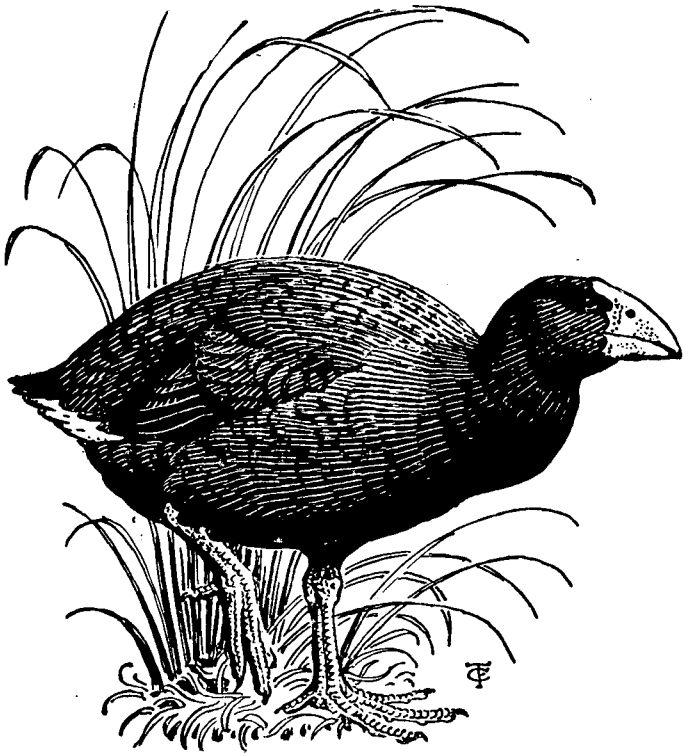
NOTORNIS

Quarterly Bulletin of

The Ornithological Society of New Zealand



Volume Seven, Number Four : April 1957

NOTORNIS

In continuation of New Zealand Bird Notes

BULLETIN OF THE ORNITHOLOGICAL SOCIETY OF NEW ZEALAND

(Incorporated)

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

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

Annual Subscription, 10/- (Juniors, 5/-); Endowment Membership, £1; Life Membership, £10 (for members over thirty years of age).

Contents of Volume 7, Number 4 : April 1957

NOTORNIS

VOLUME SEVEN NUMBER FOUR: APRIL NINETEEN FIFTY-SEVEN

NESTING OF THE YELLOW-BREASTED TIT
(Petroica m. macrocephala)

By JOYCE H. ANGLESEY

On 6/10/55, early in the morning, I saw a female Yellow-breasted Tit flying to and fro in the verandah of my home near Wakefield and trying to begin a nest on a ledge under the corner of the verandah ceiling. Every time she flew away from the ledge the wind caused by her wings blew down to the floor some of her building materials, moss and fine straws bound together with cobwebs. She persisted with very little success, so after an hour or so I tacked up a small stick and a piece of cardboard to give her something to hold her materials. From then on building went on apace and in two days the nest was almost finished; she completed it on the third morning. Probably two days would have been enough if she had not had so much time wasted that first morning.

The male did not carry building material, but came occasionally and examined the nest with a critical eye, apparently deciding what was needed next, and would go away by himself, but returning after a while to lead the hen off in some new direction whence she would return with material and work from there for a while. The colour of the breast of the male approached the yellow of pale factory-made butter. The female had a few yellow feathers too, giving her breast a slight tinge of cream. Some of the fine straw and dry grass she used was pulled with much fluttering from the bottom of an abandoned blackbird's nest (this year's) in a wistaria just outside the verandah. The cobwebs were collected from about the verandah and eaves of the house, the moss from a distance away under the trees.

Egg laying must have begun on the day the nest was completed. We contrived a way to see into the nest by standing on a step below and holding a mirror over the nest. Five pale eggs (slightly pink, I think) with brown specks were laid within as many days and the brooding began immediately. The male bird fed the female by collecting caterpillars or insects in its beak and then flying into the trees close to the house, where it would whistle a thin little song. The female would immediately leave the nest and fly to the tree. Only once did I actually see her meet her mate. I heard the snap of her beak as she took the food, but several times I saw him with something in his beak – once some wriggling green caterpillars – and heard him give his little whistle.

After she had been sitting nearly two weeks something must have alarmed the hen – dogs barking at a cow which came round the house, I think – and she was away from the nest for more than six hours, but I saw her on the nest in the evening, by the light shining through the pantry window. We thought that would be the end of her hopes, but by the end of the third week she hatched out four of the eggs. During the last week she seemed to leave the nest for longer periods and we thought she was giving up hope of hatching them, but perhaps she was not needed so constantly, or she may have been feeding herself for the next stage.

After the nestlings were hatched we could not count them very well as they looked in the mirror like a few slugs with a little pinkness showing here and

there. At first the male bird seemed to do most of the hunting. When he flew to the nest the hen would fly off. He would dip his head twice into the nest before flying away, she would return after a few minutes, dip her head down once and settle down over the chicks until her mate would come again. During the second week she was helping more with the feeding and would warm the chicks up after being off the nest for about ten minutes. He would feed them twice before she returned. The food during this time seemed to be small and looked fluffy, perhaps sandflies or other small insects; but this week was the third, and the youngsters filled the nest so that the mother was not needed for warmth and the food had progressed to the ordinary earthworm size or a slater. At this stage most of the hunting seems to be on the ground. I frequently see the parents pulling worms out of the lawn just as the thrushes do. When I throw a worm on the path the male bird sees it from his perch on the telephone wires and flying straight down will jerk it up and down until he breaks it in two pieces – then away he will fly to the nest with one piece and return for the rest. The female too when she has had a worm on the lawn will work away at it – probably breaking it in pieces.

On 16/11/55 I had a look at the nest after dark to find that the mother was not on the nest – there would not be room for her as the chicks fill the nest. They are growing their feathers now and are obviously two males with their black heads and light breast feathers and two females with brown heads. Last week I observed that before flying away from the nest the parents would stay a minute watching the little ones and often, but not every time, would pick up something white in the beak and fly quickly away. At first I thought it might be broken shells they were clearing away, but soon realized it was the droppings of the young birds, and yesterday I saw that the young ones were now attempting to attend to their sanitary arrangements themselves. A nestling appeared to heave itself on to the backs of the others and then on to the edge of the nest till it contrived to push its tail over the edge and so get rid of its own droppings. The parents are still clearing up occasionally, but there are a lot of white splotches on the step below.

Every time one of the parents arrives with food we know all about it with the chorus of squeaking from the young. They are fluttering a little now and trying their wings. I am very afraid of what will happen when they begin to fly, as we have two cats! One cat was sitting eyeing the nest this morning so that I had to smack him and take him away every time I noticed him. At last he gave up in disgust.

17/11/55. When alarmed near the nest, the parents fly low and perch low apparently to draw attention away from their young.

It does not seem possible that such small eggs should take three weeks to hatch, but I am almost certain of this. Building started on a Thursday and laying on a Saturday and I would not be surprised if they do not fly by the end of the third week. They are practising this morning on the edge of the nest.

18/11/55. A boy who had been staying with us overnight was trying to see into the nest. I handed him the mirror we had been using and told him to use it quietly. Instead, he shot his arm up quickly and the four young birds 'exploded' from the nest; two flying into his face; then, turning, flew to a tree just outside the verandah; and the other two flew the length of the verandah, about 18 feet, before going outside and flying back to the same tree. In the excitement I did not notice what happened to them, but imagine that the parents piloted them away to safety. We did not see them near the house again. They did not nest in the same place this year, 1956, but late in August I saw the female collecting cobwebs along the wall of the house and flying out towards some trees.

Summary: October 6th. Nest begun. 8th. Nest finished. ? First egg. 12th. Five eggs. Incubation begun. 29th. Four eggs hatched. Incubation period, therefore, about seventeen days. November 18th. Four young flew. Fledging period of twenty days.

TAXONOMIC STATUS OF THE BOBWHITE QUAIL IN NEW ZEALAND

By KAJ WESTERSKOV
Wildlife Division, Department of Internal Affairs, Wellington

The introduced Bobwhite Quail (*Colinus virginianus*) in New Zealand have not hitherto been determined subspecifically and are in the *Checklist of New Zealand Birds* (1953) listed as *Colinus virginianus* subspecies. As wild populations of this bird persist in the Waikaremoana area where they have been hunted as game birds for many years (Westerskov, 1956) it is not only of theoretical but also of practical value to find out where the stock originally came from, and thus the subspecies to which the New Zealand birds belong.

