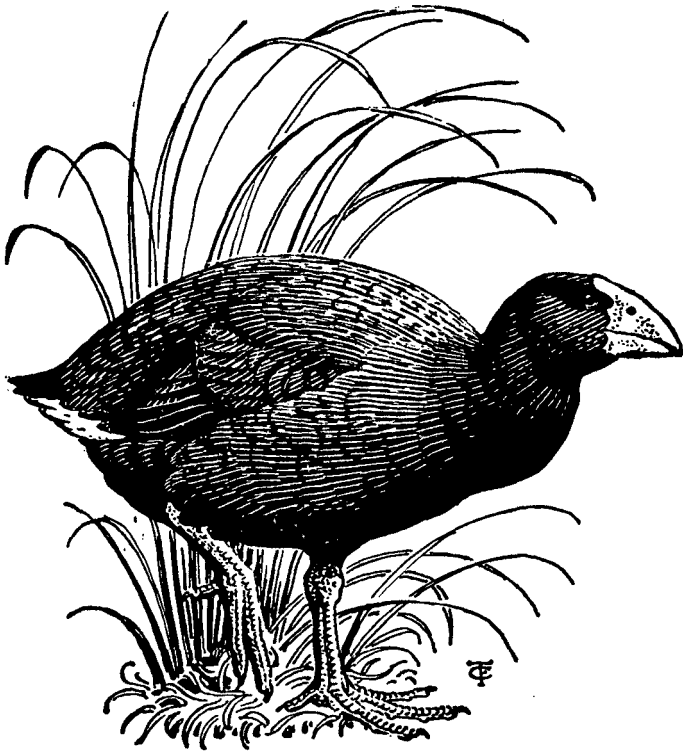


NOTORNIS

*Quarterly Bulletin of
The Ornithological Society of New Zealand*



Volume Six, Number Five : July 1955

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, 7/6 (Juniors, 5/-); Endowment Membership, 10/-;
Life Membership, £6/6/-

OFFICERS, 1955 - 56

President—MR H. R. McKENZIE, Clevedon.

North Island Vice-President—MR P. C. BULL, Lower Hutt.

South Island Vice-President—MRS L. E. WALKER, Dunedin.

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

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Secretary (acting)—MR E. G. TURBOTT, War Memorial Museum,
Auckland.

MRS O. SANSOM, Invercargill; DR R. A. FALLA, Wellington.

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NOTORNIS

VOLUME SIX, NUMBER FIVE : JULY NINETEEN FIFTY-FIVE

EDITORIAL

This is the first issue of *Notornis* to appear under new editorship. In 1946 Mr R. H. D. Stidolph succeeded Professor B. J. Marples and Dr R. A. Falla as editor of *New Zealand Bird Notes*. Under his skillful direction that modest publication grew into *Notornis*, which now holds its place among the recognized ornithological periodicals of the world. Bob Stidolph was well qualified for the task of editor. As an active field naturalist he had contributed several papers to *The Emu* and more recently he added the Least Sandpiper to the New Zealand list; and as a journalist he knew most of the tricks of the printer's and publisher's trades. The Society owes him a debt which cannot easily be paid and wishes him a long retirement with many opportunities of watching birds without the burden of having to produce *Notornis* punctually four times a year.

Your new editor enters upon his duties with some diffidence. The high standard set by his predecessors has to be maintained. Occasions may arise when the publication of contributions has to be deferred till they have been critically examined. Even so, published papers may contain statements which do not tally with the experiences of other observers, and it is hoped that a vigorous correspondence column may further the interests of critical ornithology. Short communications are always welcome.

The change of editor has involved a change of publisher. The Society is grateful for the help it has received for nearly ten years from the Masterton Printing Company Ltd, and looks forward to a period of happy co-operation with the Pilgrim Press of Auckland.

The honorary secretary of the Society leaves for Europe in June and takes our good wishes with him. During his absence Mr E. G. Turbott has consented to act as secretary. Correspondence should be addressed to him at the War Memorial Museum, Auckland. Jock Brookfield will be away for about a year. We are delighted to hear that when he returns he will resume his position as secretary.

FIFTEENTH ANNUAL REPORT

FOR THE YEAR 1954 - 5

OFFICERS:

After the last Annual General Meeting Council members were:

President: Mr H. R. McKenzie

Editor: Mr R. H. D. Stidolph

Treasurer: Miss N. Macdonald

Secretary: Mr F. M. Brookfield

Mrs L. E. Walker, Dr R. A. Falla and Mr E. G. Turbott

Two positions, those of the South Island and North Island vice-presidents, were vacant, and in terms of the Constitution had to be filled by resolution of the Council. Mrs L. E. Walker and Mr P. C. Bull were appointed accordingly to the respective vacancies. Mrs Walker had been due to retire as a Councillor at the present Annual General Meeting, and we are obliged to Mr L. Gurr, who, for the time that remained, filled the vacancy caused by her promotion.

It is proper to record here our thanks to Mr R. H. D. Stidolph, who at this Annual General Meeting retires from the editorship, after having held it for eight years. The high standard maintained in *Notornis* is very largely due to his devoted and efficient service.

We report with regret the death last December of the Reverend F. H. Robertson, a committee member and Hawke's Bay Regional Organizer from 1948 to 1952. He deserved well of the Society, and Hawke's Bay members in particular will miss him.

REGIONAL ORGANIZERS:

The Council acknowledges the assistance given by these officers during the year. The vacancies in their ranks are slowly being filled and still exist for North Auckland (as distinct from the Far North), Waikato, Taranaki, and Bay of Plenty.

MEMBERSHIP:

This stood at the end of the financial year at 772, comprising 720 New Zealand and 52 overseas members. Further details of these figures are given in the Treasurer's Report.

ACTIVITIES:

The Society's affairs and activities have continued more or less evenly during the past year. Group activities follow the familiar course of lecture-meetings, censuses and some combined ringing work. 'Short Notes', printed in the January issue of *Notornis*, continue to show in classified form the valuable and informative results of the field work of individual members. The number of contributors on this occasion (the period being 1953-54) was 100, as compared with 112 for 1952-53, 98 for 1951-52, and 99 for 1950-51. It will be seen that only about one member is seven is represented in 'Short Notes'. This may perhaps be due in part to insufficient publicity of this feature in other issues. Whatever may be the reasons, the Council hopes that those active field observers whose work has not been so recorded in the past will this year supply their respective Regional Organizers with short notes before mid-August for inclusion in the next January issue.

The several special inquiries continue. Interim reports will appear in *Notornis*.

PUBLICATIONS:

The bringing of the editorship from Masterton to Auckland necessitates a change in printers also. The Society has had most cordial and satisfactory relations with the Masterton Printing Company Ltd, and we hope to establish the same with its successor.

BIRD STUDY IN NEW ZEALAND:

Only a very few copies of this pamphlet remain and a reprint is necessary. During the year a committee consisting of the president, the retiring editor, Mr R. B. Sibson, the treasurer and the secretary have attended to the revision, which was a little more radical than had at first been thought necessary. The revised draft is in the hands of the Masterton Printing Company, this being the company's last work for the Society.

LIBRARY REPORT

for the year ending 31 March 1955

After a considerable increase in the number of borrowings in 1954, the total has fallen to 60 during the past year. At the same time, current issues of the main journals have been circulated as before within groups of members and this scheme has enabled our resources to be used fairly effectively. During the year twelve new books and pamphlets have been added to the Library.

The Library Committee has established exchange during the period 1953 - 55 with several leading overseas journals which form important additions to the Library: *Dansk Ornithologisk Forenings Tidsskrift* (Danish, with English summaries), *Der Ornithologische Beobachter* (journals of the Swiss society for study and protection of birds), *Die Vogelwarte* (German journal of bird ringing), and *Bird Study* (published by the British Trust for Ornithology). In addition large sets of both *Audubon Magazine* and *Forest and Bird* have been received by donation and further issues of these journals have been promised to the Library.

Four further requests for exchange have been received from overseas journals and will be considered this year.

E. G. TURBOTT,
HON. LIBRARIAN

TREASURER'S REPORT - 1955

The membership of the Society remains as last year at 772, the number of new members exactly balancing that of the resignations for the year. There are 59 Life Members, 475 Ordinary Members paying 7s. 6d. per annum, 51 Junior Members paying 5s. per annum, 169 Endowment Members paying 10s. a year, and 19 Complimentary Members to whom copies of *Notornis* are sent free. Sixty-nine members were unfinancial on 31 March, representing the sum of £36 7s. 6d. Some of these subscriptions are owing for two years. In spite of repeated reminders some members are still very slow in paying their accounts on time. This does mean considerably extra trouble for the treasurer, extra stationery (forms and envelopes), and unnecessary extra postage costs.

Although the Society appears to be holding its own, the financial position is not as good as it might be, especially as the cost of printing *Notornis* is rising all the time and next year is expected to be very much higher. The total cost this year was £257 10s., compared with £188 10s. last year. Another marked increase was in postages - this year £42 12s. 1d., compared with £22 14s. 1d. in 1953-4.

There was a slight increase in the amount of subscriptions received during the year, £278 0s. 6d. being received this year compared with £263 3s. 6d. last year. Sales of various Society publications realised £18 18s.

The Society's most grateful thanks are due to all who have sent donations during the year; and to Mr D. N. Chambers for auditing the books.

NOELLE MACDONALD,
Hon. Treasurer.

12/5/55

REPORT OF THE RINGING COMMITTEE

For the Year ended 31 March

By P. C. BULL

Once again the number of birds ringed during the year (3496) exceeds all previous records. The number of recoveries (126) appears lower than usual, but this is only because details of many recoveries were received too late for inclusion in this report and have been held over for next year's one. It would help the recorder if operators would send in details of recoveries as soon as they are made. The usual summary of the species ringed and recovered during the year is supplied separately for the year ending 31 March 1955.

