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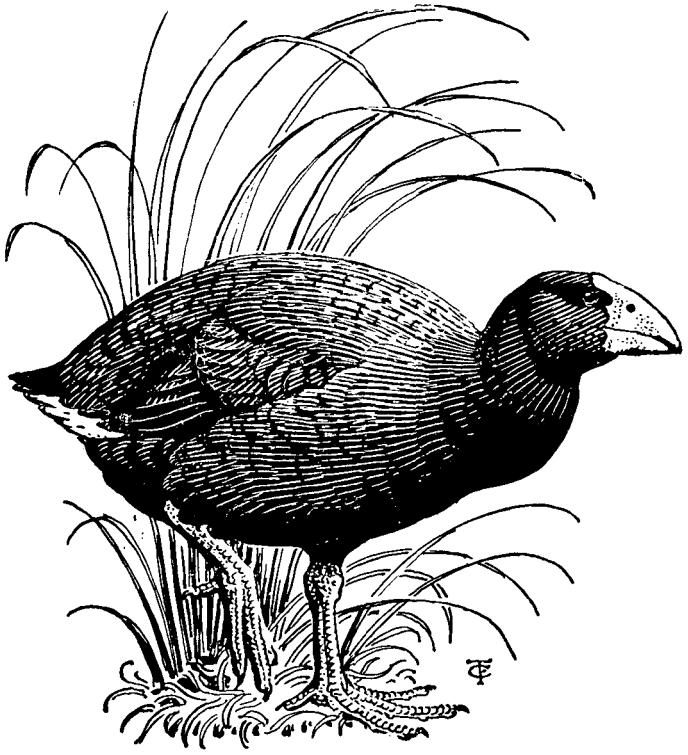
NOTORNIS



BULLETIN OF THE ORNITHOLOGICAL SOCIETY
OF NEW ZEALAND.

PUBLISHED QUARTERLY.

NOTORNIS

In continuation of New Zealand Bird Notes.

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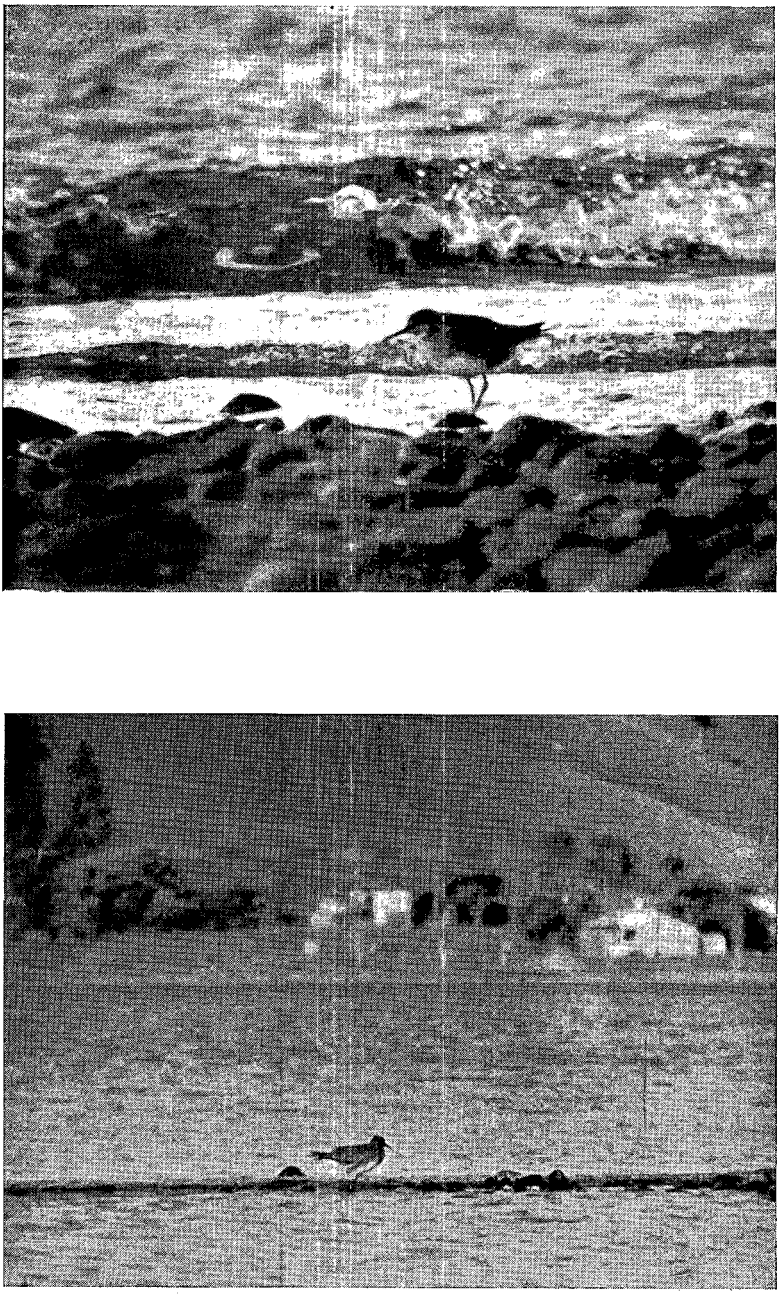
CONTENTS.

OFFICERS, 1955-56.—Members received with the January issue the notification required by the society's constitution, calling for nominations for the positions of North Island vice-president and editor, and for the position on the council occupied by Mr. L. Gurr. The retiring North Island vice-president (Mr. P. C. Bull) and Mr. Gurr, were appointed respectively to fill (for the remainder of the terms) the vacancies created by Mr. McKenzie's election as president and Mrs. Walker's appointment as South Island vice-president. The new vacancies are in accordance with the ballot held at the 1953 annual general meeting. Retiring officers are eligible for re-election under the constitution.

ANNUAL GENERAL MEETING.—This will be held in Dunedin on May 13th, 1955. Full details of place and time and of the field excursions will be notified to members.



W. P. Mead, Photo.

WANDERING TATTLER IN CLEVEDON DISTRICT, Nov. 30, 1948.

THE WANDERING TATTLER.

FURTHER RECORDS OF THE BIRD AT CLEVEDON.

By H. R. McKenzie, Clevedon.

The wandering tattler (**Heteroscelus incanus incanus**) recorded up to July 1949, "New Zealand Bird Notes," Vol. 3, No. 7, p. 178, stayed for some time further, though obviously living elsewhere part of the time. Later records are:—

3/7/49.—Seen in full breeding plumage. (See above article.)

14/8/49.—At Mataitai, Clevedon, with two godwit, two whimbrel and stilts. It flew, but was soon found again at Kawa Kawa Bay. Here it gave its four-note call while feeding, and later, while on the ground and not feeding, it gave a trill of about 12 notes. This longer trill had not been heard before.

18/8/49.—In heavy moult; no tail, wings ragged, colour fading on sides, still striped on front of body and under tail. 27/9/49, hardly able to fly. Not seen on next visits.

22/2/50—Reported by Mr. Pratt to be back again. 26/3/50, seen by W. P. Mead and H.R.McK. 15/4/50, seen by J. C. Davenport and H.R.McK. Striped on sides and flanks. Front of body broken colour.

9/8/50.—Reported by Mr. Pratt to have been present to date but not seen by the writer on several trips. 24/10/50, seen flying at Mataitai. 3/12/50, Mr. Pratt reported it seen at odd times up to date and there were several later unrecorded occasions.

It is possible and indeed probable that this bird came to New Zealand in the spring of 1947 and departed in the autumn of 1951, though it could have died here or be still present in another locality. There is little chance of more than the one bird having been seen throughout. The changes of plumage kept to the pattern of a northern hemisphere breeder, not being affected by the bird's long sojourn here without migration.

In the former account (up to July 1949) it is mentioned that the grey-tailed tattler (**Heteroscelus incanus brevipes**) had not so far been recorded in New Zealand. Since then, E. G. Turbott ("Notes on Parengarenga Harbour Waders," "Notornis," Vol. 4, No. 6, p. 122, 1951) has made the first record of the species in this country on 13/2/50, and has dealt with several birds observed on further occasions up to March 1951. He describes how D. A. Urquhart and the writer, having studied the Clevedon wandering tattler over many months, were able to assist in the further confirmation of the identification by comparing in the field at Parengarenga Harbour the calls of these birds and that of the Clevedon bird. Skilful imitation by Urquhart of the two kinds of call was extremely helpful in separating them. The call is also considered the best evidence of identity in eclipse plumage by Hindwood and Hoskin ("The Waders of Sydney (County of Cumberland), New South Wales," "The Emu," Vol. 54, p. 217, October 1954) although no reference has been made to Turbott, 1951, where the importance of the difference in calls was pointed out. Hindwood and Hoskin describe the call of the wandering tattler as "a series of about eight notes, fairly loud and uttered quickly—a kind of loud twittering—with the accent on the second note, the following ones diminishing a little in volume and given more rapidly than the first two or three." The Clevedon bird, except once, gave an even four-note call on numerous occasions and at all seasons. This indicates some difference in individual birds but does not reduce the value of the call as the principal diagnostic feature in determining identity in non-breeding plumage.

The wandering tattler may well have occurred in the northern tip of New Zealand also. On 4/4/53, at the eastern end of Spirits Bay, Mrs. A. Prickett and Mr. A. H. Watt clearly heard calls as of this species from a bird either flying low and invisible over the water or on a rocky islet. The habitat was a suitable one. On 22/8/53, at the mouth of Rangaunu Bay, R. H. Michie saw two birds flying and heard them calling. By his description they are likely to have been wandering tattlers.

SUMMARY OF TAKAHE INVESTIGATIONS FOR 1953-54 STUDY SEASON.

By G. R. Williams, Wildlife Division.

This is a very brief summary of the work done in the Takahe Valley area from December 1953 to May 1954. Detailed discussion of some particular aspects are expected to appear in due course as special communications prepared by the ornithologists mainly concerned with these aspects. The matter presented here has been culled from the as yet unpublished observations of the following persons: Dr. D. S. Farner, Mr. L. C. Bell, Mr. K. E. Westerskov, Mr. P. C. Bull, Mr. K. H. Miers, Mr. E. Cutler and G. R. Williams. These observations have been made available to the present writer through reports addressed to the Wildlife Division, Department of Internal Affairs.

