numbers; while others are appearing now that we have not known before. If there is anything in the cycle theory a decline may be expected sonner or later. If the increase continues the Turnstone will have to extend its habitat and resort to inland living places as in Hawaii. We like to think that we have been very clever in "shrinking the world" with our sudden improvement in communications, but the birds may be keeping up with us.

MANUKAU HARBOUR WINTER COUNTS

Prior to the census period fewer and less comprehensive visits were made to Manukau, which could explain there being few records, 10 on 13/7/47, 13 on 2/7/50 and 16 on 16/7/50. The chart shows an increase which is roughly in line with the summer figures. It is good to know that this engaging little bird is more than holding its own.

RED-NECKED STINTS IN NORTHERN NEW ZEALAND

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By R. B. SIBSON

The history of the Red-necked Stint (Calidris ruficollis) as a New Zealand bird begins in the South Island in 1902, when Edgar Stead obtained two specimens of what he called the Red-necked Sandpiper, at Lake Ellesmere, one in January and the other in July. Apparently in the same year another stint was collected in Otago at Taieri Flat and was thought to be an example of the Little Stint (C. minuta). About 1910 when Stead (1) secured several more stints in winter plumage at L. Ellesmere, all were identified as minuta. According to Falla (3) more stints were collected at L. Ellesmere between 1928 and 1930, by which time it was generally agreed that the migratory stints which normally reach New Zealand are referable to ruficollis.

It is relevant to mention that not only first year birds of ruficollis and minuta but also adults in winter plumage are virtually inseparable in the field; and are distinguishable in the hand only under the most critical examination. Some authors have been inclined to treat minuta and ruficollis as conspecific; minuta being the form which breeds in the western palaearctic, and being supplanted in the extreme east by ruficollis. But Russian ornithologists (5) treat them as full species as there is a broad zone where their feeding ranges overlap; and Vaurie (10) states that they are sympatric on the eastern Taimyr Peninsula and around the delta of the Lena. Males of the two species in breeding plumage are markedly dissimilar.

The first mention of the occurrence of the Red-necked Stint in the North Island is by Falla (3). It was taken at Waikanae on the Wellington coast on 30 March 1930. Thus when four were found together in the Firth of Thames (4) on 27/10/41 and again on 9/11/41, this was the first record of anything resembling a flock in the North Island. During the ensuing years the study of shorebirds in the Firth of Thames became much more thorough; yet

very few stints were noted — none at all in some years — and it was not till the summer of 1951-52 that another palpable flocklet was discovered.

Similarly the Red-necked Stint was very scarce in Manukau Harbour during the 1940's. The Wrybills (A. frontalis) and Banded Dotterels (C. bicinctus) of the Puketutu flats were under close observation between 1940 and 1950; yet in only two summers was a Red-necked Stint found among them. Along the Karaka coast (8) scrutiny of the Wrybill flocks began in 1946, but some years were to elapse before a stint was found among them. It is reasonable to assume, therefore, that during the 1940's the Red-necked Stint was a very rare migrant in the northern harbours; and probably elsewhere in New Zealand.

COUNTS OF RED-NECKED STINTS

Summer	Firth of Thames	Manukau	Kaipara
1941-42	4 (2)	_	
1942-43	_ ` ´	_	N
1943-44	_	1	. O
1944-45	2	_	
1945-46	_	_	O
1946-47	- '	_	В
1947-48	1 2 2 1 5 (3) 9 (4) 7 (1)	1	B S E
1948-49	2 (2)	_	
1949-50	2	_	R
1950-51	1	_	V
1951-52	5 (3)	· –	Α
1952-53	9 (4)	2 (2) 2 1 (2) 2 (1) 4 (1)	A T I
1953-54		2	I
1954-55	6 (1) 5 5 (2)	1 (2)	O
1955-56	5	2 (1)	N S 3 4
1956-57	5 (2)		S
1957-58	19 (20)	11 (4)	3
1958-59	26 (1)	14 (1)	4
1959-60	5 5 3 (1) 4 (1)	11	4
1960-61	5	14 (4)	4
1961-62	3 (1)	12 (1)	1
1962-63		7 (1)	1 3 1
1963-64	15 (11)	7	1
1964-65	18 (2)	13 (1)	6
1965-66	13 (2)	14 (2)	-
1966-67	14	20	7
1967-68	15 (3)	21 (1)	-

The figures for overwinterers are in brackets

During the 1950's, as a glance at the chart will show, there was a marked increase, particularly towards the end of the decade. Now in the later 1960's we would be surprised if we could not find small flocks of stints spending the summer, often but not invariably attached to Wrybills, in certain favoured localities, namely Miranda between White Bridge and Kairito Creek in the Firth of Thames; Kidd's Bay in Manukau and Tapora in Kaipara.

In Australia the Red-necked Stint is the commonest of the migratory arctic waders to remain over the southern winter. In

New Zealand the number of immature non-breeders which stay behind after April is very small; and the quickest way to find them, at any rate in the north, is by examining the flocks of wintering Wrybills at their high-tide roosts. The twenty Stints which overwintered in 1958 at Miranda were, by our standards, quite exceptional.

The few which overwinter may form the nucleus of the flocks which slowly build up during the spring; but some may travel south with the Wrybills or Banded Dotterels with which they have been associating for several months. Sometimes the first migrants are back before the end of September; e.g. at Karaka in 1958 after four had over-wintered, ten were present on September 28th, one of which was still in quite bright breeding dress; but most drift in during October and November. Adults may arrive still wearing traces of red nuptial feathering. By December the local flocks have become fairly stable and they remain so till the end of March. Thus at Kidd's Bay, Karaka, a flock of 18 had assembled by 9/12/67; there were 20 on 21/2/68 and 21 on 31/3/68. Likewise in the Firth of Thames a summering flock of 15 was undiminished on 24/3/68. So far there is no evidence of any substantial influx as Stints from the more southerly flocks travel north. Once they set out, they probably travel fast with few or short halts. Nor do the local flocks suddenly disappear. Rather they dwindle as pairs or groups complete the moult into breeding dress.

Elsewhere in the north there are few localities from which Red-necked Stints have been reported and the paucity of sightings is probably a true reflection of their former status. The records are:

Parengarenga:

2 on 24/3/51 (D.A.U., H.R.McK.) 11 (15?) on 5/4/53 (H.R.McK.) 1 on 1/2/55 22 on 6/3/68 (A.T.E.) 20 on 25/10/68 (A.T.E.)

Ruakaka:

1 on 19/12/57 (B.D.B.) 1 on 14/9/58 Kaimaumau: 11 on 25/1/62 (A.T.E.) Kaituna, B.o.P.: 1 overwintered 1967 (R.J.)

From the evidence available it seems indisputable that the improved figures so noticeable in the Firth of Thames and Manukau Harbour since the 1940's and especially in the 1960's represent a genuine increase in the number of Red-necked Stints which are reaching New Zealand annually; and that they are not merely the result of greater efficiency on the part of local observers. Even so the size of the northern flocks which have been under review is modest compared with those found in the South Island in 1968, viz. 57 in Southland and 38 on Farewell Spit.

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