ORIGIN OF STOCK

The five shipments of Bobwhite Quail arriving in New Zealand between 1899 and 1902 were supplied by an American dealer in game birds, Mr Charles Payne, Wichita, Kansas. Examination of the annual reports of acclimatization societies, the relevant minute books of the Wellington Acclimatization Society, and files of the Department of Internal Affairs have not revealed the localities where the introduced birds had been trapped; but Phillips (1928) records that Payne about 1890 to 1895 began to ship large quantities of Bobwhite Quail mostly to eastern and north-eastern United States and that they were trapped in Kansas and the Indian Territory (later to become part of Oklahoma). After a time he had to stop as he violated the laws protecting game on Indian lands; later he obtained Bobwhites from Texas under a so-called 'scientific permit' until this method was stopped by the combined action of thoroughly aroused Texas sportsmen. Bobwhite Quail were very plentiful in Kansas at the time of Payne's mass-exports; they had increased rapidly when farming operations began.

BOBWHITE SUBSPECIES

The genus *Colinus* is endemic to the Americas. The species *Colinus virginianus* occurs in eighteen subspecies from southern Canada and the United States in the north through Cuba and Mexico to Guatemala in the south (Friedmann, 1946). Bobwhite Quail have been introduced as game birds to western United States, British Columbia and Manitoba, the West Indies and New Zealand. They were unsuccessfully introduced in China, France, Germany, Sweden, and Denmark (where the results of recent plantings cannot be evaluated yet).

There are six subspecies of Bobwhite Quail in the United States (Aldrich, 1946): (1) New England Bobwhite, *C. v. marilandicus,* in New England, Pennsylvania and Virginia; (2) Eastern Bobwhite, *C. v. virginianus,* from Virginia, south through the Carolinas, Georgia and northern Florida; (3) Florida Bobwhite, *C. v. floridanus,* lower part of the Florida peninsula; (4) Interior Bobwhite, *C. v. mexicanus,* interior eastern United States from New York, south-eastern Ontario, Michigan, Wisconsin, Minnesota and eastern South Dakota in the north to the Mexican Gulf; western boundary of range is in Kansas, Oklahoma; on the eastern side meets with subspecies mentioned above; (5) Plains Bobwhite, *C. v. taylori,* from central South Dakota through the Great Plains to northern Texas; (6) Texas Bobwhite, *C. v. texanus,* central and southern Texas. A seventh subspecies, the Masked Bobwhite, *C. v. ridgwayi,* was formerly present in southern Arizona, but is now extinct in this area and found only south of the United States-Mexico border.

The Eastern Bobwhite has been introduced into the West Indies and both eastern and western United States. The Florida Bobwhite has been introduced in the Bahama Islands. The Interior Bobwhite has been introduced both in eastern and western United States. The Plains Bobwhite has been established

in Washington, Oregon and Idaho, but has also been introduced in eastern states. The Texas Bobwhite has been transplanted extensively into many parts of the United States.

Wichita, Kansas, from where Mr Payne operated, is almost the geographical centre of the range of the Plains Bobwhite. Both his trapping in Kansas and Oklahoma were within the range of this subspecies. The only two other subspecies he is likely to have obtained for shipment are *mexicanus* from east of Kansas, and *texanus* from Texas.

These three subspecies differ in the following respects:

(1) SIZE. The Texas Bobwhite is smaller than *mexicanus* and *taylori*, which are approximately of the same size:

	Wing (mm)	*Tail* (mm)	*Culmen* (mm)	*Tarsus* (mm)
C. v. mexicanus —	106-119 (112)	49-71 (62)	12.5-15.5 (14.4)	30-36 (33)
C. v. taylori —	105-117 (112)	56-68 (62)	13-15 (14)	30-33 (32)
C. v. texanus —	102-111 (108)	53-67 (61)	13.5-15.5 (14.6)	30-33 (32)

(All male specimens)

(2) COLORATION: The small Texas Bobwhite is pale, excessively greyish above and relatively heavily barred below; it has a more variegated appearance than *mexicanus* and *taylori*; the back patch in *texanus* is flecked and barred with grey and black to a high degree; the whiteness of the light markings and edgings of the remiges further adds to the variegated appearance. The Interior Bobwhite is of a medium shade with a greyish wash; the back patch is a darker, warm reddish as contrasted with the paler, more greyish back patch in *taylori*. The Plains Bobwhite has upper parts much lighter and greyer than in *mexicanus*; rump and tail greyish with no brown or reddish brown; dark areas of back, tertials, and scapulars more sharply defined and less mottled with brown.

NEW ZEALAND BOBWHITES

The New Zealand specimens examined consisted of two Bobwhites — a cock and a hen — shot at Ruapapa, Wairoa, in 1952, and now kept in the Dominion Museum, Wellington, and thirty-seven specimens — thirteen cocks and twenty-four hens — from the original shipments to Wellington in 1900, also kept in the Dominion Museum.

The two birds shot in 1952 — in an area where they have persisted since the liberations in 1900 — have the following measurements:

Young male, Ruapapa, 10/5/1952 — wing 113 mm; tail 58 mm; culmen 14.5 mm; tarsus 29 mm. Serial No. Dom. 2406.

Adult female, Ruapapa, 30/6/1952 — wing 115 mm; tail 57 mm; culmen 14.8 mm; tarsus 30 mm. Serial No. Dom. 2405.

Measurements of ten cocks of a shipment in 1900, landed in Wellington, are: wing 107-116 (111.5) mm; tail 58-66 (62.3) mm; culmen 14.5-16.2 (15.0) mm; tarsus 28.5-31.0 (29.6) mm.

Measurements of ten hens obtained similarly are: wing 107-115 (110.4) mm; tail 57-63 (59.9) mm; culmen 14.4-15.0 (14.8) mm; tarsus 29-31 (29.8) mm.

A comparison of the mean measurements of males of the four groups: *mexicanus, taylori* and *texanus* from the United States and New Zealand specimens is given in Table 1.

TABLE 1

Mean measurements in mm of 67 male specimens of *C. v. mexicanus*, 15 male specimens of *C. v. taylori*, 52 male specimens of *C. v. texanus* (from Aldrich, 1946) and 10 New Zealand specimens.

	Males			
	mexicanus	*taylori*	N.Z. specimens	*texanus*
Wing	112	112	112	108
Tail	62	62	62	61
Culmen	14.4	14	15	14.6
Tarsus	33	32	30	32

From the measurements alone it appears that the New Zealand population of Bobwhite is not derived from *texanus* stock. Furthermore, the New Zealand specimens have *not* the back patch heavily flecked and barred with grey and black, and their appearance does not compare generally with examined specimens of this subspecies.

The acclimatized population of Bobwhites in this country accordingly stem from *mexicanus* or *taylori* stock. Examination of series of skins in the U.S. National Museum, Washington, D.C., as well as comparison with selected study skins sent to me from the National Museum collection, have proved that the New Zealand Bobwhites are the Plains Bobwhite, *Colinus virginianus taylori* Lincoln. The lighter and greyer coloration generally, the lack of reddish brown on back and rump, and the paler back patch in the examined New Zealand specimens characterize them as belonging to the subspecies *taylori*.

The Plains Bobwhite was first described from specimens collected by Dr F. C. Lincoln at Laird, Yuma County, Colorado, in 1915 (Lincoln, 1915).

An interesting point in connection with the subspecific status of New Zealand Bobwhites is the fact that the original stock was trapped and shipped here (1899-1902) before the large importations of Texas Bobwhites into the northern ranges of the Bobwhite. These importations began in 1910 (Phillips, 1928) and the result is that the Bobwhite Quail populations of many eastern states as well as in the west are 'now hopelessly mixed beyond the point of subspecific identifiability' (Friedmann, 1946). The New Zealand Bobwhite population has remained undisturbed from introductions of other subspecies and should thus be pure *C. v. taylori*.

Another interesting point in the establishment of the Plains Bobwhite in New Zealand is the fact that they only became permanently acclimatized within latitudes corresponding closely to the areas from where they came. Wichita in Kansas, the centre of Bobwhite Quail exports, is situated between 37 and 38° N. In New Zealand Bobwhites were liberated in many localities over a vast range from 36° S. in Northland to 47° S. in Stewart Island (cf. Westerskov, 1956). Up till 1923 or later, populations were established in the South Auckland area, between 37 and 38° S., and the Wairoa-Waikaremoana area where Bobwhites are permanently established in various localities is situated between 38 and 39° S. Roughly, light conditions and day lengths are similar in the area of origin and the area where these birds became acclimatized.

