THE ORIGINS OF SOUTH AFRICAN SANDERLINGS, SIBERIA OR GREENLAND

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For many of the palaearctic waders little guess work is required to derive their origins. For example, the Curlew Sandpiper Calidris ferruginea, and the Little Stint Calidris minuta, are restricted to the Palaearctic region and breed in a comparatively small area in northern Siberia. For others with a circum-polar breeding distribution the problem is more complicated. The Sanderling, Crocethia alba, is one of these species. No subspecies have been described for the different parts of the arctic where it occurs, though this need not mean that morphological variation does not occur, as will be seen later.

Before going on to describe the situation in South Africa it is worth describing what is known of Sanderling migration as seen on the Wash in England, where this species has been studied intensively. At the 1973 Ringing and Migration Conference held by the British Trust for Ornithology, Dr. Tony Williams showed that two distinct populations of Sanderlings occurred on the Wash:- (a) a moulting and over-wintering population which migrated through in May (northward) and August/September (Southward) had a mean bill length of 25,2 mm. The two means, based on large samples, were found to be significantly different. He assigned the former population to the Siberian breeding quarters as one bird, which had been trapped three times and typified as a moulting/wintering bird, was recovered in Murmansk in Russia. The latter population, by a process of elimination, was therefore assigned to the Greenland breeding quarter (Minton, 1971). At this stage there was no proof that the Greenland population occurred in Britain.

In 1974, a British Expedition travelled to Greenland in order to dye waders in an attempt to clear up the mysteries of the migration routes of Greenland breeding waders. Of the 52 Sanderling colour marked no less than 9 were subsequently seen on migration through Britain in August/September, thus confirming that Greenland Sanderlings occur in Britain and that they pass through in Autumn. However, a sighting in March in Ireland goes very much against the hypothesis (Green, 1975).

As bill length appears to be an important population characteristic I measured a series of birds and compared them with measurements I have made on captured birds wintering in Scotland. Also Harry Green kindly lent me the Greenland Expedition data (Table 1).

TABLE I. BILL LENGTH OF DIFFERENT POPULATIONS OF SANDERLINGS

	$\bar{x}$	SD	n
Scotland	24,4	1,3	50
South Africa ♂	25,0	1,1	52
♀	26,2	1,1	15
♂ + ♀	25,2	1,2	67
Greenland	25,0	1,8	20

Two values are givenfor the South African birds: one where males and females have been lumped (25,2) and another where the bias resulting from the preponderance of males in the sample has been removed (25,6). It can be seen that these values, and the Scottish mean are very similar to those given by Tony Williams for the two Wash populations.

When one tries to fit these two populations to places of origin one encounters problems for the Greenland value of 25,0 lies between the Scottish and South African values of 24,4 and 25,4 though closer to the 25,2 given by Tony Williams for the assumed Greenland population. In general the biometric data support the Wash hypothesis that the Greenland population migrates through N.W. Europe and winters in Africa.

Ringing Recoveries.

Approximately 600 Sanderling have been ringed by the W. Cape Wader Group and several recoveries are now at hand. One of the first recoveries was from the Wash in May, a bird which would presumably have been classed as Greenlandic. However all the other recoveries have been towards the east where many South African Curlew Sandpipers have been recovered (Elliott *et al*, in prep.), and the bird which was recovered on the Taimyr peninsula in June confirms that Siberian breeding birds occur in South Africa.

There is obviously a degree of conflict between the results of the biometrics and those from ringing, thus raising a host of questions. Do the Siberian and Greenland populations mix rather than separate? Is the strong May passage through Britain of Siberian origin rather than Greenlandic as usually assumed? Is the European wintering population of Greenlandic origin like the Knot? Can the small differences in bill sizes be measured accurately by different observers?

To go some way to help in the solving of this problem we will be dye-marking Sanderlings before they migrate north in 1976. We therefore appeal to everyone to look out for marked birds during the passage periods.

References

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