The highlight of this year's operations has been the recovery in Australia

(continued on p. 138)

THE ORNITHOLOGICAL SOCIETY OF NEW ZEALAND (INCORPORATED)

Balance Sheet for Year ending 31/3/55

LIABILITIES		ASSETS	
SUBSCRIPTIONS:		SUBSCRIPTIONS:	
Paid in Advance to 1/4/54	50 7 6	Arrears £36 7s. 6d., estimated to realise	17 0 0
Plus paid in 1954-55	43 6 0	STOCKS ON HAND:	
	<hr/>	Ringing (Rings and Stationery)	37 0 0
Less transferred to Subscription A/c	35 17 6	Stationery	8 0 0
	<hr/>	Envelopes	3 0 0
	57 16 0	Reports and Bulletins (Cyclostyled Reprints)	95 15 0
Life Members' Subs. to 1/4/54	187 13 0	'Checklist'	18 12 0
Plus paid in 1954-55	21 12 0		<hr/>
	<hr/>		162 7 0
	209 5 0	SUNDRY DEBTORS:	
Less transferred to Subscription A/c	19 17 6	Reprints sold not yet paid	0 15 6
	<hr/>	'Checklists'	3 16 6
	189 7 6	Takahe	0 10 0
	<hr/>		<hr/>
	247 3 6	PLANT at cost less Depreciation	5 2 0
SUNDRY CREDITORS	36 0 0	CASH: Bank of New Zealand	35 5 1
GENERAL RESERVE	336 3 6	Post Office Savings Bank	306 8 11
Add Gain for Year	30 12 9		<hr/>
	<hr/>		430 5 8
	366 16 3		<hr/>
	<hr/>		£649 19 9
	£649 19 9		

We report to the members of the Ornithological Society of New Zealand Incorporated that we have examined the books, accounts and vouchers of the Society for the year ended 31st March 1955, and certify that the above Balance Sheet is properly drawn up to show the true financial position of the Society at that date. We have accepted the values placed by your secretary on 'stocks on hand'.

CHAMBERS, WORTH AND CHAMBERS

D. N. Chambers

AUDITORS

THE ORNITHOLOGICAL SOCIETY OF NEW ZEALAND (INCORPORATED)

Income and Expenditure Account for Year ended 31/3/55

INCOME		EXPENDITURE	
Subscriptions:		Printing <i>Notornis</i>	216 0 3
Cash 1954-5	276 18 0	Illustrations	41 10 0
Overdue £36 7s. 6d., estimated to produce	17 0 0		<hr/>
	<hr/>		257 10 3
Donations:		General Expenses:	
General	12 11 10	Envelopes	12 9 9
Illustrations	3 10 0	Stationery	18 19 10
	<hr/>	Postages	42 12 11
	16 1 10	Exchange	0 3 6
Sales:		Sundries	6 11 0
Back Numbers	16 19 4		<hr/>
<i>Takahe</i> Issue	1 4 0	Depreciation Plant	80 17 0
Reprints	0 15 6	Excess of Income over Expenditure transferred to General Reserve	3 6 10
Cyclostyled Reprints	1 15 0		<hr/>
'Checklist'	7 3 6		30 12 9
	<hr/>		
Ringing Scheme	27 17 4		
Interest Post Office Savings Bank	24 17 6		
	9 12 2		
	<hr/>		
	£372 6 10		<hr/>
			£372 6 10

last winter of six white-fronted terns ringed at Lake Ellesmere the previous summer. The suspected movement of young terns to Australia was one of the reasons for starting the ringing scheme, and it is very gratifying that this movement is now an established fact. It is to be hoped that a similar movement in banded dotterel will be established in due course, but at present relatively few birds of this species have been ringed. Dispersal movements of young gannets continue to be documented with a large number of recoveries, most of them from Australia. There have also been some long-distance recoveries of harrier hawks, and useful data have been collected on the dispersal of gulls in the Auckland and in the Nelson-Wellington-East Coast areas. It is encouraging to see the publication of papers reporting the progress of studies involving birds ringed under the Society's scheme. So far there have been papers on blackbirds, harriers, gannets and gulls, and it is hoped that further work will be published before long. With this trend developing, there is less need for detailed annual lists of recoveries and, except for recoveries of special interest, it is proposed to reduce this list to a brief summary of general trends.

A less satisfactory aspect of the ringing work is that some operators are not sufficiently critical of the recoveries they report. In two instances, both involving more than one bird, ring numbers which were read in the field with binoculars have proved to be incorrect. If this sort of thing continues it may be necessary to reject from the permanent record all recoveries which are not supported by the presence of the actual ring. At present the recovery cards are marked to show clearly the circumstances under which the particular recovery was made. On another occasion an adult red-billed gull was reported at Porangahau with a yellow ring, thus indicating that the bird had been ringed in Canterbury, but there are no records of this species ever having been ringed there. Both the ringing operator (assuming it is a Canterbury gull) and the person who made the 'recovery' are experienced operators, but it would appear that one or the other has confused the red-billed with the black-billed species or else that some unauthorised person has been ringing gulls.

The excessive wear noted on some rings after only a few years' use was reported last year. In an attempt to correct this, some type B rings were obtained from America and used last season, but it is still too early to judge their worth. The Dominion Laboratory has analysed the Society's standard rings and concluded that the copper content is undesirably high. Inquiries have been made with regard to the experiences of Australian, British and American workers, but as yet there is no complete solution to the problem.

The problem of paying for the ever-increasing numbers of bird rings required by the Society is becoming urgent. While the Department of Internal Affairs has helped in the past, requests for further assistance would be more convincing if it could be shown that the members of the Society had made a substantial contribution themselves. If, as appears to be the case, the Society cannot spare any contribution from its general funds, it may be necessary to establish a ringing fund and ask members for donations to it.

With the approval of the Department of Internal Affairs, a small quantity of size 8 rings was sold to the North Canterbury Acclimatization Society for use on black swans, because that Society's long-continued ringing work with swans was threatened by a temporary shortage of rings.

In conclusion, the Ringing Committee wishes to place on record its thanks to Mr J. Moreland (Dominion Museum) for his work as Ringing Recorder; to Mr J. M. Cunningham for work carried out in Europe on behalf of the Committee; to the Dominion Museum for housing the Society's records and for clerical assistance; to the Department of Scientific and Industrial Research for typing duplicate recovery cards and for the chemical analysis of rings; to the Department of Internal Affairs for their co-operation with permits and for allowing the Society to comment on the draft provisions of the new Wild Life Act; and finally to the many members of the public, both here and in Australia, who have sent in rings from dead birds.

RINGING OPERATIONS
SUMMARY FOR THE YEAR ENDING 31 MARCH 1955

Compiled by P. C. BULL, Lower Hutt

The following is a statistical summary of the birds ringed and recoveries during the past year. It includes a number of birds of various species outside the normal scope of the Society's scheme, ringed by special permission of the Hon. the Minister of Internal Affairs, and also some birds ringed with other than the Society's rings, but details of which have been provided by the operators. No distinction is made in either case. The list includes only those species which have been ringed or recovered during the present year; species which have been ringed in other years may be found by consulting *Notornis*, Vol. 5, No. 5, and Vol. 6, No. 1.

BIRDS RINGED AND RECOVERED
(Asterisk denotes coloured rings also used)

<i>Species, Operator and Where Ringed</i>	Totals for 1954 - 5 <i>Ringed Recov'd</i>	Grand Totals to 31/3/55 <i>Ringed Recov'd</i>	
WANDERING ALBATROSS		31	1
R. A. Falla, Wellington	1		
SHY MOLLYHAWK		1	
R. A. Falla, Wellington	1		
FLESH-FOOTED SHEARWATER		28	
R. B. Sibson, Hen Is.	1		
SOOTY SHEARWATER		44	
R. B. Sibson, Hen Is.	2		
GREY-FACED PETREL		26	
R. B. Sibson, Hen Is.	8		
PYCROFT'S PETREL		8	
R. B. Sibson, Hen Is.	4		
GANNET		48	2562 83
P. A. S. Stein, Horuhoru and Bush Is.	757		
K. Wodzicki, Cape Kidnappers	120		
BLACK SWAN		161	
North Canterbury Acclimatization Society, Lake Ellesmere	161		
HARRIER		14	229 68
J. S. Watson, Hawke's Bay	13		
BANDED DOTTEREL		49	
*J. M. Cunningham, Whakataki	1		
*H. R. McKenzie, Firth of Thames	5		
NEW ZEALAND DOTTEREL		10	5
*H. R. McKenzie, Firth of Thames	2		
PIED STILT		33	2
J. M. Cunningham, Ohau R.	1		
R. B. Sibson, Ohau R.	1		
BLACK-BACKED GULL		32	2806 108
J. M. Cunningham, Palliser Spit	48		
J. C. Davenport, Rangitoto Is.	636		
F. C. Kinsky, Baring Head & Somes Is.	99		
P. A. S. Stein, Fan Is., near Waiheke	2		
RED-BILLED GULL		6	706 89
J. M. Cunningham, Castlepoint	19		
BLACK-BILLED GULL		3	2213 32
*E. W. Dawson, Ashley & Waitaki Rivers	451		
D. H. Braithwaite, Ngaruroro R.	20		

<i>Species, Operator and Where Ringed</i>	Totals for 1954 - 5 Ringed Recov'd	Grand Totals to 31/3/55 Ringed Recov'd
WHITE-FRONTED TERN		
*W. C. Clark, Waitaki R.	301	8 1843 57
CASPIAN TERN		245
M. A. Waller, South Kaipara Head	236	
SHINING CUCKOO		1
*R. B. Sibson, Auckland	1	
BLACKBIRD		10 527 72
*P. C. Bull, Lower Hutt	88	
H. L. Secker, Karori	14	
H. G. Warburton, Mairangi Bay	8	
SONG THRUSH		2 130 16
*P. C. Bull, Lower Hutt	27	
H. G. Warburton, Mairangi Bay	3	
HEDGESPARROW		39 3
P. C. Bull, Lower Hutt	7	
SILVER-EYE		2 5422 189
B. D. Bell, Blenheim	18	
D. Medway, New Plymouth	34	
J. S. Watson, Eastbourne	384	
STARLING		1 102 1
H. L. Secker, Karori	22	
OTHER SPECIES (previous years)		1427 241
Numbers Ringed and Recovered 1954 - 5	3496 126	
Numbers Ringed and Recovered to 31/3/54		15,147 841
Numbers Ringed and Recovered to 31/3/55		18,643 967

RECOVERIES

GANNET (*Sula bassana serrator*)

Thirty-three gannets ringed as chicks at either Horuhoru or Cape Kidnappers were recovered in Australia (Queensland, New South Wales, and Victoria) during the year, and two others were found dead on New Zealand beaches. Most of these birds were in their first year, but five of those recovered in Australia were in their second year and one nearly in its third. Thirteen gannets ringed as chicks at Cape Kidnappers have been identified at the colony as three- or four-year-old birds. One of these, No. 15322, a four-year-old bird, was breeding, but the others appeared to be unemployed.

