen in the air over the colony. We counted the birds and got a tally of just over 800 gannets, including all the young birds that we could actually see not covered by the adult bird. I estimated that there may have been 40 young birds not counted, as I had a closer look later. Photographs showed an equal number of young and adults and on this basis I estimated a total of over 1200 birds in the colony, excluding "unemployed" birds which were away from the colony during the day—perhaps 1400 birds in all.

In December, 1951, a landing was not made but I passed the colony several times until the first week in January and made several counts of the birds. The largest number estimated at 7 p.m. one evening was 1100, working on an "area" basis. It would appear that there has been a good increase in the colony this season. Further developments will be watched with interest.

Many nesting sites were not occupied and it is clear that at one time the colony must have contained at least 2000 birds. The Maoris told me that many years ago the young birds were taken each year and potted in their own fat in casks, but this practice died out when casks were no longer available. Many of the young birds were fed while we watched. I noticed that in each case a red-billed gull flew close overhead and hovered until the adult gannet flew away. The gull then quickly dropped down and snatched any food dropped on the ground. At the same time the young gannet and others in the vicinity made a lunge at the gull without actually pecking it. This attitude of animosity against the red-billed gull manifested itself at other times as I witnessed many lunges towards a gull flying low overhead.

No gannet with eggs left the nest unguarded for a second. None of the birds was disturbed, however, as not one of us went through the colony. Only one "display" of adult birds was noted. The pair stretched their necks out upwards to their full extent and with wings half closed extended them outwards at right angles to wave slightly while they made queer throaty noises. Bills were rubbed together smartly several times and the birds went back to the position with the neck stretched upwards to the full.

SPREAD OF THE AUSTRALIAN MAGPIE WITHIN THE ROTORUA ACCLIMATIZATION DISTRICT.

By Kaj Westerskov.

Wildlife Division, Department of Internal Affairs.

When McCaskill in 1945 published his detailed account of the distribution of the Australian magpies (**Gymnorhina hypoleuca** and **G. tibicen**) in New Zealand, there was only one record of magpies in the Rotorua Acclimatization District, namely from Wairoa ("At least one pair of birds in the township"). In Phillipps and Lindsay's preliminary list of the birds of the Rotorua Acclimatization District (1948) two more records were added, from Whakatane, 1946, and the Taupo district, 1946. Since then the magpie has been recorded from a number of different places within the district.

The spread pattern of New Zealand birds should prove extremely interesting for the understanding of general bird distribution problems especially as there are few places in the world today where such extensive bird introductions have taken place as in New Zealand. Although most of the passerine birds were introduced long ago and today seem to have reached their maximum distribution under present conditions, the magpie has—in spite of being introduced a long time ago—not yet spread very widely. The whole volcanic plateau, almost entirely embraced within the boundaries of the Rotorua Acclimatization District, seems to have been devoid of magpies until very recently.

A documentation of the occurrence of the magpie within the Rotorua Acclimatization District up till the end of 1952 may prove of some value years ahead when further extension of the range of the species may be recorded and spread routes discovered. There seem already to be four or five distinct magpie inroads into the district and it will be interesting in the future to see to what extent the spread pattern here visualized might be followed.

One of the unique characteristics of the present New Zealand avifauna composition is an almost complete lack of predators to control birds like the magpie (the New Zealand falcon seems very rarely, if ever, to be able to catch and kill a magpie). The spread of the magpie, therefore, seems determined more by presence of suitable habitat and food than by environmental pressure (from predators or from allied species).

During my stay in the district for more than a year, I have travelled by car fairly widely within the area; also the staff and field officers of the Rotorua Acclimatization District have been approached regarding occurrence of magpies in the various subdistricts; valuable information has also been received from nine members of the Ornithological Society of New Zealand. Mr. Peter Logan, of the Wildlife Division, supplied the information about the presence of magpies in the Kaimanawa Ranges which he knows thoroughly from repeated explorations during 1948-1952.

I am greatly indebted to Dr. C. A. Fleming and Mr. F. L. Newcombe for reading through the manuscript and for valuable suggestions. The author gratefully acknowledges all help received.

1952 Distribution in the Rotorua Acclimatization District.

All the available information has been plotted on the distribution map, Fig. 1. Since the one occurrence recorded in 1945 (Wairoa), the magpie has spread and seems to be invading the district from four or maybe five quarters.

The routes followed seem to be (a) the Tongariro-Kaimanawa route, (b) the Napier-Taupo road, (c) the Wairoa-Galatea route, (d) the Gisborne-Opotiki route, and (e) possibly a route from the west into the Rotorua area. A further possible route is northwards around East Cape and south-westward along the Bay of Plenty coast.

(a) The Tongariro-Kaimanawa Route.

The first record of magpies in the south-western corner of the district is from the Kaimanawa Mountains where, in 1946, one was seen at an altitude of 4,000ft. (M. Johnson, N.Z. Bird Notes, 2 (1), 1946, p. 16.)

The spread of magpies in the Kaimanawa Ranges has been documented in detail by P. Logan, who first went into the ranges in November 1948 and was last through in May 1952. Although some of these observations were made outside the Rotorua Acclimatization District boundary, they are included here as well as on the map, Fig. 1. The Kaimanawa Ranges are a large system of mountains and it was found of value to have the present distribution of the magpie dealt with for the whole area.

According to Logan, magpies are increasing throughout the ranges though they are mainly confined to the areas surrounding permanent and old established huts. Magpies were not recorded around tent camps of the deer cullers operating in the area. Colonies throughout were small, and six was the highest number ever seen together. From memory, Logan states that they were mainly black-backed magpies.

