

## THE TEMPORARY REGISTER

The temporary marking of waders using either plumage dyes or leg flags is increasingly being used in the study of waders. To facilitate the accurate registering of schemes and reporting of sightings two new forms have been

produced. Anyone wishing to report a temporary marked wader or wish to register a new scheme should contact

the Register. If you have used a temporary scheme during 1996 please notify the co-ordinators as there are a number of untraceable sightings. To cover the costs of running the Temporary Register all new schemes will be required to pay a one-off payment of £5 for each species.

Stephen Browne & Harriet Mead

Reviews

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van der Have, T.M., van de Sant, S., Verkuil, Y. & van der Winden, J. (eds). 1994. *Waterbirds in the Sivash, Ukraine, spring 1992*. WIWO Report No. 36. WIWO, Zeist. 102 pp.

The book can be purchased by paying Dfl.20 (plus Dfl.15 - administration cost for each separate order) to postal giro account 2.666.009 or to ABN bank account 57.02.16.613 of Stichting WIWO, van Stuivenbergweg 4, 6644 AB Ewijk, The Netherlands.

The Sivash is well known as one of the largest European shallow lagoon systems, which attracts very large numbers of waterbirds, including waders, for breeding and during migration (e.g. Grimmett & Jones, 1989. *Important Bird Areas in Europe*. ICBP Technical Publ. 9). This was confirmed by the data presented in this report. According to this study, 320 000-560 000 waders of 37 species stop in the Sivash during April and May in an area of about 2 500 sq.km.

Ruff *Philomachus pugnax* and Dunlin *Calidris alpina* are the most numerous species. Practically the whole Mediterranean wintering population of Dunlin (100 000-200 000 individuals) and at least 30% (6 000-8 000 individuals) of the European breeding population of the Broad-billed Sandpiper *Limicola falcinellus* wintering in the Middle East migrate through the Sivash. As there is no other stopover site of similar importance known for these populations during spring migration, the Sivash thus has unique importance for the conservation of European Dunlin and Broad-billed Sandpiper populations.

It should be noted that the Sivash has been the subject of the constant attention of Ukrainian ornithologists for many years. The main research activities of the Azov-Black Sea Ornithological Station of the Ukrainian Academy of Sciences are currently concentrated in this area. The large number of studies, partly listed in the Report, are devoted to waterbirds of the Sivash, especially to breeding species. A complex study of distribution patterns and bird number dynamics during migration was lacking however. This situation contrasted with the level of ornithological knowledge of the East Atlantic flyway and the Mediterranean winter grounds of waterbirds. Because Arctic breeding birds concentrate in a few key areas during migration, the ecological condition and conservation of any such area, the Sivash in particular, can determine stability of whole geographic populations of some waterbirds.

This WIWO Report is the output of an international expedition aimed on study of waterbirds on the Sivash

during 1992 spring migration. The introduction outlines the general characteristics of the Sivash as a wetland, its importance for migrating waders, the reasons of initiation of the Azov Sea Wader Project 1992 and its three objectives. These were:

- 1) to study numbers and distribution of waterbirds so as to evaluate the international importance of the Sivash area in spring and thus to stimulate the establishment of a National Park;
- 2) to establish in particular the importance of the Sivash area for the Western Palearctic population of Broad-billed Sandpiper during spring migration; and
- 3) to study the spring migration ecology of arctic waders, and the Broad-billed Sandpiper in particular.

The main part of the Report consists of five chapters. The Sivash lagoon system and study areas in the Central and East Sivash are described in detail. Results of regular waterbird counts on the main study areas and in other sites of the Sivash, as well as analysis of distribution and number dynamics of all wader species are presented in the next chapter. There is quite detailed analysis of feeding ecology and food supply for migratory waders in the Central and East Sivash, and results of ringing and biometry of captured waders in two following chapters. Apart of this, a paper about the Broad-billed Sandpiper reprinted from *Wader Study Group Bulletin* (1993; 71: 41-43) is given as a separate chapter. The international importance of the Sivash is discussed in the Conclusion, which recommends the creation of a large National Park or a

Biosphere Reserve on the Sivash.

The Report is rich in figures and tables which summarise enormous quantities of data collected during the two month expedition.