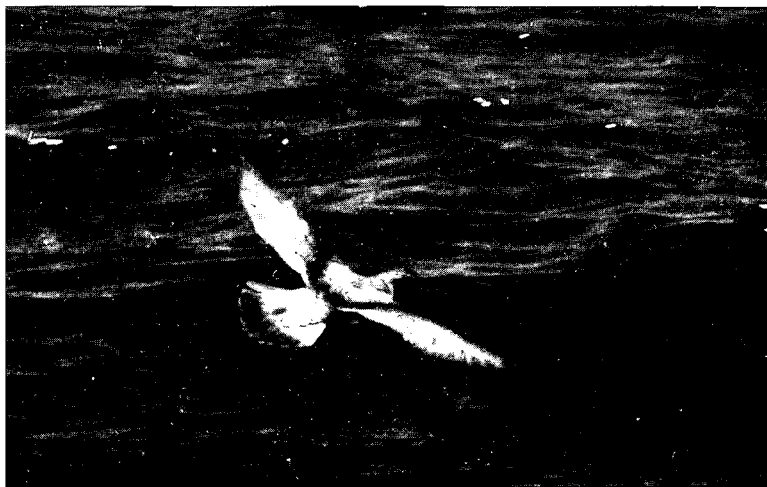
HARRIER (*Circus approximans*)

Nine birds were recovered in various parts of Hawke's Bay (Kereru, Tikokino, Otane, Waipukurau, Weber and Norsewood) and five from further afield, namely Tolaga Bay, Waitoa (near Te Aroha) and Whangarei to the north, and Masterton and Annat (Canterbury) to the south. Several of these birds had been ringed for two years prior to recovery, the others for shorter periods.

BLACK-BACKED GULL (*Larus dominicanus*)

Twenty-one of the recoveries were birds ringed at Rangitoto Island; sixteen of them were found in the vicinity of Auckland, two at Motutapu Island, one at Te Kauwhata and one near Cape Rodney. Twelve of these birds were recovered during their first year, six during their second, two during their third, and one during its fourth. Eight gulls ringed at Baring Head have been recovered during the year, four of them at the place of ringing,

PLATE XI



Fairy Prion (*P. turtur*) at sea near Hen I., December 1954. The broad dark band on the tail and the pattern of the upper wing surface are clearly shown.



Sharp-tailed Sandpiper (*C. acuminata*), Miranda, January 1955. Small numbers of these sandpipers regularly reach New Zealand. The species has recently been found as far south as Invercargill.

Photographs by D. A. Urquhart

three in Wellington and one at Masterton, all birds being in their first or second year when recovered. Two gulls ringed at Paliiser Spit were recovered in Wellington, one being in its first year and the other in its fourth.

RED-BILLED GULL (*Larus novaehollandiae*)

Two birds ringed at the Boulder Bank, Nelson, were recovered near Nelson when in their second year. A gull ringed as a chick at the Brothers Lighthouse was recovered in Wellington during its third year. Another Wellington recovery was a bird ringed at White Rock (East Coast) 18 months previously. Two red-billed gulls have been recovered in New Plymouth, one was found dead and the ring number of the other was read with binoculars. Both were originally ringed as chicks at Snapper Rock and when recovered were two and three years old respectively.

BLACK-BILLED GULL (*Larus bulleri*)

Three black-billed gulls ringed as chicks at the Ashley River have been recovered within a year of ringing, two of them in Christchurch and the third near Rangiora.

WHITE-FRONTED TERN (*Sterna striata*)

Six birds ringed as chicks at Lake Ellesmere in January 1954 were recovered in New South Wales during the following winter (May to August). This is the first occasion that New Zealand white-fronted terns have been proved to visit Australia, although the existence of such a movement has for long been suspected. Two birds were recovered in New Zealand not far from where they were ringed.

BLACKBIRD (*Turdus merula*)

Ten ringed blackbirds were recovered at or within a mile of ringing stations in Lower Hutt, Karori and Masterton, all within two years of ringing.

SONG THRUSH (*Turdus ericetorum*)

Two birds were recovered within a half of where ringed in Lower Hutt, one eighteen months and the two two and a half years after ringing.

WHITE-EYE (*Zosterops lateralis*)

Two birds ringed at Mahina Bay were brought in by cats at Day's Bay within a few days of ringing.

STARLING (*Sturnus vulgaris*)

A starling ringed as an adult at Karori was retrapped at the same ringing station five months later.

CORRECTION TO 1953-54 RINGING REPORT

Notornis, Vol. 6, No. 1, p. 16. Black-backed gull No. 13823 was recovered at Orapiu, at the south-east end of Waiheke Island, not at Henderson as stated.

ANNUAL REPORT OF NEST RECORDS SCHEME

The convener, Mr Hallam Secker, Wellington, who succeeds Mr J. King, Feilding, reports the accession of some 100 cards for the nesting season of 1954-55. There are now almost 600 accession cards classified as follows:

Bellbird (2), Bittern (1), Blackbird (140), Yellow Bunting (3), Chaffinch (22), Banded Dottrel (22), New Zealand Dottrel (4), Rock Dove (17), Brown Duck (2), Grey Duck (6), Mallard Duck (2), Fantail (16), Gannet (2), Goldfinch (17), Little Grebe (1), Greenfinch (5), Black-backed Gull (10), Silver Gull (1), Harrier (10), White-faced Heron (1), Reef Heron (2), Sacred Kingfisher (3), Skylark (6), Magpie (1), Morepork (1), Black

Oystercatcher (5), Pied Oystercatcher (2), Little Blue Penguin (1), Grey-faced Petrel (1), Bush Pigeon (1), Pipit (2), Pukeko (5), Lesser Redpoll (10), Northern Robin (4), House Sparrow (11), Hedge Sparrow (28), Starling (9), Stilt (13), Black Swan (1), Grey Teal (7), Black-fronted Tern (1), Caspian Tern (2), Fairy Tern (1), White-fronted Tern (9), Song Thrush (143), Pied Tit (3), Yellow-breasted Tit (1), Tui (1), Grey Warbler (13), White Eye (23), Whitehead (4).

ANNUAL MEETING

About fifty-five members of the Society attended the fifteenth Annual General Meeting, held this year at Dunedin in the Pioneer Women's Memorial Association Rooms in Moray Place, on 13 May. The members present came from many parts of the country – from Southland to North Auckland. The president, Mr H. R. McKenzie, presided.

The general report was read by the secretary, Mr F. M. Brookfield, and the treasurer's report and statement were presented in her absence by the president, Mr McKenzie. Reports were also presented by Dr R. A. Falla on behalf of the convener of the Ringing Committee, and by the secretary on behalf of the librarian, Mr E. G. Turbott.

All the foregoing were adopted by the meeting. Mr Turbott's most interesting report on the eleventh International Congress was read and received by the meeting.

Following the adoption of the Ringing report it was resolved to set up a special fund to provide for the purchase of rings. The growth of the ringing activities of the Society had made this most necessary.

The following were, in the absence of other nominations, declared elected to replace retiring officers:

North Island vice-president: Mr P. C. Bull (re-elected)

Editor: Mr R. B. Sibson

Council member: Mrs Olga Sansom

The brief but very valuable address of the president, Mr H. R. McKenzie, will appear in the next issue.

Mr D. N. Chambers was thanked for his services and re-elected the Society's auditor.

After the formal business was completed at about 8.45 p.m. the meeting adjourned to view most informative colour films of Stewart Island bird life, shown by Dr R. A. Falla and Captain Black.

BRIEF REPORT ON THE DUNEDIN EXCURSIONS

For the Annual General Meeting and ensuing week-end, members of the Society converged on Dunedin from many parts of New Zealand, and on two well-planned excursions were given ample opportunity to learn something of the varied bird life of this richly rewarding area.

On 14/5/55 the visitors were taken first to the mole and then to the tidal flats on the western side of the entrance to Otago Harbour. To some the variety of shags was quite bewildering, for two dimorphic species were present: *P. melanoleucos* represented by the white-throated and little pied forms and also by yearlings without white throats; and *P. carunculatus* represented by the bronze and white-breasted forms which are sometimes called Stewart Island Shags. Then outside the harbour were the long lines of Spotted Shags, streaming in their hundreds to and from and past Taiaroa Head.

On the mole itself a flock of more than three hundred White-fronted Terns contained only two mottled birds of the season. Three Black-fronted Terns in a puzzling transitional plumage were the subject of some discussion. Off the end of the mole mollymawks were usually in view, but only Buller's was certainly identified. From time to time the eyes of the visitors would wander to the two young Royal Albatrosses, visible on the headland opposite. Once two adults were present together, but it was easy to miss their coming and

going, though they were often conspicuous over the choppy waters outside the bay.

A most profitable walk was taken over the sandy flats. Four species of waders were present in some numbers. Whatever may have happened or have been reported in the past, the observations of recent years show that many Godwits, Stilts and Banded Dotterels now pass the winter in the south of New Zealand. Pied Oystercatchers were strung out along the tideline. But to some visitors the most satisfying experience on the flats was to be found in watching resting flocks of Black-fronted Terns, which numbered more than a hundred and of which most appeared to be in full breeding plumage. Even a Reef Heron was seen, lone representative of a species now much outnumbered in Otago by the White-faced Heron. The Caspian Tern, so plentiful in the north, is here hailed as a rarity.

On the following day the first objective was Taiaroa Head, where the large white downy youngster of one of the three pairs of Royal Albatrosses which are breeding this year could be viewed through the tall Stalag-like barbed wire fence. It was here that some of our members temporarily forsook ornithology to scramble down the cliffs and examine at close quarters a colony of fur seals. Two gannets flew past.

Thence the itinerary took us across the peninsula to the outer inlets with their Stilts, Oystercatchers and a White-faced Heron; and so to Sandfly Bay. Here at least for the visitors from the north was the *pièce de résistance* of the trip, a trio of Yellow-eyed Penguins, two in bright freshly moulted plumage on their breeding slope and one swimming in the gentle surf. Offshore on a reef were Black Oystercatchers and beyond on the towering Gull Rocks most of the available space was occupied by the so-called Stewart Island Shags. The Society is grateful to Mr Sharp, the official ranger, for the part which he played in making this a most successful day.

Individual visitors were taken by their hosts to other points of ornithological interest: Tomahawk Lagoon with its impressive flock of Shovelers; Waikouaiti with its many White-faced Herons and waders; the Town Belt with its Robins, Bellbirds and Creepers. To Mrs Walker and her helpers who provided such unstinting hospitality, the visitors are deeply grateful.

R.B.S.

O B I T U A R Y

REV. F. H. ROBERTSON

Frederic Herbert Robertson was born in Feilding in 1910. He was educated in Auckland, where he was dux of the Mount Albert Grammar School, and later took his Master of Arts degree with honours. He then joined the Presbyterian Theological College in Dunedin, where he was a notable scholar. At the end of his studies he entered the ministry of the Presbyterian Church at Ross on the West Coast. From there he was appointed Director for New Zealand of the Christian Order Campaign undertaken by all the Protestant Churches of New Zealand. On the termination of this task he responded to a call from St Columba's Church, Havelock North, where he remained until his appointment as first Rector of Lindisfarne College in Hastings, a position he held until his untimely death on 15 December 1954.