NUMBER OF STUDY PARTIES.—There were four, made up as follows:—No. 1: Dec. 8th—17th 1953, Dr. D. S. Farner (Washington State College, U.S.A.), L. C. Bell and G. R. Williams (Wildlife Division); the last-named had to withdraw on the eve of the expedition. No. 2: Dec 31st 1953–Jan. 8th 1954, E. Cutler (D.S.I.R.), L. C. Bell and K. E. Westerskov (Wildlife Division). No. 3: Feb. 14th–21st 1954, P. C. Bull (D.S.I.R.), K. H. Miers and G. R. Williams (Wildlife Division). No. 4: May 15th–19th 1954, P. Logan, B. Mangos and K. H. Miers (Wildlife Division).

AIMS.—Parties Nos. 1, 2 and 3 were concerned mainly with continuing the investigations into the various aspects of the breeding biology and behaviour of the takahe and the development of the banding programme. Party No. 4 paid a very short visit to make a later report on the suitability of the bands used so far and to make preliminary observations intended to estimate the relative abundance of the deer population of the area and the effect it may be having on the vegetation. In addition, each party had a number of minor objectives and these will be described later.

RESULTS OF THE MAIN INVESTIGATIONS.

BREEDING BIOLOGY.

(i) NESTS.—Five nests that had been used—or apparently used—for incubation were found; four by Party No. 1 and one by Party No. 2. Only two of these nests contained eggs when found—in each case a clutch of two was being incubated. The other three nests were associated with egg fragments. Only in two instances can a reasonable guess be made about the fate of any of these five nests. In Area M where several fragments of shell and a piece of egg membrane had been found in a nest in mid-December, a chick about one month old was caught and banded in early January. It is very likely that the chick came from this nest. In Area E, in mid-December half an egg shell was found near a nest that had supposedly been used for incubation. The appearance of this shell fragment suggested that the egg may have been destroyed by a weka. That the clutch was indeed destroyed seems more likely when consideration is taken of the fact that another nest containing two eggs and an incubating bird was found in early January within twelve feet of the first nest. This second nest was seen—apparently freshly completed but without eggs—during the visit of Party No. 1. The assumption made by Westerskov and Bell that the same pair had renested is a justifiable one.

(ii) CHICKS.—Four definitely different chicks were accounted for during the 1953-54 season and there is the doubtful record of one more. In Area A two different chicks were seen—one in early December and a recently-hatched one in mid-February. As one of the attendant adult birds was the same in each instance (it was bearing the same colour band combination) it appears that one pair may hatch out two broods in one season. The fate of the earlier chick is unknown.

(iii) BREEDING AGE.—A bird banded as a chick in late December 1952 was found incubating eggs in Area B in early December 1953. This

is the first instance known of a takahe showing reproductive activity in its first year.

(iv.) INCUBATION BEHAVIOUR.—Party No. 1 observed two different birds incubating the nest in Area B. Apparently both sexes take part in this activity; and if this should prove to be the rule, then takahe behaviour in this respect is in line with that shown by other members of the rail family.

BANDING.

This part of the research programme is regarded as very important, for, as a result of continuing with it and even expanding it, we hope to get reliable information about:—(1) Mean annual mortality rates; (2) the mean annual productivity; (3) the age at which breeding first occurs; (4) the fraction of the birds at breeding age which actually breed; and (5) the interchange of birds among the various units of the population (which will include, of course, the usual movement studies). Other aspects of a life history study upon which banding throws light are the study of behaviour and the perfecting of means of ageing and sexing individuals of a population.

(i) NUMBER OF TAKAHE BANDED.—Nine birds were banded in late December 1952 using coloured plastic bands only. During the period under review another nine were banded, using both coloured bands and numbered aluminium bands. Three of the birds banded were carrying bands from the previous occasion so a maximum number of 15 birds are now marked in this way. There is a likelihood that some of the "new" birds are birds banded in December 1952 that have lost the band or bands put on them. As far as is known at present, nine birds bear both aluminium and colour bands and six birds bear colour bands only.

(ii) SUITABILITY OF BANDS.—At least three of the plastic colour bands put on the birds' legs in December 1952 had been lost by about one year later, one of the plastic wrap on bands was pulled off in February 1954 within a minute of being fitted and another wrap-on band was lost between February and May 1954. The plastic spiral bands are probably not so easily lost although birds were recaptured that had some of the spiral broken off. More time will have to pass before the durability of the aluminium bands can be assessed, but they should be very much more satisfactory than the plastic ones as far as endurance on the bird is concerned. Ways are being sought to ensure greater permanence of the colour bands.

All types of band are being carefully watched in case wear should make them unsuitable. At present it seems that there is no risk of injury to the birds. Colour bands are also being tested for dye-fastness in the field.

(iii) OTHER DATA OBTAINED FROM BANDING.—Some new facts that could have been obtained only by marking wild birds in some way have already been described—e.g., the age at which one particular bird displayed reproductive activity, the sharing of incubation duties at one nest, and the fact that one bird has been seen with two different chicks during the course of one breeding season. Other information on territory size, pair bonds, general movements and behaviour, etc., has already been obtained and will be written-up at length when the amount of information available justifies this. During the coming three-month period of continuous observation, the banding effort is to be persevered with so long as any untoward interference likely to adversely affect survival, breeding behaviour or care of young is avoided.

CENSUS.—It was not a special objective of any of the four parties to carry out a total census in the two main colonies. Party No. 3 accounted for most birds and found a minimum of 20 birds of all ages in Takahe Valley and five adults in the Point Burn.

GRID SYSTEM.—To make all recording of data easier and more reliable, a grid system has been applied to the best map at present generally available of Takahe Valley. Thus within the limitations of accuracy of the map itself, each observation can be placed in relation to others and the extent of movements or of territory can be more precisely defined. The scale and nature of the grid is such that when aerial maps of the Murchison Range become available it should be possible to transfer the grid and the observations connected with it to the aerial photographs with satisfactory accuracy.

SOUND RECORDINGS.—During the February visit, a tape recorder was taken into the Valley and some recordings of takahe adults and a chick (as well as some other native birds) were obtained. The original tapes are now with the N.Z. Broadcasting Service, and of two copies of an abridged version with commentary one is in the N.Z.B.S. record library and the other is in the possession of the Wildlife Division.

SOIL SURVEY.—Mr. E. Cutler, pedologist, D.S.I.R., made a preliminary soil and vegetation survey of Takahe Valley during the stay of Party No. 2 and a report and map have been received.

GENERAL BIRD OBSERVATIONS.—Mr. Westerskov and Mr. Bull specialised in these and their findings will no doubt appear separately in the near future. All expedition members made casual observations which are on file at the Wildlife Division, Department of Internal Affairs.

NOTE ON VOICE OF LESSER REDPOLL.—This bird's calls were investigated at Makara and Karori, Wellington, chiefly between 1947 and 1951, and the following records made. One note which sounds like "tzwee" appeared to be a contact note. This has been heard from birds of both sexes. It has been heard from a bird alighting, from a hen when the cock it was with was chasing another redpoll, from another hen with a cock nearby which had just finished posturing at another cock redpoll, and from birds when completely by themselves. Apart from the common flight calls, which need not be described, and some weak twittering calls, there is in addition a low-pitched trilling note, sounding like "tzur" to my ear, sometimes repeated several times with the common flight call. This trill is heard commonly in summer but rarely in winter. Birds were heard sometimes making this call while flying round in circles and quivering their wings, but while in normal flight at other times. Once, in early January, when a cock and a hen had finished intimidation of another redpoll they perched together on a bush repeating this note. This note is heard mostly between October and January and appears to have the function of expressing threat judged by the circumstances under which it is heard. Throughout the flocking period the redpoll makes a highly pitched rattling note "garr." The note is mostly heard in the months October to December. This is possibly the note syllabised as "geez" in the "Handbook of British Birds." This call has been heard from birds in flight over built-up areas in May and December. It was heard when I approached a cock and hen in October. Courting cocks mobbing a hen have used it and it has been recorded from two birds fighting in conjunction with the low-pitched trilling note "tzur" which has been referred to. There is a shrill call in addition syllabised as "tzlee-tzlee-tzlee-tzlee. . . ." This again is often heard in conjunction with the low-pitched trilling note "tzur." This call, which sounds a little like the common flight call, has been recorded from what were evidently paired birds when strange birds were about. A hen believed to be making this call was seen finally to adopt the posture for courtship feeding. Harsh metallic sounding notes often repeated are also heard. These sound like "tzeu-tzeu-tzeu-tzeu. . ." The writer observed a cock making this call while it was on the wing in front of a perching hen.—H. L. Secker, Wellington, February 15, 1955.

NOTES ON TWO RARE PETRELS

(H. caerulea and Pt. brevirostris.)

By J. C. Davenport and R. B. Sibson.

The Checklist following Dell (2) allows twenty-one records of the blue petrel (**H. caerulea**) in New Zealand. Additional records are one from near Dargaville in 1950 and two from Muriwai in 1953. During the winter of 1954 the Auckland west coast has been more effectively patrolled than ever before, and one result has been that between the Waikato estuary and Muriwai the remains of fourteen blue petrels have been found.

Visiting Muriwai on 27/6/54, S. found the beach strewn with prions, **P. salvini** predominating, and among them were two blue petrels freshly ashore. On the same day S. C. Rutherfurd found the first of the Awhitu specimens. The weather had not been of the kind usually associated with big "wrecks" of petrels, and to find so many prions ashore was very surprising. On June 23, a high pressure system covered the Tasman. On the 24th a cold front was developing south of Tasmania and on the 25th, pushed by another "high" which covered the whole of the south Tasman, this cold front had moved gently north-eastwards. On the 26th it reached Auckland. There were no strong winds and fair weather continued to the south. The second Awhitu specimen found by V. M. Rutherfurd on July 4th, probably came ashore at this time.

