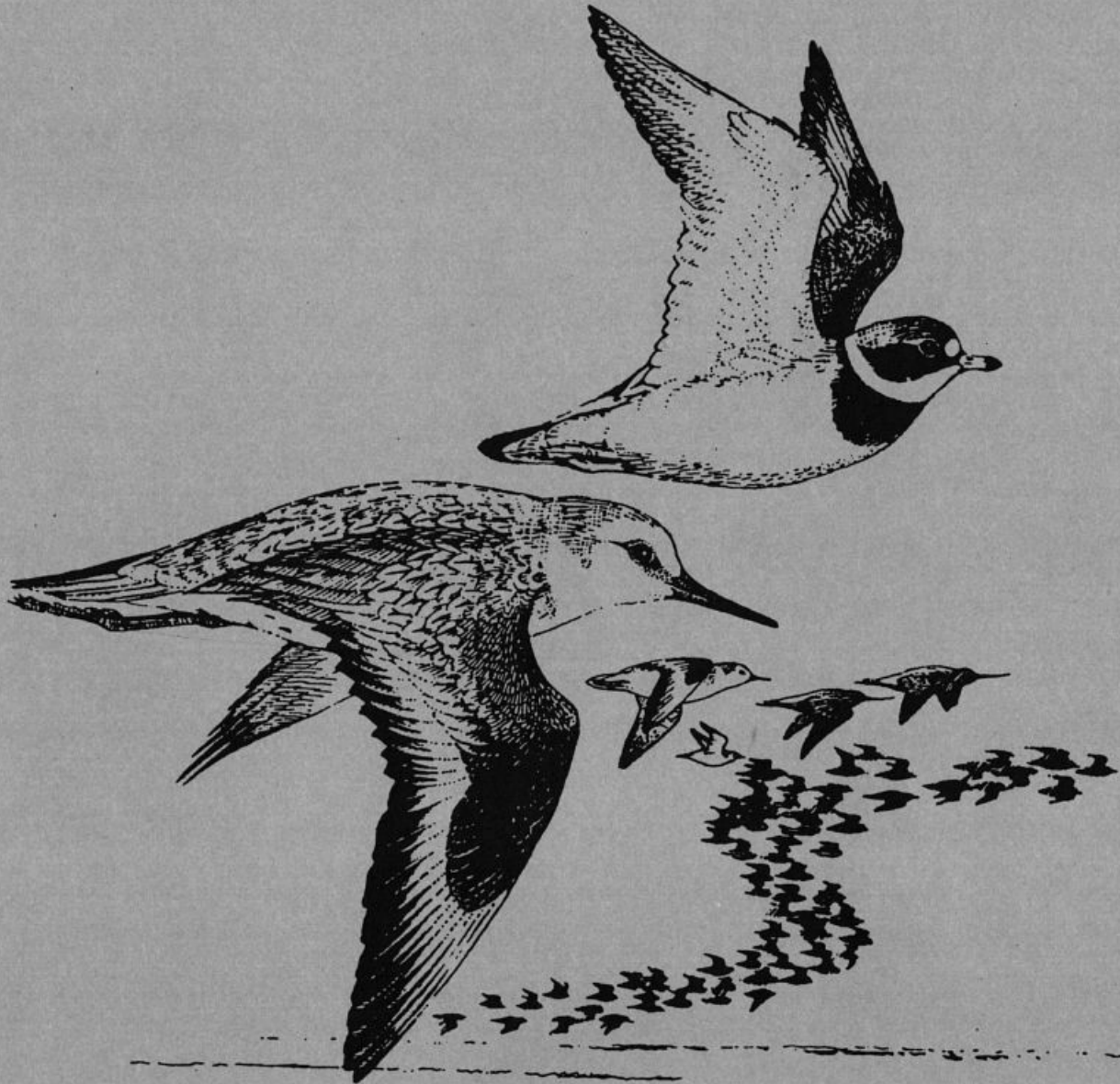


WADER STUDY GROUP



BULLETIN

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Membership

All applications for membership, initial subscriptions and renewals, changes of address, matters relating to the circulation of the *Bulletin* etc. should be sent to the Membership Secretary.

Payments and Subscriptions

See details on inside back cover.

Projects

Matters and proposals concerning co-operative research projects and objectives should be sent to the Co-ordinator.