The individual observations were as follows: Ngamatea Homestead, November 1948, magpies plentiful, extending over grassland; Log Cabin, November 1948, plentiful extending to Tararau and Cameron; Mansen Hut, December 1948, found along the tops; Hogget Top, December 1948, found along bushedge and tops; Golden Hills, January 1949, extend through to Gold Creek; Boyd Hut, November 1949, along bush edges; Kaimanawa Hut, January 1949, along hush edge, creek and tops; Forked Spurs, January 1949, along bush edge and into Mangamaire; Motumatai Hut, December 1949, along bush edge and adjacent basins; Mt. Michael, January 1949,

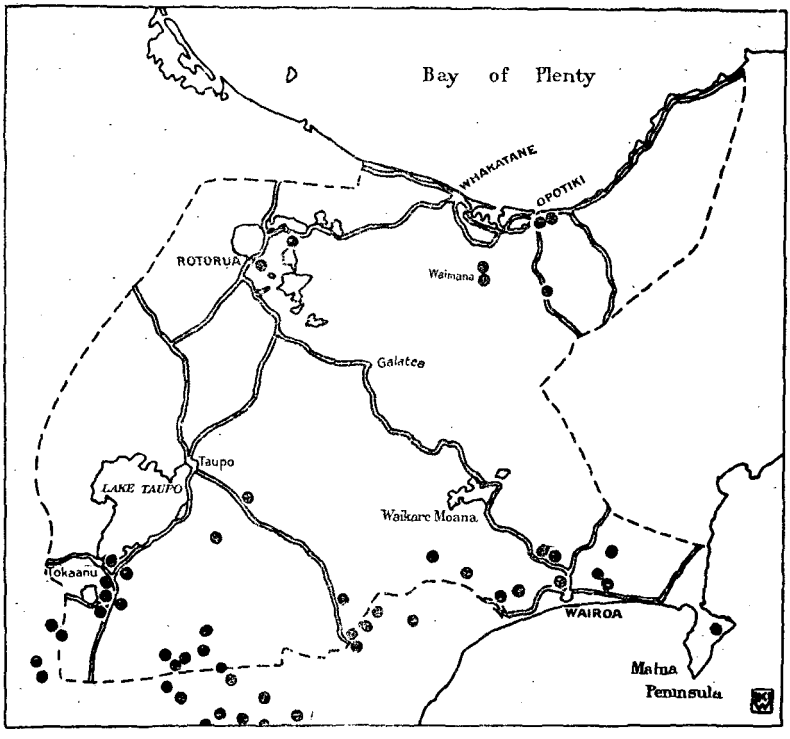

Fig. 1—Distribution in 1952 of the Australian magpie in the Rotorua Acclimatization District.

along west side, at bush edge and tops; Cameron tops, November 1948, along bush edge; Kuripapanga Homestead, November 1948, throughout district; Tiki Tiki Bush, December 1949, from bush edge to river; Lowry Hut, June 1950, magpies found throughout.

During 1948-49 on several occasions magpies were seen at the Poronui bottom homestead right on the bush edge; the homestead is situated in the Taharua Valley, about two-thirds of the way down the Taharua River (P. Logan).

At the Chateau, Tongariro golf links, two magpies were seen 15/10/47 (R. H. D. Stidolph, N.Z. Bird Notes, 3 (4), 1949, p. 106). They were reported numerous near the Chateau 23/3/50 (L. W. McCaskill, Notornis, 4 (3), 1951, p. 59). Mr. Gordon V. Gow, of Walton, reports (in litt., 27/4/52) that in October 1951 he noticed about a dozen magpies at the Chateau. On several occasions during 1952 I have seen groups or single magpies around the Chateau.

Eight magpies were seen at 3,700ft. at Waihohonu Stream, near the base of Ngaurohoe on 2/4/49 (B. Davis, N.Z. Bird Notes, 3 (8), 1950, p. 220).

In March, 1952, several magpies were seen near Salt Hut on Mt. Ruapehu, altitude approximately 5,600ft. (F. L. Newcombe).

In the Turangi-Tokaanu area, a pair of magpies was seen daily during March/May 1952, and magpies have been seen regularly since near the State Hatchery, three miles south of Turangi. On 25 May 1952 two magpies were also seen on the Rangipo Prison Farm, where I also have seen them regularly since. Magpies were also seen on several occasions in the autumn of 1952 at the delta of Tongariro River. Mr. M. J. S. Black, of Rotorua, has informed me (in litt. 28/4/52) that two magpies were seen at Turangi as early as 3/6/51 by Messrs. H. Smith and Frank Jones.

By 1952 magpies were also present on the Hautu Prison Farm on the north-western side of Tongariro River (T. P. Fisher).

The magpies present in this area have come either from south-west (National Park area), from the Kaimanawas, or from the south in the Waiouru-Taihape area where they are very common; (on 19/5/53 I saw 56 magpies in one flock in a pasture about 10 miles north of Taihape).

Further spread of the magpie in this area will be aided by the opening up of new land from Tokaanu towards Taumarunui. The Kaimanawa Mountains and desolate manuka and fern land of the lower Kaingaroa Plains seem to cut off a further spread in a north-easterly direction. Towards the north the only outlet is the lake, the road, and a narrow rim of partially developed pastoral land along the eastern shore of Lake Taupo to Taupo, and later along the western shore when that country has been brought in. The pastoral land between Taupo and Rotorua and the new land being brought in around the Kaingaroa plantations and in several places along the Taupo-Rotorua highway would undoubtedly be suitable habitat for magpies if regular spread was possible or stragglers happened to reach the area.

(b) The Napier-Taupo Road.

Magpies have long been common in many parts of Hawke's Bay and also found on many back-country sheep stations.

On 22/9/52 I saw a black-backed magpie in a paddock near the bridge across the Mohaka River, which is the Acclimatization District boundary. At Te Pohue, a few miles nearer to Napier, two more magpies were seen, and from there on magpies were seen regularly to Napier. Mr. Roy Cavanagh, of Ngongataha, saw a pair of white-backed magpies a quarter of a mile south of Tarawera Hotel on the Napier-Taupo Road in June 1952. Mr. G. G. Potts, of Taupo, has once seen a magpie in this part of the district: a bird flying across the road, near Opepe Bush, Napier-Taupo Road, on 21/7/46.