The second "wreck" occurred about July 10. On the 9th a strong southerly air stream was moving up the Tasman and on the morning of the 10th gusts of 100 m.p.h. were registered at Wellington, and violent squalls laid a carpet of sleet over the exposed slopes of the Bethells sand-hills. Subsequently, R. S. Hill brought in three blue petrels from the coast west of Waiuku; A. C. Coutts found a skeleton at Piha, and D. and H. G. Warburton recovered three fragmentary specimens from Muriwai.

All the petrels, including light-mantled sooty and grey-headed albatross, white-headed petrel, blue petrel, and prions of four species, which were examined, were thin and without reserves of fat. It would appear that there had been a prolonged period of food scarcity, which so weakened them that even the mildly unfavourable weather of June 24-26 was too much for their powers of resistance, as they were steadily driven up the Tasman Sea towards the Auckland west coast. On July 10th the force of the wind was such that it must have brought disaster to any pelagic bird already suffering from starvation and now threatened by the long lee-shore of northern New Zealand.

There was evidently a third "wreck" of blue petrels about the end of August or early in September. Two were brought in from Piha and Muriwai by A. C. Coutts and R. S. Colegrove; and Miss N. Macdonald recovered a third on September 19th from the Waikato rivermouth.

The following measurements were obtained:—

	Average.	Extremes.
Wing	216 (8)	210—222 m.m.
Tarsus	32.7 (6)	31.5—34.8 m.m.
Culmen	26.5 (10)	25.6—27.6 m.m.

Only three specimens were sexed. All were males. Two, which were worth preserving, were made into study-skins and have been deposited in the Auckland War Museum.

The Kerguelen petrel (**Pt. brevirostris**) is on the New Zealand list on the strength of three specimens wrecked on the Wellington coast in July, 1934. Two of these were discussed by Oliver (Emu 34, p. 158). Suspicions that this rare petrel might again be in New Zealand waters were raised when R. S. Hill brought in the battered head of a medium-sized pterodroma, which he had found ashore west of Waiuku on the evening of July 10th, the day of the big southerly gale.

At first glance it resembled the head of a mottled petrel (**Pt. inexpectata**), but the sombre feathering and the narrowness of the bill seemed to rule out this species, which in any case is seldom cast ashore on the Auckland coast in midwinter. A few days later a good skin was received from V. M. Rutherfurd, who had found it on July 11, and S. C. Rutherfurd sent in another head. On July 18th, D. A. Urquhart recovered from Maioro the remains of two brown petrels which he described as being "like small **macropteras**". He estimated that they had been ashore about a week. Thus five Kerguelen petrels are known to have been blown on to the Awhitu peninsula on or about July 10th. Subsequently, D. found a dried corpse at Muriwai.

But that is not the end of the story. Kerguelen petrels evidently remained in New Zealand waters for some weeks till past mid-August, and two more were found by two schoolboys, A. C. Coutts and R. S. Colegrove, who spent much of their holiday combing all the beaches between Manukau Heads and Muriwai. On August 28th they found one at Maori Bay, just south of Muriwai. It had been picked clean by gulls but had obviously not been long ashore. On September 5th they found another at Whatipu. It was wrecked probably about a fortnight earlier.

Thus we have been able to examine the remains of eight specimens, and the following measurements have been obtained. For purposes of comparison, Oliver's and Serventy's measurements of a Wellington and a Marion Island specimen are placed alongside.

	Extremes.	Average	Oliver.	Serventy.
Wing	245—258 m.m.	253 (4)	255	260
Tail	100—111 m.m.	106 (4)	108	106
Tarsus	35.4—37 m.m.	36 (4)	38	38
Culmen	25.8—26.6 m.m.	26.2 (8)	26.5	27.4
Width of Bill	9.5—10.2 m.m.	9.8 (8)	—	10.9

The most recent contribution to the literature of **Pt. brevirostris** is that of Rand (Ibis 96) who found difficulty in identifying certain dark petrels which he studied on Marion. His main arguments are that: (a) **brevirostris** of Marion is a bigger bird than **lugens** of Kerguelen; (b) **brevirostris** may be a winter-breeder; (c) the dusky summer-breeding petrels of Marion are not **brevirostris** but a dark phase of the soft-plumaged petrel (**Pt. mollis**). By way of comment we would diffidently suggest:— (a) Rand's diagnosis is based on too few specimens. If **lugens** and **brevirostris** are conspecific, the high-latitude Kerguelen **lugens** might be expected to be a more robust bird than the lower-latitude **brevirostris** of Marion. (b) Both Alexander and Murphy state that **brevirostris** is a summer-breeder and its occurrence in Western Australia and New Zealand between June and August indicates that this is so, unless these birds, wrecked so far from their breeding islands, are wandering non-breeding juveniles. (c) Elliott (Bull. B.O.C., 74) has recently described a dark form of **mollis** from Tristan da Cunha. If there is a similar dark **mollis** breeding at Marion, it may explain the dark petrels which Falla observed in company with **mollis** in the South Indian Ocean and which he tentatively identified as **brevirostris.**

In 1937 Falla (3) suggested that **brevirostris** might prove to be a dark phase of **mollis,** but Murphy (4) regards this as unlikely and holds rather that the texture and pattern of the mottled petrel (**Pt. inexpectata**) except in the wing lining, suggest kinship with **brevirosris.** Against this are the proportions of the bill and the skull. Viewed from the side, the crania of these two petrels are not unlike, but from above they have quite different outlines. The broadening of the bill of **inexpectata** gives it an appearance of strength which is lacking in **brevirostris.** The average width of the culmen of five **inexpectata** was 11.7 m.m. as compared with 9.8 m.m. of eight **brevirostris.** There is a corresponding and very obvious difference in the width of the palatine bones.

Rand's measurements of the width of the culmen of **lugens** and **brevirostris**, 5 m.m. and 7 m.m. respectively, seem unusually small and are difficult to understand. Unfortunately, he has omitted one measurement which might be significant, namely, that of the width of the culmen of **mollis**, both normal and suspected dark phase. However, this measurement for two specimens of **mollis** from Marion is given by Serventy (1) as 11.5 and 11.6 m.m. Somewhat anomalously, Murphy (4) while including **brevirostris** and **inexpectata**, omits **mollis** from his paper on the "Larger Petrels of the genus Pterodroma." From a study of the measurements it would seem that the skulls of **mollis** and **inexpectata** are strongly alike, while that of **brevirostris** is diagnostically slender. Skulls of **brevirostris** and **inexpectata** which we have examined, are quite distinct and easily separable.

There are good grounds for believing that the specimens of **brevirostris** recently recovered from the Auckland west coast came from Marion or adjacent islands. The measurements of our eight birds, the width of the bill being excepted, agree closely with Rand's measurements of Marion **brevirostris**; and his statement that "the nostrils are raised, bulbous and have a visible septum" fits such of our specimens as have these features intact. According to Mathews and Rand, **lugens** of Kerguelen has a smaller bill, with the nostrils flattened, partly closed and the septum hidden. Other significant evidence is that when these so-called Kerguelen petrels were wrecked, **P. salvini** which are not known to breed at Kerguelen, but which according to Crawford (1) breed at Marion "literally by the million," were being driven ashore literally in thousands on the west coast of northern New Zealand.

In the light of recent discoveries, it may well be that Marion should be designated the type-locality of **brevirostris**. Judging from its label, the original specimen came from South African waters which, as petrels fly, are not far from Marion. Later a deceptively similar petrel was found breeding at Kerguelen which was consequently designated the type-locality.

One thing that does emerge from a perusal of the literature of the medium-sized pterodromas of the South Indian Oceans is that their life-histories are comparatively unknown and their taxonomy needs revision.

BIBLIOGRAPHY.

1. Crawford and Serventy. Emu 52, p. 78, Birds of Marion Island, 1952.
2. Dell, R. K., Emu 52, pp. 147-154, Blue Petrel in Australasian Waters, 1952.
3. Falla, R.A., B.A.N.Z.A.R.E. Repts., 1937.
4. Murphy and Pennoyer, Am. Mus. Novit., 1580, 1952.
5. Oliver, Emu 34, p. 158, Occurrence of Kerguelen Petrel in N.Z., 1935.
6. Rand, Ibis 96, pp. 194-197, Birds of Marion Island, 1954.
7. Serventy and Whittell, Birds of Western Australia.

WHITE HERON (**Egretta alba**) AT NEW PLYMOUTH.—This bird was first seen at 3.45 p.m. on the afternoon of May 18, 1953. It was originally flying in a westerly direction but when almost directly overhead it changed and flew toward the north-east. It was later reported as having been seen at Pukekura Park. However, seven days later, on 25th May, at 9.55 a.m., it was seen flying south-west at on approximate altitude of 1000 feet. Nevertheless, it was again reported on the following day as having returned to Pukekura Park. The main lake at this tourist centre had been partly drained, leaving a small pond which teemed with carp and goldfish of all sizes. The heron was often seen in the next fortnight feeding on insects and fish which it caught in the mud and shallow water at the verge of the pond. It would allow observers to approach to within ten feet before it took fright and flew a short distance down the pond. It was in the area for about three weeks but when the lake was refilled it left and no further records of its whereabouts were available.—David Medway, New Plymouth.

THE BIRDS OF MAYOR ISLAND.

By J. S. Edwards, Auckland.

These notes are the result of a few days at Mayor Island in late November 1952 with the Auckland University College Field Club. Some differences were noted in comparing the bird population of 1952 with Sladden's account in N.Z. Journal of Science and Technology 1926, and these are discussed. Possibly the most conspicuous part of bird activity at that time of year was the great bellbird chorus in the crater. Largely pohutukawa forest, the crater supports a great population of honey-eaters, certainly the largest in club members' experience.

The German wasp (**Vespula germanica**) was well established, and early pohutukawa blossoms in the crater were surrounded by clouds of them. Kiwis were neither heard nor seen. Numbers are given in this account only where an actual count was made.

