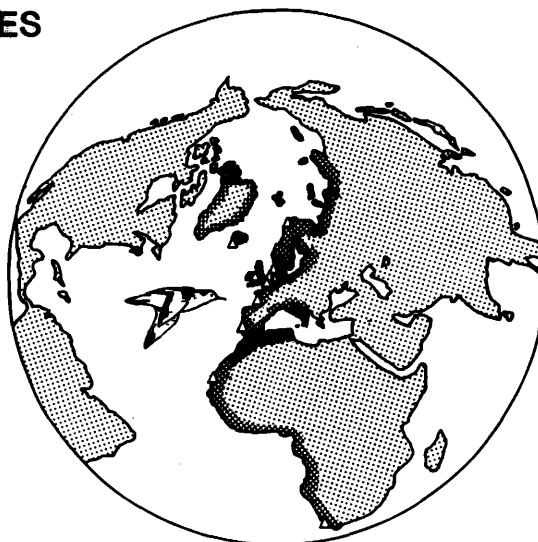


INTERNATIONAL WADER MIGRATION STUDIES ALONG THE EAST ATLANTIC FLYWAY DURING SPRING 1985

FIRST PROGRESS REPORT

by Theunis Piersma and Nick Davidson



INTRODUCTION

A detailed description of this co-operative Wader Study Group project was published in the last *WSG Bulletin* (December 1984, 42: 5-9). Since then, preparations for the spring work have proceeded considerably at most of the study sites along the East Atlantic Flyway. This progress report is to give the latest details of the work which is planned to be carried out from March until June 1985 (during which time you should be receiving this *Bulletin*!). We hope that reading this progress report will encourage all wader watchers along the East Atlantic Flyway to stand up, and go outside to see if any colour-marked waders are passing northwards, and if so, how many and in which exact direction! Keep a special eye on the target species of this co-operative study: Ringed Plover *Charadrius hiaticula*, Grey Plover *Pluvialis squatarola*, Knot *Calidris canutus*, Sanderling *Calidris alba*, Dunlin *Calidris alpina* and Bar-tailed Godwit *Limosa lapponica*, and on the west coast of Britain also Turnstone *Arenaria interpres*.

PROGRESS

Since the 'Final Announcement' one more team has been added to the list of contributing groups: Dr. J. Dominguez Conde and his colleagues from the Universidad de Santiago (Dept. of Zoologia, Facultad de Biologia, Santiago de Compostella, Galicia, Spain), hope to carry out regular counts and checks for marked waders in six small estuaries in Galicia, north-west Spain. The addition of this site is very fortunate indeed, because it is half-way along the (until now unchecked for this project) coast between the Tejo estuary in Portugal and the Atlantic coast, between the Gironde and Loire, in France.

What follows is a list of the latest plans of the different contributing groups, as forwarded to me by the local organisers in the last week of January 1985. The order of sites is the same as in the 'Final Announcement'.

1. South Africa

Owing to the frequent changes in the position of the wader roosts in Langebaan Lagoon, the Western Cape Wader Study Group does not expect to catch many Sanderlings and Knots before their departure this spring. However, they hope to establish the departure dates by regular counts.

2. Banc d'Arguin, Mauritania

A team of at least 6 Dutchmen, one Englishman and 2 Mauritians, in close co-operation with the personnel of the Parc National du Banc d'Arguin, will be working on the Banc d'Arguin in March and April. They aim to catch (and then colour-mark) as many waders as possible with mist-nets, clap-nets and cannon-nets. Most activities will take place near Iouik, in one of the northernmost bays of the Banc d'Arguin. A professional film cameraman will accompany this team to document the spring migration of waders from this important wintering area. (Stop Press. Latest news from Mauritania is that by the third week of April a total of about 1300 waders had been caught. Dye-marked waders include 40 Ringed Plovers, 9 Grey Plovers, 210 Knots, 350 Dunlins, 17 Sanderling and 80 Bar-tailed Godwits, most being caught with mist-nets. Observations in the northern part of the Banc d'Arguin found dye-marked birds in most flocks examined. Departures of Knots and Dunlins were beginning in mid-April.)

3. Faro and Tejo estuaries, Portugal

Time and funds have become available to proceed with regular counts and catching by a four-man team in the Faro estuary in southern Portugal this spring. It is hoped that counts can be made also on the Tejo estuary, near Lisbon.