VERNACULAR NAME

The Bobwhite Quail has hitherto in New Zealand literature been referred to as Virginian Quail (Bobwhite has been given as a second choice), as in, for example, Thomson (1922), Oliver (1930), and McKenzie (1953). In the shooting schedules of the New Zealand *Gazette* they have always been listed as Virginian Quail, which name was also given to this species in the *Checklist of New Zealand Birds*.

It is undesirable that a North American bird acclimatized here, a game bird about which there is an extensive literature, should be called by a different name from that under which it is known in its country of origin. The official name of this species in North America is Bobwhite Quail, often

in short referred to as Bobwhite (Stoddard, 1931; *Checklist of North American Birds*, fifth edition, from the manuscript belonging to Dr F. C. Lincoln).

It is suggested that this bird in future be called Bobwhite Quail to accord with its name in its country of origin, to avoid misunderstanding, and to facilitate location of literature references.

ACKNOWLEDGMENTS

I am grateful to Dr R. A. Falla, Director of Dominion Museum, Wellington, for making available the study skins kept in the museum; to Mr H. W. Axbey, Rotorua, who arranged that the two Bobwhite Quail shot at Wairoa were preserved; and to Dr John W. Aldrich, of the United States Fish and Wildlife Service, Washington, D.C., for reading the manuscript, helpful suggestions and the loan of study skins.

SUMMARY

The Bobwhite Quail introduced to New Zealand now only persisting in scattered populations in the Wairoa-Waikaremoana area, belong to the western prairie form, the Plains Bobwhite, *Colinus virginianus taylori* Lincoln. The introduced birds came from Kansas and/or the old Indian Territory around 1900. This bird ought in future to be called Bobwhite Quail and not Virginian Quail.

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THE WHITE HERON (*Egretta alba*) IN NEW ZEALAND

An inquiry based on available records 1951-54

By H. G. WARBURTON

This report has been written up from the observations and notes of many people throughout New Zealand that were collected and sorted out by Mr D. Brathwaite, Napier, then handed on to me to see what information I could sift from them. In its present form, this could act as a pilot inquiry into the status and general movements of the White Heron throughout New Zealand. From the details of observations and dates, I have arranged a summary for each year, month by month, as follows:

White Herons reported elsewhere than at Okarito throughout N.Z. 1951-54

	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
1951	0	6	10	12	11	16	12	15	12	7	1	1
1952	5	2	4	16	82	52	62	16	14	21	17	6
1953	0	1	1	5	9	17	14	28	21	17	2	0
1954	0	0	1	3	17	13	13	1	10	2	0	0

The reports available to me have been carefully assessed in order to eliminate as far as possible duplicate reports sent in from a district during one period which almost certainly referred to the same bird. However, it is obvious that the reports are quite likely to include observations on the same individual, as a bird may cover a good deal of ground in a short time, and such movements are difficult to check. It is hoped that the summary at least gives a general indication of annual occurrence.

Sometimes the period of residence in a locality has not been reported as such – only the date first seen – so that totals for some months should be slightly higher than shown. Nevertheless, there appear to be more reports made during the winter months when there is a general dispersal over New Zealand. Yet even these totals do not reach a figure nearly as high as would be expected from breeding information. In other words, there may be many White Herons that live unreported during the months of dispersal.

I have been in communnication with Dr Falla regarding White Herons in general, and his information on the breeding colony at Okarito has enabled me to make comparisons with that from observers throughout New Zealand:

'The cycle of occurrence is roughly the same each year, some ten pairs of herons returning to the nesting place some time in September . . . and are joined later by (another) two pairs of herons.'

I assume that during October there would be usually about 24 adult herons at Okarito, and that those reported from other parts at that time could be non-breeders. It is interesting to note that not many herons were reported during the period November to February of each year. Yet those reported for October must have been around during that period and even later.

When could one expect the young herons to be flying, and, roughly, how many would there be?

'The young are reared successfully from about a dozen nests, an average of two per nest being the maximum of survival to flying stage. It is practically certain that young birds one year old do not return to Okarito. The first of the nestlings can fly by December, and the colony is deserted by mid-January.'

On the basis of Dr Falla's information, the greatest number of herons throughout New Zealand should be, I think, soon after the young have dispersed – i.e. February to April. In order to arrive at an assumed population for this particular period of the year, I have taken the October reports of the previous year (non-breeders) plus the known 24 breeders, and, say, ten or more young, to make a table as follows:

Assumed greatest population of White Herons throughout New Zealand soon after dispersal months

Year	Oct. reports (non-breeders)	Breeders and young	Feb. - April year following
1951	7	34	41
1952	21	34	55
1953	17	34	51

According to Dr Falla the size of the breeding colony has remained the same for many years. Thus it appears that either there must be a very high mortality soon after leaving the colony amongst the young reared, or the available reports are very incomplete. As regards the young reared each year,

Dr Falla says: 'Theoretically there could be between thirty and forty of them . . . of perhaps three age groups . . . (that) remain dispersed . . . and a sizable nomadic flock.'

In order to fill in the gaps of information, we now require over the next few years greater numbers of regular reports on White Herons in as many areas as possible – or for those sending in annual bird reports to say whether or not (nil reports can be quite useful) White Herons have been in their areas.

Although a large number of herons may have passed unreported, it is significant that during May 1952 a large number of reports were forwarded through regional organisers. I assessed the number of reliable and unduplicated reports throughout New Zealand as 82, but there were very likely many more herons around at that time. General opinion was that there must have been a sudden 'invasion' of herons – but from where?

It will be noticed that the number of reported herons dropped towards November, and one would have expected more to have shown up at Okarito. On this point Dr Falla says:

'You may take it as definite that there has been no significant increase in any of the seasons 1941-1955.'

One of the places where a flock of White Herons showed suddenly was at Rangaunu Bay, near Awanui, Northland. A local fisherman, Mr T. Walker, informed me that during about fifty years he saw only an occasional lone White Heron during the winter of almost each year. During winter 1952 up to 18 in a flock were seen regularly by Mr Walker, and also by Mr R. Michie, of Kaitaia, while another fisherman reported seeing 23 at one time. From about October onwards they were not seen on the harbour. Here, then, was one large flock that just vanished, or went unreported for some months, the breeding months.

By June of 1953, White Herons were again reported at Rangaunu. I watched regularly and collected reports on the movements of a flock varying at times from 11 to 14 White Herons. From information given me by Messrs T. and W. Walker, and Mr R. Michie, this flock appeared to move about and feed on exactly the same grounds as the flock of the previous year. Could one assume any connection between the two flocks? If so, where had they been hiding? We talked of the possibility of another breeding place. In correspondence, Mr D. Brathwaite suggests an opinion along the lines that, if the birds showed up originally from 'somewhere', then they could quite well have returned there for a period, and have shown up again at Rangaunu the following year.

One significant point to me was that all reports, and my own observations of these flocks each year, showed them to move about always as a flock. Now I understand that Australian White Herons do move about in flocks sometimes during the months after dispersal, i.e. the winter months. But concerning White Herons established in New Zealand, Dr Falla has this to say:

'The ordinary dispersal pattern of White Herons from Okarito does not appear to include flocking at any stage, except for the occurrence of larger groups in Westland in the early stages of dispersal.'

By November 1953 the flock at Rangaunu had left, but again there was no increase in the numbers at Okarito, nor reports of a flock elsewhere (something to be expected, since the appearance of a single bird in an area sometimes causes notice).

In the winter of 1954 some White Herons showed up again at Rangaunu, ten being the greatest number seen at any one time by Mr T. Walker. These were again feeding in the same places as before. It was about this time that Mr W. Walker reported seeing a smallish White Heron on the sand-bar of Rangaunu Bay. This was later identified by Mr H. R. McKenzie as a Little Egret (*Egretta garzetta*) and reported in *Notornis*, Vol. 6, No. 3.

In order to check that this newly reported Little Egret was not the one reported a little earlier at Manukau Harbour, I arranged with Mr J. Prickett to look for the latter one on the same day I returned to Rangaunu Bay. The

Little Egret at Manukau was still there, and by this time there were two Little Egrets at the sand-bar of Rangaunu Bay. The most reasonable assumption of the origin of these birds is Australia, and I suggest their presence as a likely clue in unravelling the mysterious comings and goings of the White Heron flocks on Rangaunu Bay.