PIED SHAG (**Phalacrocorax varius**).—This bird was noted by Sladden as having a colony at the northern end of Lake Aroarotamahine which was destroyed, but recolonised. It is fairly certain that pied shag is not breeding at this site, though pohutukawas fringing the lake are used as roosts.

WHITE-THROATED SHAG (**Phalacrocorax melanoleucos brevirostris**).—Breeding on margin of Lake Paritu in crater. Two pohutukawa trees contain 16 nests; 18 adults and 4 fledglings counted, c. 24 shags on the two lakes. The crop of a fledgling contained remains of carp (**Cyprinuscarpio**) which are found in Aroarotamahine, and which appear to be the sole diet of the shags.

BITTERN (**Botaurus stellaris poiciloptilus**).—A pair were put up in swamp between Aroarotamahine and Paritu, the male smaller and darker than the female. A search revealed no nest. A second female took flight near the margin of Paritu the same afternoon.

BROWN TEAL (**Anas castanea chlorotis**).—These delightful birds were seen at the south end of Aroarotamahine—a pair with four ducklings. There were 5-6 adults on the two lakes.

GREY DUCK (**Anas superciliosa superciliosa**).—Sladden records 20 pairs on the two lakes. None were present in 1952 on the lakes.

HARRIER (**Circus approximans gouldi**).—One present over crater.

BROWN QUAIL (**Synoicus ypsilophorus**).—Calls heard in Opo Valley from **Melicytus** scrub.

PUKEKO (**Porphyrio porphyrio melanotus**).—Recorded from the swamp by Sladden. Neither seen nor heard 1952.

BLACK-BACKED GULL (**Larus dominicanus**).—Always three or four about Opo Bay. None in crater.

RED-BILLED GULL (**L. novae hollandiae scopulinus**).—Often flying about Opo Bay in twos or threes and about nesting site of terns on rock stack between Opo and North-west Bay. Both gulls are present in larger numbers than at Little Barrier.

WHITE-FRONTED TERN (**Sterna striata**).—About 200 about rock stack between Opo and North-west Bay, some nesting.

PIGEON (**Hemiphaga novaeseelandia novaeseelandiae**).—At least five birds in crater; probably many more. Also noted in Opo Valley.

N.I. KAKA (**Nestor meridionalis septentrionalis**).—Noted about Opo Bay, but very frequent in crater, where cries echoed about throughout the day. A family with three young on the crater tholoid noisily followed us along the edge of Aroarotamahine. At least five, on the north-east crater wall were seen to glide out from pokutukawas, sail up on upcurrents, and return to the same tree. The frequency of its call, and the number seen in the crater suggest that it has increased since 1926 when Sladden remarked, "this parrot is a rare bird."

PARAKEETS.—Parakeets were neither heard nor seen by our party or by Sladden.

SHINING CUCKOO (**Calchites lucidus lucidus**).—Heard frequently in crater. The uniform call in which the final descending note of the typical call was not added, suggests that the population was a small one.

MOREPORK (**Ninox novaeseelandiae**).—Three heard in crater and heard in Opo Bay where rodents about the buildings doubtless provide food.

KINGFISHER (**Halcyon sanctus vagans**).—Although kingfisher holes were often noted in the soft pumicy cliffs, not more than three were seen.

FANTAIL (**Rhipidura fuliginosa placabilis**).—Few in comparison with Little Barrier. They have not the shore feeding habits of those of Little Barrier.

NORTH ISLAND FERN BIRD (**Bowdleria punctata vealeae**).—This record is made from a single call heard in the crater swamp. While the typical a-tick seemed unmistakable, it cannot be regarded as certain.

GREY WARBLER (**Gerygone igata**).—Two or three at Opo Bay. Not noted in crater.

SONG THRUSH (**Turdus ericetorum**).—Three or four birds at Opo Bay, but none in crater.

BLACKBIRD (**Turdus merula**).—The blackbird was not seen during our visit.

PIPIT (**Anthus novaezelandiae novaezelandiae**).—Recorded by Sladden but not in 1952, and similarly the silvereye (**Zosterops lateralis**).

BELLBIRD (**Anthornis melanura melanura**).—Noted about Opo Bay. Abundant in crater, where numerous young birds were seen. The magnificent gonging chorus started at 4.30 a.m., lasting till about 6 a.m. The crater walls echo and amplify the song, and kakas and frogs are stimulated to add to the chorus.

TUI (**Prosthermadera novaeseelandiae novaeseelandiae**)—Considerably fewer in number than the bellbird. Pairs and threes were frequently noted flying high across the crater.

CHAFFINCH (**Fringilla coelebs gingleri**).—Three or four on Northwest Bay track.

HOUSE SPARROW (**Passer domesticus**).—A small population about the buildings at Opo Bay.

STARLING (**Sturnus vulgaris**).—Eight to ten at Opo Bay. At least two pairs nesting on the Fern stack. Not noted in crater.

A group of petrel burrows was seen on the crater lip near Okawa Point. This was the only evidence of petrels on Mayor Island.

OCCURRENCE OF BLACK-FACED CUCKOO-SHRIKE.—I have to record the occurrence of a black-faced cuckoo-shrike (**Coracina novae hollandiae**) at Himatangi, near Foxton. On January 1, 1955, I was motoring past a clump of macrocarpas at the end of Lake Road between the main road and the sea when a bird about the size of a starling flew before me and settled on the grass. Its undulating wavy flight marked it as a new bird and I stopped the car and walked over to it. It allowed me to approach within a few yards and I observed it for some time actively chasing and capturing insects on the grass. Its colour agreed most with the juvenile stage as recorded by Oliver. Not being strikingly marked it could easily pass unobserved, and I consider it probable it occurs more frequently than recorded. Beside the four occurrences noted by Oliver and one by E. G. Turbott in Notornis of April, 1954, page 253, I saw one in our garden at Bulls many years ago. To any bird lover, its wavy flight marks it at once.—Robert A. Wilson, Bulls.

MANA ISLAND BIRDS.

By Eric H. Sedgwick, Western Australia.

On 7th April, 1954, I accompanied Mr. Graeme Ramsay, of Wellington, on an excursion to Mana Island. As little appears to have been published on this area since "Mana Island," Oliver and Wodzicki, "N.Z. Science Review," vol 2, 1944, a few comments on the birds encountered may not be out of place.

Proceeding from Paremata by launch we noted a banded dotterel (**Charadrius bicinctus**) on an estuary flat and, even before reaching the open sea, encountered gannets (**Sula bassana serrator**). In all, perhaps ten scattered birds were flying and diving over the estuary and strait. One Caspian tern (**Hydroprogné caspia**) was seen and a few white-fronted tern (**Sterna striata**) were diving in broken water at the mouth of the estuary. Two black shags (**Phalacrocorax carbo**) were resting on the rocks nearby.

In the strait between Mana and the mainland, the motion of the launch became rather violent, making precise observation difficult. One albatross with underwing pattern suggesting **Diomedea cauta** was seen and glimpses were obtained of a few dark shearwaters (**Puffinus** ? sp.) and prions (**Pachyptila** ? sp.). Fluttering shearwaters (**Puffinus gavia**) were very plentiful. First we encountered scattered birds in flight, then some swimming, and, finally, as we approached Mana Island, we passed through rafts of resting birds. Many could be seen from our landing place near the Island homestead, and birds were seen throughout the day, especially from the cliffs at the southern end of the island, where birds were swimming. Relatively few were seen on the return journey.

Our main ornithological objective was to locate and examine the muttonbird rookery at the south end of the island. The shepherd on the island informed us that birders had taken 38 birds in 1953, but the rookery had not been molested in 1954. Most of the burrows appeared deserted, but we carefully examined one which emitted a strong odour of muttonbird. This, however, seemed to be empty.

The rookery, 105 yards in length and averaging about 20 yards in width, occupies a slope of 45 degrees or more leading down to cliffs which fall almost sheer for perhaps 200 feet to a narrow, rocky beach. The slope is heavily grassed, the grass being grazed short by sheep. There are however, occasional clumps of **Juncus** and **Cassinia leptophylla**, a few thistles ? **Onopordon** and some **Muehlenbeckia**. The burrows were exposed and not sheltered by these larger plants. They penetrate a firm sandy loam which does not yield readily. Many burrows appeared to have been modified, possibly by the activities of birders. Graeme Ramsay traversed the rookery from end to end, counting forty burrows. This figure does not represent the total number.

While examining the rookery we noted a reef heron (**Egretta sacra**) on the rocks below and a harrier (**Circus approximans**) thrice appeared, working along the cliff top. Near the homestead we noted blackbirds (**Turdus merula**) among the macrocarpa, starlings (**Sturnus vulgaris**), house sparrows (**Passer domesticus**) and three white-backed magpies (**Gymnorhina hypoleuca**). A further magpie was later seen at the northern end of the island near a grove of macrocarpa and pinus surrounding a small pool. This grove sheltered a number of chaffinches (**Fringilla coelebs**), a fantail (**Rhipidura fuliginosa**) and a kingfisher (**Halcyon sancta**). The skylark (**Alauda arvensis**) was probably the dominant species of the pasture land which occupies most of the island, but New Zealand pipits (**Anthus novaeseelandiae**) also appeared to be present. Lesser redpoll (**Carduelis flammea**) occurred sparingly among the native vegetation on the northern slopes.

Most of the species recorded on our outward journey were seen again on our return. In addition, we saw a pied shag (**Phalacrocorax varius**) in flight over the strait and five black swan (**Cygnus atratus**) in the estuary.

Penguins (**Eudyptula minor**) were reported as nesting on the island, and black-backed gull (**Larus dominicanus**) appeared to have nested on the northern shore.

THE DATES OF ARRIVAL OF THE SHINING CUCKOO IN NEW ZEALAND IN 1953.

By J. M. Cunningham, Masterton.

SUMMARY.