As the land is used at present in the whole Kaingaroa Plains and Ahimanawa/Urewera Country, these vast areas are not suitable magpie habitat; but magpies will undoubtedly migrate from this direction when new land is broken in. Magpies may also travel over the mountains and the vast bush and scrub areas and invade sheep stations from the south. By 1952 magpies were at the gate to the district from this quarter.

(c) The Wairoa-Galatea Route.

Wairoa was the only part of the Rotorua Acclimatization District from where magpies were reported in McCaskill's report (1945). The report stated: "At least one pair of birds in township. Last year they reared two young."

In November 1947 magpies were reported from the vicinity of a small bush reserve at Moutere, Mahia Peninsula; "but the magpie is generally rare on Mahia" (W. J. Phillipps, 1948).

When on field work in the Wairoa area in September 1952, I saw magpies near Ardkeen; one and later two black-backed magpies were seen on 26/9/52. W. H. Axbey saw a few magpies near Hereheretau in the spring of 1952, and five magpies (2 adults and 3 young ones) about halfway between Wairoa and Nuhaka on 24/9/52.

By 1952 Mr. H. W. Axbey estimates that six pairs of magpies lived in the area round Wairoa. On 27/9/52 three magpies were seen in the Mangapoike Valley, and two old (magpie) nests were seen in pines nearby. On 28/9/52 one magpie was seen in the Waihua Valley, near the last bridge crossing the Waihua Stream. On 29/9/52 five magpies were seen 26 miles from the main Wairoa-Napier Road around Putere Lakes, and another 11 magpies along the Putere Road, seven miles past the lakes. (H. W. Axbey.)

On the road from Napier to Wairoa on 25/9/52, eight magpies were observed, seven (all black-backed) in the Hawke's Bay Acclimatization District, and one (white-backed) 11 miles west of Wairoa in the Rotorua Acclimatization District.

Magpies may spread north-west from the Wairoa area, but the mountains and bush-clad country and the limited amount of land in pasture are not inviting factors for possible magpie spread. When more land is opened up magpies will be able to colonize the area more easily, perhaps on a broader front.

(d) Gisborne-Opotiki.

From their stronghold in the Gisborne district, magpies have moved north-west towards Opotiki and Whakatane.

Three magpies appeared in the neighbourhood of Whakatane in 1946 (Phillipps and Lindsay, 1948, p. 50). The former district field officer, Mr. Ken Frances, who reported these birds, has told me that the magpies were seen near Waimana and were still present in 1952. Mr. J. D. Clark, of Opotiki, also reports on these birds (in litt., 5/5/52): "Four birds at Mr. Sinclair's farm, Bells Road, Nukuhou, Waimana. I understand that these birds have been there for about four years and have not increased."

At Nukuhou North, near Bells Road, and about a mile from Mr. Sinclair's farm, 4–5 magpies have been present on Mr. Eagle's farm for three or four years; one was shot (J. D. Clark, in litt., 7/5/52).

Mr. E. Pratt has told Mr. J. D. Clark (in litt. 1/6/52) that he saw a magpie at "Hamilton's" about 20 miles up the Waioeka Gorge from Opotiki; one more magpie was seen another half mile up the gorge. These birds were seen in 1945 or 1946. Magpies have not been seen in the gorge since then.

A magpie was observed regularly in the Tirohanga Valley, five miles east of Opotiki, on Mr. E. J. Parkinson's farm "for the past three months" (J. D. Clark, in litt., 7/5/52).

Three magpies were seen on Paerata Ridge, four miles from Opotiki, on 4/11/52 by Mr. L. Matthews (J. D. Clark, in litt., 4/11/52).

The few birds in this area have undoubtedly their origin in the Gisborne magpie population. No magpies are present between Opotiki and East Cape (N. Potts, in litt. 1/5/52). Mr. L. Walker, of Waihau Bay (in litt., 28/4/52) confirms that there are no magpies in that area; the nearest place one was seen was five miles north of Ruatoria, late April, 1952, which may be the northernmost point of distribution in the East Cape area.

The mountainous, bush-clad country covering the major part of this north-eastern part of the North Island is generally unsuitable magpie habitat, aside from the drained bottom-lands of the Whakatane area, valleys and other suitable areas being broken in for farming.

(e) Rotorua.

There are only a few records of magpies seen around Rotorua.

As early as 1940 a magpie stayed for some weeks in the garden of the Fishing and Tourist Lodge at Lake Okataina and was eventually killed by a rooster which objected to the magpie eating meat that had been given to the fowls (Mrs. K. O. Beamish-White, in litt., 27/4/52).

Aside from the above record there seems to be only one other occurrence of magpies near Rotorua. In January 1949 a magpie stayed for about two weeks at Lewis Hill, a suburb of Rotorua. The bird was fairly tame and was thought to have escaped from captivity (M. J. S. Black, in litt., 28/4/52); it was also reported by Mr. J. H. Clayton (in litt., 9/5/52).

It is not possible to say whether these birds had escaped, or were stragglers, possibly from the Whakatane area. It is very unlikely that they have come down from the magpie population in the Auckland district or from south or west of Lake Taupo.

If magpies are to colonize the area around Rotorua it looks as if the birds must come either from a northward extension of the bird's distribution from National Park-Taumarunui towards Te Kuiti and a later invasion of the Rotorua area from the west, or from the east from the Whakatane-Opotiki area where magpies have just arrived and may be in the process of colonizing. Immigration from the Auckland area is very unlikely as the birds are unknown in the vast area of fertile land in the South Auckland-Hamilton district. Direct movement of birds from Turangi towards Taupo and from Tarawera or Wairoa are faint possibilities.

DISCUSSION.

The information presented above is believed to be a fairly accurate picture of the distribution of magpies within the Rotorua Acclimatization District by the end of 1952.

