(a) The inland pied oystercatcher (**Haematopus finschi**) nesting on riverbeds and uplands of the South Island, migrating in winter to the coasts and to North Island estuaries.

(b) The Black oystercatcher (**Haematopus unicolor**) frequenting mainly rocky coastline from Stewart Island north along the west coast of the South Island and up the east coast of the North Island to the Bay of Plenty.

(c) The North Island oystercatcher (**Haematopus reischeki**) which is a coastal breeder on sandy shores along the whole west coast of the North Island and down the east coast to the Bay of Plenty. It is a bird of variable plumage, some being black like **unicolor**, a few pied, but larger and having less white than **finschi**, and many intermediate (R.A.F.)

From reports, the following summary is culled:—
Pied Oystercatcher (**Haematopus finschi**).

Nests on riverbeds reported from Mossburn and Lumsden (D.M.). Glenary, Waikaia, where the birds were first noted for the season on 4 August, 1939 (G.S.G.). Rakaia, Waimakariri, Ashley, Waiau, Hurunui (E.F.S. and R.A.F.). Winter flocks in Canterbury begin to increase from a non-breeding nucleus about mid-December, reaching a maximum in winter—about 3,000 at mouth of Waimakariri, June 1940 (R.A.F.). Flock of 150 at Waitati 25/8/38 had decreased to 100 by 4/9/38 (B.J.M.). Pair seen on Hokitika River and 16 at Okarito in January, 1940 (R.B.S.). Large flocks, several hundred birds, on Kaipara Harbour, February, 1940 (G.A.B.).

Page Twenty-six.

6. BANDED DOTTEREL (**Charadrius bicinctus.**)

Reports indicate that this species is still an abundant breeder from North Auckland to Southland.

It is estimated that there are about 100 pairs breeding in the northern block which is cut off by the sandy isthmus of the Ninety Mile Beach, the nesting sites being mainly inland from the sandy beaches. After the nesting season numbers are much increased and scattered flocks frequent beaches and Parengarenga Harbour. The period of increase is during late February and early March at which time small parties have been met with at night sleeping along a roadside. (A.H.W.).

Observations on Ninety Mile Beach itself give an estimate of 150-160 birds scattered along the shore, more concentrated at stream outlets 9th to 15th May, 1940 (R.B.S.).

Pairs are reported nesting in ploughed fields in the Whangarei district (S.D.P. and W.S.). Many coastal breeding records from Bay of Plenty. at Matata nests of 10 pairs averaged 400 yards apart (S.D.P.). Nesting activity at other North Auckland localities are summarised by Mr. C. A. Fleming as follows:

Nov. 22, 1938, 3 pairs in full colour; nesting suspected, one flood-destroyed nest found.

9/5/39, 8 birds on breeding ground—1 with fair bands associated with 1 with none. 3 others faint bands, rest with none.

5/6/39, not seen at Muriwai (public holiday).

17/6/39, not on breeding ground but 3 encountered 2 miles up beach (1 well banded, 1 fainter, 1 barely showing trace).

7th and 29th/7/39—Both dates in very windy weather and no birds seen at breeding ground.

Early August, 1939, E. G. Turbott recorded 1 pair of dotterel in full plumage on breeding ground.

16/9/39, pair in full plumage feeding vigorously on breeding ground. Female just distinguishable with less distinct bands.

24/10/39, male darting at female and running chases—courtship?

December, 1939. About six birds breeding (chicks on December 24).

The above records were made to test the claimed migration to Australia. From October on breeding continues to January in some cases (nest of eggs, Rotorua, January 22nd, 1939). In February and March and April non-breeding birds in flocks (young and old in eclipse) are frequent at Manukau and other harbours. Some remain at Rotorua till May tho' the whole population is not present all winter (C.A.F.).

From inland in the North Island we have a record of about 30 birds nesting at Reparoa in October, 1938 and 1939, and the following valuable summary of Mr. M. E. Fitzgerald's observations:

Rotorua District:

Nest: Usually filled with material slightly lighter than the surrounding grey (of pumice, etc.). Often a marker 15-20 inches away—a stone or wood or shrub, but nothing obstructs surrounding view. Hen incubates as a rule, but cock occasionally on cold day when female disturbed—on both fresh and chipping eggs male will sometimes appear to "order" female back on to nest. Not observed feigning injury.