The dates of arrival of the shining cuckoo in New Zealand in 1953 are recorded, and the data of 1952 compared. Comparison is made both district by district and also observer by observer for the same precise localities. While birds were earlier in some districts, a tendency is found for the earliest arrivals to be a little later in 1953, and also for the flood of arrivals to have been about a week later. It is suggested that most of the early arrivals are of odd birds, or small numbers only, which make landfall in any part of the country. They then make their way, perhaps singing as they go, to their chosen localities for breeding. The main migration may consist of much larger flocks and takes place about the end of September. Some references are also made to habits, including a widespread tendency for birds to fly into windows and stun themselves.

INTRODUCTION.

In 1952 I conducted a 'pilot" inquiry into the dates of arrival of the shining cuckoo (**Chalcites lucidus**) in New Zealand. The methods adopted together with the results, were published in Notornis Vol. 5.6:192-5. The scheme was repeated with modifications in 1953 and the results are here assessed and compared with 1952. As stated in the previous paper, it is felt that "annual recording in the same districts over a period of years is the method most likely to give us an adequate picture of the arrival of the birds in New Zealand."

METHODS.

The number of members of the Ornithological Society is still not considered sufficient to give adequate coverage of New Zealand even if all took part in the inquiry, and so once again resort was had to newspaper readers. Again, the help of regional organisers of the Society and some other members was requested. A letter from the writer was sent for publication, via these members, to 23 newspapers and periodicals in the Dominion. The letter requested readers to inform either the writer or the member named of the arrival of the cuckoo. It is surprising how many non-ornithologists do keep such dates from year to year, or at least notice the event. An attempt was made to check the validity of records by correspondence or personal contact as described in the previous paper. In addition, a letter was sent to all persons who had contributed useful reports in 1952, and a short request for information was inserted in Notornis, vol 5.6 : 184. As a result, 154 reports were received against 88 in 1952. Owing to the writer's departure overseas, all replies were not followed up as thoroughy as in the previous year, and it has not proved feasible on this occasion to separate the reports of which I am fully satisfied from those I see no reason to doubt. Therefore, a few erroneous records are doubtless included, but it is felt that these are at a minimum, because reports were more heavily culled. As doubtful records were not able to be followed up, they could not be taken as correct and 30 were in fact rejected, against five in 1952. Although a few of these were because of duplication (both the writer and the regional organiser being informed) most of these 30 were unsatisfactory in some respect, though had inquiries been made some possibly would have been proved valid. In this paper, therefore, 124 records are considered from 37 members of the society and 85 non-members.

SUMMARY OF FIRST RECORDS.

The following are grouped under dates from north to south. All reports are included but the earliest record from each major district is given in black type.

FIG. 1.
Localities of Reports Received in 1952.

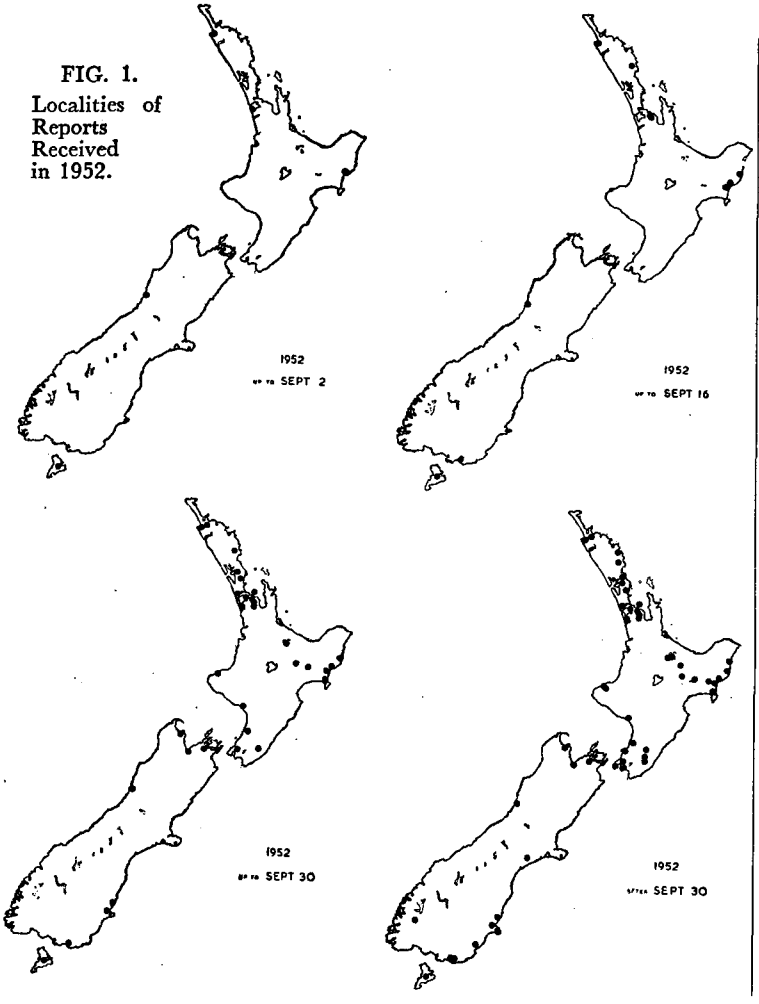
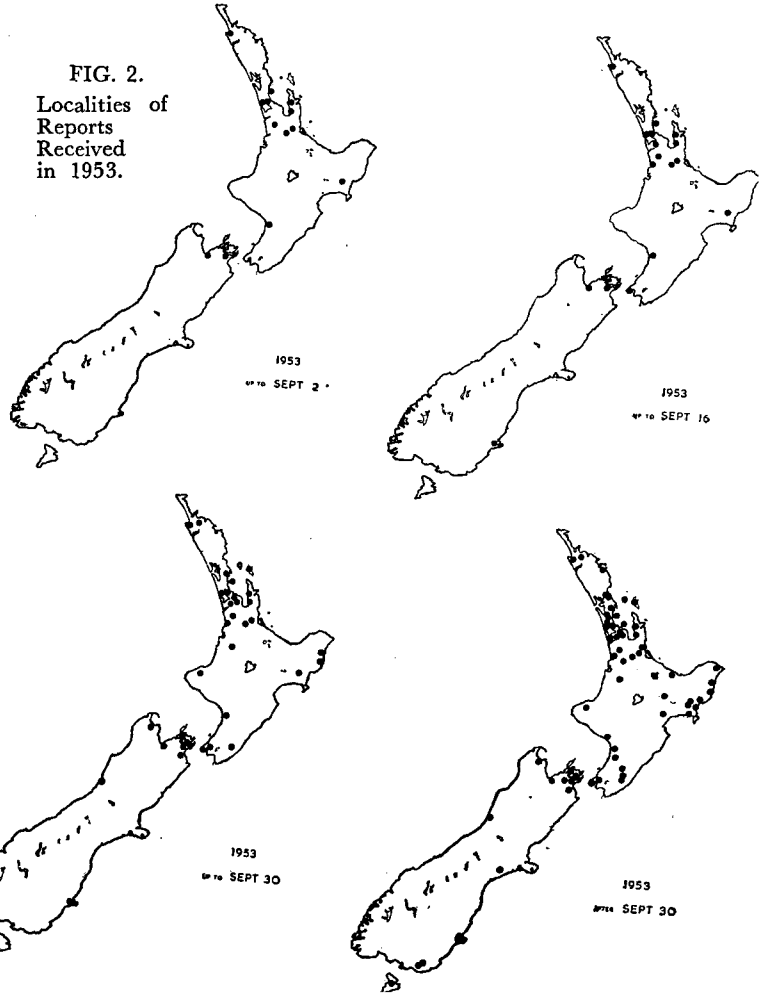


FIG. 2.
Localities of Reports Received in 1953.



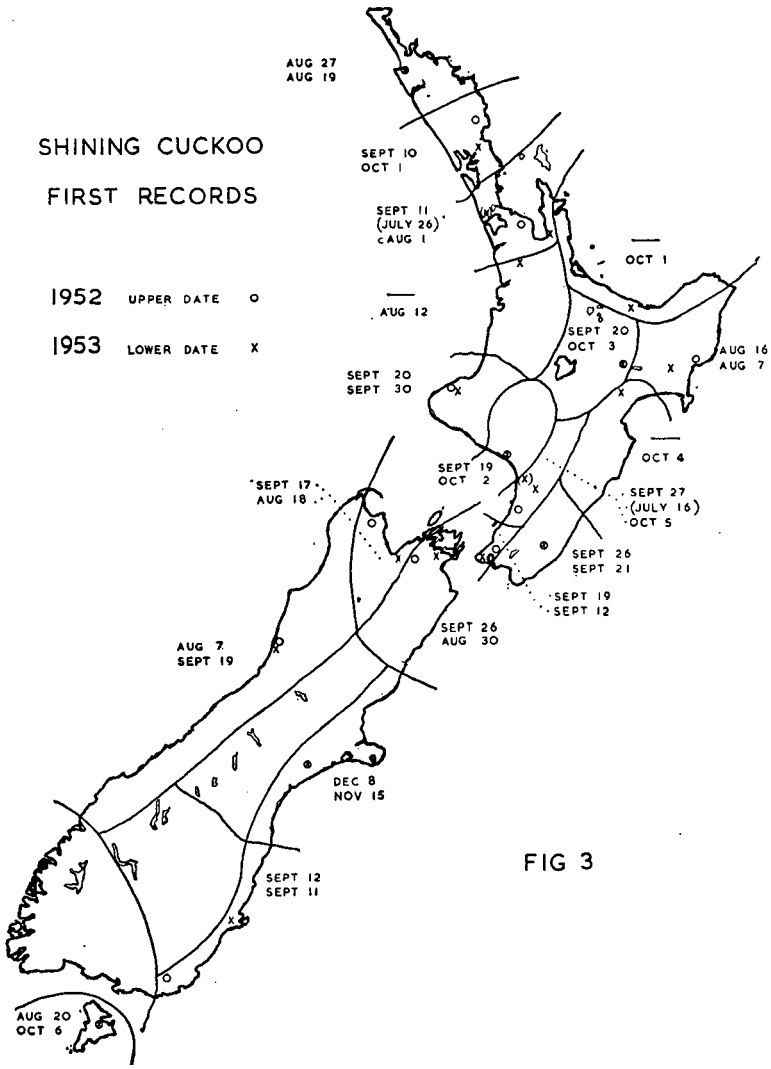

SHINING CUCKOO
FIRST RECORDS
1952 UPPER DATE o
1953 LOWER DATE x
AUG 27
AUG 19
SEPT 10
OCT 1
SEPT 11
(JULY 26)
cAUG 1
AUG 12
OCT 1
SEPT 20
OCT 3
AUG 16
AUG 7
SEPT 20
SEPT 30
OCT 4
SEPT 19
OCT 2
SEPT 17
AUG 18
SEPT 27
(JULY 16)
OCT 5
SEPT 26
SEPT 21
SEPT 19
SEPT 12
SEPT 26
AUG 30
AUG 7
SEPT 19
DEC 8
NOV 15
SEPT 12
SEPT 11
AUG 20
OCT 6

FIG 3

July—16: **Bulls** (20 miles). 19: Bulls. 26: Titirangi.