The justification for such detailed treatment is thought to be the interest attached to the spread of birds generally and to the magpie particularly. This species is known for its pugnacious habits towards other birds, but is also considered beneficial to farming. McCaskill (1945) gives a detailed review of magpies' attacks on other birds, poultry, sheep and human beings, summarizing his finding thus: "At the same time it receives commendation for its destruction of insect pests, there is much evidence of attack on and injury to human beings. There is grave suspicion that it is a menace to native birds in certain areas." The magpie is no longer on the list of protected birds.

Whatever the position of the magpie is in nature, there is very little we can do to check its possible further spread even if we wanted to.

A detailed study of the ecology of the magpie is much needed—including its food habits, relation to farming and to other birds.

This project has been limited to the Rotorua Acclimatization District, partly because the bird was almost completely absent from this vast area

in 1943, partly because the author has been stationed in this district and knows it fairly well. A similar spread of magpies in other parts of New Zealand is shown by the many new records outside the 1943 distribution limits published in the annual summarized classified bird notes in "Notornis."

One fact which has struck me while travelling through magpie country in North Auckland, Hawke's Bay, Taihape-Wellington, Wairarapa, Canterbury and Otago has been the apparent association of magpies and sheep. Magpies seem to thrive in sheep country, whether it is pleasant green pasture of coastal areas, or vast sheep stations in the rugged back country of Hawke's Bay. To what extent magpies may be dependent upon certain factors generally correlated with sheep farming is not known. The main reasons are undoubtedly that the requirements of magpies are satisfied in most areas suited for sheep farming; it may be that their food is abundant in sheep-grazed pastures, and that their nesting requirements are met in the form of wind-breaks and plantings around farms.

Ornithologists and sportsmen living within the Rotorua District or visiting it, are urged to watch the appearance of magpies in new localities and to report such observations to "Notornis."

In 10 years or so it may be possible to map quite a different distribution of magpies in the area, and as the very limited distribution of magpies in the district by 1952 is known fairly accurately, it may be possible to correlate a further spread of the species with environmental factors and maybe arrive at basic facts in the spread pattern in magpies.

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WEKAS IN GISBORNE DISTRICT.—I have recently (May 1, 1953) returned from the East Coast, 20 miles north of Gisborne and ten miles inland. I found that the weka is there in considerable numbers. Every night during my stay of two weeks, wekas could be heard calling. The area is sheep country—grass hills with isolated patches of native bush. At a friend's place it was not uncommon to see six wekas walking on the lawn just before dusk, and earlier in the season six wekas and seven (three and four) chicks were seen on the lawn. At another homestead about five miles distant about a dozen wekas appeared on the large lawn in front of the house which is surrounded by a plantation of pine and native trees. The owner informed me that he considers that there are about 30 wekas in this plantation and that they are a great nuisance as they take the hen and duck eggs.—Magnus Johnson, Auckland.

LAND BIRDS AT SEA.—Last January (1953), when cruising in my yacht a pipit came aboard. It was very tired, but took some food and drink and recovered. Later it flew off and fell in the sea. When recovered it was dead. The yacht was 30 miles from the nearest land and on the west coast a N.E. gale was blowing. On another occasion when about six miles from Auckland a song thrush flew aboard at dawn. It appeared to be very tired and judging by its plumage was a young bird. It made several landings on the yacht but could not be caught. Later it left the yacht and was forced down into the sea by a black-backed gull, which swallowed it whole.—Magnus Johnson, Auckland.

BANDED DOTTEREL AND OTHER WADERS WINTERING NEAR DUNEDIN.

By B. J. Marples, University of Otago.

The distribution and movements of winter flocks of waders has attracted the attention of several observers, and the banded dotterel and the godwit have been selected as species for special study by the Ornithological Society. For this reason no attempt has been made here to collect all the relevant references from the literature or to make comparisons with situations reported from elsewhere, all this will no doubt be done in comprehensive reports at some future date. Little, however, seems to have been published concerning winter flocks in the South Island and it seemed worth while to summarise some notes taken during the past three years.

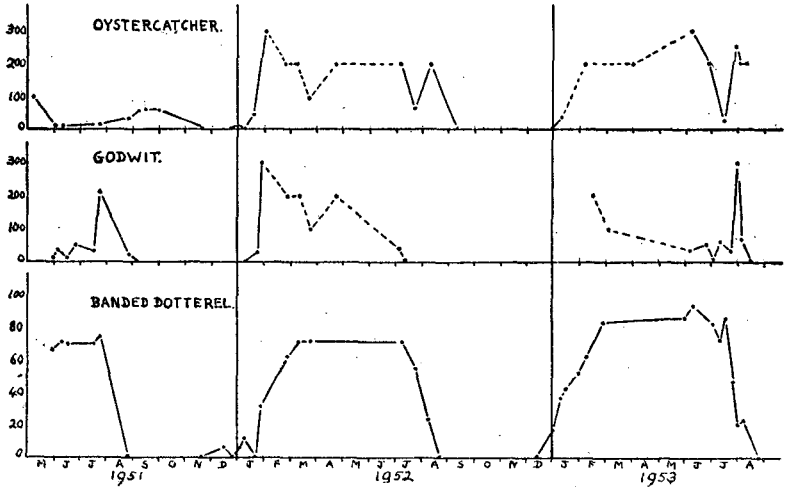
The coastline near Dunedin has been subjected to an elevation of the sea level which has resulted in a series of some ten drowned valleys. These are of various sizes, but each consists of a sand flat more or less dry at low tide, almost cut off from the sea by a sand spit which extends from the northern side and leaves only a very narrow entrance. The sand spit consists of sandhills along the ocean beach, with more or less extensive areas of flax **Phormium tenax**; salt-meadow consisting of **Samolus repens, Selliera radicans, Cotula dioica** and **Scirpus cernuus** with clumps of **Leptocarpus simplex**; and **Salicornia australis.** If large enough, these inlets form the winter habitat of S.I. pied oystercatchers (**Haematopus ostralegus**), stilts (**Himantopus himantopus**), godwit (**Limosa lapponica**) and banded dotterel (**Charadrius bicinctus**). Black oystercatchers (**Haematopus unicolor**) are often seen, usually in numbers of only one to four in an inlet, though there is a report in "Notornis" of a flock of 50 in Blueskin Bay, 15/5/52. They may nest on the sand spit at the entrance, a nest with three eggs was found at the mouth of Pleasant River 2/1/53 and another at Hooper's Inlet 15/11/53. The banded dotterel, though seen feeding on the sand flats are commonly on the salicornia and salt-meadow, and withdraw there at high tide. The other waders are seen on the inlet flats until driven off by the tide, when they usually move to the ocean beach.