Study of ecological situation on the Sivash showed that eastern lagoons with lower water salinity have a richer macrozoobenthos, especially of Ragworm *Nereis diversicolor* (biomass 9-36 g/m<sup>2</sup>). In the Central Sivash with higher water salinity the Ragworms are substituted by small pelagical Brine Shrimps *Artemia* sp. but the total biological production declines strongly there (average biomass 0.33 g/m<sup>2</sup>). In the West Sivash waders have no food at all because of the very high salinity there. Wader distribution was found to relate to described differences in their food supply.

The most pronounced variation in distribution was found in Broad-billed Sandpiper, confirming its status of a specialised feeder on Ragworms. Dunlin was distributed more uniformly, however long-billed females predominated in East Sivash, while short-billed males concentrated mainly in Central Sivash. Most waders quickly accumulated fat reserves while staying in the Sivash. Apparently only Curlew Sandpiper *Calidris ferruginea* did not have sufficient food reserves there to couple with demands for further migration. This species probably has other important refuelling sites in southern Russia during further northward migration.

Analysing the Sivash avifauna in general the authors consider that the Sivash lagoons are unique among European IBAs and Ramsar sites. At the same time their protection is far from adequate. Only about 1% of the Sivash is covered by Nature Reserves and hunting sanctuaries. Therefore the necessity was recognised to support actively the initiative of local ornithologists in creating a large National Park or a Biosphere Reserve there. This should include most lagoons, coastal cliffs and adjacent grazed steppes. In this respect, the studies made in 1992 by the large international team can be considered very important and quite successful

so as to establish justification for a future Sivash Nature Reserve.

Being generally very interesting, the book unfortunately suffers from a lack of analysis of ring recoveries, although some primary data is presented on ring controls made in 1992. The Azov-Black Sea Ornithological Station, which is headed by I.I. Chernichko - one of the Report authors, has been carrying out wader ringing for many years and has created large databases of wader recoveries and controls from the Ukraine and at least the European Russia. Hence there are already accumulated sufficient data for a detailed analysis of movements of populations passing through the region.

The book certainly will be of interest to ornithologists and bird conservationists operating on European or flyway scales, as well as to professional ornithologists or birdwatchers intending to visit the Azov-Black Sea Region either in the Ukraine or in Russia.

I would also like to use the opportunity to attract the attention of ornithologists to similar problems which occur in the Manych valley (to the north from the Caucasus), another European wetland, which is very important staging area of water birds, waders in particular (e.g. Red-necked Phalarope *Phalaropus lobatus*, Ruff *Philomachus pugnax* and Curlew Sandpiper). Two relatively small sanctuaries were created there to protect birds, but there are no ornithologists currently in the region to study birds.

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Markham, A. 1996. *Interrupted Flight. Climate change impacts and bird migration.* WWF Discussion Paper, WWF Climate Change Campaign, Washington, D.C., 20 pp. (Available from WWF Climate Change Campaign, 1250 Twenty-fourth Street, NW, Washington, DC 20037, U.S.A., or from Cherry Farrow, WWF Press Office, Panda House, Weyside Park, Godalming, Surrey GU7 1XR, U.K.)

None of the readers of the *Wader Study Group Bulletin*, all specialists on one or more species or habitats of shorebird, will have any doubt that fast climatic changes including sea level rise in a world covered by human enterprise, is likely to endanger many migrant shorebirds, or indeed, many other bird species. The present document makes that very point: that migrating species dependent on selected habitats that are few and far between are vulnerable to climate change. Although called a "Discussion Paper", the document is really a piece of advocacy, and it provides the background material for two colourful WWF leaflets on "Global warming" and "Climate changes ... the wonder of bird migration". The leaflets are very well designed, and provide a pointer to some quite alarming suggestions as to how global warming might negatively affect life on earth and the survival of migrating bird species. However, I am really at a loss as to why the background document should be such a sloppy production, so full of mistakes, half truths, critical omissions and other faults.

"*Interrupted Flight*" argues the case that the intricate webs of migratory pathways have developed "over thousands of years of relatively stable climate since the last ice age", and that, although "the birds may be highly mobile, ... the ecosystems are not". Thus, "certain birds and their habitats could be under severe threat from climatic change". I am not so convinced that the climate has been relatively stable, even over the last few thousands of years. Just as an example, there was a period of sudden cool temperatures in NW Europe (called the Dryas, about ten thousand years ago), with a rapid change in climate from temperate/

boreal to arctic conditions over less than 50 years. In fact, it seems more reasonable to state that bird migration systems are rarely in balance for long periods (Alerstam 1990), the worldwide flyways of Knots perhaps having originated over the stretch of time since the Dryas (Baker *et al.* 1994).

