

ARCTIC WADERS WINTERING IN NEW ZEALAND

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SUMMARY: Members of the sub-order *Charadrii* are the only birds to winter regularly in New Zealand. They prefer to live on inter-tidal mudflats where, particularly during late summer, they mix with New Zealand's endemic species. Some migratory species show a preference for feeding and roosting with endemic species. Distribution throughout the country is irregular. Some 160 000 northern hemisphere breeding *Charadrii* are present and this number appears to be increasing. Approximately 95% of this total is made up of two species. Some 40 species have been recorded.

INTRODUCTION

Members of the sub-order *Charadrii* (Waders) are the only land dependant migratory birds to winter regularly in the New Zealand ornithological region (Fig. 1).

The preferred wintering habitat of *Charadrii* is

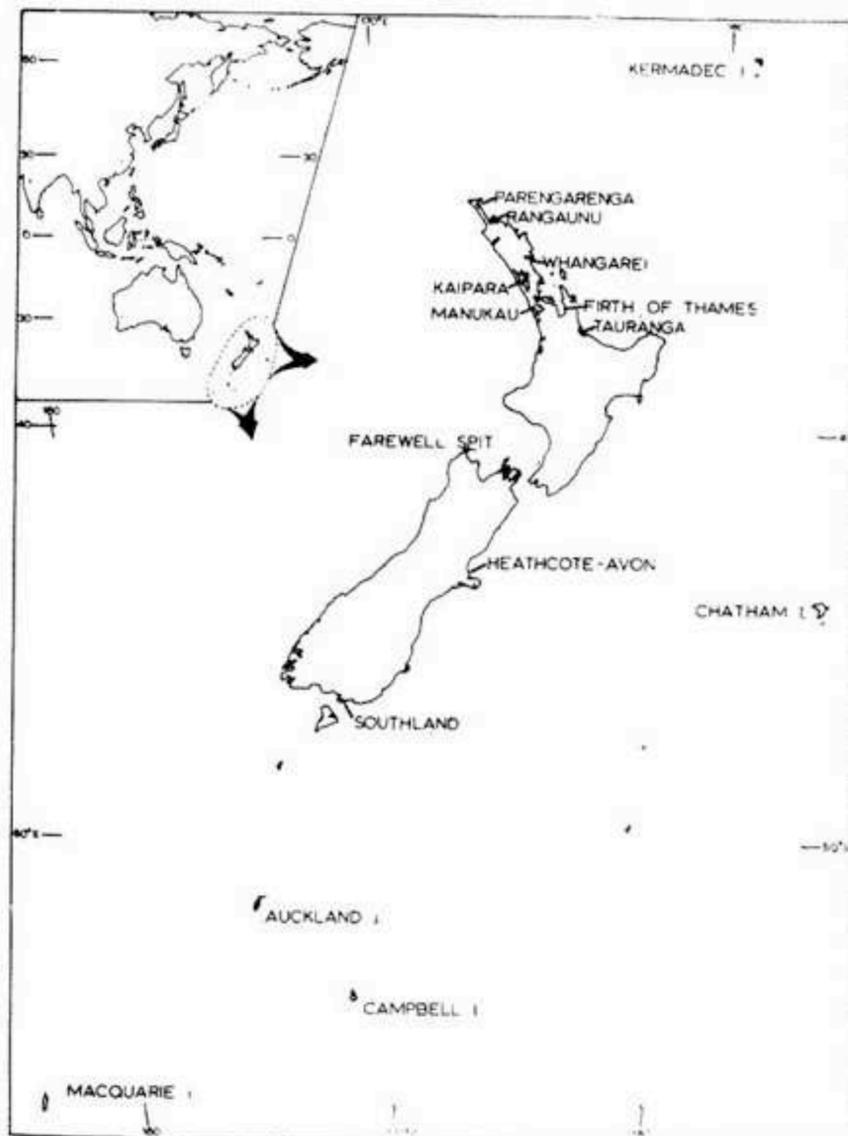


FIGURE 1. The New Zealand Region showing main wader wintering areas and outlying islands.

inter-tidal mudflats in harbours and estuaries preferably with shell or sandbanks to use as high tide roosts. Scattered small areas of such habitat are present along much of New Zealand's coast, but the major areas are in the north (Parengarenga to Tauranga), Farewell Spit, and Southland (Fig. 1). Pasture land adjacent to estuaries is also frequently used. These habitats are also used by New Zealand's endemic waders, most of which breed inland and migrate to estuaries, and generally northward, during their non-breeding season (January-August). The high numbers of wintering arctic migrants (c. 160 000) present in New Zealand from September to March/April, and lesser numbers of over-wintering birds (non-breeders), inevitably mix with these endemic species.

