

# PRELIMINARY ESTIMATES OF THE NUMBER OF WADERS WINTERING IN THE OUTER HEBRIDES, SCOTLAND

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It is over a decade since the initiation of the Birds of Estuaries Enquiry. Through the succeeding years it has been considered that the wader populations of Britain have been counted accurately (Prater 1973, 1974, 1976, 1977, 1979; Salmon 1980, 1981; Marchant 1981) and are now well known (Prater 1981). This may be true for many areas but the figures are inadequate for many Scottish island groups. Consequently this survey of the waders of the Outer Hebrides was carried out between November and February during the period 1978/79-1981/82.

Most sites were visited only once during the study period, but several in Lewis and Harris were monitored regularly. This revealed that most species frequented the same sites each year. This enabled total population estimates to be made by adding together the numbers of birds at each site. Where several counts were made for a given site, the maximum and minimum figures are included.

## Results

It was estimated there were over 30,000 waders throughout the islands (Table 1). Most were concentrated on the west coasts, especially the soft shores of the Uists and Benbecula. Relatively few frequented the east coasts, which were mainly rocky and often cliff. The only eastern areas with substantial numbers of birds were the sandy beaches in the vicinity of Stornoway in Lewis and Eoligarry in Barra.

Of the species which inhabit soft shores, the numbers of Ringed Plover *Charadrius hiaticula* and Sanderling *Calidris alba* were outstanding. About 3,000 Ringed Plover were estimated to winter in the Outer Hebrides (Table 1) and, although most sandy beaches supported a flock, the largest numbers were in the semi-enclosed strands and foreshore of the Uists (Figure 1). Even the smaller islands such as Ensay and Killegray in the Sound of Harris had about 50 birds each, whilst the larger ones, such as Beneray, supported over 120. In contrast, Sanderling were restricted mainly to the Uists. Very few occurred on the smaller islands, or even in Lewis and Harris (Table 1).

Knot *Calidris canutus* and Grey Plover *Pluvialis squatarola* were scarce species throughout the archipelago; Knot appeared regularly in small numbers only in south Harris, whilst Grey Plover were mainly restricted to a few large strands in North Uist. The majority of the Bar-tailed Godwit *Limosa lapponica* were also mainly restricted to the same strands (Table 1). Many of the 3,600 Dunlin *Calidris alpina* - a notable number for northern Scotland - were concentrated in the Southern Isles.

The distribution of rocky-shore species was also concentrated along the western coasts of the Uists. The rocky headlands, wave-cut platforms, boulder beaches and piles of cast-up kelp on the sandy shores were the main feeding sites for Turnstones *Arenaria interpres* and Purple Sandpipers *Calidris maritima*. The great exposure of these western shores to the prevailing winds did not prevent large numbers of birds using them and, in contrast, very few birds occurred in the more sheltered, densely seaweed-clad shores of the east coast sea-lochs. In adverse weather conditions, e.g. gales, birds, for example Turnstones, moved onto grasslands and machair to feed. In Lewis, Harris and the smaller islands the flocks of both Purple Sandpipers (Figure 2) and Turnstones tended to be small (< 50) but in the Southern Isles far larger numbers were frequent (up to 300).

Large numbers of both Oystercatchers *Haematopus ostralegus* and Redshanks *Tringa totanus* occurred throughout the islands, but whilst the majority of Oystercatchers fed in large flocks on the soft shores, Redshank were mainly scattered in ones and twos along the rocky shores and crofted hinterland.

Curlew *Numenius arquata*, Lapwing *Vanellus vanellus* and Golden Plover *Pluvialis apricaria* usually occurred on the machair and croftland except in hard weather, which forced them onto the coasts. Consequently, they have been underestimated except in Lewis and Harris where counts of all the birds were attempted.

## Discussion

30,000 waders are important in the context of north and west Scotland, where the total population is small. A large proportion of these waders, especially Ringed Plover and Sanderling, are dependent upon the very extensive soft shores in the Outer Hebrides, a habitat which is very limited on the mainland north of the Clyde. The British-wintering total of Ringed Plover is currently estimated as 12,000 (Prater 1981). This includes only 1,000 birds from the Outer Hebrides (Uists), a figure which is a gross underestimate. A more realistic national total would be about 14,000, with almost 25% in the Outer Hebrides. Sanderling, too, have been underestimated at 750 in the Outer Hebrides (Prater and Davies 1978), whilst the true number is approximately twice that figure. Additionally, Atkinson *et al* (1978) documented a total of 730 Purple Sandpipers, whilst this survey shows in excess of 2,500. Numbers may even be higher for this survey was not comprehensive. Several islands with suitable habitat e.g. Boreray and Watersay were not visited and hence uncounted. This survey has shown that island groups may be very important for waders, and also that it is very difficult to assess numbers accurately from isolated counts, such as those in bird reports.

## Acknowledgements

I would like to thank that small, but hardy band of bird watchers in the Outer Hebrides who have so willingly helped me in this survey. I would also like to thank Ron Summers who made useful comments on the draft of this paper.

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(see also Fuller, R.J., Wilson, J.R. and Coxon, P. 1979. Birds of the Outer Hebrides: the waders. *Proc. Roy. Soc. Edinburgh* 77B: 419-430, which presents an earlier attempt to collate information - Eds.)

Table 1. Preliminary estimates of the numbers of waders in the Outer Hebrides, during winter.