Fred Robertson was a man of many parts, serving the community untiringly. Though this is not the place to enumerate his achievements as a member of his Church and in social work, his initiative and work in the establishment of social services and homes for old people in Hawke's Bay and in Poverty Bay must be mentioned, and above all the founding and organization of Lindisfarne College. It was through his vision, powers of organization, and patient labours that these institutions were set up. They will remain a living monument to him.

It was in 1946 that Fred Robertson became a member of the New Zealand

Ornithological Society. He subsequently took a great interest in its activities. For several years he served as the Society's organizer for Hawke's Bay. He was also one of the organizers and foundation members of the Ornithological Section, Hawke's Bay Branch, of the Royal Society of New Zealand. His chief ornithological interests were in the Cape Kidnappers gannetry and in the ornithology of Hawke's Bay. At Kidnappers he was engaged in a long-term study of behaviour, life history and population trends in the gannet. This study was not completed at the time of his death, but had already provided the first evidence of the dispersal of young gannets to Australia, of the age when young gannets return for breeding, and many other data. Fred Robertson took part in the 1947 and 1949 D.S.I.R. expeditions to White Island, which provided valuable data for the 1946-47 gannet census of New Zealand and for the knowledge of the fauna of that island. He also devoted much attention to the early ornithological exploration of Hawke's Bay by McLean and Guthrie-Smith using unpublished material. This study was combined with field work at the haunts of these early ornithologists. Unfortunately he had not reached the stage where his leisure was sufficient to commit more of his bird studies to publication.

To Fred Robertson's many friends throughout New Zealand the news of his untimely death came as a great shock. They will long remember his very friendly personality and innate sense of humour which endeared him to all who had the privilege of working with him in the field. He is survived by his wife Veronica and two sons, Christopher and Timothy, to whom we extend our deep sympathy.

K.W.

WADERS ON AHURIRI LAGOON, NAPIER

By D. H. BRATHWAITE

In the course of some five years' more or less regular, if not exactly systematic observation on Ahuriri Lagoon, many interesting species have been seen, especially among the waders. During 1953 and 1954, several such records were made, but for various reasons they have not been published. It is my intention to combine these records into one paper, and at the same time to list all the other species in this group which have ever been recorded here, with brief notes. The noteworthy records to be given hereunder are as follows:

- Black-fronted Dotterel (*Charadrius melanops*) — first New Zealand occurrence.
- Tattler (*Heteroscelus incanus* subsp.) — second occurrence in Hawke's Bay.
- Red-necked Stint (*Calidris ruficollis ruficollis*) — first occurrence in Hawke's Bay.
- Least Sandpiper (*Calidris minutilla* subsp.) — second occurrence in New Zealand.
- Japanese Snipe (*Gallinago hardwicki*) — fourth (?) occurrence in New Zealand.

The Ahuriri Lagoon Reserve was originally a large expanse of water, with wide areas of tidal mud-flats and shell-banks. Although Hamilton (1886) mentioned certain species of waders as occurring on this lagoon, no systematic observations were ever carried out, and we shall never know in full the changes in bird life which have resulted in the transition of this body of water into farmland. In comparison with the old lagoon, there is only a limited area of tidal flats, salt-marshes and drains today; these are scattered, and it was a long time before I was able to locate the favourite haunts of the different species. For the lone observer there are still difficulties which even motor transport cannot altogether overcome. If time should be limited, it is not wise to infer from the numbers or absence of a particular species in one area the numbers present on the whole lagoon. To move from one spot to another in a search for, say, Sharp-tailed Sandpipers, can entail a walk of half an hour or a trip of several miles by car with a walk at the end of it.

Not until a team working on an organized basis can be set up will it be possible to do systematic census work, and for this reason no attempt has been made in this paper to give more than a rough idea as to numbers or movements. It is interesting to speculate how many more interesting records would have been made had such a team been operating every week-end.

Oystercatchers (*Haematopus* spp.) – Hamilton (1886) reported both pied and black oystercatchers as common on the shoals near the Ahuriri Bridge. Conditions subsequent to the earthquake must be unsuitable for these birds as I have seen none during the past five years, although a pair of black oystercatchers is usually resident on Ocean Beach, a few miles south of Cape Kidnappers, and the South Island pied oystercatcher winters at Porangahau. There is a fairly large tidal flat on the Napier side of the embankment road which I should have thought to be suitable for the latter species, and it would be interesting to know whether it winters in any numbers between Napier and East Cape, and what route is followed by birds wintering in the Bay of Plenty. Pied birds of the other species appear to be rare on the east coast of the North Island.

Pacific Golden Plover (*Charadrius dominicus fulvus*) – This is a regular summer visitor, though not in large numbers. Up to a dozen may usually be found around the margins of the pond in Westshore Domain; I doubt whether many more would be found on the extensive pastures of the lagoon, as even during the northward passage the largest flock I have seen was 27 birds (5/4/53). The earliest date so far recorded was 27 September 1953 and the latest 12 April 1953.

Black-fronted Dotterel (*Charadrius melanops*) – On 29/8/54, with Mrs R. Sorrel, I was investigating a spot where a number of stilts appeared to be preparing to nest when I heard the call of a dotterel and was just able to focus my glasses on the bird before it flew. A glimpse of a red bill and orange legs made me think it might be a shore plover (*Thinornis novaeseelandiae*), so after watching to see where the bird settled, I hurried back to the car for my telescope. With this set at 30x, a telegraph pole as a rest, bright sunlight from behind, and the bird not more than thirty yards away, conditions for observing could hardly have been better. The bird was most obliging, moving only within a radius of a few yards and permitting views from all angles, and it was only a matter of seconds before I was able to identify it as a Black-fronted Dotterel (*Charadrius melanops*). Altogether, the two of us were able to spend some half an hour observing the bird through telescope and binoculars, during which time we noted all such details as were visible in the non-flying bird. Notes recorded on the spot and checked by both of us are as follows:

Apparently about the size of a Banded Dotterel, but appearing more slender (i.e. apparently smaller body but relatively longer wings and tail); upper parts sandy brown and slightly mottled owing to dark shaft streaks and light edging to some feathers; an elongated dark chestnut patch along the scapulars (looking blackish in some lights but definitely chestnut with the sun on it); legs orange-yellow; bill orange-vermilion with black tip; a narrow red ring (eyelids) around the eye; a broad black line from the bill through the eye and round the nape, with a triangular black patch on the forehead; crown the same as the back, separated from the black band by a white line; a black band joining the head-band on the sides of the neck and crossing the breast in the form of a V (so long and pointed as almost to suggest a Y). This band was not conspicuous from the side, but viewed from the front was sharply defined and, with the head-band, enclosed an immaculate white throat and upper breast.

On the following Saturday, 4 September, I again visited the spot, this time with Mr Reg Williams, and was fortunate enough to see the bird once more. On this occasion I was equipped with a coloured sketch of the species, prepared during the week, and with a copy of the *Emu* containing an excellent

photograph. Conditions once more were perfect for observing and we were both able to check it almost 'feather by feather' with both sketch and photograph, and we both agreed that there was absolutely no doubt as to the identification. The bird was seen only once more, this time by Mr G. C. Crawford on the following day; as I had previously 'briefed' him in the identification with both sketch and photograph he had no difficulty in recognising it.

It has been suspected in some quarters that a bird seen at Taieri River on 23/9/51 was of this species. I have seen the original notes on this observation, and for reasons which I hope to discuss fully in a future paper I agree with others who believe it more likely to have been a young Shore Plover.

Banded Dotterel (*Charadrius bicinctus*) – Recorded in every month of the year and known to breed (one nest recorded and others suspected). No systematic census has yet been attempted and I am unable at present to suggest any ideas regarding the seasonal movements.

New Zealand Dotterel (*Charadrius obscurus*) – Formerly (? still) present on Portland Island, and recorded by Hamilton (1886) as present in the area between the Tutaekuri and Mohaka Rivers (no precise locality or other details), so the species may formerly have been present on the lagoon. I know of no recent occurrences anywhere along this coast.

Wrybill (*Anarhynchus frontalis*) – Single birds have been recorded on 12 and 19 October 1952 and 11 October and 23 November 1953.

Long-billed Curlew (*Numenius madagascariensis*) – I have the head from a mounted bird of this species, given to me by Mr F. D. Robson, former manager of the Game Farm at Greenmeadows. He told me that he had shot the bird when shooting godwit on the lagoon 'many years ago', but could not recall even the approximate date. Dr A. G. Clarke has also told me that he has seen the species on the lagoon some years ago.

Little Whimbrel (*Numenius minutus*) – I have nothing to add to my earlier notes on the occurrence of this species (*Notornis*, V: 117, 181).

Asiatic Whimbrel (*Numenius phaeopus variegatus*) – A single bird was seen by the writer when watching feeding godwits with Messrs J. M. Cunningham and G. C. Crawford on 4/4/53. This may have been the same bird seen by Stidolph (*Notornis*, V: 226) at Gisborne on 17 November 1952.

Eastern Bar-tailed Godwit (*Limosa lapponica baueri*) – Stidolph (1954) recorded flocks of 135 and 126 in November 1952. On 18 October 1952 I counted 220 in one flock, but as some of these were no doubt birds on passage the validity of his conclusions in that paper cannot be questioned. Although, owing to the scattered nature of suitable feeding grounds in the district, it has not yet been possible to obtain more exact figures, I believe the numbers of birds present in summer to vary between c. 150 and c. 200 and the number of wintering birds to be fairly constant at between 25 and 30. Birds on passage apparently do not stay for long, as I have never seen more than c. 250 at any one time and then only in spring.

Tattler (*Heteroscelus incanus* subsp.) – On 16/11/53 I visited the 'Domain' Lake, behind Westshore Motor Camp on the Ahuriri Lagoon, and found on the edge of the lake a mixed gathering of godwit, stilts, golden plover and sharp-tailed sandpipers. Among them I noticed a bird about the size of a knot, whose active movements called for a closer examination. Fortunately I had a powerful telescope, as I could not approach closer than about 70 yards. With this I could see that the bill was noticeably longer than that of a knot; it appeared to be quite straight. The legs were yellow. The upper parts appeared smooth grey, though in some lights there seemed

to be a faint suggestion of light spots, but of this I could not be sure. The crown was of the same colour as the back and there was a pale line above the eye. The underparts were white or whitish. Subsequent investigation of available literature appeared to confirm my belief that the bird was a tattler (*Heteroscelus incanus*). The bird was seen again at the same place on 21 November, but not subsequently. It was unfortunate that on neither occasion was I able to approach close enough to flush the bird and hear its call-note, so that I can make no suggestion as to its subspecific identification, except that it appears unusual for *incanus* to frequent any but rocky or stony habitats on the coast, whereas according to Turbott (1951) *brevipes* has been seen on mud-flats at Parengarenga. Incidentally, his comparison of the bobbing action with that of the dotterels describes very well the movements of the above bird.