RECORDS

Irregular records of *Charadrii* numbers have been kept for many years but these have only been frequent enough for comparative purposes during the past 20 to 30 years. Regular, twice yearly, censuses have been carried out by members of the Ornithological Society of New Zealand on the

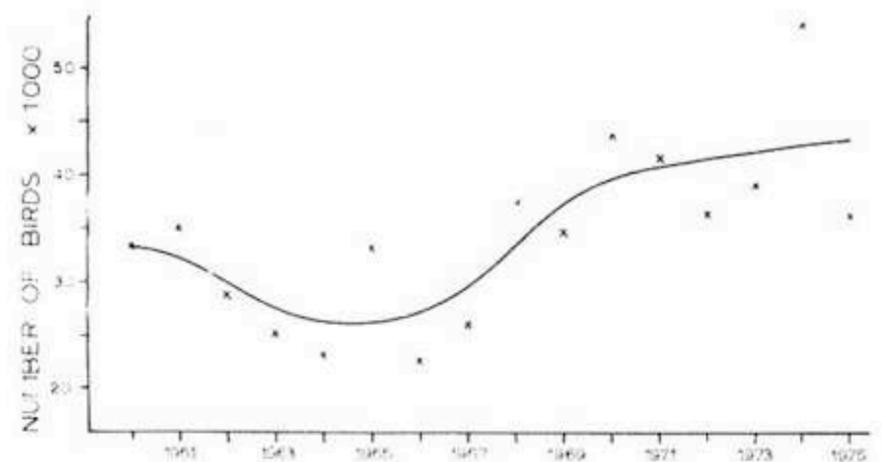


FIGURE 2. Numbers of arctic waders wintering on Manakau Harbour and Firth of Thames.

Manukau Harbour and Firth of Thames since before 1960. These show that the populations of some species have increased during this period (Fig. 2) (Veitch, in prep.) To date, some 40 species or subspecies of northern hemisphere breeding *Charadrii* have been recorded in New Zealand (OSNZ, 1970), more than half of these are rare or irregular visitors (less than 30 individuals of each species having been recorded during the last 20 years).

The two common species, Eastern Bar-tailed Godwit (*Limosa lapponica baueri*) and Knot (*Calidris canutus canutus*), make up more than 95% of the arctic breeding waders wintering in New Zealand. Godwits are the more numerous with a probable total population of 100 000. This is considered to be the bulk of their breeding population (Sibson, in *Field Guide*, 1970). Regular censuses on the Manukau Harbour and Firth of Thames indicate that this species is becoming more numerous. Godwits are found throughout the New Zealand region on all suitable harbours and estuaries where they feed mostly on the tidal flats, although, particularly during wet weather, they will visit pasture land and marshes. In some areas flocks of up to 8 000 Godwits have frequently been seen without the company of other species. Knots commonly consort

with Godwits, particularly on the larger estuaries. The distribution of Knots is more restricted (Table 1) although in some places they may be the more abundant species. This indicates habitat preferences which are not understood at present.

Thirteen species may be considered regular, but not abundant, migrants which total less than 4% of the arctic *Charadrii* wintering in New Zealand. The most abundant of these is the Turnstone (*Arenaria interpres interpres*) with a total population of some 4 000 individuals. This species is recorded as having a liking for shelly or stony foreshores or rock-pools (Sibson, *loc. cit.*) as well as showing a preference for the sandier inter-tidal flats of some estuaries (Table 1). Turnstones are also sometimes found with Pacific Golden Plover (*Pluvialis dominica fulva*) and the endemic Banded Dotterel (*Charadrius bicinctus*) on ploughed land near the sea or estuaries. These two last mentioned species also usually prefer to feed on intertidal areas. Golden Plovers are somewhat less numerous than Turnstones and probably number less than 1 000.