Actually, the Knot features in this publication as a celebrated case of a shorebird species in danger: "The (Red) Knot is the classic example of a bird whose complex migratory strategy, which has evolved over thousands of years, may be put in peril by a rapidly warming world." And although I don't deny that conclusion, I am far from convinced by the arguments put forward by Markham. That the timing of migration of southbound Knots along the US east coast has changed over the last 20 years does indeed suggest that the world is not constant, but is just as likely to show that Knots can adjust to such changes, as proving that things are going wrong! I am convinced that the real trouble may be not so much climate change itself (there is so much flexibility in biological systems), but the fact that there is no space left for this biological flexibility to be played out.

What do we have to make of a document that states that shorebirds like Sanderling, Knot or Dunlin "are able to *double their weight* in fat *after just a few days* of frenzied feeding"? That states also that "most shorebirds' northern migrations are triggered by day-length" and one line further makes the contrary statement that "birds begin to take on fat" "as indicated by their biological clock" (external input versus internal regulation). That tells about "spectacular concentrations of up to two million shorebirds" in the Wadden Sea? Of course, total numbers in the Wadden Sea (and in Britain, and in Africa, and in the world) are spectacular, and so are roosting aggregates of 50 000 of more waders, but 2 million at one spot.... After discussing coastal shorebirds and areas like the Wadden Sea, the document reviews inland wetlands in several parts of the world, eventually coming up with an "initial list" of bird areas most threatened by climate change. This list includes the Arctic

("wetlands, coastal wetlands, tundra, ice"[!]), coastal wetlands in the Mediterranean, Delaware Bay, Chesapeake Bay, The Great Salt Lake and Coppename Rover Delta in Surinam. What an inventive shortlist, what a wonderful mixed bag, what a variety of scales.....

Don't get me wrong here! There is nothing that I would like to see more than a strong interplay between nature conservationists & fund raisers and the amateur & professional scientific community; between those of us that devote their lives to further the understanding of shorebird migrations (often being acutely aware of the risks that our study sites and species are exposed to) and those of us that spend a life fund-raising, campaigning and positively tinkering with national and international policies. To bring this interplay to fruition we need communication, mutual support, and tolerance. I am afraid that "*Interrupted Flight*" puts high demands on the tolerance level of any, even remotely scholarly, shorebird scientist. Why doesn't WWF spend the resources for somebody to have enough time to come up with a thorough (and refereed!) document about possible climate change impacts on (shore-) bird migration, a working paper that is inspiring to the scientific community of people that are keen to go out, get cold and wet with dirty boots, that is inspiring to the layman who doesn't want to lose the sights and sounds of shorebirds in his personal environment, and that is also inspiring to the conservationists, campaigners and policy makers? Or spend that sort of money on the many critical pieces of research that await being done? Only sound science will stand the tests of the (short-term economically argued) opposition!

Markham quite rightly explains that whereas "the WWF document concentrates mainly on ... well-studied regions" in the North, it likes to emphasize "the need for much greater research in the South". Isn't it ironic that a reasonably well thought-out WSG-project proposal to study the migration of the celebrated Knots along the apparently troubled shores of South America (*Wader Study Group Bull.* 78: 40-44, 1995) has as

yet failed to attract any financial support, **even** from the WWF headquarters in Washington, DC?

Alerstam, T. 1990. *Bird migration*. Cambridge University Press, Cambridge.

Baker, A.J., Piersma, T. & Rosenmeier, L. 1994. Unraveling the intraspecific phylogeography of Knots *Calidris canutus*: a progress report on the search for genetic markers. *J. Ornithol.* 135: 599-608.

*Theunis Piersma*

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Kent, D.M. (ed.) 1994. *Applied wetlands science and technology*. Lewis, CRC Press, New York. 436 pp. ISBN 0-87371-749-X £55

This book is a significant collection of relevant and up to date information on wetland functions, and how wetlands can be protected and managed.

