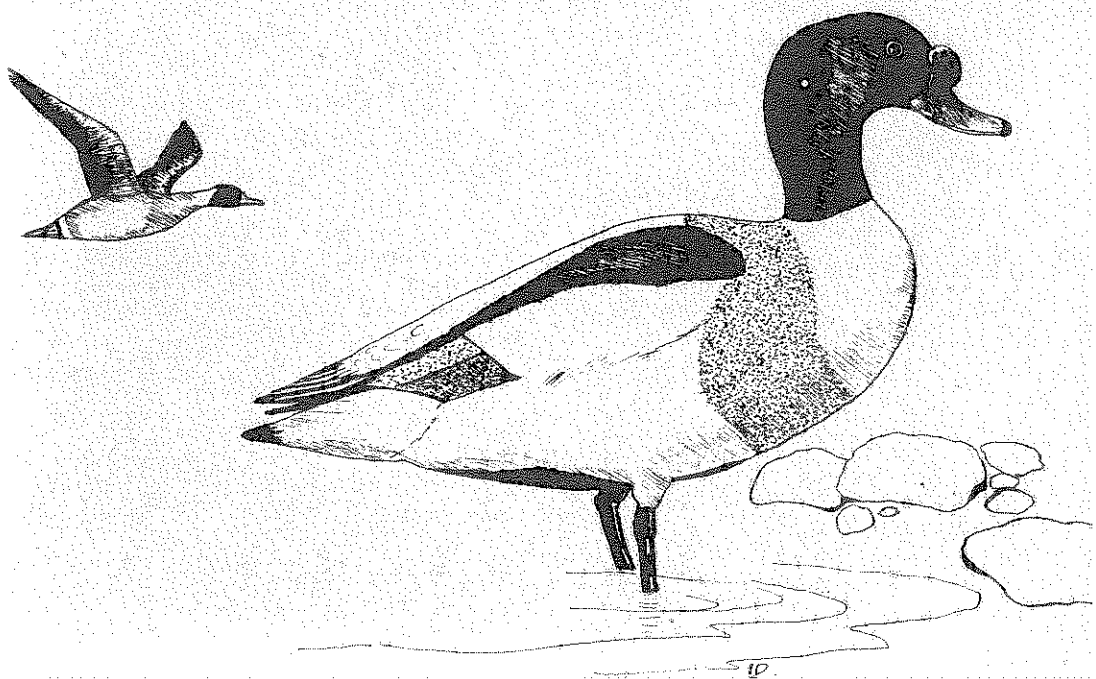


BIRDS OF ESTUARIES ENQUIRY 1974·75



Contents

| | |
|------------------------|----|
| Introduction | 2 |
| Divers | 4 |
| Grebes | 4 |
| Other water birds | 4 |
| Ducks, geese and swans | 5 |
| Waders | 18 |
| Scotland | 21 |
| Wales | 22 |
| North-west England | 23 |
| South-west England | 24 |
| Southern England | 25 |
| Eastern England | 26 |
| Northern Ireland | 27 |
| Republic of Ireland | 28 |
| Gulls | 29 |
| Terns and skuas | 30 |
| Publications | 31 |
| Regional organisers | 31 |

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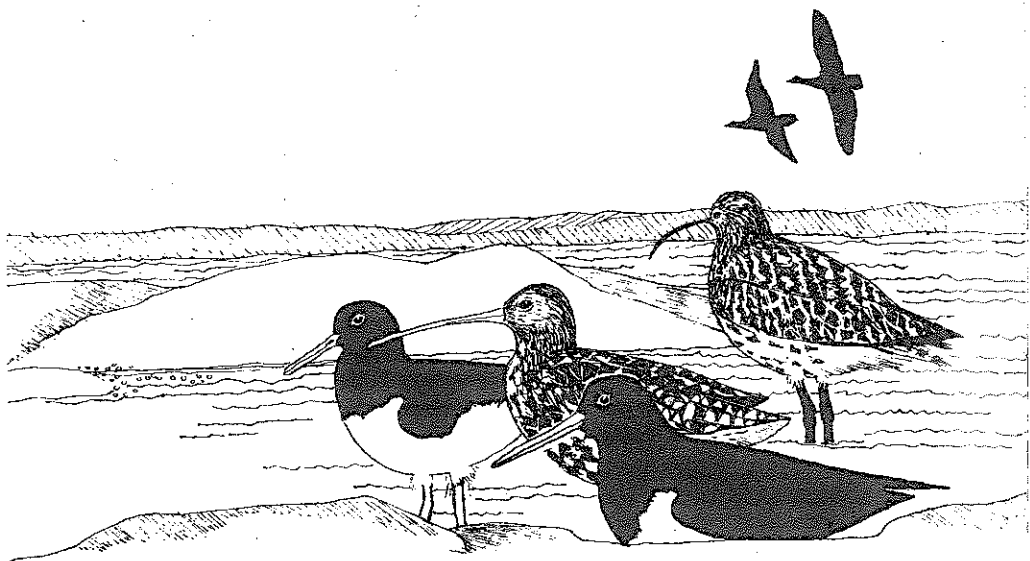
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Introduction

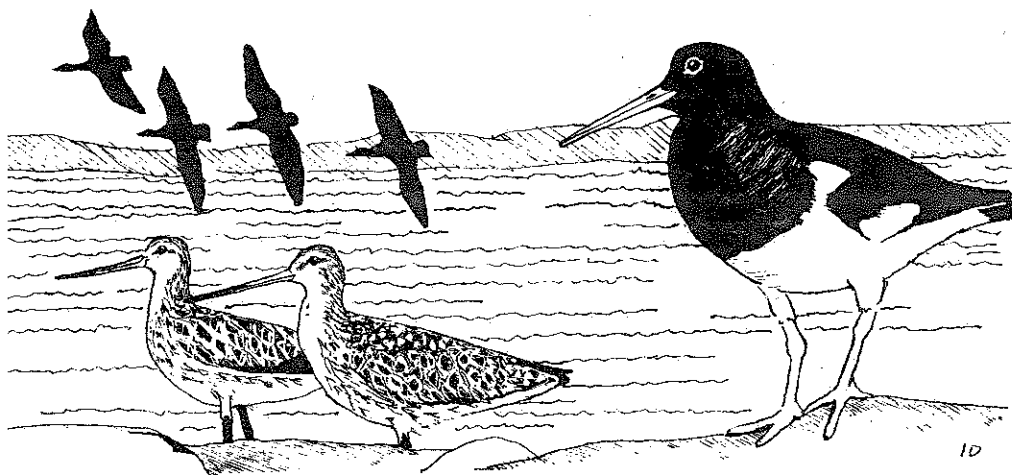
This report covers the fifth year, from July 1974 to June 1975, of the *Birds of Estuaries Enquiry* sponsored jointly by the British Trust for Ornithology, the Royal Society for the Protection of Birds and the Wildfowl Trust. It also covers the fourth year of the Irish Wildbird Conservancy's *Wetlands Enquiry*. The *Birds of Estuaries Enquiry* is financed by a grant from the Nature Conservancy Council and the Institute of Terrestrial Ecology.

Coverage was again satisfactory. About 15 small estuaries were counted for the first time and much more complete data were obtained for two major areas, north Solway and Dundalk Bay, and two regionally important estuaries, Gwendraeth/Tywi and Fal. The data for the period August-April were comprehensive although less information was available for July, May and especially June. Counts for some groups of birds are less complete than for others; those not fully representative are gulls, terns, divers and grebes. All of these groups occur widely in other areas or habitats.

During the last year, two bodies drawing together the local and national conservation societies have been formed. They are the Thames Estuary Wildlife Conservation Group and the Severn Estuary Conservation Group. The *Estuaries Enquiry* has been closely involved with both of these, and it has maintained contact with the Dee Estuary Conservation Group.

The Maplin contract with the Department of the Environment finished in August 1975, and detailed and summary reports on this work were submitted. This was one of the many areas of close liaison built up with the Colney Research Station of the Institute of Terrestrial Ecology and the Nature Conservancy Council.

It has been decided that the production of a book on the results of the *Birds of Estuaries Enquiry* will be given priority. Work on this has already started and it will probably be



published in 1978. The book will be in two parts; the first including background information on estuarine ecology, migration of estuary birds, the relationship between British and Irish estuaries and those of the rest of Europe, and the threats to our estuaries. The second part, which will form the bulk of the book, will cover counting methods, etc, and present the results obtained during 1969-75 by region, and also summarise the seasonal distribution and variations of numbers of all species.

The present counting system with counts in December, January and February will continue (but please see footnote below) although all counts are welcomed. Annual reports will continue to be produced and sent to counters.

This report follows closely the format of the previous one. The section on ducks, geese and swans has again been written by G L Atkinson-Willes of the Wildfowl Trust and I am most grateful for his continuing help. The section on waders has been divided as follows:

- 1 Scotland : including north Solway.
- 2 Wales : Gwent—Clwyd, excluding the west shore of the Dee.
- 3 North-west England : Dee—south Solway.
- 4 South-west England : Gloucester, Avon, Somerset, Devon and Cornwall.
- 5 Southern England : Dorset—Sussex.
- 6 Eastern England : Kent—Northumberland.
- 7 Northern Ireland.
- 8 Republic of Ireland.

Note: The Wildfowl Trust is continuing its long-term programme of national wildfowl counts. The counts have been running without a break for nearly 30 years and it is most important that this continuity should not now be broken. Please make a special effort to count the ducks, geese and swans from September to March.

Divers

Fewer Great Northern Divers *Gavia immer* were seen during this winter. They were only recorded on 21 areas and the maximum count was seven on the Bann, Co. Londonderry.

Red-throated Divers *G. stellata*, however, were present in similar numbers to those of previous years. Once again the principal flocks were in the North Sea and peak numbers occurred in March when there were 87 on the Firth of Forth, 21 on Dengie Flats, 13 in the Blackwater and 19 on the Colne. Lindisfarne had 18 in February.

Small numbers of Black-throated Divers *G. arctica* were seen on nine estuaries although 25 were present at Golspie, Sutherland and nine in the Firth of Forth in midwinter.