Turnstone (*Arenaria interpres interpres*)—A single bird was seen in November 1950 on the main outfall (above the traffic bridge) with a flock of godwit. It was not until 1952, when I began to concentrate attention on the pond in Westshore Domain, that I discovered the species to be of fairly regular occurrence there, two or three birds being seen every summer in 1952-3 and 1953-4. The summer of 1954-5 was a bad year for some waders, apparently because heavy rains had flooded the flat sandy and muddy margins, and none were seen.

Japanese Snipe (*Gallinago hardwicki*)—This bird was seen by the writer and G. C. Crawford on 13/4/52. It was observed for about ten minutes at a distance of c. 50 yards (8x binoculars), while it rested and preened near a small flock of stilts. While we were watching the bird about twelve godwits landed nearby, permitting further comparison. The following notes were made on the spot:

Smaller than either stilt or godwit (perhaps about size of golden plover). Upper parts fulvous brown, heavily mottled blackish; under parts pale buff, apparently unmarked; crown with broad blackish stripe on either side of pale median stripe; pale line over eye and what appeared to be dark line through eye; bill dark in colour and quite straight, appeared about equal in length to that of stilt. In flight no wing stripe or pale rump discernible.

The lack of markings on breast and sides is not in agreement with such descriptions of *G. hardwicki* as I have been able to find, but these give little or no details of plumage changes related to age or season. The only other snipe which seem likely to occur in New Zealand are Swinhoe's (*G. megala*) and Wilson's (*G. gallinago delicata*), but of the three only the Japanese seems to have a wholly dark bill and this is the only species hitherto recorded in New Zealand. This, then, is presumably the fourth record of this species.

Knot (*Calidris canutus rogersi*)—Although the knot is one of the more numerous migrant waders to visit New Zealand, the numbers seen at Napier are remarkably small. Knots are usually seen among flocks of godwit, but generally on the tidal flats and often at distances too great to be counted at ease. Only once have I seen more than six, on 26/11/51, when I recorded among a flock of godwit twelve smaller birds which presumably belonged to this species.

Sharp-tailed Sandpiper (*Calidris acuminata*)—This species seems to be a regular summer visitor. It was first recorded here in April, 1951, and has been seen during every subsequent summer. The largest flock I have seen was 18 (2/1/54), but Mr G. C. Crawford recorded a flock of 30 on 8/11/53.

Pectoral Sandpiper (*Calidris melanotos*)—This bird is apparently also fairly regular, having been recorded in March 1951 (two), March 1952 (two), December 1952 (four) and November 1953 (two).

Red-necked Stint (*Calidris ruficollis ruficollis*)—A small sandpiper, identified as this species, was seen on 1/11/53. It could not be approached closer than about 100 yards, but with the sun behind me and with the aid of

a 30x telescope, it appeared to be smaller than nearby sharp-tailed sandpipers. The plumage was light grey in tone, with a fair amount of white around the face and base of the bill, the legs being black. I saw this species in Australia in 1951 and am confident of the identification, despite the distance.

Least Sandpiper (*Calidris minutilla* subsp.) – In November 1953 I saw a small sandpiper standing alone at the edge of the pond in Westshore Domain. I thought at the time that it seemed rather small and rufous about the face for a sharp-tailed sandpiper, but as no other birds of that species were near enough for comparison I unfortunately dismissed my suspicions and assumed that it was, in fact, a sharp-tailed sandpiper. On 24/1/54, at the same spot, I was showing an assortment of waders to Dr D. A. Bathgate (Hastings) when I saw what must have been the same bird again, this time in winter plumage. In this plumage there was no possibility of confusion, the bird being much greyer in tone than a sharp-tailed sandpiper and generally bearing a close resemblance to a red-necked stint in winter plumage, except for the yellow legs. Reference to a copy of the *Audubon Water Bird Guide* which I had with me left no doubt in either of us as to the identification.

The species *Calidris minutilla* comprises two subspecies, the Least Sandpiper (*C. m. minutilla*) of North America, and the Long-toed Stint (*C. m. subminuta*) of eastern Asia. Although the latter has been recorded at least once in Alaska, the problem of separating the two in the field does not appear to have been given any attention up till now. Hitchcock (in litt.) informs me that according to Robinson & Chasen (1936) and Meyer & Wigglesworth (1898), *subminuta* has the bill paler at the base of the lower mandible and the legs greyish yellow, darker on the joints. Bent (1927) compared the legs of freshly collected specimens of *minutilla* with Ridgway's *Color Standards and Color Nomenclature* (1912). He states that 'In the adult Least Sandpiper the tarsi are distinctly yellow with a faint greenish cast. They correspond best to the Sulphine Yellow of Ridgway, while the toes, which shade off a little darker, are *Citrine*.' Stidolph (1953) specifically mentions that there was no trace of brownish at the base of the bill in the bird he saw at the Wairoa River mouth in November 1952. The bill was also a uniform blackish in the bird I saw and I noticed no trace of darker colour on the joints of the legs. None of the plumage descriptions I can find give many details of winter plumage of either *minutilla* or *subminuta*, but the small painting of the latter in Plate xxvi of Smythies' *Birds of Burma* suggests that it may be less white on forehead and face than *minutilla*. Should further investigation show these distinctions to be valid, it would appear that New Zealand records of the species could be attributed to the American race, but I think that further attempts at subspecific determination are premature at present.

Pied Stilt (*Himantopus himantopus leucocephalus*) – Stilts breed on the lagoon (when permitted to do so by youthful vandals) and may be seen in any month of the year. The numbers seen vary greatly, but apparently irregularly, and I have not yet been able to determine whether the movements causing this variation are migratory or nomadic, though I suspect the latter.

Black Stilt (*Himantopus novaezealandiae*) – On 16 May 1954 I was watching stilts and other species on the Domain pond with Mr H. G. Warburton (Auckland), when I saw a black stilt among a number of pied birds on the other side of the pond. There seemed no possibility of this being a trick of the light as the pied plumage of the other birds was quite distinct, whereas no trace of white could be seen on the bird in question. We immediately drove round to the side where the bird had been seen, but there was no sign of it and time did not permit a more lengthy search.

SUMMARY

During five years (1950-55) seventeen species of waders have been recorded on Ahuriri Lagoon, evidence has been obtained for the occurrence of an

eighteenth, probably since the earthquake, and there are literary records of two or three others in the last century. The records include the first New Zealand record of the Black-fronted Dotterel, the second of the Least Sandpiper, and what is presumably the fourth of the Japanese Snipe. It is to be hoped that projected developments on the lagoon do not result in such changes that this interesting and attractive group of birds will cease visiting Napier. I would like to express appreciation of Mr C. G. Crawford, who has accompanied me on many occasions, besides supplying me with notes of his own visits; also to Mrs R. Sorrel and Miss C. Saxby, both of whom have always been ready to provide motor transport, and whose interest and enthusiasm have been a valuable stimulus.

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A BREEDING RECORD OF THE KIWI IN NORTH AUCKLAND

By E. G. TURBOTT, *Auckland Museum*, & G. C. WIGHTMAN, *Okaihau*

The following notes by G.C.W. describe a nest of the North Island kiwi (*Apteryx australis mantelli*) found on 16 January 1955 in the Okaihau district, North Auckland. A dog had unfortunately killed a female kiwi (sent to the Auckland Museum) near the nest, and the same dog about a week later led to the discovery of the nest and sitting male kiwi.

The nest was on a farm which had recently been taken over by G. C. and T. Wightman. It was situated in a patch of bush, surrounded by rough farmland which includes much bracken fern and tea-tree scrub. Evidently fires on the adjacent land have fairly recently come within a short distance of the bush remnant itself. In the neighbouring area there are wide tracts of bracken and scrub. There is still a good deal of heavy bush in the district, the nearest being the Puketiki State Forest, which is some six miles away.

The nest contained two eggs, although this was not known until hatching had taken place, as every precaution was being observed to avoid disturbing the incubating bird. Visits to the nest were made at about weekly intervals, from 16 January until 11 February. One chick was seen in the nest on the 11th with the adult, the egg having hatched between this date and the preceding visit on the 6th. The second egg hatched between the 20th and 21st, this chick being found dead in the nest.

As F. D. Robson, in *Kiwis in Captivity* (Bulletin of the Hawke's Bay Art Gallery and Museum, Napier: 1947; third ed. 1950), has recorded so many details of the kiwi's breeding habits, we have attempted to make a fairly detailed comparison with his observations in the following notes. Robson's observations were made on captive kiwis at the Greenmeadows Game Farm, Hawke's Bay.

The nest found at Okaihau was in a tunnel, about 2 feet 6 inches long, beneath a solid mass of debris including part of the old base of a tree-fern, which appeared to be completely weatherproof. The sitting bird always faced in the same direction, i.e. to the north, and sat across the entrance. In his observations over a number of seasons Robson found that the male always sat in the nesting box facing south, and the eggs, when there were

two or three, were arranged 'in a row, one in front of the other' under the bird. By this means, the male is able to incubate up to three of the disproportionately large eggs. It seems likely that, once two or three eggs have been placed in line, the sitting bird would tend to keep them in the same position. However, it appears from Robson's supplementary observations (third ed., 1950) that in the 1948 season the male* incubated a single egg facing in this same direction. Robson states that, in the 1949 season, the male mostly sat facing south, but the position was sometimes changed during the season; in this season two eggs were laid, but from Robson's account it appears that the male changed position at intervals and not when the second egg was laid.

The kiwi sat at the entrance and left the back of the tunnel unoccupied. One egg could generally be seen projecting behind the bird. As mentioned above, the presence of the second egg was uncertain during the incubation period.

On 11 February, the entrance was found to be partly covered with twigs and dead leaves, mainly of rewarewa and tree-fern, and it was on this visit that the bill of the recently hatched chick was seen behind the sitting bird. The adult was raised slightly with a stick to make sure that it was sitting on a second egg, and the entrance covered again.