August—c 1: **Thames.** 7: Tiniroto (c 25 miles S.-E. Gisborne). 11: Whangaparaoa Peninsula (26 miles N. Auckland). 12: **Huntly** (11 miles W.). 15: Te Aroha. 16: Auckland (Mt. Eden). 18: **Nelson** (Hira). 19: Nelson (Upper Moutere, 19 miles). **Ahipara;** Morrinsville (Motumaoho). 30: **Picton;** Auckland (St. Heliers).

September—2: Coromandel. 7: Patumahoe. 9: Raglan (Mt. Karioi). 11: **Dunedin** (Maori Hill). 12: **Wellington** (Brooklyn). 14: Great Barrier Island. 17: Great Barrier Island. 19: **Greymouth** (Coal Creek); Clevedon. 21: **Hinakura** (near Martinborough). 22: Clevedon (Moumoukai); Tokomaru Bay. 23: Oruru (6 miles); Oruru; Warkworth (Mahurangi); Tologa Bay; Nelson; Takaka. 24: Auckland (Parnell). 25: Little Barrier Island; Clevedon (3 reports). 27: Tolaga Bay (2 reports); Anawra Bay (N. Gisborne); Clevedon (Moumoukai); Lower Hutt. 28: Tolaga Bay; Picton; Te Rawa (Pelorus Sound). 29: Te Kuiti, Keneperu Sound; Kaituna (near Blenheim). 30: Auckland (Middlemore); **Inglewood;** Nelson.

October—1: **Maungaturoto** (Northland); Mangawhai; Waimauku (29 miles N. Auckland); Silverdale (east); **Taneatua;** Clevedon; Waiuku; Thames; Gisborne (Whararata); Huia Dam; Masterton (Maungarakei); Masterton (Blairlogie); Blenheim (Wharanui); Blenheim (Ruapara); Picton; Progress Valley (Waikawa); Titirangi. 2: Auckland (Epsom); Tokomaru Bay; Gisborne (Mangapa); Gisborne (Hangaroa); **Wanganui;** Picton; Quarry Hills (Waikawa). 3: Auckand (Remuera, St. Heliers, Henderson's Valley); Te Araroa (Whakaangiangi); **Minginui;** Masterton (town and Mt. Bruce, 16 miles N.); Rai Valley (25 miles west Blenheim). 4: Hamilton; **Maungaharuru Range** (Hawkes Bay); Manunui; Wellington (Botanic Gardens and Khandallah); Onamalutu (15 miles W. Blenheim); Haldane. 5: Titirangi (3 miles W.); Waimauku; **Palmerston North;** Lower Hutt. 6: Auckland (New Lynn); Lake Okataina; Canvastown (32 miles N.-W. Blenheim); Dunedin (Three-mile Hill); **Stewart Island.** 7: Auckland (Onehunga); Picton. 9: Frankton; Waihi; Nuhaka; Tuamarina (Blenheim). 10: Wellington (Karori). 11: Blenheim. 12: Auckland (Remuera and Hillsborough). 13: Wellington (Karori); Blenheim (Wairau R.). 14: Waiheke Island; Blenheim (2 reports). 15: Blenheim. 16: Whangaruru South; Masterton (Carter's Bush). 19: Wellington (Wadestown). 20: Blenheim (Tuamarina). 24: Waiheke Island. 31: Blenheim.

November—11: Thames. 15: Ashburton.

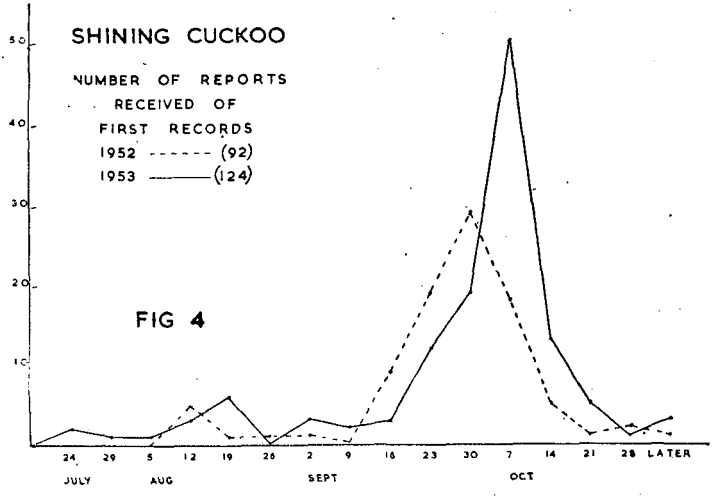


FIG 4

TABLE 2.—ADDITIONAL 1952 RECORDS.

September—19 **Lower Hutt.** 20: Minginui. 22: Auckland (Howick). 23: Waiuku. 26: **Hinakura.** 28: Clevedon. October—1: Mangawhai; 3: **Whangaruru South.** December—8: **Ashburton.**

TABLE 3.—NUMBER OF REPORTS RECEIVED (All New Zealand) for Each Week, with Respective Districts from which First Records Came.

Week ending	1952		1953	
July 22	0		2	(Manawatu)
29	0		1	(Auckland)
Aug. 5	0		1	Auckland.
12	5	Westland	3	Waikato, Gisborne-East Cape.
19	1	Gisborne-East Cape	6	Far North, Nelson
26	1	Stewart Island	0	
Sept. 2	1	Far North	3	Marlborough
9	0		2	
16	9	(& "several") North Auckland, Auckland, Coastal Otago	3	Wellington, Central Otago.
23	19	Rotorua-Taupo, Taranaki, Wanganui, Wairarapa, Wellington, Nelson.	12	Wairarapa, Westland.
30	29	Manawatu, Marlboro.	19	Taranaki
Oct. 7	18		50	North Auckland, Bay of Plenty, Rotorua-Taupo, Wanganui, Hawke's Bay, Manawatu, Stewart Island.
14	5		13	
21	1		5	
28	2		1	
Later	1	Coastal Canterbury.	3	Coastal Canterbury.
Totals	92		124	

DISCUSSION.

It is thought desirable to group arrivals in seven-day periods: in 1952 the first of these was taken as August 1 to August 7. However, in order that the data may fit in better with other data such as nesting, it is now considered that these weekly periods should commence on January 1. Therefore, weeks ending August 5, 12, 19, 26, September 2, etc., are followed. As far as districts are concerned, no division of New Zealand into ecological areas has yet been published. Until this is done, recourse must be had to artificial boundaries such as provinces, counties, etc., and the following districts have been chosen:—Far North, North Auckland, Auckland, Waikato, Bay of Plenty, Gisborne-East Cape, Rotorua-Taupo, Taranaki, Wanganui, Hawke's Bay, Manawatu, Wairarapa, Wellington, Nelson, Marlborough, Westland, Coastal Canterbury, Inland Canterbury, Central Otago, Coastal Otago, Southland, Stewart Island. These, it will be noticed, follow rather closely the areas covered by regional organisers of the society.

Table 3 shows the number of records for each week for all New Zealand and the respective districts from which first records came. The July records are in parentheses as possibly these (the Bulls occurrence was supported by a specimen) were of birds which had not migrated. 1952 records are reassessed with the additional records received and included for comparison with 1953. In neither year is there any justification for assuming that any distributional pattern is shown with the earliest arrivals, and Figs. 1 and 2 demonstrate this. In 1953, however, there is some indication that the arrival of the main migration stream was in the north.

However, the fact that there is a preponderance of North Island records may perhaps simply be taken as reflecting the much greater number of observers in that island. Fig. 3 shows how individual districts have varied in the two years, e.g., Westland, August 7 in 1952, September 19 in 1953; Stewart Island, August 20 in 1952, October 6 in 1953; North Auckland, September 10 in 1952, October 1 in 1953. This shows that, with the exception of Gisborne, localities having the earliest records in 1952 gave pride of place to others in 1953.

It was noticed that many observers stated the birds were a week or two later in 1953 than in 1952: accordingly, Fig. 4 is presented, and this certainly shows that the bulk of the reports were about a week later in 1953.

It is certain that the more cuckoos there are about, the more reports there will be, as the odd early arrival may be noticed by only one observer. Therefore Fig. 4 probably refers largely to the flood of arrivals of numerous birds rather than giving a comparison of individual birds. Let us, therefore, now examine records from the same observers in precisely the same localities for the two years, to see if there is any constant difference in the dates of first arrivals.

TABLE 4.—FIRST ARRIVALS.