The 16 chapters are well-structured with texts, tables, black and white figures, summaries and lists of references to discuss the following topics:

- ch. 1) wetland definitions, legislation and the rôle of federal agencies in wetland protection and regulation in USA;
- ch. 2-6) fundamental issues of applied wetlands science including offsite and onsite identification of wetland functions and values, ecological assessments, and avoidance and minimization of impacts;
- ch. 7-8) enhancement, restoration and creation of freshwater and coastal wetlands;
- ch. 9) wetland monitoring;
- ch. 10-12) use of wetlands for renovating wastewater, stormwater and acid mine drainage;
- ch. 13) relevance of modern conservation principles to the

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| <p>design of wetland wildlife preserves;</p> <p>ch. 14) management of wetlands specifically for wildlife;</p> <p>ch. 15) management of coastal marshes, a wetland type that has been severely impacted and continues to be threatened perhaps more than any other wetland type;</p> <p>ch. 16) wetlands education; this chapter emphasizes that effective management and regulation of wetlands depends ultimately on</p> | <p>educating the general populace on the value of wetland functions.</p> <p>This last chapter includes five useful appendices on governative and non-governmental organizations in the US and materials and documents produced by them.</p> <p>The authors are a team of 19 practising wetland professionals including consultants, academicians and regulators, all from United States of America. The result of their work is an authoritative and at the same time approachable publication which</p> | <p>is essential reading for both professionals and non-professionals working on wetland management and restoration, conservation and policy.</p> <p>Whilst information on species, habitats and resource contacts are restricted to a North American context, this book is a recommended purchase for non-American readers given the effective coverage and for the complete synthesis of many topics concerning applied wetlands science and technology.</p> <p><i>Roberto Tinarelli</i></p> |
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### *Are migratory waders tropical or arctic birds?*

Attendees at the Busüm WSG meeting in 1994 will recall Hans Meltofte's provocative and stimulating talk on the evolution of migratory patterns of African-wintering/arctic-breeding waders. The substance of his hypothesis has recently been published in *Ardea*, and we reprint below the abstract with acknowledgement. Although *WSG Bulletin* has only infrequently carried correspondence, we would welcome debate on this important paper. Notes, observations or short papers should be sent to the Editor.

Meltofte H. 1996. Are African wintering waders really forced south by competition from northerly wintering conspecifics? Benefits and constraints of northern versus southern wintering and breeding in waders. *Ardea* 84: 31-44.

During recent decades it has been widely accepted that waders wintering on the coast of West Africa experience less favourable conditions than those wintering on European tidal flats and estuaries. The driving force behind their long migrations is considered to be heavy competition on the northern wintering grounds. A comparative study of the annual cycles of all wader populations migrating through Denmark demonstrates a moult and migratory pattern of African winterers which is inconsistent with this view.

In late summer these birds overfly large intertidal areas in West Europe a long time before these areas are occupied by northern winterers. In addition, adults pass at a time when large numbers of juveniles have not yet arrived on the European staging and moulting areas. If strong competition for moulting and wintering grounds take place in western Europe, then adults from all populations should occupy these areas, forcing the less competitive and later arriving juveniles to continue their migration further south, e.g. to West Africa. Differences in body size between populations, inferring differences in competitive force, can neither explain the observed distributions, since in a number of species the smaller males winter north of the larger females. Furthermore, if conditions on the West African coast were poor, one may ask why many more of the African migrants would not stay in Europe during at least part of the primary moult? One may also ask why more of them do not return to

north-west Europe in March, like temperate (early) breeding Black-tailed Godwits *Limosa limosa*, Oystercatchers *Haematopus ostralegus*, Curlews *Numenius arquata* and some of the Redshanks *Tringa totanus*.

Intertidal food resources in Africa do not seem to be a limiting factor during 'winter', and many species are able to increase their food intake there considerably during the pre-migratory spring fattening. The apparent difficulties that some wader populations have in building up sufficient body reserves on West African intertidal flats for spring migration could be a result of competition for wintering in West Africa and do not necessarily indicate that these areas are less favourable than tidal flats in north-west Europe. It is argued that in most wader populations heavy competition is more likely to take place in connection with the breeding season than during non-breeding. Especially the pre-laying period seems critical, but competition is likely to take place in most segments of the annual cycle.

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