Grebes

Apart from the two regular principal areas, the Firth of Forth and Conway Bay, only Carlingford Lough (74), Larne Lough (74) and Blackwater (58) had over 50 wintering Great-crested Grebes *Podiceps cristatus*. The winter flock of 425 on the Firth of Forth was the largest recorded during the *Enquiry*. The moulting autumn concentration on Conway Bay reached 283 but again there was no sign of the spring increase seen in 1972-73.

More Red-necked Grebes *P. grisegena* were seen especially in eastern Britain where there were 43 in the Firth of Forth in August and six at Lindisfarne in March when this species is more usually seen.

Slavonian Grebes *P. auritus* were seen on 23 estuaries, four of which held flocks of over ten, they were the Firth of Forth (47), Blackwater (18), Portland Harbour (13) and Poole Harbour (12). The last had peak numbers in February but on the rest maxima occurred in March.

More Black-necked Grebes *P. nigricollis* were seen than last year; they were recorded on 13 estuaries, peak counts being on Langstone Harbour (35), Poole Harbour (9) and Conway Bay (6).

The principal counts of Little Grebes *Tachybaptus ruficollis* were on the Orwell (81), Duddon (78) and Strangford Lough (70) and mainly occurred in November or December.

Other water birds

No wintering Spoonbills *Platylea leucorodia* were reported in 1974-75 although the bird which was seen on the Tavy in March and Tamar in April might come into that category. Four migrants were reported on the Orwell (September and April), the Dee (September) and the Exe (June). A single Little Egret *Egretta garzetta* was on the Gwendraeth in September and a White Stork *Ciconia ciconia* was on Lough Foyle from September to November. Flamingos *Phoenicopterus spp.*, which had escaped from captivity, were seen on seven estuaries with three on The Fleet being the largest number. In September at least seven individuals were involved.

There was again a similar pattern to that of previous years in the occurrences of Cormorants *Phalacrocorax carbo*. Eight estuaries had more than 200 birds, they were Firth of Forth (1,141), Solway, south (677), Cromarty Firth (400), Moray Firth (332), Solway, north (302), Clyde, inner (210) and the Duddon and Lindisfarne each with 200. Only the Firth of Forth (587) and Lindisfarne (400) had over 100 wintering Shags *P. aristotelis*.

Ducks, geese and swans

As in previous years, this section of the report incorporates the results of both the National Wildfowl Counts and the International Waterfowl Censuses. In England, Scotland and Wales regular monthly counts were again made on nearly all the more important estuaries; in Ireland, however, there were quite a number of gaps in the data, notably in December and January, at the time of the mid-winter peak.

The 1974-75 winter was characterised by its mildness throughout northern Europe, many areas remaining ice free. The numbers of dabbling duck wintering in Britain were, therefore, lower than in previous years. A comparison between duck counts in Niedersachsen, West Germany in January 1974 and 1975 illustrates this clearly. Numbers of both Teal and Pintail were seven times higher in 1975, while Wigeon were two and a half times more numerous in 1975 than in 1974.

The aim of the present report is to summarize the results of the past five years, and more especially to assess the relative importance of the principal sites. Hitherto the main resorts of the various species have been listed separately, each in their own order of importance. These lists are now consolidated, so that the several interests at each site can be viewed as a whole.

There are two criteria based on waterfowl numbers which are currently used to evaluate wetland habitats. These are that a wetland shall be regarded as internationally important if it supports regularly each year:

A total of 10,000 ducks, geese and swans, or

More than one per cent of the estimated regional population of a species. (Britain lies in the north-west European region, which includes the whole of the Baltic, North Sea and Atlantic seaboard between Finland and Portugal.)

The second of these criteria is much the more sensitive and selective of the two, and is used in preference to the first whenever the data permit. In Britain and Ireland there are 22 estuaries which are known to have held more than 10,000 waterfowl in one or more of the seasons under review (Table 1). Except for the Humber, these have all held major concentrations of at least one species, and can thus be assessed on either basis.

The "one per cent" criterion is preferred because it takes into account the status and behaviour of the species, and ensures that each of them is given due consideration according to its needs. In particular it tends to favour the species with small populations, and those which are forced by their specialized requirements to concentrate on a few restricted areas of habitat. Such areas are of vital importance to the species concerned, often holding a sizeable proportion of the total population. In this situation the "one per cent" criterion is likely to select the majority of the sites in current use. The more numerous and more adaptable species are normally dispersed over a much wider range of habitats, and are much less dependent on individual resorts. In their case the proportion of the population occurring at any one place is usually quite small, and only the sites with the very largest concentrations deserve to be regarded as important.

The same principle has been used in assessing the relative importance of the major estuaries listed in Table 2. At each site we have taken the average of the highest annual counts of the 14 selected species and sub-species, as in Tables 3, 5, 6, 9. The averages have then been expressed as percentages of the respective north-west European

populations. These percentages indicate the extent to which the various species depend on the estuary in question, and when added together provide a combined index of importance.

In general the system works well. All the places listed in Table 2 are of international importance, and as such deserve special consideration, but some are clearly more important than others. In the upper half of the list the gradings are often influenced by the occurrence of the scarce or less adaptable species, which are the ones most threatened by the loss of estuarine habitat, e.g. Brent Geese, Scaup and Pintail. Considerable emphasis is also placed on estuaries which hold major concentrations of several of the common species, such as Wigeon, Teal and Shelduck. Such areas would make admirable reserves, satisfying a broad range of requirements. Very little importance is attached to the occurrence of Mallard, and there are certainly no concentrations large enough to warrant individual attention. If the species were decreasing it would be better to adjust the length of the shooting season than to try to safeguard its main resorts: a very large number of reserves would be needed to protect even a small part of the population, and this would be an extravagant waste of limited resources. Most of the sites in the lower half of the list support important gatherings of one species only, and in this respect are more or less of equal value. The main distinction between them lies in the numbers and diversity of the other supporting species.

Table 1 British and Irish estuaries at which totals of 10,000 ducks, geese and swans were recorded in one or more of the seasons, 1970-71 to 1974-75. Peak count, 1974-75, and average of annual maxima. The figures are in thousands.

| | 1974-75 | Average | | 1974-75 | Average |
|------------------------|---------|---------|---------------------|---------|---------|
| Firth of Forth | 26.4 | 30.3 | Shannon-Fergus | 14.2 | 13.3 |
| Lindisfarne | 29.9 | 28.1 | Lough Foyle | 13.9 | 13.2 |
| The Wash | 20.4 | 24.5 | Morecambe Bay | 7.4† | 12.0† |
| Strangford Lough | 12.3 | 24.2 | Moray Firth | 12.8 | 11.6 |
| Inner Solway | 30.6 | 23.6 | Ribble | 10.3 | 11.3 |
| Mersey | 18.0 | 21.0 | Castlemaine Hbr | (2.4) | (11.0) |
| L. Indaal, L. Gruinart | 21.5 | 18.6 | Cromarty Firth | 13.0 | 10.9 |
| Outer Tay | nc | 17.2 | Wexford Hbr & Slobs | 10.0 | 10.4 |
| Medway | 12.2 | 16.7 | Chichester Hbr | 8.5 | 9.5 |
| Foulness, Leigh | 14.2 | 14.3 | Dee, Cheshire | 11.6 | 8.6 |
| Blackwater, Colne | 13.0 | 14.3 | Humber | 10.4 | 8.5 |

Note: nc no count

() 74-75: data incomplete, omitted from average

() Average: based on two seasons only

† Morecambe Bay: January data only, all years.

Table 2 The percentage of the north-west European population of selected species recorded at the main waterfowl centres in Britain and Ireland. (Based on the average of the annual maxima, 1970-71 to 1974-75.) The right-hand column shows the combined index of importance (see notes in text).