There are many people to whom thanks are due for the different ways that they have helped with the matter for this report. Will they please accept the thanks of Mr D. Brathwaite and myself.

NORTH ISLAND NATIVE THRUSH OR PIO-PIO
(Turnagra capensis tanagra)

By G. E. SOPP

The Native Thrush, or Pio-Pio, is reliably reported once to have been common in bush country from Waikaremoana far up towards East Cape. From reports from further north and from my own experience I am satisfied that it still occupies much the same range, though in small numbers and reduced bush habitat. The retiring habits of this bird, its fondness for thick cover and its similarity to the Song Thrush (*Turdus ericetoram*) make identification difficult. It appears to sing only rarely. An alarm call is very frequently used, but only too often comes from a thicket and does not lead to a sight record.

In many years of working and hunting in the bush I have caught glimpses of thrushes, usually flying low and away from me, some of which I now consider could have been the Pio Pio. The first that I found to be certainly different was at Hopuruahine, Lake Waikaremoana, in 1938. I had followed a deer off the road into the bush when I clearly saw this thrush with white on the underside, a down-curved tail and of a larger size than the Song Thrush.

In May 1946, on the shore of Lake Waikare-iti, my brother Carl Sopp was watching a flock of Whiteheads (*Mohoua albicilla*) working through the low growth when he noted two larger birds following them. These answered to the description of the Pio Pio. They stopped close to him, regarded him steadily, then quietly retired.

Two brothers, David and Henry Odey, trappers and hunters, on 11 November 1952 told H. R. McKenzie of a song, new to them, which they had heard that day several miles north of Lake Waikaremoana. Their description of the song fitted that of W. P. Mead and H. R. McKenzie of song heard by them on the Wanganui River, believed to be Pio-Pio. I have since found that a good population exists where the Odey brothers heard the song.

At the edge of a natural clearing far back from Lake Waikare-iti, on 9/4/53, with another brother, Brian Sopp, I was waiting in the evening for deer when a bird, with undulating flight, came from the bush behind and settled on the top of a small bog pine five feet above our hiding place. It sang a beautiful loud clear song, then flew back into the bush. By this time I had been furnished by Mr W. P. Mead, of Wanganui, with a good photo of a mounted specimen of the Pio Pio in the Wanganui Museum, and I knew this fine songster could be none other than it. I had not previously heard the song or anything closely approaching it.

On 9 April 1955 I took four friends, Mr and Mrs W. Holloway and Mr and Mrs Shaler, of Rotorua, for a tramp to the Pio-Pio country. The two men were veterans of the bush. While we were having our lunch in a small clear spot a Pio-Pio gave its alarm call in a thick bush beside us. Another called nearby as if in answer. The first then came out on to the leafy face of the bush only six feet away from us and in full view, where it fed on 'leaf-roller' grubs for several minutes. While obtaining the grubs it supported

itself largely by fluttering with wings vibrating strongly and audibly. We had ample opportunity to note the shape of the bill, the white throat and generally light colour underneath, down-curved tail and reddish-brown colouring on top of the tail. Unfortunately the two cameras carried by the party were not ready. On returning home later we checked with the photo by W. P. Mead and all agreed that the bird we had seen was certainly a Pio-Pio. The bird departed quietly through the trees.

A mile from the above place we flushed another from the undergrowth. It flew low and settled in a bunch of hard-fern a little way ahead. It did not move so I bent down and parted the fern fronds, causing it to make an unhurried departure from within six inches of my hands. It showed no fear while being followed at a few feet from perch to perch by Mr Holloway and Mrs Shaler with their cameras. No photograph was obtained owing to the dull light under the bush and the leaves and twigs of the undergrowth. This bird was silent. Between the two places where the birds were seen several others gave alarm and other calls. The alarm call was the most frequent. It is a succession of even staccato notes like that of the bellbird, louder and slower. This is usually given three times with very short pauses between. Mr Holloway remembered having often heard this call up the Patea River fifteen or more years ago, but he had not seen the bird.

The chatter of the Bush Hawk (*Falco novaseelandiae*) has a similar tone but trails down at the end and is not usually repeated in quick succession. The illustration in *New Zealand Birds*, Oliver, of the head of the Pio-Pio by the late Mrs L. A. Daff I consider to be a perfect likeness.

A VISIT TO A NESTING COLONY OF CRESTED PENGUINS
(Eudyptes p. pachyrhynchus)

By OLGA SANSOM and PHIL DORIZAC

During the last week of August 1956, while on a five-day visit to Doubtful Sound, Western Southland, on the advice and through the courtesy of Mr George Howard, we landed at Rolla Island, a high forest-clad half-acre island in deep water at the junction of Hall's Arm and Deep Cove in Doubtful Sound. With some 95 miles of waterway this sound is shallow at the entrance – 200 feet in places – due to the slowing down of the ancient glacier, but in Deep Cove, at the head, there are depths of over 1000 feet. Rolla Island stands steep to the sea. The Spanish names of this island, of Bausa Island, Malaspina Sound and Espinosa Point, were given by Malaspina, the Spanish explorer of this sound, in 1793.

From our launch *Constance* seals and penguins were seen at close quarters, while Deep Cove harboured a somewhat unusual visitor, a nine-foot Leopard Seal (*Hydrurga leptonyx*). Complete with spots, a surprising turn of speed and athletic abandon, he shot under the *Constance* and out again to toss a fish with an impressive snapping of teeth.

Rolla Island appears to be vermin-free. Its coverage is magnificent. A few massive kahikateas, rimus and miros crown the island; there is a coastal strip of Rata and great Grass Trees (*Dracophyllum*) with trunks eight inches in diameter swinging out over the deep water of the fiord. Coprosmas, the aromatic green flowered *Ascarina lucida*, some pseudo-panax and notho-panax and a small tangle of supplejack compose the scrubby cover. A rug-sized patch of *Tmesipteris*, related to the lycopods, and usually epiphytic, makes unexpected ground cover, while *Asplenium flaccidum*, also a tree dweller, was growing in the ground alongside it. Veined white marble was noted on this island. There is no water on the island.