	1952	1953	days different
Mrs. H. I. Cameron, Hinakura	Sept. 26	Sept. 21	5 earlier
J. E. Coulthard, Waiuku	Sept. 23	Oct. 1	8 later
F. J. & Mrs. W. Cuming, Waimauku	Sept. 18	Oct. 1	13 later
J. C. Davenport, Remuera	(Oct. 26	Oct. 12	14 earlier)
W. J. Gill, Ahipara	Aug. 27	Aug. 19	8 earlier
Miss A. J. Goodwin, Clevedon	Sept. 28	Sept. 25	3 earlier
L. Gurr, Nelson	Sept. 30	Sept. 23	7 earlier
Mrs. G. G. Hayter, Takaka	Sept. 17	Sept. 23	6 later
Mrs. M. E. Martin, Lower Hutt	Oct. 6	Oct. 5	1 earlier
Mrs. E. Mason, Canvastown	Sept. 26	Oct. 6	10 later
H. R. McKenzie, Clevedon	Sept. 28	Oct. 1	3 later
E. St. Paul, Moumoukai	Sept. 23	Sept. 22	1 earlier
J. W. St. Paul, Moumoukai	Sept. 28	Sept. 27	1 earlier
R. St. Paul, Manginui	Sept. 30	Oct. 3	3 later
Mrs. E. J. Schroder, Tologa Bay (Titirangi Station)	Sept. 20	Sept. 23	3 later
M. E. Sepperell, Hamilton	Sept. 26	Oct. 4	8 later
Mrs. J. C. Sibson, Inglewood	Oct. 2	Sept. 30	2 earlier
J. L. Skelton, Tolaga Bay	Sept. 29	Sept. 27	2 earlier
Mrs. P. Soderstrom, Progress Valley (Waikawa)	Oct. 5	Oct. 1	4 earlier
F. W. Strumpel, Whangaruru South	(Oct. 3	Oct. 16	13 later)
H. G. Warburton, Oruru	Sept. 20	Sept. 23	3 later
E. O. Welch, Mt. Bruce	Oct. 7	Oct. 3	4 earlier
Mrs. K. O. B. White, Lake Okataina	Sept. 24	Oct. 6	12 later
Mrs. N. F. Wilkins, Tokomaru Bay	Oct. 6	Oct. 2	4 earlier
R. Wills, Ashburton	(Dec. 8	Nov. 15	23 earlier)
L. Wintle, Mangawhai	Oct. 1	Oct. 1	———
L. C. Wybrow, Owaka	Sept. 12	Oct. 4	22 later

Of the 27 reports available from the same observers in precisely the same places in both 1952 and 1953, three (in parentheses) are not considered as they are rather late in the season to refer to first arrivals in the district though there is no reason to doubt they represent the first birds in the observers' immediate area. Of the others, one was of the same date, 12 were earlier and 11 were later. The earlier reports varied from one day to eight days earlier with a total of 42, and the later ones varied from three days to 22 days later with a total of 91. It seems that if birds were earlier in any districts in 1953 generally it was by a few days only, while if they were later, it was by a few days in some cases but about a fortnight or more in others.

BEHAVIOUR ON ARRIVAL.

Many observers have given some information about the arrival of these birds, and the following refer to the most useful of these reports. Unless otherwise stated, the dates refer to 1953.

Turakina.—Some years ago, Mr. T. Andrews found several dozens of cuckoos near the mouth of the Turakina River. "They must have just landed for they were completely exhausted." The birds were seen about dawn in lupin near the coast.

Hinakura (Mrs. H. I. Cameron).—First heard September 21, fairly regular since October 6; not yet numerous October 29.

Waiuku (J. E. Coulthard).—First heard several October 1, some distance apart "showing that a considerable number of birds evidently arrived in this locality on the same day." They were heard about each day during October.

Ahipara (W. J. Gill).—The first bird was found exhausted on August 19 after three days of westerly gales, and he was able to manoeuvre it into an unoccupied hen run to protect it from cats. It stayed for two days.

Brooklyn, Wellington.—Mrs. P. D. Hall, who recorded the call on September 12, heard no more until September 24, when two or three birds sang, after which it was heard daily.

Canvastown.—Mrs. E. Mason heard it every day after October 6, whereas in 1952 birds were not heard for some time after the first.

Manunui.—J. W. Mayo heard them each day after the first on Oct. 4.

Blairlogie, Masterton (John Morrison).—First recorded October 1. Many birds were heard.

Inglewood.—Mrs. J. C. Sibson heard it on September 30, again on October 3, 4 and 8, after which it was heard several times daily.

Oruru.—H. G. Warburton states that both in 1952 and 1953 a bird was seen and heard daily after the first arrived. In both years the first bird landed in a tall tree, gave the distinct call, and then flew north, down the valley. After the first day, the bird was seen regularly to have a "beat" of about a quarter-mile diameter circle, within which its movements could be traced by its calls.

Tokomaru Bay.—Mrs. N. F. Williams notes that in 1952 the first arrival was on October 6: a single bird. Birds were in the locality in ones and twos daily after that. In 1953 she says the first bird on October 2 was alone and remained in the vicinity (written Oct. 3).

Silverdale.—L. M. Woods reports the first bird at Wade Herds on October 1 was by itself.

Haldane.—In 1952, on September 12, L. C. Wybrow saw three "in a very exhausted condition quite close to the coast. They showed no alarm and I walked to within several feet of them." In 1953 he heard the first on October 4, then October 6 and seven on October 8. By the 11th they were heard "in full force."

Thus, in some districts it appears that an odd bird will appear briefly and no more will be seen for some time. At other times, an odd bird or two will remain in the one locality for some time before being joined by others, while some reports are of birds not present one day being plentiful the next There is some suggestion of individual birds having a preference for a particular locality, probably where they were hatched, and it seems more and more clear that birds are likely to make their first landfall anywhere in the country, but largely near the coast. In such cases if birds arrived singly or in small numbers, they would make their way to their "home" areas and might well be recorded on the way. It is probable that all the early arrivals are of such odd birds, or birds in small parties, but there can be no doubt that, as the season advances, considerable flocks reach the country and they may be found exhausted in large numbers.

The song is distinctive, consisting of a series of short, even and unhurried whistles of an ascending pitch (all commencing on the same pitch), followed by one or more descending notes. The call has a distinctive timbre about it enabling most observers to easily distinguish it from somewhat similar notes of thrushes and starlings with which it is confused at times. It may have a ventriloqual effect, usually gaining in intensity as it is uttered until the bird, at first thought to be some distance away, may be found to be quite close at hand. The number of upward notes may vary from the usual half dozen or so: the most I have counted is 51, but J. C. Davenport has recorded as many as 176. The phrase may be repeated at frequent intervals, and in some years the song may also be given by all birds in a particular district at a much greater speed. Their habit of calling at night, either settled or as they fly over, is, of course, well known. The note then seems to be always the downward slurs only. The song appears to me to be identical in all respects with that of the closely allied Australian bronze cuckoo (**C. plagosus**), which I was unable to distinguish by sound.

Opinions vary as to the song on arrival of the birds. Some observers believe the birds do not use the downward slurs, the final notes of the full song, until they have been here for some days. Others, however, have recorded either a single or several downward notes without the upward ones, from first arrivals, and yet others record that the full song is given immediately. I see no justification for statements that if a song thrush is heard "imitating" a cuckoo early in the season, that is proof that the cuckoo has been present for some days. Some observers tend to the view that birds may be silent for a few days after arrival, and they would then be difficult to record. It must be stated, however, that there is yet no evidence in support of such a view. Probably the truth is that birds sing on arrival (or after having recovered from their immediate exhaustion, which would be a matter of a day or two only), and continue in varying degrees of completeness of song as they make their way to their chosen localities. This would satisfactorily account for the odd birds heard once and not again in an area until numbers arrive to stay, and fits in with all the observed facts.

PREVIOUS YEARS' RECORDS.

The following series of records refer to the same localities in the case of each observer:—

Hinakura (Mrs. H. I. Cameron).—1943, Sept. 26; 1944, Oct. 4; 1945, Sept. 19; 1946, Sept. 11; 1947, Oct. 1; 1948, Sept. 25; 1949, Sept. 25; 1950, Sept. 20; 1951, Sept. 23; 1952, Sept. 26; 1953, Sept. 21.

Hamilton (M. E. Sepperell)—1946, Oct. 9; 1947, Oct., 9; 1948, Oct. 6; 1949, Oct. 4; 1950, Oct. 2; 1951, Oct. 8; 1952, Sept. 26; 1953, Oct. 4.

Mangawhai (L. Wintle).—1948, Oct. 4; 1949, Oct. 8; 1950, Oct. 10; 1951, Oct. 4; 1952, Oct. 1; 1953, Oct. 1.

OUT OF SEASON RECORDS.

It is widely believed that odd birds remains in New Zealand through the winter. Two of the following must refer to such cases, but it would be desirable to have more such records with actual dates, and also to know if birds sing on such occasions.

Hinakura.—Mrs. H. I. Cameron saw one in June, year not recorded.

Waiuku.—J. E. Coulthard saw what may have merely been a late bird on March 8, 1954, in stormy weather. No birds had been recorded since the previous January.

Bulls.—The birds reported July 16 and July 19 1953 by K. W. Dalrymple (see section following) may not have been newly arrived migrants.

Wanganui District.—I. H. Clark states he has heard these birds in mid-winter.

FLYING INTO WINDOWS.

The curious propensity shining cuckoos have of flying into windows and stunning themselves does not appear to have been recorded before. The first such case drawn to my notice was some years ago when Mr. T. A. Cunningham, of Masterton, found a bird beneath a window. (I think he had actually seen the bird fly into it.) This bird, which was killed by the impact, had flown into the window which was under a verandah, and, from the outside, looked dark with no noticeable reflection of trees to attract the bird. Since then I have heard of two or three similar cases but the following, received during the inquiry, are the only ones I am able to document.

At Hinakura, Mrs. H. I. Cameron, writes: "On three occasions shining cuckoos have collided with a large sunroom window. The first time I was in the room and heard the thud. On rushing out I picked up the bird which was stunned and in half an hour he had recovered enough to fly away. Unfortunately, on the two other occasions both birds were dead when discovered. It seems strange that no other bird has met its end this way. There was a large ash tree (since cut down) a few yards from the room and my theory is that the cuckoo saw the reflection of the leaves and with its powerful flight went headlong into what it thought was open air."