| | Teal | Wigeon | Pintail | Shoveler | Scaup | Goldeneye | Shelduck | Whooper Swan | Bewick's Swan | Dark-bellied Brent | Pale-bellied Brent | INDEX OF IMPORTANCE |
|------------------------------|-------|--------|---------|----------|-------|-----------|----------|--------------|---------------|--------------------|--------------------|---------------------|
| 1% of NW European population | 1,500 | 4,000 | 500 | 200 | 1,500 | 2,000 | 1,250 | 200 | 100 | See note | 175 | |
| *Strangford L. | 0.7 | 3.4 | 0.7 | 0.4 | — | 0.1 | 0.1 | 2.4 | — | — | 25.0+ | 33.5+ |
| *Mersey | 5.4 | 0.9 | 17.6 | 0.1 | — | — | 1.9 | — | 0.4 | — | — | 26.4 |
| *Foulness-Leigh | 0.2 | 0.7 | — | 0.2 | — | — | 0.4 | — | — | 23.2 | — | 24.7 |
| *Firth of Forth | 0.3 | 0.3 | 0.4 | — | 12.7 | 2.5 | 1.6 | 0.2 | — | — | — | 18.7+ |
| *Blackwater, Colne | 0.5 | 0.6 | 0.5 | 0.3 | — | 0.2 | 3.3 | — | 0.2 | 11.2 | — | 17.1 |
| *The Wash | 0.3 | 1.3 | 0.2 | 0.2 | — | 0.2 | 7.0 | — | 0.5 | 6.2 | — | 16.1+ |
| *Lindisfarne | 0.4 | 5.8 | 0.1 | — | — | — | 0.5 | 1.8 | — | — | 4.7 | 13.5 |
| Langstone Hbr | 0.5 | 0.3 | 0.2 | 0.2 | — | — | 1.4 | — | — | 9.4 | — | 12.0 |
| *Ribble | 1.0 | 1.0 | 8.0 | 0.3 | — | — | 1.1 | — | 0.4 | — | — | 11.9+ |
| *Medway | 2.9 | 1.9 | 1.9 | 1.5 | — | — | 2.4 | — | — | 1.1 | — | 11.9 |
| Chichester Hbr | 0.3 | 0.2 | 0.2 | — | — | — | 2.5 | — | — | 8.3 | — | 11.5 |
| North Bull | 1.0 | 0.9 | 0.8 | 1.5 | — | — | 0.4 | — | — | — | 6.3 | 10.9 |
| Dee, Cheshire | 0.4 | 0.2 | 5.6 | 0.2 | — | — | 3.5 | — | — | — | — | 10.1 |
| *Inner Solway | 0.5 | 1.1 | 2.6 | 1.0 | 0.6 | 0.1 | 1.8 | 0.7 | — | — | — | 8.7+ |
| *L. Foyle | 1.1 | 2.3 | 0.5 | — | — | — | — | 2.8 | 1.7 | — | — | 8.6 |
| *Wexford Hbr, Slobs | 1.1 | 0.6 | 2.0 | 0.5 | 0.2 | — | 0.2 | 0.1 | 3.0 | — | 0.2 | 8.2+ |
| *Shannon, Fergus | 1.7 | 2.1 | 0.2 | 1.0 | 0.2 | — | 0.9 | 0.3 | 0.1 | — | 0.6 | 7.2 |
| Swale | 0.2 | 0.7 | — | 4.0 | — | — | 1.0 | — | — | 1.2 | — | 7.2 |
| Dengie | 0.3 | 0.4 | 0.3 | — | — | — | 0.3 | — | — | 4.4 | — | 5.8 |
| *Cromarty Firth | 0.5 | 2.3 | 0.6 | — | — | 0.3 | 0.4 | 1.2 | — | — | — | 5.5 |
| Hamford Water | 0.3 | 0.1 | 0.3 | — | — | — | 0.9 | — | — | 3.8 | — | 5.4 |
| *Morecambe Bay | 0.6 | 1.3 | 0.6 | — | — | — | 2.6 | — | — | — | — | 5.3 |
| Stour, Essex | — | 0.8 | 1.4 | 0.1 | — | — | 1.9 | — | — | 0.7 | — | 5.3 |
| Poole Hbr | 0.9 | 0.2 | 0.7 | 0.3 | — | — | 1.7 | — | — | 0.1 | — | 3.9 |
| Burby Inlet | 0.4 | 0.6 | 1.5 | 0.6 | — | — | 0.5 | — | — | — | — | 3.6 |
| Exe | 0.5 | 1.3 | 0.2 | — | — | — | 0.3 | — | — | 0.8 | — | 3.2 |
| Dornoch Firth | 0.5 | 1.6 | 0.2 | — | 0.2 | — | 0.2 | 0.3 | — | — | — | 3.0 |
| Bridgwater Bay | 0.5 | 0.7 | 0.2 | 0.2 | — | — | 1.0 | — | — | — | — | 2.8 |
| Duddon | 0.5 | 0.3 | 1.0 | — | — | — | 0.6 | — | — | — | — | 2.4 |
| Inner Thames | 0.3 | — | 0.5 | — | — | — | 1.5 | — | — | — | — | 2.4 |
| Chesil Fleet | — | 1.1 | 0.1 | 0.2 | — | — | — | — | — | — | — | 2.0 |
| Eden, Fife | 0.3 | 0.4 | 0.1 | — | — | — | 1.1 | — | — | — | — | 1.9 |
| Inner Clyde | — | 0.1 | 0.3 | — | — | 0.2 | 1.1 | — | — | — | — | 1.9 |
| Southampton Wtr | 1.0 | 0.1 | — | 0.1 | — | — | 0.6 | — | — | — | — | 1.8 |
| Teesmouth | 0.1 | — | — | — | — | — | 1.3 | — | — | — | — | 1.4 |

Notes on Table 2

1 The figures in the species columns show the percentage of the estimated north-west European population occurring, on average, at the annual peak. The right hand column shows the sum of the values for the various species; a plus against this figure indicates that there are additional concentrations of ducks or geese which have not been considered (eg Pinkfeet, sea-ducks, *etc*). The values for Mallard, Eider and Mute Swan are included in the total although the individual figures are not shown. An asterisk before the place name indicates a total population of 10,000 or more.

2 The numbers in the top row represent one per cent of the estimated north-west European population. The figure for Bewick's Swan has been rounded up to 100.

3 Dark-bellied Brent Goose. The values for the various sites have been arrived at by calculating the percentage of the population occurring on them in each year, and taking the mean. This takes into account the rapid increase in total numbers over the past five years (see Table 10)

4 To avoid excessive emphasis being placed on a single concentration the top value attributable to a species is fixed at 25.0. In the present table this limit is applied only to the Pale-bellied Brent Geese at Strangford Lough, which comprise about 60 per cent of the European population. It may also be applicable to some of the other geese which are not considered here.

5 The following species have been excluded from the assessments for the time being:—
(a) the Barnacle Goose, and all the grey geese (because they tend to use estuaries only as roosts, and are not dependent on them for food; a separate scale of values is required):
(b) the saw-bills and sea-ducks, except Scaup and Goldeneye (because of counting difficulties, and because no reliable estimates of total population are yet available):
(c) Mallard, Eider and Mute Swan are not included in the detailed assessment as no area counted supported one per cent of their population; they do, however, contribute to the index of importance.

6 Several sites of known or probable importance have been omitted because of inadequate data, or because their interest lies primarily in the species listed above. They are:

Castlemaine Harbour

Loch Gruinart and L. Indaal, Islay

Moray Firth

North Norfolk Harbours

Inner Severn estuary

Outer Firth of Tay

Tralee Bay

7 Because of these omissions, the order of importance must be regarded as provisional, and should not be quoted without consultation.

8 A dash in Table 2 does not imply that the species is absent, only that it is not of international importance. Many other species are of regional importance, this will be assessed at a later date.

The following comments are restricted by lack of space to the common estuarine species, and to those which rely on estuaries for their winter food supplies. A summary of the relative numbers and distribution of some of the other species is contained in the list of major resorts in Table 2.

Dabbling Ducks

Mallard *Anas platyrhynchos*. By far the largest gathering was on the Humber where 7,728 were recorded in December; the peaks in previous years have all fallen between five and six thousand. Even a concentration such as this represents only a very small proportion of the north-west European population, which must total at least one and a half million.

Table 3 British and Irish estuaries at which concentrations of 1,500+ Teal were recorded in one or more seasons, 1970-71 to 1974-75. Peak count 1974-75, and average of annual maxima.

| | 1974-75 | Average | | 1974-75 | Average |
|-----------------|---------|---------|---------------------|---------|---------|
| *Mersey | 6,390 | 8,070 | Ribble | 490 | (1,440) |
| *Medway | 3,500 | 4,330 | *Southampton Water | 1,530 | 1,440 |
| *Shannon-Fergus | 2,980 | 3,300 | Wexford Hbr & Slobs | 790 | 1,390 |
| Lough Foyle | 3,000 | 1,640 | Newtown I.o.W. | 420 | 850 |
| *North Bull | 1,820 | 1,560 | Rogerstown | 600 | 840 |
| Castlemaine Hbr | (364) | (1,460) | Exe | 310 | 752 |

Note: () 1974-75: incomplete data, omitted from average

() Average: based on two seasons only

* Sites of international importance at which concentrations of 1,500+ have been recorded in at least three of the five seasons under review.

Teal *Anas crecca*. Concentrations of 1,500 or more were found on six estuaries, three fewer than in the previous season (Table 3). At most of the main resorts the numbers were well below the average level of recent years, a trend which is noticeable in several other species.

Table 4 Monthly totals of Wigeon and Pintail recorded on British and Irish estuaries, 1971-72 to 1974-75. The figures are in thousands.

| | Wigeon | | | | Pintail | | | |
|------------------------------|--------|-------|-------|-------|---------|-------|-------|-------|
| | 71-72 | 72-73 | 73-74 | 74-75 | 71-72 | 72-73 | 73-74 | 74-75 |
| September | 34.3 | 42.1 | 43.2 | 37.6 | 1.5 | 2.8 | 4.3 | 3.2 |
| October | 98.1 | 127.3 | 120.4 | 104.1 | 7.1 | 12.0 | 13.7 | 11.8 |
| November | 112.5 | 145.6 | 124.3 | 127.1 | 13.1 | 11.8 | 19.6 | 14.3 |
| December | 116.5 | 122.3 | 165.9 | 91.2 | 8.6 | 14.0 | 26.4 | 20.6 |
| January | 103.7 | 139.1 | 132.4 | 84.9 | 11.1 | 19.9 | 19.7 | 15.3 |
| February | 69.4 | 76.5 | 75.0 | 52.8 | 10.4 | 13.7 | 10.6 | 8.9 |
| March | 20.4 | 30.1 | 38.4 | 25.9 | 3.3 | 3.2 | 5.5 | 2.8 |
| Sum of monthly totals | | | | | | | | |
| Britain | 447.2 | 515.4 | 517.9 | 408.2 | 50.2 | 64.7 | 93.9 | 72.4 |
| Ireland | 107.7 | 167.7 | 181.7 | 115.5 | 4.9 | 12.8 | 5.9 | 4.6 |
| | 554.9 | 683.1 | 699.6 | 523.7 | 55.1 | 77.5 | 99.8 | 77.0 |

Note: the 1972-73 Wigeon totals have been revised since the previous report.

Wigeon *Anas penelope*. The monthly totals of Wigeon on estuaries were, in every case, much lower than in either of the two previous seasons. In Britain the sum of the monthly counts was some 20 per cent lower than in 1973-74, and in Ireland, where the cover was

less complete, as much as 35 per cent lower (Table 4). The peak numbers at the main resorts were also below average, except in northern Scotland and Northumbria, and on the Shannon estuary (Table 5). The biggest decreases were on the Wash and Medway, and on Strangford Lough, where the numbers have been falling steadily for some years. (The peak count on the Ouse Washes, the main inland resort, was 42,500 in February 1975, compared with 35,500 in January 1974. The main reason for this increase was probably the extent of suitable flooding.)

These results, although disappointing, do not affect the rating of the main resorts. All ten of the sites, which were previously recognized as internationally important, continue to qualify and two further sites, the Shannon-Fergus estuary and St. John's Lake, Tamar, can now be added to the list. The sites concerned are marked with an asterisk against the place name in Table 5. The other five estuaries at present fail to qualify, albeit by a narrow margin. Some at least of them are likely to be up-graded when further data become available.