Of the drowned valley inlets mentioned above, seven seemed likely to contain banded dotterel and they were visited during June and July, 1953. From north to south they are as follow:—Pleasant River is a long narrow inlet with several branches and its salt meadow area is limited though there is much salicornia. It was visited once, 5/7/53, and only 16 dotterel were seen. The Waikouaiti River estuary at Karitane is somewhat similar and contained 30 dotterel on 20/6/53. Blueskin Bay is large, about two square miles, and has very little saltmarsh. Owing to the size of the inlet and the fact that it has an island in the middle, it is difficult to get near enough to count dotterel satisfactorily, but as a result of several visits their numbers were estimated at 50, possibly more. Purakanui Inlet is small and no dotterel were seen on one visit, 21/6/53. The mouth of Otago Harbour is the largest of the series and has considerable stretches of saltmarsh. Fifty-five dotterel were counted on 13/6/53. On Otago Peninsula are Papanui and Hooper's Inlets. Papanui Inlet is without salt-meadow, as the region behind the sand spit is reclaimed, and no dotterel were seen but Hooper's Inlet has a regular wintering flock numbering 93 this year. Two hundred and forty-five banded dotterel (as a minimum) were thus counted in five inlets and to judge from behaviour at Hooper's Inlet they are resident for the winter.

Allan's Beach, the area of sandhill and saltmarsh at the mouth of Hooper's Inlet, Otago Peninsula, is being studied ecologically and has been under observation since May, 1951. The saltmarsh was at that time inhabited by about 70 banded dotterel, and periodical observations have been made on their numbers since then. These are shown on the graph, and they clearly show a stable wintering population. The birds start to

arrive in January and leave again in August, none are known to nest in the vicinity. The birds are very quiet and tame, and seem to spend more time on the salt-meadow than on the open sand flats of the inlet. They are almost the exact colour of the vegetation and so are difficult to see even with glasses, and if there is much wind they squat in the hollows and are practically invisible. It would be very easy to visit the inlet to look at the waders and not to notice the dotterel unless one went on to the saltmarsh, which is some 200 yards across, and specially looked for them. It seems possible that there may be wintering flocks in other similar localities which have been overlooked. The flock counted at the mouth of Otago Harbour would never have been seen if it had not been specially searched for in the light of experience at Allan's Beach. In connection with the dates of departure and return it is interesting to see in former volumes of "Notornis" two notes from the Hakataramea Valley to the effect that banded dotterel are absent from there in winter but common from late August onwards. There is also a note from Cromwell that they leave there in the second week in January and reappear in September. Presumably the birds wintering on the coast near Dunedin breed in such inland regions.

Less attention has been paid to the other species of waders in Hooper's Inlet. They are scattered widely over the sand at low tide and often cross over to the ocean beach at high tide, though sometimes some of them come up on to the salt-meadow. The stilts breed in small numbers at the head of the inlet and are present throughout the year. Numbers up to 63 have been counted. Pied oystercatchers are not known to breed anywhere in the vicinity. They are absent in the summer and present throughout the winter in numbers up to 300 or more. They are less static than the dotterel and flocks have several times been seen crossing between Hooper's Inlet and Otago Harbour or Papanui Inlet. No North Island pied oystercatchers have been seen. Both stilts and pied oystercatchers occur in the other inlets described above throughout the winter. At a very rough estimate a total of over 1000 oystercatchers and 200-300 stilts may be present. The godwit shows somewhat similar behaviour, appearing in large numbers, up to about 300 in February and decreasing until about July, after which they are absent except for perhaps an odd bird.



Graph showing the numbers of waders present in Hooper's Inlet, Otago Peninsula, between May 1951 and August 1953. The dotted lines join points where the numbers were only estimated.

REGIONAL ORGANISERS.

Under the new constitution the council has made the following appointments of regional organisers:—

Mr. E. W. Dawson, 271 Papanui Road, Merivale, Christchurch, for the Canterbury Region (bounded roughly by the Waitaki River, the Main Divide and the Conway River).

Mr. A. Blackburn, 10 Score Road, Gisborne, for the Gisborne Region (bounded roughly by the Waihau River in the south and by a line running west of Lake Waikaremoana northward through the Urewera country and eastward to Hick's Bay through the upper reaches of various Bay of Plenty rivers).

The list of regional organizers is now as follows:—

Southland (east to the Mataura River and including Stewart Island and Gore)—Mrs. C. A. B. Smith, Home Street, Winton.

Otago (south to the Mataura River, north to the Waitaki River and including Queenstown).—Mrs. L. E. Walker, 15 Cornwall Street, Vauxhall, Dunedin.

Canterbury (defined above).—Mr. E. W. Dawson.

Marlborough (south to the Conway River and including Havelock and the Sounds).—Mr. B. D. Bell, 6 Graham Street, Blenheim.

Nelson.—Mr. L. Gurr, c/o The Cawthron Institute, Nelson.

Wellington (including Upper Hutt and Waikanae)—Vacant.

Wairarapa (including Woodville).—Mr. J. M. Cunningham, 39 Renall Street, Masterton. (At present overseas.)

Manawatu (south to Waikanae and north to the Rangitikei River and Ashhurst).—Mr. E. Dear, Kopane R.D., Palmerston North.

Wanganui (south to the Rangitikei River, north to Waitotara and inland to Waiouru).—Rev. H. W. Austin, c/o Collegiate School, Wanganui.

Taranaki (south to Waitotara, north to Awakino).—Vacant.