As heavy rain fell on the 11th, it was supposed that the covering was placed over the entrance for shelter. (There was no rain from 16 January to 11 February, which was during a period of drought.) However, Robson's observations have shown that 'when the chick hatches, the male blocks up the opening of the box, and keeps it blocked up until the sixth day'. On 13 February the entrance was completely covered with the same material, and it was still covered, although the amount of material varied, on the 15th, 17th, 19th and 20th. On all these visits the kiwi was seen on the nest, enough of the covering being removed from the entrance for observation, and the material carefully replaced. The chick was seen with a torch at the back of the tunnel on the 19th, a small opening being made at the end of the tunnel for observation.

The arrangement of the twigs and leaves used to cover the entrance gave the impression that at least some of the material had been built up from the outside. There is no mention of this in Robson's account. The material used was like that included in the surrounding debris, so that it could have been obtained from within the tunnel.

When the nest was visited at 8.30 p.m. on the 21st after heavy rain the male and the chick had left, and the entrance was completely covered. A dead chick was found in the nest, the second egg having hatched since the visit on the previous day. It was noted that a small piece of the end of the shell, a little over an inch in diameter, was attached to the feathers.

It might be added that the female of this pair was almost certainly the one accidentally killed about a month earlier shortly before the nest was found; and this was confirmed by the absence of any indication of the female's presence, especially during the final stages of incubation. According to Robson, the female shows interest in the nest by frequently tapping the outside, and the covering over the entrance, at this stage, and is answered by the male tapping from the inside.

The first chick, which was hatched between 6 and 11 February, appeared to have stayed in the nest for some ten days, as the entrance remained at least partly covered, but could possibly have left the nest to feed before the hatching of the second egg. Robson found that the chick did not go out of the nest for food until the sixth day after hatching, when the male cleared the entrance to enable it to come out.

The eggs were apparently laid within 12 - 16 days, as shown by the interval between the times of hatching. Approximately the same period is recorded by Robson between the first and second eggs of the 1943 season. However,

*The same male is referred to throughout Robson's observations.

his records show that the eggs up to the second or third of a 'clutch' were mostly laid at intervals of 25-32 days. The incubation period is 75 days, as recorded by Robson, but may vary in exceptional cases up to 80 days; the first egg generally takes 77 days. Robson found that the chick began feeding as soon as it left the nest, and returned to the nest while the remaining eggs were being incubated.

In addition to the nest described above, G.C.W. has a record of another kiwi's nest which was found on the adjacent farm in January-February 1952. This nest, unfortunately destroyed by fire, also contained two eggs; one was infertile and the other contained a well-grown chick.

On 21 January 1955 the Auckland Museum received another record from Mr P. A. Laurent, of the neighbouring town of Kaeo. Mr Laurent wrote that a kiwi's nest had been destroyed by a bulldozer engaged in the construction of a new road cutting, at Tauranga Bay, about a mile south of the Whangaroa Harbour entrance, in the same district. The sitting bird was found dead under a fall of earth, and was sent to the Museum by Mr Laurent. There were two eggs in the nest, one of which had been broken, and the other (weight 14 oz, containing a well-developed chick) was also sent to the Museum. The locality is in open country with bracken fern, and some scrub and bush. Mr Laurent also mentioned that a live kiwi was found in January 1954 in this area: it was in a hollow log which had been moved when constructing a road through scrub.

NOTES ON THE HEN AND CHICKENS ISLANDS

By B. S. CHAMBERS, S. CHAMBERS, and R. B. SIBSON

Through the courtesy of the Commissioner of Crown Lands, Auckland, members of the King's College Bird Club spent a week, 15-22 December, on Big Chicken Island in 1953, and six days, 15-21 December, on Hen Island in 1954. On both trips the skilled seamanship of Mr Norman Warren (skipper of the *Gunner*) saw us safely to and from these islands. One of the advantages of sailing from Leigh is that one is soon in waters which are the feeding ground of countless petrels and shearwaters, of which no less than twelve species breed on the outer islands of the Hauraki Gulf. Within the triangle formed by Leigh, Little Barrier and Hen Island, one should see on any day in the summer at least six species, and with luck as many as ten of the local breeding species may be logged. The two defaulters are the far-ranging Black and Grey-faced Petrels, whose oceanic beat is away to the north and east. To the watcher of birds there is something particularly satisfying in the flight of petrels at sea. He cannot have too much practice at identifying even the commoner species under the varying conditions of calm and storm, and at studying the characteristics of shape, flight and plumage pattern.

There are in the Chickens group five islands of some size, strung out in a line which runs roughly east and west. The Big Chicken, or Western Chicken as it is sometimes mistakenly called, is in the middle. To the west are the two smallest islands, on which we had no opportunity to land. To the east, separated by a narrow channel, is the Middle Chicken. It rises a little higher than the Big Chicken; and from what was seen on one brief visit, its sturdy unspoilt forest would be a suitable home for Saddlebacks, if further experiments at distributing this rare and beautiful bird are contemplated. The line of islands ends with the Eastern Chicken, on the outermost tip of which a light has been placed. This has necessitated the cutting of some bush, but for the most part the island is untouched by man. During a brief reconnaissance thirteen species of land birds were seen.

The Big Chicken, with an area of some 340 acres, rises steeply on all sides except part of the west, where a pleasant sandy beach is backed by a gently rising valley, deep in flax and rather surprisingly sporting an alien

willow tree. The northern coast is an almost unbroken line of cliffs. From the main ridge, 500 - 600 feet above sea level, deep gullies fall abruptly away to the south and east coasts. Although big old trees, puriri, kohekohe and pohutukawa, survive in the gullies, much of the island is now covered with the saplings of second-growth forest. Beneath this on all suitable sites are the traces of past Maori occupation. The Maoris have moved out, but petrels and shearwaters have moved in and have riddled with their burrows the trenches and terraces of former pas.

Despite the steep slopes it is not difficult to move about the Big Chicken, except where there is short windswept scrub. Beneath the canopy of the trees the ground is generally clear and there are few climbers or epiphytic plants to impede progress. This being so, we were continually finding tuataras, the numbers of which were remarkable.

Although we had with us a big dinghy and an outboard engine, rough weather prevented our making much use of them. On only one day was it safe to cross to some of the other Chickens; and even then a rising wind cut short our stay on the Middle Chicken before we had time to penetrate the bush.

Brief descriptions of Hen Island have been given by Turbott (1940) and Sibson (1949). Here our previous experience stood us in good stead and much more of the island was covered by exploring parties than in 1949. The northern gullies received their meed of attention and produced the only Yellow-crowned Parrakeets which were recorded. Eastwards along the main axis of the island a hill-top pa with a most interesting well-made defensive wall was reached; and D.A.U. went considerably further. Calm weather permitted frequent use of the dinghy. One trio during a circumnavigation of the island was able to drift among Fairy Prions and D.A.U. obtained some unusual photographs.

Besides the writers the following took part in one or both of these expeditions:

Dr O. F. Lamb, D. A. Urquhart, S. C. Rutherford, V. M. Rutherford, D. P. Eyre, D. Monteith, R. S. F. Lamb, M. B. Gill, G. E. Thomas, P. W. Wilson, S. J. Murray, D. A. Trenwith, P. J. P. Georgetti, D. R. N. Jones, W. H. Robertson, R. J. Sutton, D. J. Withers, D. J. Woodhams.

SPECIES LIST

Blue Penguin. At this season some eggs are still unhatched, but most nests contain downy young.

Fairy Prion. On 15/12/53 these were quite numerous to the east of Hen I. and some were seen in the passage between Hen I. and the Chickens. They are known to breed on the Poor Knights, and according to the checklist they also breed on the Chickens. We were unable to find any evidence of breeding on the Big Chicken.

On 15/12/54 there were more than 250 near Sail Rock, where the calm surface of the sea was ruffled by small shoaling fish. Most of the prions were sitting on the water and as they fed they half-raised their wings and with head and neck thrust forward along the surface, they paddled forward. A few Diving Petrels, Fluttering Shearwaters, White-fronted Terns and about 30 Red-billed Gulls were also attracted, but the prions dominated the scene.

Flesh-footed Shearwater. Plentiful at sea from C. Rodney to the Chickens. There is a breeding population probably of some hundreds of pairs, on the Big Chickens, the burrows generally being situated on slopes with direct access to the sea. Eggs in mid-December were hardly soiled. Twenty-seven adults were ringed. On Hen I. only one *carneipes* was found in a burrow. None was seen gathering offshore at dusk and the small colony found in 1948 was deserted by this species, though *griseus* was still using it. An ominously large number of the burrows was occupied by penguins.

Buller's Shearwater. At sea in the Hauraki Gulf its numbers rival, if they do not surpass, those of the Fluttering Shearwater.

Sooty Shearwater. This species is not easily seen at sea in the Hauraki Gulf. Odd birds were noted east of Hen I. on 15/12/53 and off C. Rodney on 22/12/53. Although the Big Chicken is not listed as a breeding place in the checklist, Sooty Shearwaters are now breeding there in such numbers as to suggest that this may well be one of the biggest colonies in the north. Twenty-eight adults were ringed. On Hen I. the numbers are still small. Only two were found in burrows.

Fluttering Shearwater. We found no evidence of breeding on the Big Chicken. On Hen I. the distinctive calls of incoming 'flutterers' indicated that many were visiting burrows, but as in 1948 we found it difficult to locate an occupied burrow, though we searched both high and low. Eventually a half-grown chick in down was found in a burrow only about 120 feet a.s.l.

Allied Shearwater. It is doubtful if the numbers of this winter-breeder on Hen I. are very large. We had a few unsatisfactory glimpses of what appeared to be this species at sea.

Gray-faced Petrel. The burrows of this species occur almost anywhere and it nests inland in gullies more readily than either *griseus* or *carneipes*. In mid-December there are still many young in the burrows, some ready to leave, others still retaining much down. Fourteen were ringed on the Big Chicken and eight on Hen I.

Pycroft's Petrel. Several were seen at sea to the east of Hen I. on 15/12/53, in a 'swirl' which included eight species of *tubinares*. On the Big Chicken the calls of incoming birds were heard every evening, beginning about 8.30, but the breeding population would not be large. Only three occupied burrows could be found. In one of these the single egg (48.5 x 34.3 m.m.) was being brooded by different birds on two successive days. The remains of two dead *pycrofti* were found. Judging by the incoming calls, there are many more *pycrofti* on Hen I., but, even so, we were able to find only three occupied burrows. It may be rash to try to estimate the population, but we doubt whether on the Hen and Chickens there are more than a few hundred pairs of these exquisite petrels.

Cook's Petrel. A few seen off C. Rodney on 15/12/54. Their normal beat lies normally well to the east of the Leigh - Hen I. run.