Table 5 British and Irish estuaries at which concentrations of 4,000+ Wigeon were recorded in one or more seasons, 1970-71 to 1974-75. Peak count 1974-75, and average of annual maxima. The figures are in thousands.

| | 1974-75 | Average | | 1974-75 | Average |
|-------------------|---------|---------|----------------|---------|---------|
| *Lindisfarne | 24.5 | 23.3 | *The Wash | 2.1 | 5.3 |
| *Strangford Lough | 6.6 | 13.6 | *Exe | 4.0 | 5.0 |
| *Cromarty Firth | 10.5 | 9.0 | *Morecambe Bay | 2.2† | 4.8† |
| *Lough Foyle | 8.6 | 9.0 | Solway, Inner | 6.0 | 4.3 |
| *Shannon-Fergus | 9.5 | 8.3 | *Chesil Fleet | 4.2 | 4.3 |
| *Medway | 4.6 | 8.0 | *St Johns Lake | 1.6 | 3.9 |
| *Dornoch Firth | 8.0 | 6.2 | Ribble | 3.9 | 3.9 |
| Castlemaine Hbr | (1.5) | (6.2) | Cley | nc | 3.9 |
| | | | Mersey | 3.5 | 3.5 |

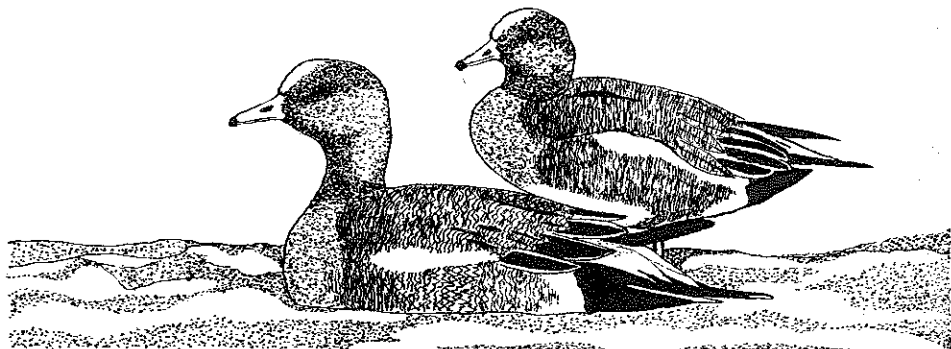
Note: nc no count

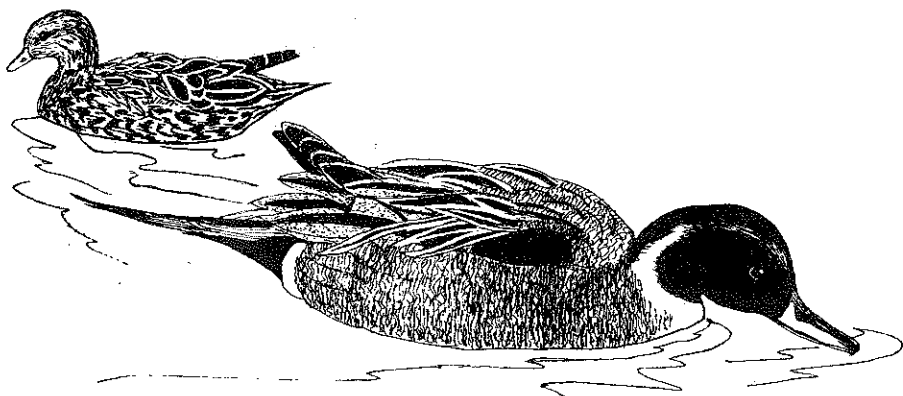
() 1974-75: incomplete data, omitted from average

() Average: based on two seasons only.

† Morecambe Bay: January data only, all years.

* Sites of international importance at which concentrations of 4,000+ have been recorded in at least three of the five seasons under review.





Pintail *Anas acuta*. The results are much the same as for Wigeon. In England, Scotland and Wales the sum of the monthly counts was nearly 25 per cent lower than the record level attained in 1973-74, but still well above the totals for the two previous seasons (Table 4). The low Irish total was due partly to a scarcity of birds, and partly to the lack of regular records from some of the major resorts. The most striking feature of the 1974-75 results was the re-distribution of the population in north-west England. After several years of steady increase, from a peak of 5,450 in 1970-71 to 14,840 in 1973-74, the numbers on the Mersey fell back to less than 7,000. This was largely offset by substantial increases on the Ribble, Cheshire Dee and Solway Firth, each of which held an extra 1,500 birds compared with the previous season. The change, if maintained, will be all to the good; three or four gatherings of roughly equal size are much less vulnerable to adverse developments than a single massive concentration.

Table 6 British and Irish estuaries at which concentrations of 500+ Pintail were recorded in one or more of the seasons 1970-71 to 1974-75. Peak count 1974-75, and average of annual maxima.

| | 1974-75 | Average | | 1974-75 | Average |
|----------------------|---------|---------|---------------|---------|---------|
| *Mersey | 6,960 | 8,820 | *Medway | 800 | 970 |
| *Ribble | 4,720 | (3,980) | *Burry | 400 | 750 |
| *Dee, Cheshire | 5,500 | 2,800 | *Stour, Essex | 870 | 680 |
| *Inner Solway | 2,360 | 1,300 | Duddon | 660 | 510 |
| *Wexford Hbr & Slobs | 1,110 | 1,030 | North Bull | 270 | 450 |
| Castlemaine Hbr | (50) | (1,010) | Dengie | 560 | 152 |

Note: () 1974-75: data incomplete, omitted from average.

() Average: based on two seasons only.

* Sites of international importance at which concentrations of 500+ have been recorded in at least three of the five seasons under review.

Eight estuaries are now regarded as internationally important for the species (Table 6). Two others, the Duddon and Castlemaine Harbour, may also qualify at a later date; they are currently excluded because of the wide variation in numbers from year to year, and because of the lack of records in one or more years.

Diving Ducks

Both Scaup *Aythya marila* and Goldeneye *Bucephala clangula* were much less plentiful than usual (Table 7). The counts of Scaup, in all months except February, were 30-40 per cent lower than the average levels of the three preceding years. This is attributed partly to a scarcity of cold weather migrants from the main winter quarters in the western Baltic and the Netherlands, and partly to the apparent decline in the Icelandic breeding population. (At Myvatn, the most important centre, the number of pairs of Scaup is said to have fallen from c. 5,000 in 1970 to not more than 1,600 in 1974.)

Table 7 Monthly totals of Scaup and Goldeneye recorded on British and Irish estuaries, 1971-72 to 1974-75. The figures are in thousands.

| | Scaup | | | | Goldeneye | | | |
|------------------------------------|-------|-------|-------|-------|-----------|-------|-------|-------|
| | 71-72 | 72-73 | 73-74 | 74-75 | 71-72 | 72-73 | 73-74 | 74-75 |
| October | 0.3 | 2.8 | 6.9 | 2.3 | 0.3 | 0.8 | 0.8 | 0.3 |
| November | 9.6 | 13.0 | 17.6 | 7.9 | 3.8 | 6.0 | 5.9 | 2.8 |
| December | 10.8 | 26.6 | 21.0 | 13.1 | 4.5 | 5.7 | 9.8 | 5.1 |
| January | 24.4 | 24.2 | 20.6 | 13.8 | 7.9 | 11.0 | 8.6 | 7.6 |
| February | 20.5 | 11.8 | 16.9 | 14.9 | 5.8 | 10.0 | 8.6 | 8.5 |
| March | 7.4 | 3.2 | 5.1 | 2.7 | 4.7 | 5.5 | 6.5 | 3.6 |
| Sum of monthly totals | | | | | | | | |
| All estuaries | 73.1 | 81.6 | 88.0 | 54.8 | 27.0 | 39.0 | 40.2 | 28.0 |
| Firth of Forth | 64.0 | 69.1 | 74.6 | 41.8 | 13.1 | 19.7 | 19.0 | 11.8 |
| Percent of total on Firth of Forth | 88 | 85 | 85 | 76 | 49 | 51 | 47 | 42 |

Goldeneye were particularly scarce in autumn and early spring. In November the counts were about 45 per cent below their average level, in December and January about 20 per cent down, but in February were normal for the time of year. This steady improvement over the course of the season suggests that the shortage early on was due almost entirely to the mildness of the Scandinavian winter. The most noticeable decrease in both Scaup and Goldeneye was on the Firth of Forth, the only British resort of international importance for these two species. In previous years the Firth had held a more or less constant proportion of the British/Irish population; in 1974-75 the numbers were greatly reduced, and the proportion of the total count recorded there was quite appreciably lower (Table 7). This may well mark the beginning of a sustained decrease. The local distilleries are now pouring much less spent grain into the Firth, and the Edinburgh sewage system will be redesigned in the near future. Both changes are likely to have a major effect, both directly and indirectly, on the quantity of food within the Firth.

Shelduck

Shelduck *Tadorna tadorna*. Except in December and January the monthly totals for 1974-75 were all within 10 per cent (and often within 5 per cent) of the average numbers recorded over the previous three seasons (Table 8). The peak count in January was in fact the only result which showed any marked decrease. The low December total is explained by the absence of a count from the Wash, which was probably holding some 5-6,000 at the time (4,100 were recorded there in November, and 7,600 in January). The peak

numbers at most of the major resorts were lower than usual, often by several hundreds, but this has in no way jeopardized the international status of the sites concerned, nor has it altered their placing in the general order of importance. Of the 21 estuaries listed in Table 9, no fewer than 17 can now be regarded as internationally important; the remainder are excluded by only the narrowest of margins. Although the list is a good deal longer than for most other species, this is not unwarranted. In most years the mid-winter numbers in Britain and Ireland represent well over half of the north-west European population; we have, therefore, a special responsibility for the welfare of this purely estuarine species.

