

At migratory sites such as the Vendée and Iceland it has proved valuable to observe departing flocks, generally at high tide and often during the evenings. The birds become restless, call characteristically, and eventually fly strongly at steadily increasing altitude. By following with binoculars, it is possible to obtain accurate bearings, as well as departure dates.

It is hoped to correlate departure dates from South Africa with subsequent arrival and departure information at as many sites as possible.

#### Participation of WSG Members

This project can only succeed by co-operative effort from participants from several different countries. With the high level of fieldwork in South Africa, the Vendée and the German Waddensee, fieldwork in other areas can be interpreted more meaningfully. Participation of members will be fully acknowledged in any publication of the results, which is envisaged preliminarily in the WSG Bulletin, and more fully in a journal as soon as possible after completion of the spring work. Establishment of the migration route and staging areas is of considerable conservation importance. Participation of members in Britain is not being sought in the project, except for observation for dyed birds in the SE corner of England, due to the route. It is hoped that British members will be involved in the other passage study described in this Bulletin.

Visual observations and/or ringing fitting into any part of the above programme would be very much appreciated, and could members who would be prepared to select an area which they could cover between 1st April and 31st May please contact me, giving the likely extent of their fieldwork. (A form is provided with this bulletin.) Of especial interest would be any members who may be able to make any observations at all between Morocco and the Vendée (or anywhere in Africa!) and in the Baltic. I will be very pleased to send forms for recording data, and let them know of other members involved near them.

The required information for visual observations will be as follows: location and extent of area covered; date; time; number of Knots; number marked and number inspected for dye; habitat occupied; state of tide; departing flock size, time and bearing.

The required information for ringing data will be as follows: date; time; catch method; age (adult or 1st year); estimated % of breeding plumage; bill length (in mm from tip to the edge of the feathering); wing length (maximum flattened & straightened chord length); weight. Retrap information would be extremely useful, particularly for weights.

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## 2. SPRING PASSAGE OF DUNLINS, SANDERLINGS, RINGED PLOVERS AND TURNSTONE THROUGH BRITAIN

by Peter N. Ferns

The Birds of Estuaries Enquiry wader counts show that a marked passage of Sanderling Calidris alba, Ringed Plover Charadrius hiaticula and Turnstone Arenaria interpres occurs in Britain each spring, particularly in the west and also on the more northerly parts of the east coast. There is a similar passage of Dunlin Calidris alpina but this does not show up so clearly in the monthly BEE counts. A good many of these birds are en route to breeding areas in Iceland, Greenland and Canada, and many WSG members have already devoted a good deal of time and effort to the study of this passage (e.g. Eades 1972, 1974, Eades & Okill 1976, 1977, Ferns & Green in prep., Green 1976). The objective of this research project is to investigate these four species (Dunlin, Sanderling, Ringed Plover and Turnstone) in more detail by intensifying and co-ordinating the counting and catching of spring flocks in the 1979 season. We hope that more detailed counts will enable us to :-

a) determine whether the spring migrants arrive and depart in small numbers more or less continuously, or whether they do so in distinct waves,

- b) discover whether there is any relationship between the times of arrival and departure at different estuaries,
- c) get some idea of the length of time birds spend at a single site and thus take a step towards estimating the total size of the spring passage population.

We hope that by obtaining more catches and pooling the information we will be able to:-

- a) determine whether the populations using different estuaries have similar measurements and similar age, sex and race compositions at about the same date,
- b) see if there are many movements between British estuaries in the same season,
- c) see if the rates of weight gain appear to be similar at different estuaries.

Ringed groups in the Severn, Dee and Ribble estuaries and in Morecambe Bay already cannon-net these species during the spring and it should therefore be relatively easy to obtain coverage of these sites. Various groups have also expressed an interest in working in Cornwall, North Wales, Solway Firth, West of Scotland and the Hebrides. All these sites are in the west, where the most abundant spring passage takes place, but there are also a number of places in the east of Scotland, north-east England and the south coast which have a good spring passage and which would be well worth covering.

The proposed duration of the project is from 1st April to 10th June 1979. There should therefore be four, or perhaps five, spring tides available for cannon-netting during this period. Such regular catching would require fairly regular reconnaissance and we are therefore asking wader ringers if they can extend their visits so as to conduct counts of Dunlin, Sanderling, Ringed Plover and Turnstone at about weekly intervals. We are asking wader ringers to conduct the counts both because they are likely to be on site during this period and because it would be a little unfair to ask regular BEE counters to intensify their effort for a project of this sort. However, we would warmly welcome any counts from BEE regulars who wish to become involved. We are not aiming at anything like comprehensive coverage over the whole country for these counts. Instead we would like a high frequency of counts from a few well defined sites. Counts about twice a week during the peak of the passage would be ideal, though it may obviously be impossible for some people to count other than at weekends.