Plate V: Open nest of Crested Penguins on Seymour I. PHOTO BY PHIL DORIZAC

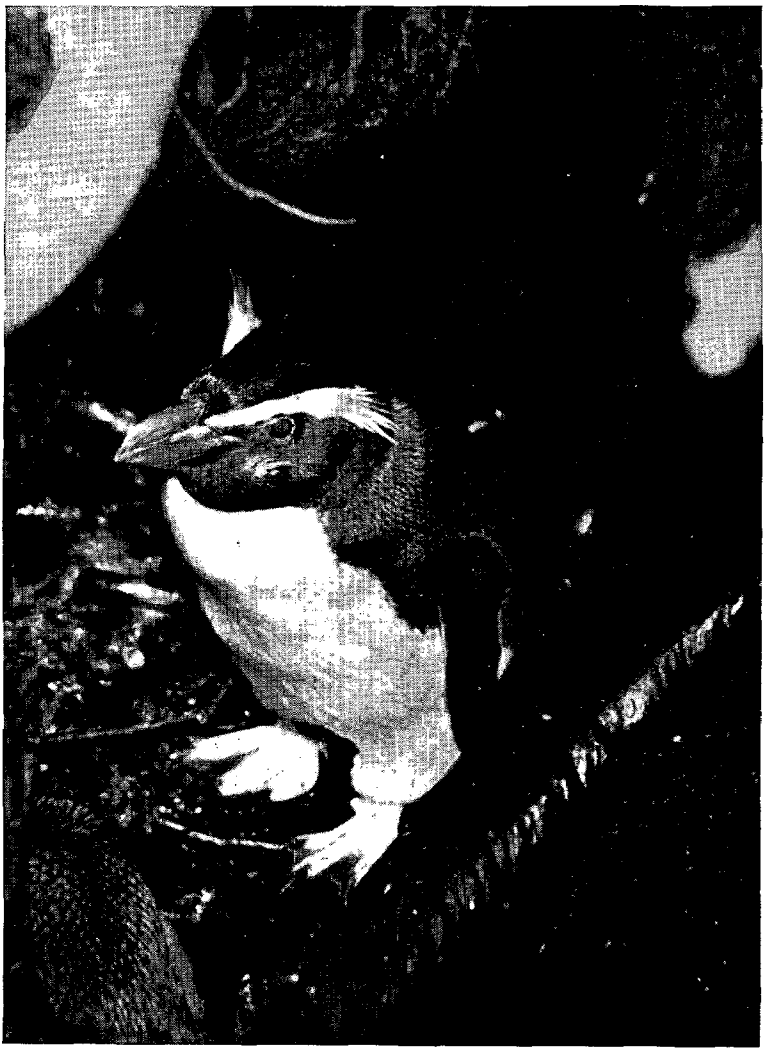

Plate VI: Crested Penguin on Rolla I. PHOTO BY PHIL DORIZAC

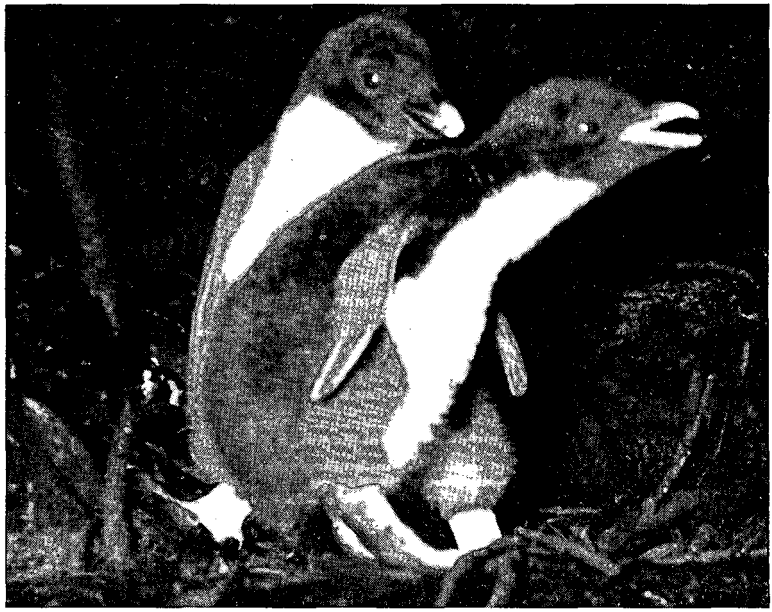

Plate VII (a): Young Crested Penguins. PHOTO BY PHIL DORIZAC

PHOTO BY MAY PARKIN

Plate VII (b): Little Blue Penguins on nest: Little Barrier I.

Plate VIII. Nest and eggs of Spur-winged Plover near Lovezeveill.

It was under the gnarled dry roots of old rata trees that the breeding colonies of Crested Penguins were found. Under our feet the springy peat was alive. Murmurs of the incubating birds were as soonthing as the purr of kittens; but in one hole an argument between two birds was conducted in a raucous tenor.

Twenty-six nests were located. Under one tree in various tunnels, by means of a torch, and flat-on-the-face stance, we could see ten birds on nests. Although we restricted our count to observed nests, we could hear birds which were inaccessible to eye and torch. All birds were sitting closely. In three nests when the bird moved we noted two eggs in each, but six nests had only one egg. Old moulted pin-feathers lay at the entrances to the holes. The crests weere bright yellow, prominent with an upswept look. With their pale pink feet, large bright eyes and well-groomed plump black and white bodies, these penguins are a fine sight in their peaty recesses.

P.D. visited this island again and also landed on Seymour Island, near the entrance of the sound, on two occasions in September. In the meantime he had procured a suitable camera in order to photograph the birds in their dark recesses (*vide* Plates V, VI and VII).

SUMMARY

Rolla I.

28/8/56. 26 nests found.

12/9/56. Three chicks seen, two being in one nest.

25/9/56. Chicks well grown, the bigger being the size of an adult Little Blue Penguin. On one nest were two dead chicks. There was still one incubating bird with egg unhatched.

Seymour I.

11/9/56. One nest with eggs in open under supplejack. This was the only nest seen in the open. On 26/9/56 the nest contained two chicks.

Other birds noted on Rolla I. were: Pigeon 1, Tomtit 2, Fantail 2, Yellow-head 2 in full song, Grey Warbler 1, Bellbird 1, Black Oyster-catcher 4.

THE ROYAL SPOONBILL

By ROBERT A. WILSON

The establishment of a new species in any country is an interesting study. When the bird is as large and striking as the Royal Spoonbill (*Platalea regia*) it is doubly so. With the breeding of three pairs last season at the white heronry near Okarito, South Westland, and return in May 1956 to the estuary of the Manawatu River of twelve birds, it may be considered that the Royal Spoonbill can be struck from the list of stragglers in New Zealand and promoted to the status of a resident species.

New Zealand has been colonized by several new species in the last hundred years. Buller records the first appearance of the White-eye (*Zosterops lateralis*) in the North Island in 1856, but it was not recorded as breeding till 1862. It was presumed to have come from Australia and was named by the Maoris as 'tauhou' or 'stranger'.

The Spur-winged Plover (*Lobibyx novaehollandiae*) had only one specimen recorded before 1930 which was taken in 1886. Now it is breeding freely in Southland.

The White-faced Heron (*Notophoyx novaehollandiae*) has been recorded as a straggler fairly frequently over the years. I myself shot one on the Rangitikei River over sixty years ago, but no record exists of its having bred in this country before 1930. It is a common bird in Australia. Shortly after this date it was recorded as breeding in South Canterbury and it is now spreading rapidly over both Islands and is becoming almost a common bird.

One explanation of this may be that, as Dr Falla states, it is a frog-eater in Australia and the introduction of frogs to New Zealand may have made this country a much more congenial home. One of the earliest observers of this heron in New Zealand, Mr E. Ellis, has described in the July issue, 1945, of *N.Z. Bird Notes* how he watched it stalking and catching frogs. One advantage this species possesses over some of its relatives is that apparently it can nest without the stimulus of numbers in a rookery, as it is recorded as nesting in many places in single pairs.

In England the classical example of the spread of a new bird is the Fulmar (*Fulmaris glacialis*), which during the last hundred years has spread all round the coast of the British Isles. James Fisher has written a book of 500 pages on this bird alone and it has excited great interest among bird lovers. Here again the food supply may explain the spread. The Fulmar feeds on the same plankton as the whalebone whales, of which hundreds of thousands used to inhabit northern waters. They have been exterminated by whaling and this may have made more food available for the Fulmar.

The Fulmar also requires a stimulus of numbers in a community before it can nest and breed. When a new locality is colonized it takes some years of occupation before sufficient numbers are congregated in the colony to produce the stimulus for breeding.

The position of the Glossy Ibis (*Plegadis falcinellus*), also an Australian bird, is at present in doubt. An immature bird was shot near Nelson in 1935, but the first record was 1902. Since then several stragglers have been seen and recorded, but in 1954 a large flock, up to 24, was recorded first in Southland, then in the north of the South Island, and then in November 1954 a flock of 16 was seen for some weeks in the Manawatu. This would seem to indicate it was breeding in New Zealand: since then nothing more has been recorded of them, but it is quite possible they have bred somewhere.

In the case of the Royal Spoonbills, their chief home in the North Island has been the estuary of the Manuwatu River near Foxton, Stidolph seeing four there in November 1943. In his review of the species in the April number of *N.Z. Bird Notes* in 1948 he says he thinks two may have been young birds, but from that date to 1950 there was no sign of their breeding. During that period Foxton was their chief home, though they were recorded from the Waikanae and Waitotara river mouths. In May and June 1946 four birds visited Lake Ellesmere, but one was probably shot as later only three were seen, and in May 1947 the three were recorded again at Foxton. During this period I several times in company with the late Major Buddle visited the locality to see if they were breeding. In Holland they are reported to nest in swamps and there was a secluded swamp close to their feeding grounds at Foxton, but we saw no sign of their nesting. No more than three were seen together till after 1950.

In the summer 1949-50, however, Dr Falla reported having seen a pair of Royal Spoonbills in breeding plumage at the white heronry at the Roto Sanctuary near Okarito, and in September 1952 five were reported as having been seen at Foxton by a member of the King's College Bird Club. Since then they have generally been reported absent from Foxton in summer, but returning in greater numbers each autumn until, as stated in the preface, in May 1956 twelve have been counted there. The official rangers of the Roto Sanctuary and visiting ornithologists have reported that Spoonbills have bred successfully each season since 1949 and that there has been a gradual increase in the number of breeding pairs from one to three or perhaps four. Usually two young have been reared in each successful nest.

In November 1955 I accompanied Dr Falla to the Okarito heronry and we saw three pairs of Spoonbills breeding there. While the White Herons were nesting on low trees like kowhai and tree ferns, the Spoonbills were nesting high up, 80 feet or so, in the branches of tall rimu trees some 50 to 100 yards distant from the heronry.