Mr. K. W. Dalrymple, writing from Bulls, August 17, 1953, tells of a bird stunning itself, and as his letter is of general interest it is also quoted directly: "On July 19 a friend of mine and his wife came to see me and said that a few days before they had seen a strange bird. It was hopping about in an apple tree in their garden, close to a window, so they were able to have a good look at it. Their description was of a shining cuckoo, but they did not know the cuckoo. I turned up the plate in the second edition of Buller. As soon as they saw it they said, 'That is it.' Just then I had a call to go outside to another room with a french window entrance. As I was about 7 or 8 yards away from it, a bird flew just over my head and under the verandah full tilt into the top window, and fell stunned on its back just in front of me. I picked it up—a shining cuckoo! Taking it to my friend and his wife, they both said at once, 'Where did you get that? That is the bird.' It gradually recovered, and after a few minutes was able to fly away."

From Blenheim, Mrs. O. L. Watson says: "I have twice known these birds to fly against a closed window. When in the garden, I heard a bang on a window close at hand. On looking up I saw a shining cuckoo on the verandah beneath the window. It appeared momentarily stunned but soon flew off."

That is seven such cases and it is difficult to be sure of the reason for them. In three cases the window was under a verandah, but in another the window was on a sunporch and presumably unobstructed. Cases are on record of birds such as blackbirds apparently attacking their reflections in windows and silvereyes sometimes stun themselves on windows, usually when disturbed suddenly while feeding nearby. The cuckoos' habit seems to be in a different category for which I can offer no explanation.

AN INJURED BIRD IN A CAGE.

Another item of interest is the keeping of a bird in captivity for some time, and I quote a letter from Mrs. N. F. Wilkins, of Tokomaru Bay, who once found a shining cuckoo with an injured wing. To protect it from cats she caged it. "At first it was very spiteful, rather than timid, and screeched and pecked at my hand, but soon became tame, and would sit on my finger while eating leeches off the leaves which I held. To satisfy its enormous appetite, I was forced to feed a few worms to supplement the leechess. They were not relished, but eaten. Slaters, or woodlice, were also fed to it but these were very 'third favourite.' When the bird could fly short distances, I released it on a pear tree. For a week it remained in the proximity and would come to me when I whistled to it, and drink from a dish. It was possible that it remained longer, but I lost sight of it amongst the numerous trees."

ACKNOWLEDGMENTS.

Grateful thanks are offered here to those members and regional organisers who collected and examined records in their areas. Particular mention must be made of B. D. Bell who forwarded 19 reports, J. C. Davenport (43 reports), and Mrs. P. J. Taylor who sent 11 reports. Acknowledgment is also made to all who contributed information in this essentially co-operative inquiry.

AN OBSERVATION ON SILVEREYES.—On October 31, 1954, I found a silvereye nest which was in an ideal position for observation. This nest, situated nine feet from the ground in a young miro tree, was almost entirely built of moss, horse-hair and spider webs. The nest contained three pale blue eggs. The first two eggs hatched about the same time before 4 p.m. on November 1 and the third egg hatched 24 hours later. A silvereye remained sitting for about a day after the third egg had hatched and on leaving the nest both adults made several trips to remove eggshells and excreta. On the tenth day in the nest the young were being fed about 263 times a day over a period of 14 hours. Visits were paid by both adults on an average every three minutes. Sometimes the chicks were fed twice in five seconds and on one occasion they were not fed for over 20 minutes. The adults, which remained at the nest for only ten seconds on each visit, fed the chicks on flies and caterpillars which were already broken into small pieces. The chicks were first fed at about 5 a.m. and last fed when the adults retired at 7 p.m. Some time before noon on November 13, the young left the nest, and supposing that the first egg hatched at noon on November 1st, the nestling period would not be less than 11 days 12 hours or more then 12 days. However, it is certain that the nestling period was almost exactly 12 days. At 5 p.m. on November 14, the three chicks were flying well, when observations ceased.—David Medway, New Plymouth.

INFORMATION WANTED ABOUT THE KAKAPO.—The kakapo is now a very rare species. Before active steps can be taken for its conservation as much information as possible must be obtained about its past and present distribution. A paper is being prepared on this subject and the author would be grateful for data which may be in the possession of members. Most of the readily-accessible literature has already been searched; what is particularly wanted now is first-hand information of birds seen or heard, references to anyone known to have seen them of recent years or in the past, and references to any accounts of distribution of the kakapo in out-of-the-way literature or diaries that members may know about. Please get in touch with G. R. Williams, Wildlife Division, Dept. of Internal Affairs. All assistance will be acknowledged.

BLACK-BACKED GULLS DISPOSE OF ENEMIES BY DROWNING.—Mr. A. L. Nugent witnessed, at Whangaroa, a savage encounter between a mated pair of black-backed gulls (**Larus dominicanus**) and a harrier (**Circus approximans**). The harrier accidentally dropped a partly consumed young rabbit into the sea near the shore. It seemed unable or unwilling to pick it up from the water. The two gulls took charge of the rabbit, gradually got it ashore and fed from it, each giving the other a turn as is usual with mated birds of this species. The harrier circled for some time, then made a sudden descent, frightened the gulls, seized the rabbit and rose with it. The gulls quickly rallied and made diving attacks in such a manner as to purposely force the harrier away from the land and over the sea, where it again dropped its prey. This time the gulls took the carcase into shallow water and fed on it, not allowing it to strand in case the harrier should be able to pick it up as before. After much waiting on the cliff-top, almost invisible, anger apparently overcame the harrier's hope of the gulls forgetting its presence and it plunged sharply downward to the attack, fastening its talons into the wings or shoulders of one of the gulls

and tearing with its bill at the gull's head and neck, also making very good attempts to lift it ashore. The other gull now entered the fray, working from the landward side to force the fight into deeper water. It grasped the harrier's head and pushed it under the water so that it had to release its grip on the first gull. Both gulls now concentrated on holding the harrier under the surface until it was drowned. Although the injured gull bled profusely and was very sick for a few days it eventually recovered. —H. R. McKenzie, Clevedon.

MAGPIES AT MARAKOPA.—In a letter from Marakopa, dated 23 May, 1954, my daughter Miss B. G. Fordham, informed me of the appearance at our farm at Marakopa, of a pair of magpies, which she first observed on the above date. Marakopa is thirty miles south of Kawhia, and I believe that this occurrence must be the first record of this species from that region. My daughter knows the magpie well, having observed it further south. During my 30 years' residence at Marakopa I did not see one nor hear of its presence in that district.—R. E. W. Fordham, Ngongotaha, 15 September, 1954.

REVIEWS.

Bird Migrants.—Eric Simms. Cleaver-Hume Press, Ltd.

All who have attempted to study the migration of birds will enjoy this well-written book, in which the author successfully presents in a popular way, the essential facts, insofar as they are known, and the problems of this branch of ornithology. Although the book is primarily concerned with British birds, it is none the less thought-provoking for New Zealand naturalists, because "the phenomena of bird migration cannot be regarded in a purely insular way."

In a valuable introduction, the author points out that the ordinary observer can collect accurate and much-needed information. A chapter on the forms of migration has some bearing on our problems in New Zealand, where migration is far from being a simple up-and-down, north-and-south affair. When the author discusses migration on broad and narrow fronts it is brought home to us how little is known about bird routes and movements in these islands. For example, would a patient watcher on Farewell Spit in the autumn be able to note a northward movement not only of waders but also perhaps of introduced passerines? Observations in recent years give grounds for believing that some harriers and many goldfinches and yellowhammers move in a northerly direction in autumn along the isthmus between Tamaki and Manukau. In spring flocks of skylarks and goldfinches in the fields, when local birds are paired and males and singing on territory, pose a problem which has yet to be solved.

This book can be read with benefit by all birdwatchers in New Zealand. The author ends with an appeal for keen and critical attiudes and skilled teamwork in dealing with observations.—R.B.S.

Bird Study.—The Journal of the British Trust for Ornithology. Vol. I., No. 1, March, 1954; Vol. I., No. 2, June, 1954.

This journal replaces the former bulletin, which ended its existence with No. 52. The new publication intends giving first place to the results of the Trut's inquiries but space will be available to the results of studies assisted by the Trust, to articles on general topics relating to research on birds and to reports of various organisations. The first number includes a paper on the breeding biology of the greenfinch by J. F. Monk, which will be of interest to New Zealanders, while David Lack writes on "Two Robin Populations." In No. 2, the loss of rings by marked herring gulls, by R. H. Poulding should be read by New Zealand bird banders. There is much of general interest in both numbers.—R.H.D.S.

Marine Birds—at and off-shore—at Bird Island, Algoa Bay. M. Courtenay-Latimer. The Ostrich xxiv., 1 : 27-32.

Some field notes of interest on four species of albatross seen around a fishing boat.—J.M.C.

Some Sea Birds in Winter off the S.W. Cape. W. P. Stanford. The Ostrich. xxiv. 1 : 17-26.

This paper concerns sea birds seen from the research ship Africana II. on one of her routine scientific trips off the south-west Cape coast. Species dealt with include many species of petrel and albatross which are also found in New Zealand seas, and the field notes and comparisons of plumage at different ages between birds of somewhat similar appearance could be of much value to ornithologists in New Zealand if The Ostrich was readily available.—J.M.C.

A Sub-Fossil Hawk from New Zealand, by R. J. Scarlett. Records of the Canterbury Museum, vol. 6, pp. 245-252, 1953.

The Recent and sub-Recent formations of New Zealand and the Chatham Islands, in swamps, sand dunes and caves, often contain bird bones, sometimes in considerable quantities. The species range from giant moas to small perching birds. Collections have accumulated in the main museums but very little work has been done on them. Mr. R. J. Scarlett has recently paid some attention to the comparatively extensive series in the Canterbury Museum and has sorted out the bones of a harrier larger than the existing species. In addition to large size there are structural differences, notably in the premaxilla in which the cutting edge is convex instead of straight as it is in **Circus approximans.** This new species has been named **C. eylesi** and the type and most of the other bones examined come from Pyramid Valley. There are as well a few bones from Lake Grassmere, Marlborough. The author's description is accompanied by line drawings and numerous measurements and amply demonstrates the specific status of this harrier.—W.R.B.O.

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