Table 8 Monthly totals of Shelduck and Dark-bellied Brent geese recorded on British and Irish estuaries, 1971-72 to 1974-75. The figures are in thousands.

| | Shelduck | | | | Dark-bellied Brent Geese | | | |
|-----------------------|----------|-------|-------|-------|--------------------------|-------|-------|-------|
| | 71-72 | 72-73 | 73-74 | 74-75 | 71-72 | 72-73 | 73-74 | 74-75 |
| September | 6.5 | 8.0 | 13.5 | 10.8 | | | | |
| October | 19.6 | 15.0 | 18.5 | 17.2 | 7.6 | 6.2 | 15.7 | 10.3 |
| November | 31.2 | 20.7 | 25.8 | 25.4 | 17.5 | 15.0 | 28.7 | 25.4 |
| December | 36.3 | 27.0 | 48.7 | 30.8 | 22.5 | 29.6 | 41.2 | 33.2 |
| January | 68.6 | 69.4 | 57.9 | 52.8 | 21.9 | 29.3 | 37.8 | 31.4 |
| February | 61.1 | 49.6 | 55.0 | 49.8 | 22.5 | 27.2 | 37.7 | 30.6 |
| March | 37.2 | 37.9 | 45.8 | 38.8 | (10.6) | 15.7 | 28.0 | 22.8 |
| Sum of monthly totals | | | | | | | | |
| | 260.5 | 227.6 | 265.2 | 225.6 | 102.6 | 123.0 | 189.1 | 153.7 |
| Percentage in Ireland | 5.5 | 6.6 | 6.5 | 5.5 | | | | |

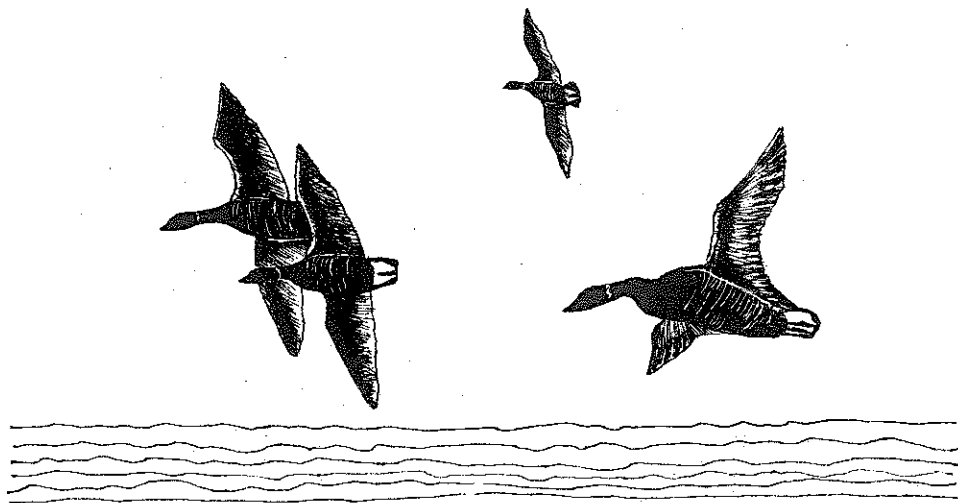
Note: () incomplete data.

Table 9 British and Irish estuaries at which concentrations of 1,250+ Shelduck were recorded in at least two of the five seasons, 1970-71 to 1974-75. Peak count in 1974-75, and average of the annual maxima. The figures are in thousands.

| | 1974-75 | Average | | 1974-75 | Average |
|-------------------|---------|---------|------------------|---------|---------|
| *The Wash | 7.6 | 8.8 | *Inner Thames | 0.9 | 1.9 |
| *Dee, Cheshire | 3.7 | 4.4 | *Langstone Hbr | 0.7 | 1.7 |
| *Blackwater/Colne | 3.9 | 4.2 | *Teemouth | 1.3 | 1.6 |
| *Morecambe Bay | 2.1† | 3.2† | *Eden, Fife | 1.4 | 1.4 |
| *Chichester Hbr | 2.3 | 3.1 | *Ribble | 0.9 | 1.4 |
| *Medway | 2.3 | 3.0 | *Swale | 0.5 | 1.4 |
| *Stour, Essex | 1.9 | 2.4 | Inner Clyde | 1.0 | 1.4 |
| *Mersey | 2.5 | 2.4 | Strangford Lough | 1.1 | 1.2 |
| *Inner Solway | 2.4 | 2.3 | Bridgwater Bay | 1.0 | 1.2 |
| *Poole Hbr | 2.0 | 2.1 | Shannon-Fergus | 0.7 | 1.1 |
| *Firth of Forth | 2.2 | 2.0 | | | |

Note: † Morecambe Bay: January data only in all years, except 1971-72.

* Sites of international importance at which concentrations of 1,250+ have been recorded in at least three of the five seasons under review.



Brent Geese

Dark-bellied Brent Goose *Branta bernicla bernicla*. The number of young reared in 1974 was the lowest on record: that autumn the flocks appearing in Britain contained less than 0.1 per cent of juveniles, compared with 40-45 per cent in four of the five preceding seasons. Breeding failures and near-failures are by no means exceptional in a high Arctic species such as this, and are one of the dominant factors which control the level of population from year to year. In this instance the world population fell by c. 15 per cent from the record level of 84,500 attained in autumn 1973 to a maximum of 71,300 in 1974. The British total showed an even greater decrease of nearly 20 per cent; even so the reduced level of 33,200 was still appreciably higher than the numbers recorded in any of the earlier seasons between 1960 and 1972 (Tables 8, 10 and footnote). The proportion of the total population wintering in Britain has decreased considerably in recent years, due presumably to the milder winters and possibly to increasing numbers in France (Table 10). It also seems that most of the major British resorts have been unable to accommodate their proportionate share of the recent increases in population. The only sites which have maintained their relative importance are Chichester Harbour, and some of the smaller and previously less favoured resorts such as Hamford Water, Pagham Harbour and several other south coast estuaries.

Note: Dark-bellied Brent: after a good breeding season in 1975 the world population reached a new record level of c. 110,000.

Pale-bellied Brent Goose *Branta bernicla hrota*. The gaps in the Irish data make it impossible to reach a reliable estimate of the numbers occurring in 1974-75. The highest monthly total obtained by the BTO and IWC amounted to 7,600 in December, but this is based on a wide scatter of dates and may well include a good deal of duplication. An independent survey in November 1974 produced a total of 11,610 but the figure is not yet confirmed. It compares with November totals of 8,720 in 1973, and 11,170 in 1972.

In these two earlier years the peak counts amounted to 16,300 and 15,520 respectively, the first in December, the second in October. The largest concentrations were as usual on Strangford Lough where 9,500 were recorded during the November census, and 5,900 in the December count. The only British resort at Lindisfarne held a peak of 300 in December, compared with maxima of 1,700 in 1973 and 400 in 1972. This small group belongs to the Spitzbergen breeding population, which winters mainly in Denmark.

Table 10 Peak counts of Dark-bellied Brent Geese at their regular British resorts, expressed as percentages of the world population in the years to which they refer.

| | 1970-71 | 1971-72 | 1972-73 | 1973-74 | 1974-75 |
|---------------------------|----------------|----------------|---------------|---------------|---------------|
| World population | 40,800 | 34,000 | 51,800 | 84,500 | 71,300 |
| Exe | 0.9 | 0.9 | 1.2 | 0.7 | 0.4 |
| Poole Harbour | 0.1 | — | 0.2 | 0.2 | 0.1 |
| Solent, Hants | 0.3 | 0.3 | 0.5 | 0.4 | 0.6 |
| Newtown, I.o.W. | 0.2 | 0.2 | 0.1 | 0.4 | 0.4 |
| Portsmouth Hbr | 0.2 | 0.2 | 0.6 | 0.4 | 0.5 |
| Langstone Hbr | 10.0 | 11.0 | 10.8 | 7.2 | 7.8 |
| Chichester Hbr | 8.1 | 9.1 | 8.4 | 8.7 | 7.2 |
| Pagham Harbour | 0.2 | 0.2 | 0.3 | 0.6 | 1.0 |
| SOUTH COAST TOTAL | 8,080 | 6,870 | 10,924 | 14,722 | 11,646 |
| Peak month | Feb | Jan | Feb | Jan | Jan |
| % of world pop. | 19.8 | 20.0 | 21.1 | 17.3 | 16.3 |
| Swale | 1.5 | 1.6 | 1.2 | 1.1 | 1.0 |
| Medway | 0.9 | 1.6 | 1.4 | 0.9 | 1.0 |
| Foulness-Leigh | 34.2 | 24.1 | 22.2 | 19.1 | 16.4 |
| Crouch-Roach | — | 0.5 | 0.8 | 1.5 | 1.1 |
| Dengie | 7.4 | 5.9 | 2.9 | 2.0 | 3.9 |
| Blackwater, Colne | 13.8 | 12.9 | 12.1 | 8.6 | 8.5 |
| Hamford, Naze | 2.9 | 4.6 | 2.6 | 4.0 | 4.9 |
| Stour | 1.1 | 0.7 | 0.8 | 0.4 | 0.6 |
| Orwell | nc | 0.3 | 0.2 | 0.8 | 0.5 |
| KENT-ESSEX TOTAL | 18,537 | 13,125 | 17,482 | 21,212 | 18,534 |
| Peak month | Nov | Nov | Dec | Dec | Nov |
| % of world pop. | 45.4 | 38.6 | 33.7 | 25.1 | 26.0 |
| North Norfolk | (4.9) | (5.6) | 4.2 | 4.6 | 3.6 |
| Wash | 6.1 | 7.2 | 6.7 | 7.0 | 5.4 |
| NORFOLK-WASH TOTAL | (4,500) | (4,050) | 5,342 | 7,853 | 5,348 |
| Peak month | Feb | Dec | Dec | Feb | Feb |
| % of world pop. | 11.0 | 11.9 | 10.3 | 9.2 | 7.5 |
| BRITISH TOTAL | 24,725 | 22,531 | 29,640 | 41,186 | 33,158 |
| Peak month | Feb | Dec/Feb | Dec | Dec | Dec |
| % of world pop. | 60.6 | 66.2 | 57.2 | 48.7 | 46.5 |

Note: () figures based partly on interpolations of missing data.