The other less abundant regular migrants have been more frequently recorded on the northern harbours, at Farewell Spit, and the Southland estuaries, often in the company of, or near, the more abundant Bar-tailed Godwits and Knots. During January—March Terek Sandpipers (*Xenus cinereus*), Curlew Sandpipers (*Calidris ferruginea*) and Red-necked Stints (*C. ruficollis*) are likely to be found with flocks of the endemic Wrybill (*Anarhynchus frontalis*) in areas where they are present. The Greenshank (*Tringa nebularia*) prefers to join flocks of Pied Stilts (*Himantopus himantopus leucocephalus*) (Sibson, *loc. cit.*). The Asiatic Black-tailed Godwit (*Limosa limosa melanuroides*) has been recorded mainly from the North Island of New Zealand, rarely in the South Island and, once, from the Auckland Islands, some 1 600 km to the south. The Long-billed Curlew (*Numenius madagascariensis*) is regularly seen in the north, at Farewell Spit (average 24 birds), and Southland.

Records of low numbers, or irregular sightings, of the less abundant regular migrants and most of the rare or irregular visitors have come from both the main islands of New Zealand and, occasionally, the Chatham and sub-antarctic Islands, although all have been seen more frequently on the major estuaries. Exceptions to this generalisation are: the few species which have been recorded only once or twice; Oriental Dotterel (*Charadrius veredus*) and Broad-billed Sandpiper (*Limicola falcinellus sibirica*) which have not been recorded south of the Firth of Thames (Sibson, *loc. cit.*); and Bristle-thighed Curlew (*Numenius tahitiensis*) which has been

	LIMOSA L. BAUERI	CALIDRIS C. CANUTUS	ARENARIA I. INTERPRES	PLUVIALIS D. FULVA	OTHERS	
No	2100	830	720	175	54	PARENGRENGA
%	54	21	25			(Edgar Pers. Comm)
No	2500	1350	260	0	18	BANGAUNI
%	59	35	6			(Edgar Pers. Comm)
No	3500	1000	10	10	3	WHANGAREI
%	77	22	1			(Munn 1971)
No	12000	4300	165	8	21	KAIPIARA
%	72	26	2			(McKenzie 1965)
No	15300	2800	225	39	16	MANUKAU
%	83	15	2			(Veitch in Prep)
No	9300	6500	52	34	35	FIRTH OF THAMES
%	58	41	1			(Veitch in Prep)
No	8000	0	10	0	3	TAURANGA
%	99	0	1			(Veitch Own Records)
No	18400	26700	750	30	68	FAREWELL SPIT
%	40	58	2			(Edgar 1974)
No	4500	0	0	0	1	HEATHCOTE-AVON
%	99	0	1			(Brathwaite Pers. Comm)
No	5000	200	1400	110	77	SOUTHLAND
%	74	3	23			(Darlow Pers. Comm)

TABLE 1. Major components of wintering arctic wader flocks in New Zealand during November-February.

recorded only from the Kermadec Islands (Veitch, 1974). In Northern New Zealand some rare waders tend to roost with flocks of Wrybill, when it is present, and hence are more frequently recorded than species which roost individually.

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REFERENCES

- EDGAR, A. T. 1974. Farewell Spit, March 1974. *Notornis* 21: 250-259.
- SIBSON, R. B. 1970, in *A Field Guide to the Birds of New Zealand* by R. A. Fella, R. B. Sibson & E. G. Turbott. (Revised Edition). Collins, London.
- McKENZIE, H. R. 1965. Field Study Course, Kaipara Harbour, January, 1965. *Notornis* 12: 70-79.
- MUNRO, M. 1971. Birds of Whangarei Harbour. *Notornis* 18: 202-206.
- O.S.N.Z. 1970. *Annotated Checklist of the Birds of New Zealand*. The Checklist Committee (F. C. Kinsky, Convenor), A. H. & A. W. Reed, Wellington.
- VEITCH, C. R. 1974. Bristle-thighed Curlew Records from the Kermadec Islands. *Notornis* 21: 83-84.

AUTHOR'S NOTE

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This copy has been amended for New Zealand distribution by the addition of common bird names.