Chicks: Never three alike; yellowish background always goes with bold large markings on back. Others have white background with minute dark markings giving grey effect; or white with bold markings. Yellows assume juvenile plumage with greyish belly and faint band indications while greys develop pure white belly and breast.

Incubation Period:

Nest A: partly inc. 27/10; hatched 17/11; 21 days.
Nest B: partly inc. 28/10; hatched 16/11; 19 days.
Nest C: fresh eggs 15/11; hatched 12/12; 27 days.
i:e:. not less than 28 days.

Season: Nests of eggs and chicks in October; and eggs as late as January. December nests probably result of casualty to first.

Laying Dates (including some C.A.F. records): October 6th, 6th, 25th, 18th, 18th, 18th, 27th, 2nd, 17th. September 27th, 28th, 2nd week, 1st week, 2nd, 19th, 26th, 28th, 7th. Jan. 2nd. November 5th, 25th, 15th, 15th. December 6th, 12th, 20th.

Are present in small numbers in the Central North I. in April and assume breeding plumage during May to July, with males ahead of females. Bands fade in February and by the end of that month the birds are in bands as if ready to depart. Absent in March and early April.

Development of Chicks: From hatching, in 19 days feathering is well shown, in 7 months juvenals' bands appear and are complete in males by 8 months; in female by 3 weeks to a month later. Preparing to mate in 9 months. Lose colour in 12 months and are in full eclipse again 13 months from hatching. (M.E.F.)

From more southern localities it is reported that banded dotterel are increasing in the Wairarapa (R.H.D.S.), decreasing in Canterbury, especially on areas invaded by the Australian magpie (E.F.S.), present on the riverbeds of Aparima, near Otautau and the Oreti, above Lumsden (D.M.); seen at the following Westland river mouths in January, 1940: Hokitika, 2; Arahura, 4; Waitangi, 2; Okarito, 1 (R.B.S.).

Notes on winter movement and distribution are provided by the following three contributors:

i. **C. A. Fleming at Muriwai.**

Regular trips up the 30 mile beach from Muriwai to S. Kaipara Heads have been made on the following dates. The numbers of both banded dotterel and wrybill show a general increase as if by influx of southern populations. The numbers are somewhat affected by strong onshore winds when the small waders are fewer. ( ) indicate incomplete counts.

Date.	Dotterel
Dec., 1939	*c. 3 pairs*
Feb. 21, 1940	None seen
Mar. 10, 1940	10
Mar. 23, 1940	(13)
Mar. 31, 1940	25
Apr. 7, 1940	(23)
Apr. 21, 1940	37
May 5, 1940	6
May 11, 1940	(4)
May 24, 1940	0
June 9, 1940	4

ii. **P. C. Bull at Mangere.**

Mangere (Orangi Mudflats, between Puketutu Id. and Ihumatao Peninsula and 2 cow paddocks on south side of Ascot Road).

Numbers and Migration:

Feb. 27. 6 wild birds in eclipse in estuary at Puketutu.

			Percent. full plumage
Mar. 31	(spending high tide in paddock)	50	0
Apr. 1	,,	50	0
10	,,	250	0
14	,,	100	
17	,,	500	
24	,,	550	1%

			Percent. full plumage
Apr. 25	(spending high tide in paddock)	1000	
28	,,	400	4%
May 3	,,	500	
10	(on mudflats)	70	
16	(on paddock)	500	30%
21	,,	50	
25	,,	68	10%

The above counts are in most cases approximate counts. The suggestion that an autumn through-migration occurs is supported by the above figures and by the varying percentage of birds in full plumage. On May 3 the flock gave a shrill chattering sound, not unlike that of godwits in flight, which may have migratory significance. During April the dotterel were always to be found in one closely-grazed paddock about 600 yards from the sea and 50 feet above the mudflats. During May they at times used adjacent paddocks, perhaps owing to the top-dressing or shortening by grazing of the grass in the original one, to the frequent presence of people and cows, of large numbers of redbilled gulls. At the end of May they almost invariably used a small, more swampy paddock sometimes used by stilts. In the paddocks the birds grouped together and rarely appeared to feed—on the mudflats they invariably were feeding.