In addition to counting it would also be very valuable to record the direction of departure of birds as they continue their migration. Waders generally form into small, compact flocks as they depart and these are easily recognised by their intense calling and by the fact that they eventually fly off in a constant direction, steadily gaining altitude as they do so.

Although this project is aimed primarily at ringed groups who catch waders by cannon-netting, we would also like to involve smaller scale ringers who work more restricted sites by mist-netting. Similarly we would also welcome anyone who is prepared simply to count a well defined area at regular intervals next spring, even if it is only a small site.

To help in determining the length of residency of migrants, we hope to colour mark a limited number of birds. We suggest the Severn Estuary as being the best site for this for two reasons. Firstly, it is the largest site in the south west and there is therefore a better chance of colour marking good numbers of birds with the highest chance of them being seen at other estuaries further north (if indeed they do visit more than a single site each season). Secondly, the main study site on the Severn, at Collister Pill is going to be permanently manned throughout the spring, and daily counts will be conducted from 1st April to 10th June. There will therefore be an excellent opportunity to determine the rate at which colour marked birds disappear from the site. It is intended to use a different colour for each race of Dunlin and a single colour for Ringed Plovers. It is not proposed to colour mark any Sanderling or Turnstone.

A major feature of this project will be the attempt to analyse the results relatively quickly after the field work has been completed. Special forms have been prepared on which counts and departure directions can be entered and further notes on each of the three aspects of this project (catches, counts and departures) are given below. As with all WSG co-ordinated studies, the raw results will be placed on file and will be available for anyone else who cares to examine or analyse them.

#### Catches

Biometric and other information should be entered on WSG forms in the usual way (wing, bill, age, weight). Bills should be measured from the tip to the edge of the feathering with calipers. Wings should be measured as maximum length (method iii in Ringer's Manual) and the name of the measurer stated. In addition, for those birds in nuptial plumage it should be possible to identify the sexes, and in the case of Dunlin to identify the races. For those who do not do this routinely,

instruction sheets are being prepared. As a measure of the state of progression of prenuptial moult it would be very valuable if the percentage of the body occupied by breeding plumage feathers could be estimated (to the nearest 10%). In the Dunlin, the mantle alone provides a good guide (i.e. just record % summer plumage on mantle). We hope that it will be possible to process all catches fully but in the event of large catches, the least valuable measurements are wing length in Dunlin and Sanderling, and bill length in Ringed Plover. All retraps and controls should of course be fully processed.

#### Counts

Although the target species are Dunlin, Sanderling, Ringed Plover and Turnstone, some space is available on the form for the inclusion of other species for those who wish to do so.

The roosting habits of spring migrants are sometimes different from those of winter residents and they often use a greater variety of small roosts - which tends to make counting difficult. Since some counts will obviously have to be conducted at neap high tides when feeding areas may still be exposed it may be easier for many people to carry out their counts routinely at a time when birds are concentrated onto a small area of mud at the top of the shore. Depending on the size of the site, this can sometimes be easier than roost counting at high tide. In some areas, such as Morecambe Bay and the Ribble, it may be particularly difficult to select suitable counting sites because of the large areas of sand available at neap high tides, and the tendency of birds to change roosts. The important point at all sites is that counts should be comparable throughout the passage period, so as to really reflect the changes in numbers which are occurring. They do not need to be comprehensive, however.

Additional space is provided on the count forms to record information about weather and disturbance, and also the presence of any colour marked birds. Finally, there is space for estimates of the numbers of each species in full or partial breeding plumage. This may be helpful for judging the rate of progression of prenuptial moult in April and for making comparisons between estuaries. Usually it will only be possible to examine a small number of birds at close enough quarters to arrive at such figures.

#### Departures

It is easy to identify the species composition of departing flocks because of their intense calling (even at night). The direction of departure needs to be measured by standing directly beneath the flight line of the birds and following them into the distance through binoculars. A bearing can then be taken with a compass. It is often easiest to note a conspicuous point on the horizon which is vertically below the birds line of departure and take a bearing on that. The sizes of each of the departing flocks should also be recorded - usually these are quite small, but several flocks may leave within the course of a few minutes. Most departures seem to occur around the high tide period.

#### References

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