Table 12 The monthly population levels of waders in British estuaries 1974-75.

| | July* | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May* | June* |
|---|--------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|-------|
| Oystercatcher <i>Haematopus ostralegus</i> | 36,184 | 142,301 | 224,329 | 207,514 | 211,881 | 177,356 | 183,928 | 144,651 | 93,604 | 54,651 | 26,358 | 3,393 |
| Lapwing <i>Vanellus vanellus</i> | 17,504 | 38,680 | 74,501 | 57,745 | 93,384 | 109,628 | 152,765 | 130,662 | 30,080 | 6,552 | 2,685 | 2,409 |
| Ringed Plover <i>Charadrius hiaticula</i> | 2,700 | 25,482 | 26,250 | 11,157 | 9,840 | 8,033 | 7,436 | 6,792 | 4,293 | 5,579 | 18,774 | 675 |
| Golden Plover <i>Pluvialis apricaria</i> | 3,037 | 11,806 | 26,358 | 24,796 | 42,737 | 41,600 | 50,895 | 44,293 | 22,445 | 8,647 | 179 | 1 |
| Grey Plover <i>P. squatarola</i> | 2,052 | 9,575 | 15,241 | 12,739 | 12,007 | 13,601 | 13,305 | 11,493 | 8,905 | 8,168 | 1,419 | 238 |
| Turnstone <i>Arenaria interpres</i> | 1,670 | 8,837 | 11,692 | 9,731 | 9,289 | 10,005 | 9,959 | 8,462 | 9,072 | 10,354 | 5,783 | 101 |
| Common Snipe <i>Gallinago gallinago</i> | 68 | 448 | 1,571 | 2,423 | 3,479 | 3,244 | 3,115 | 2,931 | 2,210 | 765 | 71 | 19 |
| Jack Snipe <i>Lymnocyrtus minimus</i> | — | — | 8 | 44 | 67 | 65 | 84 | 77 | 68 | 29 | — | — |
| Curllew <i>Numenius arquata</i> | 39,364 | 76,758 | 88,273 | 60,713 | 58,978 | 55,165 | 60,054 | 67,056 | 51,211 | 21,069 | 4,054 | 1,291 |
| Whimbrel <i>N. phaeopus</i> | 386 | 1,172 | 441 | 33 | 7 | 1 | 2 | 6 | 3 | 505 | 1,593 | 30 |
| Black-tailed Godwit <i>Limosa limosa</i> | 3,776 | 4,894 | 6,436 | 4,194 | 4,816 | 3,955 | 4,806 | 3,688 | 3,590 | 704 | 128 | 11 |
| Bar-tailed Godwit <i>L. lapponica</i> | 8,216 | 23,195 | 27,092 | 30,661 | 38,232 | 40,188 | 38,508 | 24,746 | 11,402 | 5,797 | 1,356 | 210 |
| Green Sandpiper | 121 | 208 | 165 | 51 | 19 | 23 | 20 | 19 | 14 | 11 | 4 | 2 |

| | | | | | | | | | | | |
|--|---------|---------|---------|-----------|-----------|-----------|-----------|-----------|---------|---------|---------|
| Wood Sandpiper <i>T. glareola</i> | 2 | 23 | 15 | 1 | — | — | — | — | 1 | 3 | 3 |
| Common Sandpiper <i>T. hypoleucos</i> | 583 | 954 | 678 | 59 | 11 | 19 | 19 | 15 | 16 | 93 | 151 |
| Redshank <i>T. totanus</i> | 36,204 | 74,410 | 104,321 | 99,299 | 81,860 | 76,148 | 74,934 | 73,189 | 67,184 | 27,578 | 5,108 |
| Spotted Redshank <i>T. erythropus</i> | 184 | 370 | 781 | 368 | 91 | 81 | 72 | 68 | 68 | 82 | 35 |
| Greenshank <i>T. nebularia</i> | 435 | 1,051 | 1,275 | 494 | 218 | 191 | 163 | 124 | 181 | 130 | 81 |
| Knot <i>Calidris canutus</i> | 32,796 | 138,339 | 113,739 | 151,656 | 198,826 | 216,501 | 180,175 | 180,537 | 129,958 | 131,683 | 6,302 |
| Dunlin <i>C. alpina</i> | 117,776 | 173,390 | 244,679 | 430,947 | 554,565 | 621,755 | 558,133 | 482,831 | 300,418 | 161,526 | 96,058 |
| Sanderling <i>C. alba</i> | 10,781 | 23,312 | 5,222 | 4,546 | 5,318 | 5,207 | 6,396 | 4,814 | 5,381 | 5,423 | 27,086 |
| Ruff <i>Philomachus pugnax</i> | 118 | 317 | 612 | 414 | 159 | 110 | 169 | 105 | 130 | 61 | 30 |
| Little Stint <i>Calidris minuta</i> | 4 | 50 | 156 | 19 | 8 | 2 | 2 | 1 | — | 5 | 7 |
| Curlew Sandpiper <i>C. ferruginea</i> | 1 | 46 | 49 | 13 | 1 | — | — | — | — | 1 | 8 |
| Purple Sandpiper <i>C. maritima</i> | 56 | 165 | 133 | 257 | 362 | 293 | 762 | 481 | 546 | 359 | 26 |
| Avocet <i>Recurvirostra avosetta</i> | 50 | 72 | 9 | 62 | 84 | 99 | 88 | 72 | 41 | 28 | 19 |
| | 314,067 | 755,855 | 974,026 | 1,109,936 | 1,326,239 | 1,383,270 | 1,345,790 | 1,187,117 | 740,820 | 449,801 | 197,318 |
| | | | | | | | | | | | 19,461 |

Note: * denotes incomplete cover, these counts are not strictly comparable with the others.

Waders

Very large numbers of waders were present during 1974-75. Table 11 presents the peak counts obtained for the major estuaries of Britain and Ireland, together with a summary of all counts since the *Birds of Estuaries Enquiry* began in 1969. During 1974-75 the peak count of waders on two estuaries exceeded 200,000. Morecambe Bay, although slightly down on the previous year, still reached a quarter of a million waders while its more southerly neighbour, the Ribble, again had almost 220,000. Numbers on the Wash were down a little but with the improved counts on the north Solway the importance of the whole Solway becomes clearer. The leap in numbers on the Thames is due to two factors, the better winter counts on the south shore and an enormous increase in the Lapwing and to some extent the Dunlin numbers; conversely, declines of these species accounts for the decrease on the Severn estuary. There was improved cover on both Dundalk Bay and the Duddon, which resulted in higher counts.

Table 11 has been separated into two sections. This division is rather arbitrary but estuaries in Section A qualify for international importance by having 20,000 or more waders. In addition the numbers present of one or more species exceed one per cent of their European winter total. Those in Section B are of national importance in that they mostly have 10,000 or more waders, the majority of these estuaries would also qualify for international importance on the basis of the "one per cent" criterion.

The monthly population levels of waders in Britain are presented in Table 12. Overall the numbers are very large although not quite reaching the record number in January 1974. In five months the total exceeded one million. To isolate some of the trends Table 13 shows the percentage change in peak numbers of several species. These are those where the ringing effort has enabled us to pinpoint the origins of the birds and where the information indicates that birds from only a single breeding area are present in Britain during certain months. The Table shows that those species which breed in the UK, Iceland and Scandinavia all increased in number while those which breed in the arctic zones of USSR, Greenland and NE Canada all decreased. The populations from the USSR decreased slightly, with the exception of the Bar-tailed Godwit, but which maintained the level reached in 1973-74. Wader populations from Greenland and Canada, however, all decreased by a sizeable amount; of these species the Knot is possibly in the most serious position. After doing poorly in a relatively good season (1973-74), it suffered an even greater decline in this bad season. Table 19 in the 1973-74 report showed precisely the opposite pattern with high Arctic species doing very well and north temperate species doing relatively badly. The variations of the increases and decreases within a region may reflect local differences in breeding success, the adaptability of the species to changes in summer conditions, or to adaptability in the winter. At the moment, it is not possible to isolate a single controlling factor.

In general, migration timings which have been summarised in the monthly tables in the previous reports were similar in 1974-75. The wintering numbers of the species which show a midwinter peak (Bar-tailed Godwit, Knot and Dunlin) were all at their maximum in December whereas in previous years they usually occurred in January or February. There was a difference in the pattern of occurrence of the Ruff; there is usually a September peak after which numbers drop away before building up rapidly in late December-January to a midwinter peak which often exceeds the autumn one. In

Table 11 Principal estuaries for waders in Britain & Ireland 1969-75.