Apparently, therefore, the Spoonbills require the stimulus of other breeding

birds before they can mate and nest, but it is certainly mysterious how they discovered the heronry nearly 400 miles south of their feeding grounds at Foxton. Presumably White Herons are near enough kin for their courtship rites to excite the mating instinct in the Spoonbills and they both put on their nuptial dress of breeding plumes, though the Spoonbill's crest is only from the back of the neck and is much smaller than the White Heron's.

We saw the Spoonbills fly to the nests to feed the young, but they were too high to observe any feeding particulars. Mr Ken Nolan, the caretaker there, however, says he has seen the Spoonbills carrying fish in their bills to the nests. This fish, it would seem, could only have been small flounder. No doubt in the mud where the Spoonbill feeds with a swinging motion of its bill there must be numbers of small flounders, and these could no doubt be caught by the Spoonbill. This theory is confirmed by the fact that on a Bluff estuary the Black Swans that are shot often have young flounders in their crops.

It would seem a difficult job for the Spoonbills to feed on their usual food of small crustaceans and worms, and if flounders could form a portion of the diet it would probably be a much easier task rearing the young. The small crustaceans and worms on which the Spoonbills feed are also the food of other waders. These waders (Godwits, Knots, Dotterels, etcetera), with their narrow bills, must take their food individually, but a bird so large as the Spoonbill could hardly gather enough food to live on if it had a narrow bill. The broad bill, sweeping in numbers of crustacea at each sweep, must simplify the feeding process. This rather resembles the whalebone whales engulfing large numbers of whale food at each mouthful. As it is said, the largest animal in the world lives on one of the smallest animals!

In Europe a similar species of Spoonbill is reported often to nest in heronries where other species of *Ardea* are breeding, so that our example at Okarito is not unique. They are also reported to live on vegetable matter as well as fish, crustacea and insects, as they consume large quantities of marsh plants.

SHORT NOTES

WHITE ISLAND GANNETRIES IN AUGUST

During a trawling expedition in the Marine Department's m.v. *Ikatere* in the Bay of Plenty during August 1956 I was able to spend a short time ashore on White Island examining some of the gannetries. Robertson and Wodzicki (1948) and Fleming and Wodzicki (1952) have described these gannetries and given counts of birds and nests as at January 1947. Oliver (1913, 1955) gives further details for December 1912, but as no observations during August appear to have been published, these brief notes may be of some interest.

Gannet Point: N.Z. Gannetry No. 24 (Fleming and Wodzicki, 1952).

This, the largest colony on the island, was visited on 16 August. All the available clear area was taken up with birds, many thousands being seen on the main part, A of the above authors. No accurate count could be made as when the cliff was climbed all the birds left the colony and flew around the headland. The entire area of A was covered with newly formed nests, little hollows in the bare ground or low raised mounds of earth, some unlined but many lined with fresh *Mesembryanthemum* only, no other building material being seen in the nests. However, one gannet was seen flying with dry seaweed in its beak. There were no eggs at all in the entire area A. The smaller portion of the colony on the other side of the ravine, area B, was also initially covered with birds and when most had flown no eggs could be seen there either. The above is in marked contrast with January 1947, when 'there were quite large areas of guano-covered ground without nest mounds in

addition to a considerable number of unoccupied mounds' (Robertson and Wodzicki, 1948). However, it probably means that all available nesting space is occupied early in each season.

The slopes surrounding this colony were honeycombed with 'mutton bird' burrows, and though some signs of fresh activity were seen, the few burrows examined were empty. This was surprising as Oliver (1913, 1955) found that *Pterodroma macroptera gouldi*, the common breeding petrel of White Island, had nearly fully fledged young in December 1912.

Rocky Point: N.Z. Gannetry No. 23.

These nesting areas were examined from the sea and gannetries A, B and C were fully occupied, the roosting area D not being seen.

The West Point Gannetry (No. 22) was not examined and there were no birds at the abandoned Dam site (No. 25).

These observations add additional evidence for the later egg laying period of the White Island Gannetries suggested by Oliver (1955).

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—*J. C. YALDWYN*

A NOTE ON GREY DUCKS BREEDING AT MIHI, IN THE ROTORUA-TAUPO AREA

Mihi is a little known district, half-way between Rotorua and Taupo, about a mile or so from the main highway. It is a thermal area with an extremely active boiling pool, a number of mud pools, fumeroles and the like scattered in the rough mixed manuka and pine bush. The area concerned is a couple of hundred yards from the Waikato River and includes a small Maori settlement.

On 30 August, with Mr P. A. F. Lewis, of Rotorua, I was exploring the thermal activities on a rough silica patch, when a large bird took off from under a small but compact clump of tea-tree scrub. Investigation revealed a nest of ten eggs, typically those of a Grey Duck, with breast-feather lining, etcetera. The nest was left undisturbed.

On 9 September, accompanied by Mr M. S. Black, of Rotorua, we returned to this spot for further observations. As our car passed down the side road into Mihi, a clutch of ten young ducklings, recently hatched, appeared on the low bank at the side of the road. They had obviously been shepherded there, and as we watched they fluttered to the road, crossed it right in front of the stationary car, and with the parent bird in attendance made for a small swampy area. Our arrival at this time was providential for the ducks, as well as being an astonishing coincidence. Some Maori youngsters spotted the ducklings, cut them off from the parent bird and splashed into the swamp after them. The parent bird flew over a low hummock and the lads were somewhat peremptorily driven off by shouts and threats from our party.

The subsequent developments were interesting. The parent duck flew up and down, gradually losing height until she landed in a small shallow stretch of water just out of sight over a low hill. From this position she flapped in and out of sight several times. The main body of the ducklings soon got their bearings and in a compact little knot made towards her. Presumably to get their directions, they stopped in a body from time to time, then set off again and presently disappeared over the hill. One laggard, separated from the main group, appeared to have no chance of catching the others, but to our surprise the parent bird, after attending to the main party, came back up the slope and waited, just in view, until this last member of the family reached her, taking several minutes in his journey of numerous short dashes and pauses. My

previous experiences of this nature had given me the impression that parent birds are satisfied so long as they have some of their flock. That this bird should be aware of, and wait for, a straggler among the rushes, etcetera, several hundred yards away, surprised me. When last seen, the ducks were safely on their way to the river. The parent, incidentally, was accompanied by another female in fairly close attendance.

Since this family of ducks had come from the immediate direction of the previously recorded nest, we had little doubt that they were from it, but investigation proved that this was not so. The nest, we found, had been raided, probably by rats. Five of the eggs had been pierced and broken at the ends, the remainder were intact. Incubation was at the stage of about one week to ten days.

If there is anything of interest in all this, it may be: (a) confirmation of the fact that two ducks nested in fairly close proximity – available cover would probably indicate nests within two hundred yards of each other; (b) no cold water in the immediate vicinity, but numerous hot pools, mud pools, fumeroles, etcetera, which apparently made no difference to breeding operations. The presence of the 'spare' female also gives rise to the speculation that this bird, deprived of her clutch, had attached herself to the family described.

– F. E. GEE

LITTLE EGRET NEAR NELSON

On 19 and 20 November 1955, at the mouth of the Waimea River, near Nelson, I saw a Little Egret (*Egretta garzetta*). The bird was very difficult to approach because when disturbed it associated with a group of ten of the notoriously shy White-faced Heron (*N. novaehollandiae*). It was seen with 9x binoculars in both dull and sunny light.

It was white, with wholly black bill and legs. Yellow webs were glimpsed once during a take-off, but facial skin colour could not be determined. Long crest and scauplar, but no pectoral plumes, were seen. The white phase of the Reef Heron (*E. sacra*) would have much shorter, lighter-coloured legs, yellow bill, more stolid stance, and no long crest or scapular plumes.

On the ground the Little Egret was virtually as tall as a White-faced Heron, but appreciably smaller in body size. In flight it was not obviously smaller than a White-faced Heron, but the wing seemed broader and more rounded. (This may be an illusion from the longitudinal black and grey pattern of the wing of the White-faced Heron.) The beat was faster and flight therefore less undulating.

A White Heron (*E. alba*) seen at Takaka on 23 November was obviously larger and heavier than the White-faced Herons near it.