Hawke's Bay (south to Woodville, north to Wairoa).—Mr. D. H. Brathwaite, 11 May Avenue, Box 360, Napier.

Gisborne (see above).—Mr. A. Blackburn.

Rotorua-Taupo (including Mamaku, the Rotorua Lakes and Kaingaroa).—Mr. M. J. S. Black, "Savernake," Tarewa Road, Rotorua.

Bay of Plenty (Waihi to Hick's Bay).—Vacant.

Waikato (south to Awakino and Taumarunui, north to Rangariri and Hikutaia, east to Paeroa and Putaruru).—Vacant.

South Auckland (south to Te Kauwhata and Ngatea, north to Awhitu Peninsula, Karaka, Papakura and Whitford and including the Firth of Thames and Thames).—Mr. H. R. McKenzie, Clevedon.

Auckland (south to Manurewa and Howick, north to Helensville and Warkworth).—Mr. J. C. Davenport, 718 Remuera Road, Remuera, Auckland.

North Auckland.—Vacant.

BIRDS PREENING ON THE WING.—During recent launch trips on the Hauraki Gulf it has been noticed that several sea birds have paused in mid-air to shake their tails or preen their feathers. This may be quite usual but it struck the writer as being a remarkable feat of balance. A gannet which had just taken off the rookery at Horu Horu paused in a swift glide to shake his tail vigorously before resuming his flight, while at several times white-fronted tern have been observed to turn their heads to preen their wing feathers and one bird was seen to scratch its head in mid-air without apparently losing height.—Noelle Macdonald, Howick.

BELLBIRDS ON KAWAU ISLAND.—A further record of the bellbird (**Anthornis melanura**) in the North Island can now be added to Mr. E. G. Turbott's list (Notornis, Vol. 5, No. 6). When the writer and Mr. G. J. H. Moon visited a bush-clad gully at the head of Bon Accord Harbour on Kawau Island (23/1/54) two pairs of bellbirds were seen in old puriri trees there. The birds were singing well and judging by the volume of song there could have been more than the four birds seen in the area.—Noelle Macdonald, Howick.

LINNET IN SOUTH CANTERBURY.—A further sight record of the linnet (**Carduelis cannabina cannabina**) was made at Pleasant Point, Timaru, on the Opihi River, by the writer and Mrs. G. A. Acres, on 10/11/53, when several of these red-breasted finches were observed feeding on a half-dead gorse bush about five feet high. The birds (six in all) were larger than redpoll with longer tail, and at least three had deep crimson breasts and slight chestnut crowns. The others were more drab but all birds lacked the dark patch on the chin which is characteristic of the redpoll. They were busily moving about the gorse bush and feeding, so there was ample time in which to study them. The backs were mottled light and dark brown like a cock sparrow, only not so dark. The white edging on the tail feathers was noticeable. The birds flew with a quick, rather light, wavering flight just above the low scrub. They disappared into a grove of willow trees and we did not see them again. They did not appear to mix with the other finches. The flight-note was a rather low, slightly metallic series of "tit-tit-tit-tit-tit."—Noelle Macdonald, Howick. (Editorial Note.—The Checklist of New Zealand Birds, page 65, does not admit the linnet to the New Zealand list. It states that its status is uncertain and that it "is left on the suspense list until its presence in New Zealand is substantiated." to their eligibility for re-election.

BIRDS SINGING AT NIGHT.—Mr. C. W. Trim, Fitzherbert West R.D., Palmerston North, wrote to me (26/8/53) as follows:—"We live in the country and on this night we had been out, arriving home at 11 o'clock. Upon stopping the car we were amazed to hear a full chorus of blackbirds. They were still singing 20 minutes later when we went to bed. It was most eerie—seemed as if the time was about 6 in the morning." In reply to my inquiry, he added that the night was calm; brilliant moonlight with a scattering of light clouds. There were no other birds singing with the blackbirds. "It would be most difficult to estimate the number of birds singing as they were near at hand in numbers. When a lull came in their singing we could hear others in large numbers in the far distance. We live in a rural district with a large area of open country dotted with pine and macrocarpa plantations and hedges. In the early morning dozens of blackbirds and thrushes sit in the trees far and near all singing with all their might. They were exactly like that on the night in question except we heard no thrushes." Mr. E. Dear, the society's regional organiser for Manawatu, who kindly discussed the episode with Mr. Trim, was able to gather no further details, but is satisfied of the accuracy of Mr. Trim's interesting report. The Handbook of British Birds and other books accessible to me make no mention of such night singing. I am indebted to Mr. Trim for the information.—J. M. Cunningham.

BIRDS IN LOWER WAINUI-O-MATA.—According to information supplied to Mr. W. J. Phillipps, of the Dominion Museum, Wellington, by Mr. J. W. Burdan, Wainui-o-mata, the huia was last seen in that district on the Cattle ridges in 1895; it was formerly recorded in Catchpole's Bush. The weka disappeared about 1905. In 1898 Mr. Burdan witnessed a flight of tuis, going north along the hills between Gollan's Valley and Wainui-o-mata. He estimated the number as about 200 as they passed overhead. The tuis from nearby gullies joined in the flight. He had known of only one North Island kokako, in 1890.

RECORD OF BLACK-FACED CUCKOO-SHRIKE.—In June, 1953, a description of a strange bird at Poutu, North Kaipara Heads, was received from Mr. W. L. Baker, of the Lands and Survey Department. Mr. Baker, who is stationed at Poutu, first observed the bird in April, and later saw it frequently until September. It remained in the same area and could be approached easily. On a visit to the Museum, Mr. Baker was able to identify the bird from specimens as a black-faced cuckoo-shrike (**Coracina novaehollandiae**). It was immature, as indicated by the black line passing through the eye, the remainder of the plumage being dove grey; the white tip of the tail was especially marked in the field. The bird moved with characteristic undulating, or swooping, flight. It was observed eating worms, and obtained ripe boxthorn berries which it took on the wing. When feeding, it often stripped off small pieces of bark which were hammered against the branch and swallowed; and leaves were treated in the same way before being eaten.—E. G. Turbott, Auckland Museum.