| A | peak counts, in thousands * | | | | | | |
|---------------------|-----------------------------|-------|---------|--------|--------|--------|--------|
| | Average | 74-75 | 73-74 | 72-73 | 71-72 | 70-71 | 69-70 |
| Morecambe Bay | 244.1 | 258.4 | 269.4 | 232.7 | 227.2 | 252.4 | 224.5 |
| Wash | 175.5 | 167.8 | 201.9 | 165.3 | 181.4 | 161.0 | (65.5) |
| Solway | 171.7 | 163.2 | (126.4) | 144.2 | 207.6 | (79.9) | (75.8) |
| Ribble | 168.1 | 219.4 | 219.4 | 158.6 | 123.2 | 119.8 | (72.7) |
| Dee | 133.5 | 105.1 | 150.9 | 154.1 | 121.8 | 121.4 | 147.9 |
| Thames | 103.1 | 134.7 | 91.0 | 83.7 | | | |
| Hants/Sussex Hbrs | 93.6 | 92.7 | 87.7 | 100.3 | | | |
| Severn | 93.2 | 82.0 | 121.6 | 75.9 | (68.4) | (49.1) | (35.3) |
| Firth of Forth | 62.6 | 61.1 | 56.6 | 62.5 | 70.2 | (37.6) | (31.6) |
| Dundalk Bay | 58.6 | 68.3 | (48.9) | (37.0) | | | |
| Shannon/Fergus | 58.2 | 44.8 | 73.9 | 55.9 | | | |
| Humber | 50.8 | 41.2 | 60.9 | 37.6 | 85.7 | 44.1 | 35.4 |
| Lindisfarne | 41.1 | 60.1 | 43.8 | 38.8 | 29.3 | 33.3 | (3.7) |
| Strangford Lough | 40.7 | 28.3 | 62.4 | 29.9 | 49.7 | 45.1 | 28.9 |
| Burry Inlet | 39.3 | 34.7 | 40.1 | 34.7 | 35.4 | 46.7 | 44.2 |
| Mersey | 32.3 | 49.1 | 44.6 | 29.3 | 18.7 | 19.7 | |
| Duddon | 30.5 | 46.0 | 19.6 | 22.2 | 33.6 | 31.1 | (17.9) |
| Bull | 29.9 | 27.6 | 36.4 | 30.0 | 28.9 | 26.7 | |
| Clyde, inner | 26.7 | 29.4 | 33.8 | 28.4 | 18.7 | (17.0) | 23.3 |
| Cork Harbour | 22.7 | 27.7 | | (7.5) | 16.6 | 23.8 | |
| Blackwater | 22.4 | 29.2 | 27.2 | 10.9 | | | |
| Hamford Water | 22.1 | 30.0 | 22.7 | 13.2 | (6.9) | | |
| Wexford Harbour | 21.9 | 18.1 | 41.8 | 20.4 | 7.3 | | |
| Dengie | 21.4 | 24.8 | 22.1 | 17.3 | | | |
| Teesmouth | 21.4 | 14.9 | 21.2 | 22.0 | 24.2 | 25.1 | 21.3 |
| Exe | 21.1 | 20.9 | 17.4 | 20.1 | 21.9 | 21.0 | 25.6 |
| Conway Bay | 20.2 | 20.8 | 21.8 | 24.4 | 18.4 | 16.9 | 19.0 |
| Moray Firth | 20.0 | 16.0 | 27.8 | 22.3 | 14.0 | (11.3) | |
| Stour/Essex/Suffolk | 20.0 | 20.1 | 32.2 | 21.4 | 14.0 | 12.0 | |
| Taw/Torridge | 20.0 | 23.5 | 26.9 | 9.6 | (10.0) | (8.8) | |
| B | | | | | | | |
| Ballymacoda Bay | 19.0 | 21.9 | 18.4 | 29.6 | 15.0 | 9.9 | |
| Lough Foyle | 17.7 | 19.9 | 14.1 | 22.9 | 16.3 | 15.1 | |
| Bannow Bay | 15.7 | 19.5 | 18.8 | 13.9 | 10.6 | (5.5) | |
| Colne | 15.3 | 15.6 | 15.3 | 17.5 | 15.4 | 12.7 | (6.2) |
| Cromarty Firth | 15.1 | 16.6 | 16.0 | 15.0 | 13.9 | 14.0 | |
| Eden | 14.8 | (3.2) | 15.5 | 11.3 | 14.8 | 17.7 | |
| Montrose Basin | 14.4 | 11.7 | (3.0) | 16.8 | 12.3 | 16.9 | |
| Alt | 14.3 | 10.1 | 12.7 | 15.6 | 14.5 | 18.6 | (7.1) |
| Firth of Tay | 14.1 | (5.6) | 20.3 | 14.3 | 12.7 | 9.3 | |
| Camel | 13.6 | 17.3 | 17.5 | 10.8 | 10.8 | 11.5 | (7.8) |
| Southampton Water | 13.5 | 17.3 | 16.5 | 13.3 | 10.7 | 9.5 | (5.9) |
| Orwell | 12.9 | 13.6 | 12.3 | (4.9) | (3.6) | (1.9) | |
| Castlemaine Harbour | | (5.6) | (7.9) | 16.7 | | | |
| Solent | 11.4 | 14.8 | 13.3 | 9.2 | 8.3 | (3.7) | |
| Esk, Cumbria | 9.8 | 7.1 | 9.6 | 10.2 | 9.1 | 12.8 | 9.5 |
| Gwendraeth/Tywi | 9.8 | (7.0) | 12.5 | | | | |

Note: Estuaries with a single count of 10,000+ were Clonakilty (av. 6.5, pk 10.4), Cull (6.1, 10.8), Dungarven Harbour (8.6, 10.8), Pagham Harbour (6.7, 10.7), and Waterford Harbour (single full count of 12.1).

A = Estuaries of international importance for waders.

B = Estuaries of national importance for waders, some species also being of international importance.

() = incomplete counts.

* Peak count is the sum of highest monthly counts for each species, regardless of month when peak occurred.

1974-75 though the September peak was almost double the previous highest one, and quite large numbers remained through the late autumn and early winter, the midwinter numbers were relatively low.

Table 13 Peak populations and relative abundance of waders in Britain in 1974-75 in relation to their breeding areas.

| Breeding areas | | 1973-74 | 1974-75 | % change |
|--------------------------|------------------------|---------|---------|----------|
| UK, Iceland, Scandinavia | Oystercatcher | 183,688 | 224,329 | + 22.1 |
| Iceland | Black-tailed Godwit | 5,634 | 6,436 | + 14.2 |
| Scandinavia/UK | Curlew | 80,862 | 88,273 | + 9.2 |
| UK/Iceland | Redshank | 97,591 | 104,321 | + 6.9 |
| UK/S. Scandinavia | Ringed Plover (winter) | 7,852 | 8,033 | + 2.3 |
| USSR | Dunlin | 625,054 | 621,755 | - 0.5 |
| USSR | Grey Plover | 15,795 | 15,241 | - 3.5 |
| Greenland/Canada | Turnstone (winter) | 11,181 | 10,005 | - 10.5 |
| Greenland/Iceland | Ringed Plover (spring) | 24,076 | 18,774 | - 22.0 |
| USSR | Bar-tailed Godwit | 51,777 | 40,188 | - 22.4 |
| Greenland/Canada | Knot (winter) | 303,054 | 216,501 | - 28.6 |
| Greenland/Canada | Sanderling (spring) | 38,637 | 27,086 | - 29.9 |



Scotland

Regular and complete counts of the whole of the north Solway (inner Solway, Auchencairn Bay/Rough Firth, Kirkcudbright Bay, Fleet Bay) were achieved during 1974-75. These counts provided valuable information since the outer areas had not been counted before. A number of small western and northern estuaries were also counted for the first time. Unfortunately, it was not possible to obtain counts for the whole of the Firth of Tay (although the inner section was counted), the Eden estuary (apart from early autumn) and only partial counts were made on the Dornoch Firth.

The peak counts of waders in each estuary are presented in Table 14. This again emphasises not only that there are a number of nationally and internationally important areas but that there are many areas with 1,000-5,000, and many more that support several hundred waders. The role that these smaller estuaries play is considerable. Of the major sites which were adequately counted in both 1973-74 and 1974-75, three, the Firth of Forth, inner Clyde and Cromarty Firth, had similar numbers in both years. The Moray Firth, however, had many fewer with reductions in numbers of almost all species.

The Grey Plover failed to continue its increase despite the mild winter. Numbers mostly hovered around the 300-400 mark, still above the 1972-73 population. In general, autumn numbers were slightly higher, with almost 30,000 Redshank in September and October being the most marked increase (30 per cent up on the previous highest autumn number). Winter numbers were similar to 1973-74 although because the Bar-tailed Godwit flocks on the Tay and Eden (which usually total 2-3,000 birds) were not counted, that species was poorly recorded. Even if numbers of Bar-tailed Godwit on these two estuaries had been similar to those of previous years the midwinter total would still have been the lowest since 1970-71.

Table 14 Principal estuaries for waders in Scotland 1974-75.

| | peak count | | peak count |
|-----------------------------|------------|-------------------|------------|
| Solway, north | 69,178 | Kirkcudbright Bay | 3,487 |
| Firth of Forth | 61,102 | Beaully Firth | 3,462 |
| Firth of Clyde, inner | 29,394 | Troon/Barrassie | 3,436 |
| Cromarty Firth | 16,625 | Hunterston | 3,295 |
| Moray Firth | 16,001 | Eden | 3,209** |
| Montrose Basin | 11,653 | S. Troon Bay | 2,894 |
| Irvine River | 10,941 | Doon | 2,880 |
| Ythan | 8,905 | Maidens Harbour | 2,601 |
| Loch Ryan | 6,549 | Loch Fleet | 2,438 |
| Auchencairn Bay/Rough Firth | 5,745 | Fleet Bay | 2,171 |
| Firth of Tay, inner | 5,603* | Dornoch Firth | 1,729* |
| Wigtown Merse | 5,127 | Ayr/Prestwick | 1,516 |
| Dipple shore | 4,702 | Brora/Golspie | 1,224 |
| Piltanton/Luce | 4,182 | | |

Other smaller areas counted and their peak counts were: Arran (926); R. Lossie (911*); Kilchattan Bay (760**); Loch Riddon (718); Philorth (714); Loch Gilp (712**); Sandside Bay (395**); N. Esk (369**); Loch Linnhe (250**); Dunnet Bay (208**); Loch Caolisport (201**); Gills Bay (121**); Loch Crinnan (166**); Loch Sween (108**); Deveron (100); S. Sinclair Bay (99**); Wick Bay (85**); Stinchar (75**); Dounreay Bay (70**); Harrow Harbour (61**); Ham Harbour (22**); Kyle of Tongue (21**). Total 7,092.

Note: * counts not complete; ** single count only.

Wales

During 1974-75 the coverage of Welsh estuaries remained good (Table 15). A complete count of the Loughor/North Burry Inlet/Gwendraeth/Twyi/Taf complex was obtained in midwinter, although only for the Gwendraeth were regular counts submitted. The excellent cover on the Severn estuary from the Wye to Cardiff was maintained. It provided information that will prove most useful should an objective assessment of the importance of this area be needed to counter the many developments proposed there.

Numbers were almost invariably down on those of the previous year, with the most noticeable decreases on the major estuaries. Although it has been shown earlier that many species were less frequent in the whole of Britain, it is probable that the very mild winter exaggerated the difference in Wales. The only estuary where the peak count rose noticeably was the Dyfi. This difference was mainly due to the reappearance of the large spring passage populations of Ringed Plover, Dunlin and Sanderling which were virtually absent in 1973-74. The number of Oystercatcher was down slightly on 1973-74. This was most noticeable in the Burry Inlet; after a reasonable autumn passage, wintering birds were scarce — no doubt directly associated with MAFF's continued slaughter of them (another 3,000 were killed in the early winter). Now the cull has finished, it will be instructive to follow the population levels in future winters.

Most species were present in lower numbers probably due mainly to mild weather in the east. The largest differences were in the Lapwing, 60 per cent down, and Knot, Bar-tailed Godwit and Grey Plover, 40 per cent down. Although there is quite a large number of waders in Wales it is striking that many species have an extremely limited distribution. During 1974-75 five species regularly had between 60 and 80 per cent of their total Welsh population on just two estuaries. Oystercatcher were on the Burry Inlet and Lavan Sands (Conway Bay), Grey Plover on the Gwent Severn and Burry Inlet, Bar-tailed Godwit on the Burry Inlet and Swansea Bay, Knot on the Gwent Severn and Burry Inlet and Sanderling on Swansea Bay and Pembrey Sands (sometimes being recorded in the Burry Inlet, sometimes on the Gwendraeth). The importance of just a few areas to these species emphasises that even relatively numerous birds may require active protection.