		Lewis and Harris	Uists and Benbecula	Other Islands	Total
Oystercatcher	<i>Haematopus ostralegus</i>	990 - 1,687	1,871 - 1,893	271	3,132 - 3,851
Ringed Plover	<i>Charadrius hiaticula</i>	262 - 614	2,003 - 2,108	512	2,827 - 3,234
Golden Plover	<i>Pluvialis apricaria</i>	1,103 - 1,396	587 - 765	423	2,113 - 2,584
Grey Plover	<i>Pluvialis squatarola</i>	0 - 8	102	1	111
Lapwing	<i>Vanellus vanellus</i>	1,990	2,898	335	5,223
Knot	<i>Calidris canutus</i>	34 - 154	8	2	44 - 164
Sanderling	<i>Calidris alba</i>	3 - 13	1,341 - 1,385	43	1,387 - 1,441
Purple Sandpiper	<i>Calidris maritima</i>	348	1,582 - 1,652	575	2,505 - 2,575
Dunlin	<i>Calidris alpina</i>	55 - 273	3,361	214	3,630 - 3,848
Bar-tailed Godwit	<i>Limosa lapponica</i>	61 - 175	1,918 - 1,951	20	1,999 - 2,146
Curlew	<i>Numenius arquata</i>	659 - 706	937	231	1,827 - 1,874
Redshank	<i>Tringa totanus</i>	361	467 - 479	137	965 - 977
Greenshank	<i>Tringa nebularia</i>	2 - 16	6	1	9 - 23
Turnstone	<i>Arenaria interpres</i>	755 - 830	1,743 - 1,763	743	3,241 - 3,336
					30,016 - 31,387

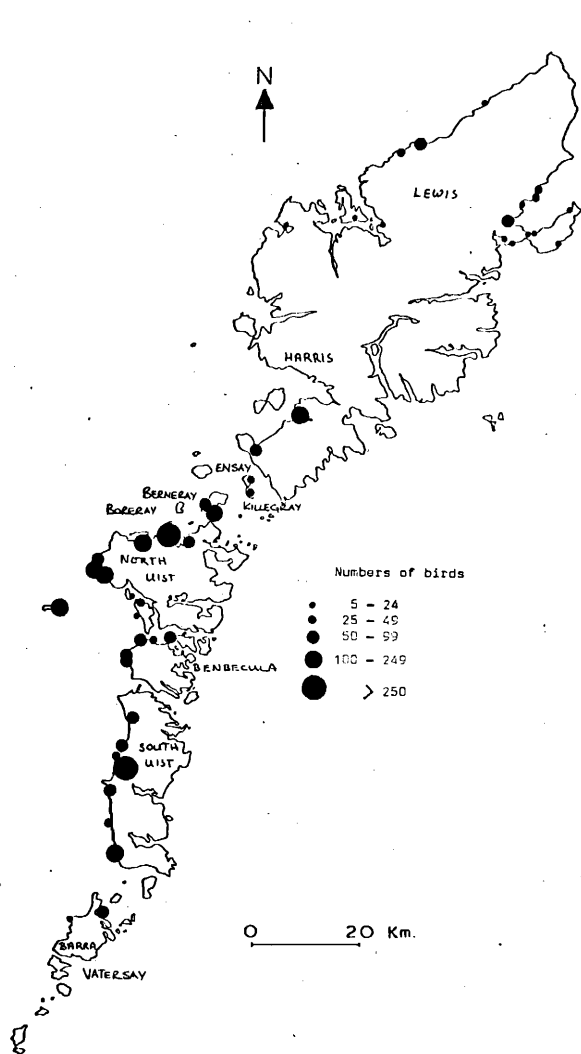


Fig. 1. The main wintering areas of Ringed Plovers.

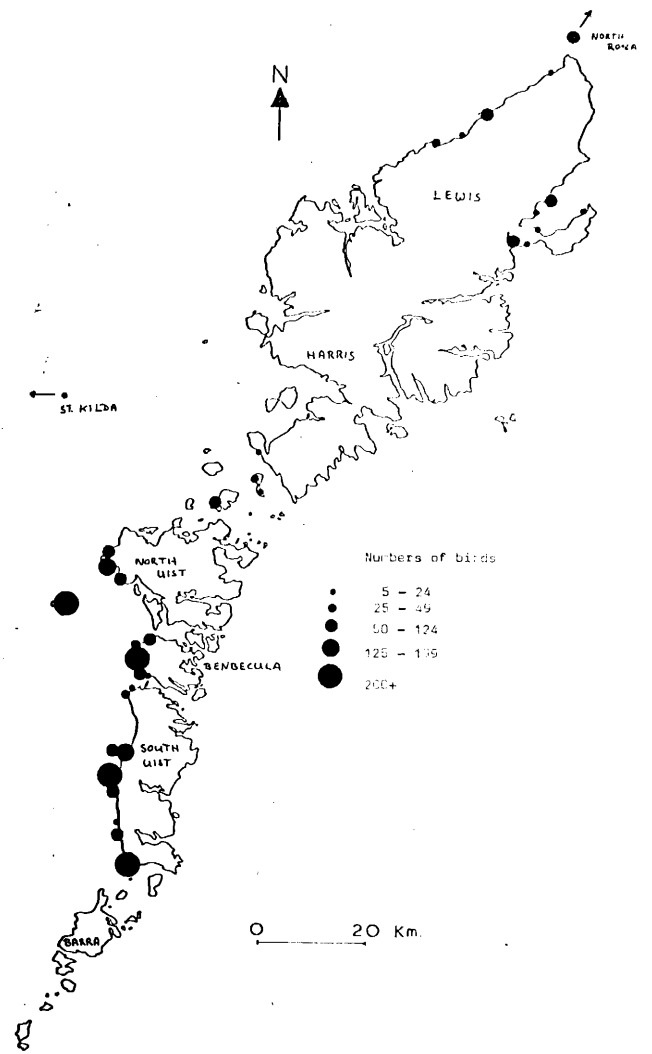


Fig. 2. The main wintering areas of Purple Sandpipers.