4. Atlantic coast between Gironde and Loire, France

A five-man team from the LPO in Rochefort will work full time on this project from 1 April to 10 June. Additional help is expected from another 10-15 amateur ornithologists. An intensive programme of simultaneous counts over large areas, checks for dye-marked waders and the catching and marking of Dunlins, Knots, Bar-tailed Godwits, Ringed Plovers and Grey Plovers is planned. It is hoped that some other areas along coastal France will also be covered by local observers.

(Stop Press. Latest news from France is that by the third week of April dye-marking of waders was well under way. 5 Ringed Plovers, 9 Grey Plovers, 2 Knots, 5 Sanderlings, 384 Dunlins and 1 Bar-tailed Godwit have been dye-marked. In addition, 52 Redshanks and 132 Whimbrels have been caught and leg-flagged. Knots were beginning to arrive in the third week of April.)

5. Great Britain

The BTO/WSG Spring Passage Project 1985

proceeds very well. A request for sightings of marked waders will be published in *BTO News* at the beginning of April. It is expected that regular counts will be made at 30-40 sites with the help of 150 volunteers, both along the west and the east coasts of Britain. Teams will be catching at five sites along the west coast of Britain, throughout April and May.

6. Delta area, The Netherlands

The Deltadienst RWS, in co-operation with local ornithological groups, will carry out very frequent counts along the Westerschelde, while it is also hoped that an observation post at Breskens will be permanently occupied to count the diurnal wader migration into the Westerschelde. Checks for marked birds will be made. A team from the Delta Institute for Hydrobiological Research aims to continue their intensive colour-marking programme, and hopes to do counts and checks for marked waders.

7. Friesian Wadden Sea coast, The Netherlands

A five-person team will be mist-netting during two separate weeks near Holwerd, for one period in mid April and one period in mid May. Local ornithologists have been encouraged to carry out an intensive checking programme for dye-marked waders.

8. Wadden Sea of Niedersachsen, West Germany

A team from the OAG Munster hopes to be mist-netting near Wilhelmshafen on three occasions. One weekend in March, another around 20 April and a full week from 15 to 20 May have been scheduled for this work. The group also hopes to organise regular counts and checks on this site, from March through until June.

9. Wadden Sea of Schleswig-Holstein, West Germany

In the first two weeks of April and of May, a team of 20 hopes to cannon-net Knots and Bar-tailed Godwits on Fohr and on Langeness. From 16-25 May this team will work on the Eiderstedt peninsula.

10. Norway

A joint Norwegian and British team, including a party of 7 from Durham University, and several from Tromso University, will jointly work in the Tromso area, making detailed studies of the migration of Knots in throughout May. Intensive cannon-netting, dye-marking, counts and studies of body condition and feeding ecology is planned. It is also hoped that a team will be able to visit the Porsanger Fjord area, in northernmost Norway, at the same time, to study the large concentration of Knots there.

11. Iceland

Counts and checks for marked waders are planned at several locations. A five-man team hopes to catch waders with mist-nets and cannon-nets. An announcement to encourage local birdwatchers to look out for marked waders and to count them, will be published in the Icelandic ornithological bulletin *Blíki*.

ANALYSIS OF BODY CONDITION

An important part of the studies in Mauritania and Norway will be to make detailed analyses of body condition (especially fat and protein reserves), to examine how these are stored (and subsequently used) during migration. The size of both fat and protein reserves vary greatly in spring, between individuals of the same species at a single stopover, as well as between different areas, depending on the timing and demands of the next migratory flight. Accurate measures of body condition at each site are therefore vital in interpreting

patterns of change in total mass, and especially in making predictions of flight ranges of departing birds - a major element of this project.

The studies in Mauritania and Norway will collect samples of birds specifically to measure condition, as well as analysing the condition of any casualties of the catching work. We strongly urge other participating groups to carefully store any casualties for later condition analysis. Such analysis involves measurement of pectoral muscle size, and solvent extraction of fat. Since much of the value of condition analyses lies in comparing the patterns between sites, it is vital that the same methods are used to analyse all samples. Durham and Groningen Universities use the same methods of analysis, of drying in vacuum ovens at 50°C, then extracting fat using petroleum ether (60-80° b.p.) in a Soxhlet apparatus. Pectoral muscle size is measured by Standard Muscle Index (see Piersma et al. 1984, *WSG Bull.* 42: 19-22).

It is vital that any casualties are weighed shortly after death, and then stored in deep-freeze in tightly sealed polythene bags until analysis. Otherwise loss of water can affect total mass measurements (and so also lipid indices). A full set of measurements (as described in the "Final Announcement") should be taken.