Voice: 1. Shrill chattering of the flock heard only on May 3rd may be cry. 2. Single note habitually uttered in flight. 3. Rapid combination of 2 so as to sound like a true song, from pairs quarrelling on the mud—probably associated with the breeding season.

Daily Movements: Birds from the paddock regularly visited the mudflats at a time governed by the tide, but affected by other factors. Wind and rain prolonged the stay in the paddock, disturbance made them leave earlier (e.g., the mob of gulls which arrived at the paddock at 7 a.m. each morning). The condition of the tide (neap or spring) also affected their stay. They definitely came up to the paddock every high tide in the daytime; probably also at night, as they were heard in flight. When leaving the field they flew off in small flocks, the whole movement occupying 15-20 minutes. The following table of times of departure shows the dependence on tide:

Date.	Time of Departure.	Approx. time of High Tide.
May 2	9.30 a.m.	6.00 a.m.
May 3	9.50 a.m.	6.50 a.m.
May 6	11.20 a.m.	9.10 a.m.
May 8	2.30 p.m.	10.45 a.m.

iii. **P. C. Bull at Whangapoua.**

Whangapoua Har. (Coromandel Peninsula) May 11: 5 in eclipse in paddock of young grass where they were reported regularly (up to 30 in wet weather). They apparently make regular trips from the paddock to sea (2 miles away) as observed at Mangere.

May 13: 3 dotterel on the ocean side of Matarangi Peninsula. 30 on the sandy mud of the gently shelving harbour side at low tide. All in eclipse, though Mangere birds had in some cases good bands by this date. Possibly the Matarangi Peninsula is a breeding place.

7. NEW ZEALAND DOTTEREL (**Pluviorhynchus obscurus**).

Counted meticulously. 50–60 would seem to be the population. A few were donning breeding plumage. They were usually in small scattered parties, e.g., 3, 4, 7, 9. Fed busily on sand exposed by receding tide. Also sleeping high and dry on the beach when the tide was low. Distributed over the whole beach from Ahipara-Scott Point; though it was noted that there were hardly any where the beach is backed by vegetation-covered dunes. [May 9-15, 1940 (R.B.S.)]

8. WRYBILL PLOVER (**Anarhynchus frontalis**).

Still breeding as elsewhere recorded on beds of Rakaia, Waimakariri and Ashley Rivers (E.F.S.).

Winter range and distribution indicated in following observations from Muriwai (C.A.F.):—

Date	Wrybill
Dec., 1939	Nil
Feb. 21., 1940	3
Mar. 10, 1940	5
Mar. 23, 1940	(15)
Mar. 31, 1940	None seen
Apr. 7, 1940	(1)
Apr. 21, 1940	23
May 5, 1940	8 (strong west gale, no small waders in afternoon)
May 11, 1940	(4)
May 24, 1940	26
June 9, 1940	82

In previous years small flocks of up to 30 birds have been seen in the Manukau, viz: 1/2/39, March 1937, 24/3/36, April 1937.

Manukau Harbour: 25 May, 1940, flock of 15, very tame, dark breast bands just beginning to show. 5 July, flock of 15, breast bands well developed (P.C.B.).

9. GODWIT (**Limosa baueri**).

From the year's reports it is proposed only to list the numbers recorded in various localities on various dates.

Ninety Mile Beach: Only 36 seen, none in breeding plumage 9–15th May, 1940 (R.B.S.).

Whangarei Harbour: About 300 remained winter, 1939 (W.S.).

Manukau Harbour: (particularly the mudflats lying between Puketutu I. and Ihumatao Peninsula).

Feb. 27, 1940: 500 flying over Puketutu—the last large flock seen and migration must have occurred soon after.

Mar. 20: 200 on mudflats.