White-faced Storm-petrel. Some may usually be seen in summer between C. Rodney and Sail Rock, where they may breed.

Diving Petrel. A few seen at sea near Sail Rock and east of Hen I.

Gannet. These typical birds of the Hauraki Gulf can be quite scarce between Leigh and Hen I.; e.g. only four were seen on one trip and three on another. A few may usually be seen along the coasts of the Hen and Chickens or in the intervening strait, where one line of six birds was noted.

Pied Shag. On the Middle Chicken there was a colony of twelve nests. They were in windswept 6ft ngaio, on a not very steep slope which faced south-west. Beneath the colony a woody, white-flowered exotic mallow (*Lavatera*) was growing lustily. The colony in Old Woman Cove on Hen I. contained 33 nests. This colony is typical, the nests being in pohutukawas which are growing out from a cliff and overhang the water. It also faces south-west. On the Middle Chicken one had the unique experience of being able to walk around on terra firma among the nests of Pied Shags.

White-throated Shag. Odd birds were seen at the Chickens and on Hen I.

Harrier. A pair had a nest with two eggs on a high ridge which overlooked

the north coast of the Big Chicken. They often harried the terns which were breeding below. An old nest was found on the Eastern Chicken. On Hen I. one or two birds were seen daily.

Black-backed Gull. These are scarce on the outer islands of the Hauraki Gulf. There may be three pairs on the Chickens and the three pairs on Hen I. are widely scattered. Evidently it is not so easy for these gulls to eke out an existence, where they are not parasitic on man.

Red-billed Gull. Small flocks come as visitors, presumably from the great colony on Mokohinau, or attach themselves to passing fishing boats. After mid-December birds of the year in mottled plumage begin to appear; e.g. one at the Big Chicken on 22/12/53, one at Hen I. on 17/12/54, and three on 21/12/54.

Caspian Tern. Single birds were occasionally seen both on the Big Chicken and on Hen I. They are probably non-breeding youngsters. One in Old Woman Cove had the mottled crown of immaturity.

White-fronted Tern. Compared with the large colonies on the mainland and inshore islands, the colonies on the outer islands are tiny. On the Big Chicken 10-12 pairs, much teased by Harriers, were attempting to breed on a rock below the northern cliffs. On Hen I. eight pairs were nesting on a rock below the light. On 16/12/54 six nests held a single egg each and two nests each a newly hatched chick. This colony did not exist in 1948. These terns appear to have a very tenuous hold on the outer islands.

Pigeon. Plentiful on Hen I. and the three biggest Chickens.

Kaka. On the Big Chicken there were four or five pairs. From one nest which contained two young, a dead youngster had been evicted. Kakas were seen on the Middle Chicken. On Hen I. they force themselves on one's attention, but the nest is not easily found.

Red-fronted Parrakeet. Plentiful on the Big Chicken, favouring the northern cliffs at this season. On Hen I. parrakeets were scarce in the high country, but were numerous as in 1948 round the coast where there was a profuse harvest of flaxpods. No occupied nests could be found. A parrakeet seen on Sail Rock was presumably of this species.

Yellow-crowned Parrakeet. It is satisfactory to be able to report that this species survives on the Big Chicken, where birds were seen in three localities. On Hen I. it was reported from one of the northern gullies.

Shining Cuckoo. Calls were heard daily on the Big Chicken. The 'tsiu' note was being made repeatedly by a bird on the Eastern Chicken. Calls were widespread on Hen I., indicating perhaps three or four singers.

Morepork. These were remarkably common on the Big Chicken. Seven nests were found, one containing two eggs, the others one or two young. The main food of the young seemed to be the so-called Native Rat (*R. exulans*), which was abundant. Remains of wetas but no bird feathers were found in the nests. On Hen I. we gained the impression that the population of moreporks, although they were common enough, was not as dense as on the Big Chicken, and that rats were fewer. The one nest found contained two young and a partly eaten 6" gecko (*Hoplodactylus* sp.). A pair of Saddlebacks was noisily mobbing one of the parent moreporks as it perched in full view.

Kingfisher. Not very common on the outer islands of the Hauraki Gulf. Two pairs were found on the Big Chicken. One of these had three eggs in a hole in a tree in a shady gully. Kingfishers may compete with parrakeets for suitable nesting holes. A kingfisher was seen on the Eastern Chicken. On Hen I. kingfishers were noted in only two localities. None was recorded during a close inshore circumnavigation of the island.

Fantail. Fairly common in the second-growth of the summit flat and ridges, but curiously scarce lower down on the Big Chicken. Two nests found were in *Coprosma robusta* and *C. rhamnoides*. The abundance of Moreporks among the bigger trees of the gullies where they nested may be the reason for the puzzling distribution of the fantails on this island. On Hen I. fantails were numerous throughout.

Pied Tit. Judging from singing males we estimated that on the Big Chicken there were at least five and perhaps seven pairs. They were elusive and tended to keep to the tops of the trees. No nests were found or family parties seen. On Hen I. Pied Tits were having a successful breeding season. Several broods of two or three young were seen on the wing. One nest was in rather an interesting position. It was placed in a small cup-shaped hollow on the perpendicular face of a grey lichen-covered boulder. For most of the day the nest was shaded from the direct sun. The nest contained three young and an egg on 20/12/54. D.A.U. built a hide and spent some hours watching and photographing. He reported that the female did all the brooding, both male and female fed the young, the male sometimes fed the female on the nest, both parents cleaned the nest.

Grey Warbler. Like the Fantails, these were mostly in the high country on the Big Chicken. Two very conspicuous nests were found, one in a small thin mapou, the other in a straggling hange-hange, only eight feet from a morepork's nest. As in 1948, there was little song at this season on Hen I., but diligent searching revealed that they were generally, if thinly, distributed. Three were singing on the lighthouse end of the Eastern Chicken.

Pipit. There is little pipit country on these islands and the few pairs are confined to the coasts, usually where bare earth is exposed above the cliffs.

Bellbird. Although the bellbird is abundant on the Hen and Chickens, not a single occupied nest could be found and the breeding season was evidently over. The dawn chorus was poor, and there was little singing by day. The best song was heard in the evenings.

Tui. On the Big Chicken tuis seemed to outnumber bellbirds. One nest contained four abnormal unspotted eggs, but they hatched safely. One interesting nest on Hen I. was tucked into the heart of a nikau only three feet above the ground. The sitting tui was remarkably well concealed.

Silver-eye. There were a few on the higher parts of the Big Chicken and on the Eastern Chicken. As in 1948 they were scarce on Hen I.

Saddleback. Some three years before our visit some saddlebacks were transferred from Hen I. to the Big Chicken under the direction of the Department of Internal Affairs. These introduced birds may be holding their own. A pair frequented the gully where our camp was pitched, and appeared to be breeding. During the hours of daylight their resonant calls were usually audible. Calls were also heard in another gully towards the south-west. On one occasion a bellbird was heard trying to imitate the calls of the saddleback, but it was unable to achieve their piercing, metallic quality. It occurred to us that the abundance of the morepork might be a deterrent to the spread of the saddleback on the Big Chicken. On Hen I. the saddleback is so abundant that it is difficult to conceive that the island could support more. During our stay it was the dominant singer and could be heard even among the stubborn scrub of the exposed eastern cliffs. No attempt at syllabification can do justice to the variety of its calls and any future expedition to Hen I. should go equipped with a tape recorder. No nests were found. The feeding of what appeared to be full-grown youngsters, hardly to be distinguished from their parents, was observed twice.

INTRODUCED BIRDS

Song Thrush. These outer islands do not suit the Song Thrush, which was not identified for certain on the Big Chicken in 1953 nor on Hen I. in 1954, although it was recorded there in 1948.

Blackbird. The Blackbird appears to be a more thrustful colonizer than the Song Thrush. On the Big Chicken seven males were noted as singing and another was heard on the Eastern Chicken. On Hen I. Blackbirds were not so easily found, only four singing males being located. A nest which contained four eggs was found.

Dunnock. Singing males were heard in four separate places on the Big Chicken. On Hen I. the Dunnock was recorded in 1948, but in 1954 its presence, though suspected, was not proved.

Chaffinch. At least five singing males were noted on the Big Chicken. Somewhat anomalously this species could not be found on Hen I. either in 1948 or in 1954, despite diligent searching.

Starling. A few pairs about the cliffs and one flock of about eighty birds on the Chickens. Rather scarce on Hen I.

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BROWN BOOBY IN THE HAURAKI GULF

By P. A. S. STEIN

Gannets and boobies are very like each other in general form. The main differences are minor ones; the extent of feathering on the throat, and the nature of the surface of the front toes. The booby's beak runs back into a naked light-coloured area, from which the eyes stare out as through a mask, and the skin of the feet has no suggestion of scales on its surface. Of much more importance to us is the fact that while the gannet breeds in temperate climates, the booby is essentially a bird of the tropics.

In Australia both Blue-faced and Brown Boobies breed on islands of the Great Barrier Reef. In the Capricorn Group, there are large rookeries at Hoskyn and at Fairfax Island. G. F. Hooley wrote in January 1955 about a ringed bird that he had picked up on Curtis Island (23° S). It was a stranger to him, but the ring number, 17006, told us that it was a year-old gannet. In comparing it with the local 'gannets' he said:

'It was slightly larger than our Brown Boobies which are very common at Curtis Island. There are hundreds breeding on North West Island, about sixty miles north of us, and indeed on most of the Reef islands.'

In February, writing from Port Stephens (34° S) about a two-year-old gannet chick, No. 15601, A. F. D'Ombraïn said:

'They have been very scarce for four years, but during the last year they have appeared again in greater numbers. Last summer I photographed a Brown Gannet which was sitting on the floating limb of a tree. It is the first record I have made of the Brown Gannet in these waters, as I think it is mostly an inhabitant of the north-east part of the coast and the Barrier Reef.'

On the coast of Australia the boobies keep mainly to the north of the Tropic of Capricorn, the gannets to the south.

Further to the east there are other breeding places, including some in the neighbourhood of Fiji. We have very few records of stragglers from either area appearing as far south as New Zealand. One was found, at Sunday Island in the Kermadecs, but only two others were seen in New Zealand up to 1952. The former, shot at Napier in July 1884, was described in detail by A. Hamilton (Transactions of N.Z. Institute, Vol. 21, 1889, page 128). Few details are known about the other, which was found at the Bay of Islands about 1910. Then, after a break of forty years, one was seen at Horuhoru, the gannet rookery to the north of Waiheke, in the Hauraki Gulf, on 8 March 1952 by P. A. S. Stein. After comparing descriptions and sketches, made on the spot, with skins of Fiji Brown Boobies (*Sula leucogaster*), E. G. Turbott identified the stranger as an immature bird in wholly brown plumage. There had been continual northerly winds from Fiji for a month and the bird was in close association with a group of gannet chicks about to depart (*Notornis*, Vol. 4, No. 8, April 1952, page 213).