We hope that it may be possible to carry out analyses of carcasses from other contributors to the project, on behalf of the Wader Study Group, at Groningen and Durham. Alternatively, groups who have suitable facilities for condition analyses may wish to analyse the carcasses themselves. In the latter case, if you are interested in this part of the studies, please contact Dr. N.C. Davidson, Department of Zoology, University of Durham, South Road, Durham DH1 3LE, U.K., as soon as possible.

ORGANISATION

A list of the local organisers responsible for co-ordinating the spring migration studies follows. Anyone interested in taking part, and who has not been in touch with us, should contact organiser, or the WSG Co-ordinator very soon.

Local organisers are listed below. Numbers refer to those in Figure 1.

1. South Africa. Manfred Waltner (Western Cape Wader Study Group), 5 Montagu Way, Pinelands 7405, South Africa.
2. Banc d'Arguin, Mauritania. Theunis Piersma (Project Banc d'Arguin 1985 of RIN, WIWO and NIOZ), Korte Nieuwstraat 4, 9724 LC Groningen, The Netherlands.
3. Faro and Tejo estuaries, Portugal. Rui Rufino, CEMPA, Rua Filipe Folque 46,5°, 1000 Lisboa, Portugal.
4. Atlantic coast between Gironde and Loire, France. Denis Bredin, LPO, La Corderie Royale, B.P. 263, 17305 Rochefort Cedex, France.
5. Great Britain. Mike Moser (BTO/WSG Spring Passage Project 1985), BTO, Beech Grove, Tring, Herts, HP23 5NR, U.K.
6. Delta area, The Netherlands. Henk Baptist, Deltadienst R.W.S. P.O. BOX 439, AK Middelburg, The Netherlands; and Rob Lambeck, Delta Instituut voor Hydrobiologisch Onderzoek, Vierstraat 28, 4401 EA Yerseke, The Netherlands.



Figure 1. Coastal sites along the East Atlantic Flyway (shown shaded) at which intensive wader migration studies are under way during spring 1985. Numbers refer to those in the text.

7. Friesian Wadden Sea Coast, The Netherlands.
Klaas Koopman (Steltloperinggroep Fryske Feriening foar Fjildbiology), Tunkerij 5, 8501 TG Joure, The Netherlands.
8. Wadden Sea of Niedersachsen, West Germany.
OAG Munster, Biologische Station Rieselfelder Munster, Coermuhle 181, D-4400 Munster, West Germany.
9. Wadden Sea of Schleswig-Holstein, West Germany. Peter Prokosch, WWF, Biologiezentrum, 9. etage, Olshausenstr. 40-60, D-2300 Kiel 1, West Germany.
10. Norway. Karl-Birger Strann, Zool. afdeling, Tromsø Museum, N-9000 Tromsø, Norway; and Nick Davidson (Durham University Expedition to North Norway), Department of Zoology, University of Durham, South Road, Durham DH1 3LE, U.K.
11. Iceland. Gudmundur A. Gudmundsson, Institute of Biology, University of Iceland, Grensasvegur 12, 108 Reykjavik, Iceland.
12. Spain. Dr. J. Dominguez Conde, Dept. of Zoologia, Facultad de Biologia, Santiago de Compostella, Galicia, Spain.

Local organisers should send news of any important local developments to the WSG Co-ordinator. A circular will be sent to all participants in early June 1985, so that a preliminary assessment of the extent and scope

of the information collected can be made. This assessment will then be published as a Second Progress Report, in the August 1985 issue of *WSG Bulletin* (No. 44). We aim to give a preliminary assessment of the achievements of the project, at the WSG Autumn Meeting in La Rochelle in October 1985.

Data relevant to the international project will be assembled initially by the WSG Co-ordinator, who can then make a preliminary assessment of the extent of the information available on each of the target species. The most suitable approach to the analysis and publication of results will depend in part on the nature and extent of this information. We plan to arrange a meeting of the major participating groups at the WSG meeting at La Rochelle, at which details of further analysis will be agreed.

All sightings of colour-marked waders should be sent, as usual, as soon as possible, to the WSG Colour-marking Register, Dr. D.J. Townshend, Department of Zoology, University of Durham, South Road, Durham DH1 3LE, England.

Any other queries, and information about the project should be sent to:
Theunis Piersma, WSG Co-ordinator, Korte Nieuwstraat 4, 9724 LC Groningen, The Netherlands.