

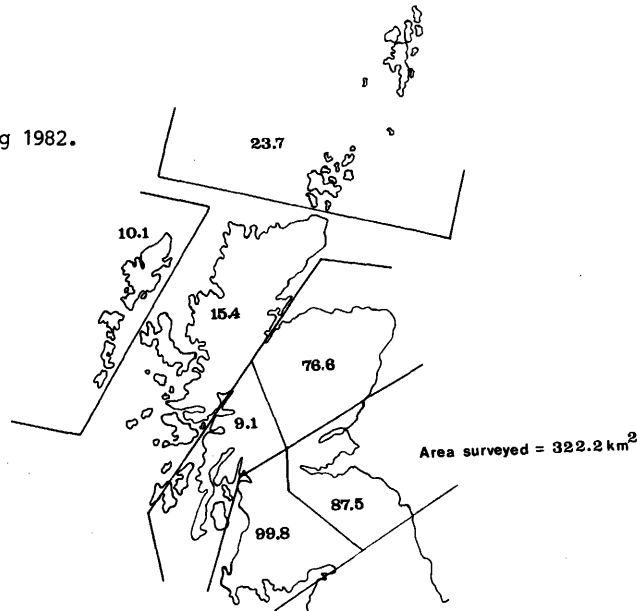
# THE SURVEY OF THE BREEDING WADERS OF SCOTTISH AGRICULTURAL LAND

by Hector Galbraith and Bob Furness

Those of you who attended the 1982 Durham conference may have heard us describe in some detail the results of the first full field season of the breeding wader survey. The response to the appeals for participation was overwhelming (we have not yet recovered from the consequential almost lethal dose of writers cramp), and the 90 or so observers who took part surveyed over 320 km<sup>2</sup> of Scottish farmland on which 3500 pairs of breeding waders were located.

Due to the patchy distribution of observers in Scotland, it was inevitable that "blank" areas would occur. The blankest of these are The Western Isles; Sutherland and Caithness; The Northern Isles and Argyll. Figure 1 shows the spread of the coverage.

Figure 1. Areas covered by the survey during 1982.



1983 is our last field season and our prime objectives must be to cover these blank areas and to get even more important data from the areas of better coverage. If you would like to take part, please complete the enclosed form and return it to us as soon as possible.

Hector Galbraith and Bob Furness, Dept. of Zoology, University of Glasgow, Glasgow G12 8QQ, U.K.

## BIOMETRICS OF BREEDING DUNLINS *CALLORIS ALPINA* FROM SOUTH UIST

by Brian Etheridge and William G Taylor

Dunlin breeding in the British Isles belong to the southern race *C.a.schinzii* and have an estimated population of 4 - 8,000 pairs (Sharrock 1976). Although this species has been one of the most intensively studied waders in Europe, very little data is available on breeding weights and measurements, particularly for the British population (e.g. Green & Greenwood 1978).

In this paper the biometrics are presented for a small sample of British breeding Dunlin. They were caught for ringing on South Uist, one of the Outer Hebridean chain of islands off northwest Scotland.

### Study Area and Methods

The study was conducted between 6-13 June 1981 and 27-31 May 1982 at Loch Bee, South Uist (57°22'N 7°22'W). All birds were trapped at nests found in a small area of damp machair grassland. This locality held an exceptionally dense breeding population of Dunlins (Etheridge 1982). All captured birds were sexed using the plumage criteria given in Ferns and Green (1979). They were then ringed, aged and measured. Measurements taken were wing length (maximum chord; to 1 mm, bill length (exposed culmen) to 1 mm in 1981 and to 0.5 mm in 1982, and weight. Most nests were revisited at later dates during the study periods and attempts were made to catch both individuals of a pair, though these were not always successful. Nest contents varied from freshly laid full clutches to one day old broods of young. No correction for time of day has been made to the weights which are presented as found. All measurements were made by the senior author.

### Results

In 1981, a total of 31 Dunlins (17 males and 14 females) were caught at 24 different nests. In 1982, 33 birds (17 males and 16 females) were caught at 21 nests. The weights and measurements are summarised in Table 1.

Sexual differences. Only in bill length was there no area of overlap between the sexes, so that sexual size dimorphism was complete. Although the weight overlap was small (2.4 g), 4 (12%) males and 6 (24%) females fell within this zone. Dunlins were least sexually dimorphic in wing length and over 56% of the adult birds had wing measurements within the 4 mm range of overlap.

Between paired birds, however, there was almost complete separation in all measurements (Table 2). The one exception was at nest 17 in 1982 where both male and female had the same wing length (115 mm). In each of the other 18 pairs handled, females were always larger in all three parameters than their mates. The size of males, expressed as a percentage of the size of their mates was: bill length 79-93% (mean 85.7%), weight 80-93% (mean 86.3%) and wing length 92-100% (mean 96%). Although the sample is small, the absence of any large male/small female pair combinations suggests that each individual may have selected a mate of a similar relative body size.