Colour-marking Register

Proposals and sightings concerning colour-marking schemes should be sent to the Colour-marking Register at the official address given above.

Bulletin

Correspondence concerning the *Wader Study Group Bulletin* should be sent to the Editor: D A Stroud, *Wader Study Group Bulletin*, c/o UK Joint Nature Conservation Committee, Monkstone House, City Road, Peterborough PE1 1JY, U.K.

Deadlines

1 January for the April issue

1 May for the August issue

1 September for the December issue

If correspondence between editor and author(s) is likely to be needed, material must be received well before these dates if material is to be included in the next issue.

copied quite well, feeding on the fields and finding large numbers of worms. This was clearly a successful feeding strategy while the weather remained mild and the fields remained unfrozen. However, as soon as the fields froze, earthworms become unavailable so putting the birds at risk.

Observations of birds feeding in the inter-tidal by the Institute of Terrestrial Ecology have shown that, on most major feeding areas, numbers of birds are very substantially down on past years. This suggested that many birds had been forced out of the Wash itself.

WHAT IS THE CAUSE OF THE PROBLEM?

Individual Oystercatchers are great feeding specialists. Individuals specialise not only on the individual type of prey, but also in the way that they handle these prey. The Oystercatcher's bill shape changes depending on the manner in which they feed. Those birds that feed on cockles *Cardium edule* and mussels *Mytilus edulis* wear their bills down by continuous hammering or probing and as a result have chisel-shaped or blunt bills, depending on the way they open their prey. Birds that feed on worms have long pointed bills, since they are not subjected to the abrasive effects of dealing with shells. Since the birds that died were not all of one bill shape, we conclude that there is a general problem with their food supply not linked to one particular prey species. Whatever this problem is, it does not appear to have affected other species wintering on the Wash. Only one dead Redshank was recovered from the Wash during January, whereas normal returns of these species greatly outnumber those of Oystercatchers. For instance, in the severe weather of February 1991, when 3,000 birds were found dead, only about 5% of them were Oystercatchers. So it is likely that food supply is the problem, rather than general pollution, which would have affected a number of wader species.

WHAT DO WE KNOW ABOUT FOOD SUPPLIES?

Cockle and mussel populations on the Wash are monitored by Eastern Sea Fisheries and Ministry of Agriculture, Fisheries and Food and their information sheds considerable light on the problem. Cockle and mussel populations on the Wash are extremely dynamic. That is, it is only in some years that large numbers of young manage to become established. The factors which determine mussel population establishment are unclear except that it is more likely to be good when the populations of adult mussels is high. On the Wash the last good recruitment was in 1986 and many of these mussels have now been harvested or died.

The situation for cockles is rather different. Two factors

seem to be important for encouraging a good recruitment, severe winter weather and low numbers of adults. When the population is high, many of the young spat are eaten whilst they are mobile by the adults, so more survive when there are low numbers of adult cockles present. Cockles have undergone a number of years of poor recruitment in a row and there are now very few cockles that are of a suitable size for Oystercatchers to feed on.

In addition to the low number of both cockles and mussels, their quality has been very low, with individual cockles or mussels of a given size holding substantially less meat than would normally be the case for the time of year. The reasons for the poor condition of cockles and mussels are unclear. However, it helps to explain why Oystercatchers are in such difficulties.

The plight of Oystercatchers on the Wash seems to result from a combination of factors. Low numbers of cockles and mussels means more search effort per food item found. Poor condition of the cockles and mussels means the returns for increased time and energy expenditure are lower. It becomes very difficult for Oystercatchers to get enough food to balance their daily energy requirements.

WHAT IS THE FUTURE FOR THE OYSTER-CATCHERS OF THE WASH?

The future is not totally bleak, as 1992 was an excellent year for cockle recruitment. If the large numbers of young survive the winter storms, then in one or two years time there should be plenty of cockles for Oystercatchers to feed on. The situation for mussels is rather more uncertain, and it could be a number of years until the populations recover.

It is therefore of crucial importance that the BTO continues to monitor the numbers and condition of Oystercatchers on the Wash over the coming years to see how long it takes for the recovery to start. In the meantime, we can only be thankful that 1992/93 was not an exceptionally cold winter, or the Wash could have been littered with even more dead Oystercatchers.