– B. D. HEATHER

COLONY OF BLACK-BILLED GULLS

A sizable colony of Black-billed Gulls (*L. bulleri*) is situated in the Cardrona River valley, Central Otago, about five miles upstream from the bridge across the river on the Wanaka-Cromwell highway. Local reports and evidence confirm that it is a regular nesting-site which has been in use for at least 'several' seasons.

On 10/11/56 there were an estimated 700-800 nests. These were scattered in two groups, one on the east bank of the river and the other on an adjacent island. In the first group only one nest contained a chick, while in the second about one-third of all nests contained chicks, some of which were developing quills and could run (and swim) quite strongly.

The nests were chiefly made of straw, dry grass, rootlets, feathers and odd leaves. Most were scattered at random, one to three feet apart, on the shingly riverbed, but many were grouped around clumps of the leafy tobacco weed, or among a pile of drift debris.

Of the 260 nests in the first group the following is the analysis of clutch sizes on the above date:

Eggs:	0	1	2	3	4
Nests:	8	52	185	13	1

plus 1 nest containing 1 chick

The average size of 11 eggs measured was 50.9 x 37.0 mm. One abnormal egg, 29.0 x 24.1, was found in a nest with a normal one, 51.9 x 36.0.

On the following day a pair of Grey Duck, a pair of Paradise Duck, and a Black-backed Gull were feeding in and near the stream; a large immature Black-backed was harassing the colony and constantly being chased by adult Black-bills.

Pied Oyster-catchers, Pied Stilts, Banded Dotterels and Black-fronted Terns also nest in the vicinity.

— *P. CHILD*

BLACK-FRONTED DOTTEREL IN CANTERBURY

I have been interested in recent reports by Brathwaite and Andrew (*Notornis* 6, 146 and 185; 7, 57) of the Australian Black-fronted Dotterel (*Charadrius melanops*) in the North Island. I can now add a South Island record.

Some time in April 1956 Mr Bruce Todd saw at Leithfield Beach, North Canterbury, a plover of a kind which he knew he had never seen before. It was feeding in very shallow water. He was able to photograph the bird on colour film and obtained some fairly close shots with a telephoto lens. Subsequently the film was twice run through for my benefit. The orange bill was very evident in some of the photos and the rest of the bird answered well to the written description. I have no doubt about the identification.

— *R. J. SCARLETT*

NORTH ISLAND ROBIN 'ANTING'

On 31/12/56, returning from the summit of Kapiti down the track leading to the caretaker's house, I noticed a male North Island Robin (*P. australis longipes*) repeatedly picking up something from the track, and performing unusual movements. I soon realized that the bird was 'anting'.

It was turning over dry leaves lying on the ground and picking up ants from underneath and stroking them along the edges of its primaries. The right and left wing were each treated alternately and the feathers stroked from both sides. I was very sorry that owing to the large group of people I was leading, and the short time available, I could not stop long enough, and had to move on, flushing the bird after a short time. The picking up of ants and stroking them along the wings alternately was repeated eight times during the short time of observation. Sometimes one ant was used for both wings, and at other times a fresh ant was picked up after it was used on one wing only.

This was the first time I ever saw a bird anting, and it was therefore of special interest to me.

— *F. C. KINSKY*

LONG-TAILED CUCKOO AND HOUSE SPARROW

On 29/12/56, a Long-tailed Cuckoo (*Eudynamis taitensis*) was observed stealing a naked chick out of a House Sparrow's nest in the top of a kanuka tree near our kitchen tent. (The camp was on Webber's property at the north end of Kapiti Island.) The next day a second chick was taken from this nest by a Long-tailed Cuckoo.

On 4/1/57, at about 7 p.m., I observed a Long-tailed Cuckoo settling in the same tree, and moving from branch to branch approaching the sparrow's nest. Perched on a small branch just outside the nest opennig, the Cuckoo pushed its head and half of its body into the nest (I thought it was looking for another chick), and after a short while flew off and returned to the bush

not far away. A member of the party climbed the tree and found four eggs in the nest, three of them normal sparrow's eggs and the fourth somewhat smaller and lighter in colour. My first impression was that this egg was also a sparrow's egg, but lighter, as very often happens in sparrows' clutches. The next day, 5 January, in the morning, the tree was climbed again – and it was found that the clutch had grown to five eggs, four normal sparrow's eggs and the mysterious egg of the day before. It struck me that this was not normal, as the lightest egg in a sparrow's clutch is generally the last egg laid.

Not having any knowledge of the habits of the Long-tailed Cuckoo and the dimensions and colouring of its eggs, I only took note of the facts as found.

After my return, I saw at the Dominion Museum Mr Stead's paper on the Long-tailed Cuckoo and learnt that the dimensions of this cuckoo's eggs, as known up to now, are smaller than those of the House Sparrow's. The colour, as described by Mr Stead, also agreed with the colouring of the eggs seen.

I am now convinced that the egg seen was a cuckoo's egg.

– F. C. KINSKY

CHAFFINCH TAKES THE CAKE

On 11/11/55 we were having afternoon tea on the lawn when a Chaffinch (*Fringilla coelebs*) came down to forage. A piece of cake was thrown to it, but though it approached it, coming to within three yards of us to do so, it made no attempt to eat it. However, when the piece of cake was crumbled the bird ate and then filled its beak and made off. This was repeated four times. The bird was by its flight pattern obviously taking the cake to its nest.

– W. A. WILLIAMSON

FALCON IN CHATHAM ISLANDS

Recently R. J. Scarlett (*Notornis* 6, p. 57) commented on the 'former existence of the falcon (*Falco novaeseelandiae* Gmelin) in the Chatham Islands', which, according to him, 'does not seem to have been recorded'. This authenticated record is based on five bones of *Falco* from the Chathams in the collections of the Canterbury Museum, collected over a period of about sixty years. However, it may be of interest to point out that quite a number of references occur in the literature of Chatham Islands birds to previous records of a species of *Falco* from this region.

Most of the prior records of *Falco* from the Chathams are based on identifications of bones collected by H. O. Forbes in February 1892 along the shores of Petre Bay, Chatham Islands. These records may be found in the following accounts: Forbes, 1892*a*, *Nature*, 46 (1185): 252-3; 1892*b*, *Nature*, 46 (1191): 404; 1893*a*, *Roy. Geogr. Soc., Suppl. Pap.*, 3 (4): 607-637; 1893*b*, *Fortnightly Rev.*, 53 (317): 669-690; 1893*c*, *Ibis* (6), 5, (20): 521-546. Other references to the presence of small hawks on the Chathams occur also, and these are probably based on Forbes's records, although some (e.g., Rothschild's) may be based on identifications from other collections. Among these secondary sources are: Milne-Edwards, 1896, *Ann. Sci. Nat. Zool.*, (8), 2: 117-136; Taylor White, 1896, *T.N.Z.I.*, 29: 162-168; Evans, 1899, *Birds*, Cambr. Nat. Hist., 9; Rothschild, 1907, *Proc. Fourth Int. Orn. Congr., Lond., 1905* (9); 191-217; Lambrecht, 1933, *Handbuch der Paleornithologie.*

Fortunately, unlike some other records of birds reputed to have inhabited the Chatham Islands at an earlier time, bones of *Falco* do exist, and probably quite a few more will be found in the near future. The relationship of this bird to the New Zealand mainland species would be of interest, if it should be possible to distinguish them from bones alone, particularly since the subspecific relation of the other hawk on the Chathams, the only present-day one there, *Circus approximans approximans* (*vide* Amadon, 1941, *Emu*, 40: 365-384), with the mainland form seems unusual. Fuller details of the Chatham Islands extinct birds and an amplification of the accounts of Forbes and others listed above will be given shortly, but it is thought that these prior records may not be without interest.

– E. W. DAWSON

SUB-FOSSIL BONES OF THE AUSTRALIAN PELICAN FROM THE SOUTH ISLAND

As there is no mention in Oliver's *New Zealand Birds*, second edition, of sub-fossil bones of the Australian Pelican (*P. conspicillatus*) from the South Island, the following records are of some interest:

AV. 12,664. Marfell Beach, L. Grassmere. 1947. R. humerus, with proximal end defective. Coll. J. R. Eyles.

AV. 13,095. Same locality. 1953. Proximal end R. humerus (possibly of the Eyles humerus). Coll. J. & R. Britton.

AV. 12,482. Same locality. March 1953. L. femur. Coll. J. & R. Britton.

AV. 13,014. Same locality. July 1952. A very probable L. coracoid. Coll. R. J. Scarlett.

These specimens are all in the collection of the Canterbury Museum.