SHINING CUCKOOS.—At Winiata's Bush, Poroutawhao, on December 14, 1953, at about noon an excited and rapid series of calls (tiu, ti-u, ti-u, etc.) was heard. These we recognised as the less-frequently heard call of the shining cuckoo (**Lamprococcyx lucidus**). The birds, six in number, paused for a minute or two on tall trees—pukatea, titoki and large old plum trees. After being on one tree for a period all would fly to the next, and so on. Towards evening we saw six birds, probably the same birds, behaving similarly. Perhaps they were feeding on leech on the plum leaves.—A. T. Gudopp, Ohau.

BIRDS ON MOKO HINAU ISLAND.—The kaka flies over the island at times; first seen in April, 1951, about seven birds; next year, April, 1952, four were recorded. They flew around for an hour or so and then disappeared. I was away in April, 1953, but my son told me the kaka flew over again, about five all told; they were seen singly or no more than two in a day. The New Zealand parakeet is very plentiful. The morepork is seen and heard. The bellbird and the tui are visitors. The red-billed gull arrives every year to breed, first coming in small numbers in August, being heard in the evening and early morning and disappearing during the day. It seems to increase in numbers every day. After about a week it continues to fly around, calling, until 10 or 11 a.m. and then disappears. Finally, hundreds fill the air, circling and then landing, in 1953, on August 20, to go straight to work building nests. The white-fronted tern also breeds here in small numbers. The kingfisher is plentiful.—Mrs. C. Emmens.

THE MYNA IN THE ROTORUA-TAUPO DISTRICT.—Cunningham (Notornis 4 (4) : 66) showed that the myna (**Acridotheres tristis**) established itself at Rotorua between 1948 and 1950, and in the latter year they occurred as far south as Atiamuri and Mihi. No change in the distribution of the birds had been reported by mid-1953 (Cunningham, Notornis 5 (7) : 210). During a recent visit to the Rotorua-Taupo area (15-20 Dec., 1953) mynas were seen at the following places: Reporoa (at least three birds); Sandhills, Broadlands (one bird); on the reclaimed land just north of Wairakei (one bird); between Upper Atiamuri and Guthrie on the Rotorua-Taupo Road (several birds); and the Wangapoa settlements east of Atiamuri (birds round many of the new farms). Mr. M. F. Weeks, Iwitahi, told us that a single bird appeared at his house, 17 miles south of Taupo near the Taupo-Napier highway, during two week-ends in November 1953; it has not been seen since. Mr. A. E. Moore, Reporoa, stated that the first myna was seen by him in Reporoa during the winter 1952. No mynas were seen by us in Taupo though this is less than 10 miles from Wairakei. The above records suggest a recent southerly extension of the myna's range in this district. Further observations recording the spread of this species would be of interest.—J. S. Watson and K. Wodzicki, Animal Ecology Section, D.S.I.R.

On the Pelagic Distribution of some Procellariiformes in the Atlantic and Southern Oceans, by G. J. van Oordt and J. P. Kruijt. Ibis, vol. 95, No. 4, pp. 615-37; 10 sketch maps.

This paper records the distribution at sea (with useful maps) of 11 species of petrel observed in the Atlantic and Southern oceans in December, 1951, and the first months of 1952, from the Dutch tanker "Barendrecht," carrying fuel for two Norwegian whaling expeditions in the Antarctic. This note emphasizes observations and conclusions about New Zealand species and includes comments by the reviewer in parentheses.

Leach's petrel (**Oceanodroma leucorhoa**) winters in large numbers in the South Atlantic off the West African coast and off the north-east coast of Brazil, judged by observations in the southern summer. (The single August New Zealand record is unseasonable, but the species is probably migratory in the Pacific too, judged by records near Galapagos Islands in November.) Wilson's petrel (**Oceanites oceanicus**) was observed migrating (i.e., birds all flying westwards) between Antarctica and 55°S. from 40°E to 140°E in the first half of March, 1952 (as if making for the known Atlantic wintering grounds).

In Antarctic seas south of Australia and south-west of New Zealand as many at 5000 **Puffinus griseus** an 8-hour day were seen, all migrating westward, in February and March, 1952, just as they were first described by Falla (1937) in the same area and season in 1931. Routh's (1949) record of **P. tenuirostris** in Indian Ocean pack-ice (not credited by the reviewer and other Australasian students) is plausibly attributed to mis-identification of **griseus**. Large-scale late-summer westward migration of sooty shearwaters in the Australian and part of the Indian sector of the Antarctic Ocean is thus postulated. Whether they were about to winter in the Atlantic or would double back around the west coast of Australia to the Pacific the authors could not decide. They suppose that **griseus** leaves its N.Z. breeding grounds in a westerly direction without first spreading in different directions over southern seas and that "a large percentage of the New Zealand population of sooty shearwaters winters in the Atlantic." (These conclusions may apply to some non-breeding members of the N.Z. **griseus** population, but they are incompatible with the fact that **griseus** has not completed nesting by February. Adults and newly fledged young have been observed streaming regularly north along N.Z. coasts in mid-May, a few weeks after the first young leave the nest burrows. Perhaps the earlier, Antarctic, migrants are drawn from the "apparently large population of unemployed birds" that Richdale has written about.)

Bierman's (1950) reports of **Puffinus diomedea** in Cape seas were not accepted by R. C. Murphy, who thought they applied to **Procellaria cinerea**, but van Oordt and Kruijt are convinced that they and Bierman correctly identified the species. They quote Murphy's opinion that "no member of the species has any association with Kerguelen Island" (whence British Museum skins were reported by Sharpe) and the breeding place of the birds from Cape seas (including the specimen Gould named **flavirostris**) remains unknown. (So, incidentally, does the origin of the bird that reached Foxton, N.Z., in January, 1934.)