Ten months later, on 21 January 1953, while counting the chicks on Motutakapu, which is 12 miles east of Horuhoru in the Colville Group, P. F. Stein noticed an adult Brown Booby among the gannets there (*Notornis*, Vol. 5, No. 5, July 1953, page 165). There was little doubt that the immature bird blown south from Fiji by the strong northerlies of February 1952 had spent the winter in company with New Zealand adult gannets, and during that period had developed its mature plumage. Since then three trips have been made to Motutakapu, but nothing has been seen there of the booby.

On 27 March 1955, through the kindness of Captain J. A. Lawler, members of the Auckland section of the Forest and Bird Protection Society were able to enjoy a trip to Kawau and back in the launch *Ngaroma*. Weather conditions — sunshine and a slight breeze — were perfect for observing birds at sea. Between Rangitoto and Kawau, Fluttering, Flesh-footed and Buller's Shearwaters were plentiful, and young gannets in brown mottled plumage were surprisingly common, more than twenty being recorded during the day.

As Tiri Tiri came abeam, R. B. Sibson was watching some of these young gannets as with shearwaters and gulls they were working over shoaling fish, when among them he saw a much darker gannet-like bird. As it swung round the light fell upon its characteristic features — blueish bill, dark brown neck with the brown ending abruptly, white belly, and underwing pattern, which were all seen clearly before it settled. E. G. Turbott also saw the bird, which was obviously a Brown Booby.

It is not unlikely that every year, in the late summer, a few tropical sea-birds reach the northern waters of New Zealand. Thus this year, Frigate Birds (*Fregata* sp.) have been reported from Parengarenga and the Waipu coast, and a Red-tailed Tropic Bird (*Phaethon rubricauda*) was seen by Master d'E. C. Darby when about 150 miles from Cuvier Island on the Panama route.

At the same time it is possible that the Tiri Tiri brown booby was the one seen in 1952 and again in 1953. A few days later this possibility became much nearer a probability when P. F. Stein on 11 April saw an adult brown booby at Horuhoru, on the same slope and within a few yards of where the original bird was seen three years before on 8/3/52. A late search was being made for young gannets. The Central Terraces on Horuhoru were found to be occupied by over two hundred adults — a most unusual thing in April — and among them was a brown booby. As the launch *Waitangi* turned in to anchor, the adult gannets began to stream down from the cliff. The booby went with them, but, passing between the launch and the sun, it did not show up to advantage. As boobies often fly in large figure-eights, the launch was put about to follow the birds out to sea. After going for half a mile to the north-west the booby wheeled round to the south and, returning, passed within 30 feet of the crew, who had a splendid view of its colour

and markings. The *Waitangi* again followed. As it neared Gannet Rock the booby banked sharply to begin another figure-eight. This brought the under surface of the wings nearly at right angles to the light, and gave a clear view of the underwing pattern from a distance of only a few yards.

Birdwatchers who have the opportunity are asked to be on the look-out for this bird; there may be more than one. It will be associating with other gannets. Standing among them it keeps its tail further down and balances further back on its legs. It seems an inch or more shorter than our gannets. In the air its wingspread is noticeably less — say, 66 inches instead of 70.

The feathers are of two colours, a rich, deep, warm brown (not as dark or lifeless as chocolate), and white. The colour changes abruptly from one area to another. The head, neck, back, tail, and top of the wings are brown. The belly and part of the under surface of the wings are white. From below, the wingtips are brown and a brown border encloses the white parts of the remainder of the wings. This border is much narrower in front than behind, and curves forward slightly to meet up with the brown part of the neck. The beak is light in colour and in many lights has a tinge of blue. Above and below the beak, the face and neck are bare and similar in colour. Against the rich brown of the head and neck, this light face area seems most unnatural, and the eyes are very prominent in it. Much the same effect would be obtained if a brown knitted balaclava were pulled over the head of a white bird and down the neck to wing level. The horn-coloured beak and light face would be seen through the opening in the balaclava, and the lower end where it ringed the neck would project slightly, as they seem to on the booby.

When the bird is standing at rest, the tops of the feet are seen. They are yellowish and may have a tinge of orange. When the booby is flying, it does not conceal its legs and feet as does the gannet. The legs appear well apart outside the feathers. The feet seem very dark against the underside of the bird and are so large that they make a band across the body and tail. The tail is generally longer than the gannet's and comes to a finer point in flight. When the booby hovers, however, it can spread the tail feathers out wide and a V-shaped gap appears between the middle feathers.

FURTHER NOTES ON WHITE-WINGED BLACK TERN (*C. leucopterus*) IN MANUKAU

By R. B. SIBSON

Since the White-winged Black Tern which spent the winter of 1953 (*Notornis*, 6.46) at Ascot, Mangere, was last seen on 27/8/53, there have been two more occurrences of this interesting vagrant in Manukau Harbour.

On 30/5/54 Mr D. A. Urquhart saw a W.W.B.T. flying along the shore at Karaka. It was a conspicuous bird in breeding plumage and was being pursued by a flock of godwits, from which different individuals in turn headed the pursuit. To escape them the W.W.B.T. climbed to 500-600 feet and flew inland.

On 30/10/54 I visited a corner of Manukau Harbour near Otahuhu, where in spring there are usually many non-breeding stilts. As the tide comes in, these gather on a small sandbank and at this season they are often joined by hundreds of newly arrived godwits. But stilts and godwits were quickly forgotten when I noticed a W.W.B.T. flitting up and down the tideline and over the flats, favouring especially those parts which were carpeted with a growth of green alga, which on examination appeared to be the breeding ground of some species of marine fly. The alga has been identified by Professor V. J. Chapman as a species of *Enteromorpha*, 'probably *E. intestinalis forma tubulosa*'. The tern was flying low in the manner typical of this species, lightly taking food near the surface of ground or water. Once when it was chased by a Red-billed Gull and climbed higher, I saw that there were the remains of nuptial black on the underside of the

wings. Otherwise it was a pale grey bird with white underparts, the tail perhaps being a little paler than the back and the upper surface of the wings. There was a small dab of black behind each eye and the nape was black as in other recently recorded W.W.B.T. (*vide* sketches by Dr C. A. Fleming, *Notornis*, 6.71). It was briefly chased several times by Red-billed Gulls, but neither stilts nor godwits were upset when it skimmed low over them and it settled quite happily among them.

On the next day Messrs E. G. Turbott and J. C. Davenport accompanied me and we found the tern sitting on the sandbank among the stilts. Twice it was seen to leap off the ground as if snapping at a fly under a stilt's belly. When it took wing and started to feed, it was persistently harried by Red-billed Gulls, which it eluded without difficulty. It made one long flight over the harbour. As it returned, flying fast at a height of about forty feet, it uttered an incisive 'keevit' and a sharp 'keet' before it alighted. All three observers were able to note the irregular black markings of the underwings.

That it was in the last stages of losing nuptial plumage was most interesting. It could have been the same bird as D.A.U. had seen at Karaka five months earlier, and that may well have been the bird which had spent the previous winter in Mangere as a yearling. Much remains to be learnt about the age when terns start breeding. The evidence seems to indicate that *C. leucopterus* does not breed in its first year and that though it may assume nuptial dress in its second year, it may defer breeding till its third year, after assuming nuptial dress for the second time.

It has also been suggested that this last W.W.B.T. in worn breeding dress could have been an adult which after a nesting season in the northern hemisphere had got caught up in a stream of southward-bound migratory waders.

From the bay where I first found it, it moved half a mile into Harania Creek, where it fans out above the Favona Causeway into a wide expanse of mud which only the biggest tides cover completely. Here the W.W.B.T. stayed for five months, so that many local observers were able to see it. During this stay it completed a moult into winter plumage, but by the time it was ready to leave it was again in nuptial dress. I was able to make a few notes on these changes. As late as 23 December there were still traces of black on the underwings.

On 5 February the tail seemed very white in contrast with the grey of the back and upper wing surface; and I believe the moult into summer plumage had begun. By 4 March a most striking change had taken place, for at a distance the tern appeared to be in full breeding dress, but when it flew closer I could see that the belly was flecked with white and that there was a little white about the face. The bill was not yet conspicuously red. When I last saw it on 24/3/55 the white flecks on the belly had gone.

The W.W.B.T. frequented Harania Creek at a season when the population of gulls in Manukau is at its smallest; and because of its restlessness it was usually an easy bird to find, though there were occasions when it was missing. For some reason it never seemed to rest on any of the many available stakes which are favourite perches for the gulls when they are in this creek. Twice I saw it balancing precariously on the topmost strand of a derelict coil of wire out on the mud. More often it rested on the mud on the edge of flocks of stilts or godwits, but sometimes right among them. It usually fed either along the edge of the tide or over a long squelchy puddle, green with algae, where a stream trickled in, a paddling-ground popular with stilts. There were no freshwater pools in the vicinity which it could visit.

On 31 December I saw another side of its flying ability. Towards full tide flocks of waders gather in the shallow lagoon part of Harania Creek. On this day godwits, knots, stilts and even a few wrybills were resting on the mud when a passing harrier put them up. In a swirling host of some three thousand waders the White-winged Black Tern quickly climbed 400 to 500 feet.

NOTICES

Appointment of New Regional Organizers

At a meeting of the Council held in Dunedin on 13 May 1955 the appointment of the following Regional Organizers was confirmed.

Nelson: Mrs S. C. Webber, 40 Tasman Street, Nelson.

Canterbury: Mr W. Clark, 22 Avonside Road, Christchurch.

Otago: Mr W. A. Williamson, 40 Eagle Street, Burkes, Dunedin N.E.2.

Stewart Island: Mr R. Traill, Halfmoon Bay, Stewart Island.

THE TIMING OF SHORT NOTES

Two suggestions have been made:

(a) That while these will continue to be published in the January issue of *Notornis*, the year for which they have to be gathered together shall end on 30 June. This seems to be a suitable in-between season. Short notes should be sent to Regional Organizers in July and they will then have plenty of time to arrange and forward them to the Editor by 30 September.

(b) That for localities where migratory birds come and go, and regular watching is carried out, e.g. the Miranda coast of the Firth of Thames, Ahuriri Lagoon at Napier, Waikanae, Otago Harbour, etcetera, annual reports should be made in the January issue of *Notornis*.