— *R. J. SCARLETT*

BUSH-EDGE POPULATIONS AT TAPANUI

The area under observation during Easter 1956 covered about 100 acres. It included a block of bush (about 30 acres), and about one-third of a mile of bush edge. The shape of the area was roughly an elongated rectangle, with the bush edge forming three sides. Farm buildings, and exotic trees round the site of an old homestead, occupied the centre of the area. About ten acres between the homestead and the bush block had been bulldozed a few months previously and contained large clumps of manuka, briar and weeds. The rest of the area was grassed for sheep.

The following bird populations were observed in the area. Observation was limited to four days, and was not constant even over this period. Hence the rather wide variation in numbers.

HARRIER: Three were observed within the area at once.

NATIVE PIGEON: 15 to 25 in an area of about seven acres containing many dispersed large introduced trees. Observed eating small leaves from outer twigs of willow, and perhaps of plane.

FANTAIL: Pied, 4 to 7; Black, 1.

YELLOW BREASTED TIT: Seemingly two pairs, 400 to 500 yards apart, separated by farm buildings; in bush edge and manuka clumps.

GREY WARBLER: 6 to 8 observed feeding in outer twigs along very broken bush frontage, apparently confined (for the periods of observation at least) to about 200 yards of frontage.

THRUSH: 12 to 30, possibly 15 to 20 as a closer estimate. Feed further from cover than Blackbird, and more especially on rotation pasture.

BLACKBIRD: More numerous than Thrush. Probably 20 to 30, but about 25 might be close. Feed more on permanent pasture, and close to bush, often on ground between trees and bushes along edge.

DUNNOCK: Large population for this species, though an estimate of actual numbers is very difficult to make. Large area recently bulldozed, in close proximity to bush edge, plentiful small shrubs and pasture, probably account for high density of population — 15 to 30 a very rough estimate.

BELLBIRD: 8 to 12 along bush frontage. Observed hunting insects in bark of trunks and larger branches.

TUI: 1 seen. Reported to have been common up to about ten years ago.

STARLING: 25 to 40. Based on and roosting in (still nesting?) tall old trees which poked out above the level of second-growth bush.

Other birds seen, but no notes taken: House Sparrow, Chaffinch, Greenfinch, Black-backed Gull.

— *D. STENHOUSE*

GIANT PETREL ROBBING BLACK-BACKED GULL

On the afternoon of 17/5/56, while staying on The Brothers in Cook Strait, I witnessed the following incident.

A Black-backed Gull (*L. dominicanus*) was swimming on the sea in the lee of the island with a captured Diving Petrel (*Pelecanoides urinatrix*) floating beside it. Although the petrel was apparently dead already, the gull aimed vicious jabs and pecks at it, and then made three attempts to fly off with it. However, the Diving Petrel dropped back to the sea each time. Five minutes later a Giant Petrel (*Macronectes giganteus*) appeared, forced the gull to take flight with its prey again, and, following, compelled it to drop the Diving Petrel. The Giant Petrel then circled back, settled alongside the dead bird and began to devour it.

It is of interest to note that Oliver states that the Black-backed Gull kills birds, and also records a statement of Buller's that the Giant Petrel sometimes feeds upon 'small sea-birds such as prions'.

— G. W. RAMSAY

LETTER

Sir: Mr D. H. Brathwaite in *Notornis* (VII, 2, Otcober 1956: 57) is concerned with the field separation of the Little Stint (*Calidris minutus ruficollis*) and the Least Sandpiper (*Calidris minutilla subminuta*) — perhaps better named the Long-toed Stint. His description tallies with my observations: the olive or greenish legs are diagnostic; the whole foot is longer than the Little Stint's, the middle toe measuring 23 to 26 mm (Little Stint not *over* 20 mm). But I think that only in exceptional circumstances will he need to distinguish between the two in the field. It is clear from my experience and from the collections in this Museum and elsewhere in S.E. Asia that the two are already separated by ecological preference (cf. Harrisson, *Sarawak Museum Journal*, V, 2, 1950: 330). It seems likely that this is a worldwide pattern also.

The Little Stint is a migrant bird of the seashore only, in season abundant on the low tide flats of the coast, in flocks of up to sixty. All the Long-toed Stints obtained in Borneo are from inland areas; these vary from those found on marshy ground near Kuching, within smell of the sea, to a series I obtained (1949) at Bario, 3700ft in the Kelabit uplands of the far interior of Sarawak, and the one specimen shot (1956) by the recent Cambridge Expedition, in the Tambunan plain, at 2000ft inside North Borneo.

Both birds are of course migratory, and so may at times (e.g. crossing a coast) be together, as also in a habitat intermediate between their two tastes. I note that Mr Brathwaite identified both species on the Ahuriri Lagoon (*Notornis* 6, p. 145). He describes the habitat favoured by waders there as a 'limited area of tidal flats, salt marshes and drains'. As he says nothing to the contrary, I presume it was on these flats or marshes that he saw the Little Stint. The Long-toed Stint, however, he records, was 'standing alone at the edge of the pond in the Westshore domain', presumably inland from the tidal, saline regions. If this is so, his observations support my conclusions, which are here offered for what they are worth and for fuller comparative study at your (New Zealand) end of the migratory chain.

Sarawak Museum,
11/12/56.

TOM HARRISSON

REVIEWS

Lead Poisoning in New Zealand Waterfowl, B. Wisely and K. H. Miers; New Zealand Department of Internal Affairs, Wildlife Publication No. 41, 1956: 11 pages.

Falla in 1936 reported suspected lead poisoning in Knot at Lake Ellesmere. The present paper gives definite evidence of lead poisoning from ingested shot in Black Swan, Grey and Mallard Duck. Cases are reported from both

Islands of New Zealand, involving up to twenty birds in some localities. Most of the work on lead poisoning in waterfowl has been carried out in the United States, and the relevant points of this work are discussed in this paper. The important facts are: the ingestion of a single No. 6 shot was sufficient to cause death in seven of ten wild Mallards, six No. 6 shot always constitute a fatal dose. Recovery from lead poisoning is influenced by diet; soft foods tend to promote recovery, grain feeding aggravates the condition. Birds that recover have a lower egg production, many of the eggs laid are infertile. The symptoms of lead poisoning are described.

The local importance of this paper lies in the implication of grain feeding practices with increased mortality from lead poisoning. This is important in New Zealand in view of the controversy over grain feeding of ponds. Now that interested persons will be able to detect cases of lead poisoning, it may be that the problem is more important here than has been suspected.

W.C.C.

Kiwi Colour Slides. New Zealand Birds – Sets A & B (A. H. & A. W. Reed Ltd, Wellington).

With commendable enterprise A. H. and A. W. Reed have published two sets of 35 mm colour slides of New Zealand birds. The slides have been made from photographs taken by K. V. Bigwood, whose name is a guarantee of the quality of the bird portraiture. In New Zealand there are now many naturalists skilfully taking still and moving colour photographs of birds; and the purists among them may find cause to complain that the excellence of Mr Bigwood's originals is not matched by the quality of the colour reproduction, particularly in the first set, in which there are evident the same false tone values which marred the colour portraits in Oliver's recent monumental volume and drew adverse criticism. In this respect New Zealand seems to be lagging behind the high standard now achieved overseas. Each set is accompanied by a commentary, but that which goes with the first set begins with the startling statement 'New Zealand has no native animals'! Aesthetically the second set is much more satisfying. Especially praiseworthy are brilliant studies of Red-fronted Parakeet and Stitchbird.

The publication of these slides will be a stimulus to New Zealanders to examine their birds more closely for their hidden beauties. An exciting start has been made in a new venture in publishing. The issue of further sets, two of which are already promised, is eagerly awaited.

– R.B.S.

NOTICES

PAST VOLUMES OF THE *EMU* DEPOSITED IN THE LIBRARY

Through the initiative of Mr R. V. Roberts and the co-operation of Dr W. R. B. Oliver, Honorary Secretary for the R.A.O.U. in New Zealand, volumes 4 - 41 of the *Emu* have been transferred by the Council of the R.A.O.U. to our Library. The O.S.N.Z. is deeply indebted to those who have been instrumental in the transference to our Library of these valuable ornithological volumes. The Library now has a complete set of the *Emu* except for volumes I - III.

The Editor will be away from New Zealand from May to September. In his absence Mr E. G. Turbott has kindly offered to edit *Notornis*. Material for publication should be sent to him at the War Memorial Museum, Auckland.

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