Falla (1937) first suggested that mottled petrels (**Pterodroma inexpectata**) were plentiful in midsummer in the pack-ice south of Australia, and the "Barendrecht" observers found them abundant in February at the entrance to the Ross Sea, becoming rarer to the east, but not confined to the pack. The white-headed petrel (**P. lessoni**) was recorded in two separate Antarctic areas, one from Ross Sea west to 130°E, the other between 20° and 90°E., that may correspond with the late-summer feeding grounds of the subspecies **australis** and **lessoni** respectively (but these are as yet inadequately defined in respect to morphology).

Diomedea cauta logged in coastal Cape seas, where it has generally been considered scarce, is attributed to **D. c. salvini** (without supporting description). The observed **D. melanophris** (black-browed mollymawk) fall into two separated populations, one in Cape seas, the other from 133°E. to the Ross Sea, apparently corresponding to the two subspecies **melanophris** and **impavida**, and the "Barendrecht" observers claimed to detect differences between them in the field. "The western population (**melanophris**) have the under side of the wing white with a broad dark margin at the anterior and a narrow margin at the posterior border. Adult eastern birds (**impavida**) have an underwing pattern with little white, both dark margins being distinctly broader." The observations thus point to the validity of **impavida** (breeding Campbell and Macquarie islands, but not Auckland Islands as wrongly recorded in the B.O.U. Check-list and in this paper. The O.S.N.Z. Check-list recognizes **impavida**, which was suppressed by Peters and by Murphy, because Campbell Island breeders and adults in N.Z. seas have darker underwings than Atlantic-Indian ocean birds exemplified by Murphy's flight photograph—published in Alexander's "Birds of the Ocean," pl. 6—and are more intensely pigmented on back and eyebrow. In addition, Campbell Island breeding adults observed by the reviewer on February 14, 1943, have light honey-coloured eyes contrasting with the dark brown eyes of **D. chrysostoma** and other species. Judged by Harrison Matthew's colour notes from South Georgia, the western populations of **D. melanophris** are dark-brown eyed like other albatrosses and this may be another subspecific difference between the races.)

All told, van Oordt and Kruijt have published a worthy successor to the report of Falla (1937), Routh (1949) and Bierman and Voous (1950) on the distribution of birds at sea in this sector of Antarctica.—C. A. Fleming.

The Question of Ten-day Incubation Periods, by M. M. Nice. The Wilson Bulletin, vol. 65, No. 2, June, 1953, pp. 81-93.

Mrs. Nice has investigated reports in ornithological literature that some birds have an incubation period as short as ten, or even nine, days. First she defines incubation period as "the time from the laying of the last egg to its hatching," and finds that use of other definitions is the reason for some short periods recorded.

Audubon first assigned a ten-day incubation period to a bird. Many such assertions have since been made but authenticated periods less than 11 days prove to be rare. The myth that cowbird eggs hatch in ten days was started by a guess and was accepted for 60 years in spite of abundant records of hatching in 11 to 12 (not 10) days.

The silvereye (**Zosterops**) attained world-wide fame for the shortest period of any bird—nine to ten days—because T. H. Potts was reported by Buller as having observed that in one nest "the birds commenced incubation on October 16, the young were hatched on October 25, and left the nest on November 4." The supposed nine-day period was quoted all over the world, and supposed ten-day periods were recorded by other writers on **Zosterops**, including Potts himself, Mrs. A. S. Wilkinson, and Fleming (the last due to faulty calculation from correct data!). Analysing the original data supplied by contemporary New Zealand ornithologists (including observations by Potts, Wilkinson and Fleming) Mrs. Nice finds that in four nests of the New Zealand silvereye carefully recorded between 1870 and 1943, incubation lasted at least 11 days. This bird's fame for the shortest period of any bird thus started in careless observation in the 1880's and the unquestioned acceptance of such blunders "shows that we need greater care in observation and less reliance on the printed word."

The silvereye is about the commonest New Zealand bird. Will the next generation of observers do better than the last three—four sets of observations in 75 years?—C.A.F.

[Fisher in "The Fulmar," has stated that the incubation period of the blackbird ranges from 9 days to 18 days. If this is correct, it would not be surprising if **Zosterops** sometimes had a similar period.—Ed.]

How to Choose and Use Field-Glasses, revised edition, by J. R. Hebditch, British Trust for Ornithology, Field Guild Number Two (revised), 1953. Price in England, 1/-. (Address of Trust, 2 King Edward Street, Oxford, England.)

This revised edition, substantially enlarged, embodies additional information relative to the subject matter of the guide. As this is contributed by Mr. Hebditch, who is an optical expert as well as an ornithologist, its value goes without question. As the cost of field-glasses today involves considerable outlay, any bird observer who is considering the purchase of what is an essential accessory to field work would be well advised to consult this guide, which deals with the choice, use and care of field-glasses.—R.H.D.S.

British Trust for Ornithology, Bulletins Nos. 50 and 51, September and December, 1953.

These informative bulletins provide impressive evidence of the activities of the Trust, which include surveys of proposed nature reserves, bird-ringing, field investigations, census work, requests for information and a report of the Trust's last annual meeting. The Trust proposes to publish a new journal, Bird Study, beginning in March, 1954.

CORRESPONDENCE.

NESTING OF QUAIL.

(To the Editor.)

Sir,—I am asking for information about the nesting of California quail and chukar (and other quail species, too, if anyone should have the data).

In particular I wish to know: (i) In what surroundings the nest was situated; (ii) the number of eggs in the completed clutch; (iii) the actual hatching date; (iv.) the number of eggs successfully hatched; (v.) the fate of any unsuccessful nests; (vi.) did the unhatched eggs contain dead embryos or were the eggs infertile; (vii.) the number of young and accompanying adults in any completely-counted family group and the date of this observation; and (viii.) any other information that might be thought relevant. Any information supplied will, of course, be personally acknowledged.—I am, etc.,

GORDON WILLIAMS.

Wildlife Division, Dept. of Internal Affairs, Wellington.

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