Table 15 Principal estuaries for waders in Wales 1974-75.

| | peak count | | peak count |
|-------------------|------------|----------------------|------------|
| Burry Inlet | 34,745 | Dyfi | 5,669 |
| Severn, Usk-Wye† | 22,689 | Severn, Usk-Cardiff† | 5,038 |
| Conway Bay | 20,825 | Beddmanarch Bay | 3,388* |
| Blackpill | 8,698 | Traeth Bach | 2,513 |
| Taff/Ely | 7,870 | Traeth Dulas | 2,463 |
| N. Burry/Loughour | 7,759** | Afon Wen | 2,390 |
| Conway River | 7,701 | Afon Ceint | 1,768 |
| Gwendraeth | 7,003 | Neath River | 1,617 |
| Taf | 6,906** | Pwhelli Harbour | 1,592 |
| Milford Haven | 5,793 | | |

Other smaller estuaries and their peak counts were: Tywi, inner (896**); Clwyd (639**).

Note: * count incomplete; ** single count only.

† these are only part of the Severn Estuary, the peak count of the Glos/Avon/Somerset coast was 56,036.

North-west England

All of the estuaries of this region were again regularly counted. July counts, however, were only made on the Dee, Mersey, Alt, Ribble and Duddon. There was an intensification of effort on the Duddon where just two observers visited the estuary on up to eight occasions each month.

Table 16 shows that the estuaries all supported large or very large wader numbers, with the four principal estuaries exceeding a peak population of over one hundred thousand birds. All estuaries, with the exception of the Duddon and the Mersey had fewer birds in 1974-75.

Most species were present in smaller numbers this year. The most striking decrease was in the Knot where the midwinter total of 83,000 was the lowest of the six winter counts made during the *Estuaries Enquiry* and almost half that recorded in 1971-72. For the first time peak numbers of Knot were seen in autumn, due almost entirely to 77,000 on the Ribble where the autumn flock appears to be a regular feature. Numbers on the May passage of Sanderling and Dunlin were also noticeably lower than last year (for Sanderling the decrease was 30 per cent). There was a large increase in the numbers of wintering Dunlin, in both November and December with a peak of 230,000. This is the first time that over 200,000 have been counted in this area. Counts were made on the Mersey, Alt, Ribble and Duddon in June, the principal species found were Oystercatcher (1,000 Duddon), Knot (6,200 Ribble) and Sanderling (520 Duddon). A Kentish Plover wintered on the Dee.

North-west England is an extremely important area; in winter 1974-75 it held 31 per cent of British estuarine waders. The most important species were Sanderling (64 per cent of British numbers), Bar-tailed Godwit (57 per cent), Knot (46 per cent), Oystercatcher (41 per cent), Dunlin (28 per cent), and Turnstone, Curlew and Redshank each with 23 per cent of the total.

Table 16 Principal estuaries for waders in north-west England 1974-75.

| | peak count |
|-----------------|------------|
| Morecambe Bay | 258,378 |
| Ribble | 219,369 |
| Dee | 105,106 |
| Solway, south † | 100,745 |
| Mersey | 49,060 |
| Duddon | 45,996 |
| Alt | 10,109 |
| Esk | 7,148 |

Note: † this is only part of the estuary, the north Solway peak count was 69,178.

South-west England

During 1974-75 the first regular counts of the Fal complex were received. Counts here were made on the Truro River, Tresillian River, Restronguet Creek and Carrick Roads; this left only Ruan River not counted. Unfortunately, it was not possible to obtain wader counts of St Johns Lake or the Lynher River this year. Otherwise cover was satisfactory.

The peak counts are presented in Table 17. They show that most major areas had lower numbers than in 1973-74. The Gloucester/Avon/Somerset Severn total of 56,000 was almost identical to the number seen in 1971-72; the decrease of nearly 30,000 from 1973-74 was almost entirely due to the absence of an exceptionally large Lapwing flock in the upper estuary. The Fal complex will emerge as being one of the most important areas for waders in Cornwall.

As mentioned above, Lapwings were much less abundant in 1974-75 than in 1973-74, although numbers were down by 50 per cent they were still the second most numerous wader, after Dunlin. In general, numbers were slightly lower. The May passage of Whimbrel, which roost on Bridgwater Bay, exceeded a thousand for the fourth successive year — no other roost of this size has been reported for this species in Britain. The increase in the numbers of Avocets wintering away from the traditional area on the inner Tamar, has been maintained. Up to 13 were seen on the Exe in midwinter. In 1972-73 it was reported that the Avocet flock had mostly moved from the Tamar to the Tavy. Since then, there has been a slow but steady return to the Tamar. The reason for this is not known. The number of wintering Knot was very low although a small flock which winters in St Johns Lake was not counted.

Table 17 Principal estuaries for waders in south-west England 1974-75.

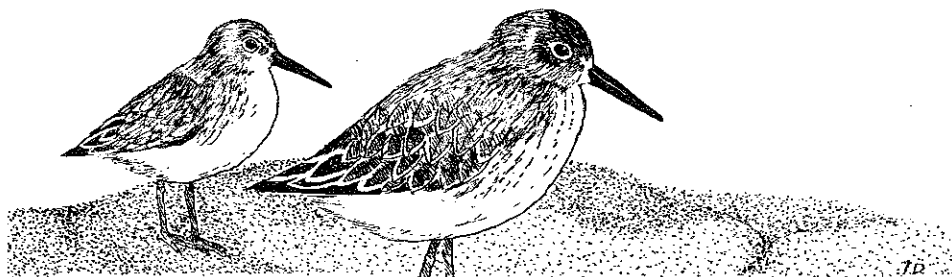
| | Peak count |
|--------------------------------|------------|
| Severn † | 56,036 |
| Taw/Torridge | 23,467 |
| Exe | 20,941 |
| Camel | 17,271 |
| Tamar | 6,568 |
| Fal | 5,366 |
| (including: Truro/Tresillian * | 4,041) |
| (including: Restronguet* | 1,921) |
| Hayle | 4,434 |
| Plym | 3,733 |
| Kingsbridge | 3,614 |
| Teign | 1,759 |
| Tavy | 1,669 |

Other smaller estuaries counted and their peak counts were: Axe (707); Erme (504); Avon (466); Gannel (333); Dart, upper (71); Carne Creek (66**).

Note: ** counted on a single occasion.

* the peak count for the two areas of the Fal are presented here, they are included in the total Fal figure.

† this is only part of the estuary, the counts of other sections were: Usk-Wye 22,689; Taff/Ely 7,870, and Usk-Cardiff 5,038.



Southern England

In 1974-75 coverage of this region was again excellent. Complete counts of all estuaries were made between September and April. In addition, December and January counts of the Sussex coast were made. Unfortunately, no counts were made on Chichester Harbour, one of the main areas, in July, August or May.

Table 18 presents the peak count of waders in each estuary in the region. Numbers were, at least in the major estuaries, slightly lower than in the previous year. Smaller estuaries, however, mostly supported larger numbers; Pagham Harbour, for the first time, had a peak count of over 10,000 waders.

Unlike all other regions of Britain, the midwinter Dunlin numbers in southern England were higher than in 1973-74. The increase was of 17 per cent and because this is the most numerous species in the area the apparently healthy position of the peak count of most estuaries hides the fact that the majority of species decreased in numbers. There is a great contrast between the intensity of the spring passage of waders in southern England and western Britain. In the south there are very few Sanderling, Dunlin and Ringed Plover present in May. In fact the numbers of Sanderling rise from almost none in early autumn to a small midwinter peak before again decreasing to almost zero in spring. In western areas the pattern is completely reversed in this species and the May passage is about ten times the winter level. Winter Ruff were much less numerous than they have been in winters since 1970, and the peak count occurred, unusually, in October. Three Avocets wintered in Pagham Harbour and two in Poole Harbour.

Table 18 Principal estuaries for waders in southern England 1974-75.

| peak count | | peak count | |
|----------------------|--------|----------------------|-------|
| Chichester Harbour † | 41,800 | Poole Harbour | 9,338 |
| Langstone Harbour † | 33,606 | Newtown River | 7,313 |
| Portsmouth Harbour † | 19,917 | Rye Harbour | 5,867 |
| Southampton Water | 17,349 | Beaulieu River | 3,699 |
| Sussex coast | 15,106 | Christchurch Harbour | 2,489 |
| Solent | 14,772 | The Fleet | 2,054 |
| Pagham Harbour | 10,711 | Brading Harbour | 1,193 |

Other smaller estuaries counted and their peak counts were: Lodmor/Radipole (750); Portland Harbour (542); Wootton Creek (492*).

Note: * count incomplete

† these three harbours only are combined to form a single Hants/Sussex Harbours total in Table 11.

Eastern England

The coverage of the estuaries of Eastern England remained excellent. Additional small areas counted for the first time were the Blyth and Wansbeck estuaries in Northumberland. A single winter count of the Holkham/Stiffkey Marshes provided a glimpse of the numbers of waders which occur on the North Norfolk coast. It is the most serious gap in our knowledge of British coastal wader populations.

Table 19 shows that the most important area is still clearly the Wash, despite having 34,000 fewer waders. Most other estuaries had fairly similar numbers to those of 1973-74 although two, Lindisfarne and the Swale, had sizeable increases. On the former this was due to an additional 5,000 Lapwing and 10,000 Knot (this was the only estuary to record a large increase of this species), while on the Swale 10,000 Lapwing were mainly responsible. Eleven of the areas counted in eastern England had a wader population which exceeded 20,000 birds — one of the criteria of international importance.

There was a good autumn passage of Oystercatcher, Ringed Plover and Grey Plover each being about 20 per cent higher than in 1973-74, which was the previous best year. The pattern was not, however, repeated for the Knot, the autumn numbers of which were down by 20,000 and winter numbers by 30,000, to levels which are lower than any recorded before. Apart from Oystercatcher, Lapwing and Grey Plover all other wintering species decreased in numbers from 1973-74, although they were still more numerous than in the preceeding years.

Table 19 Principal estuaries for waders in eastern England 1974-75.

| | peak count | | peak count |
|----------------------|------------|--------------------------|------------|
| Wash | 167,838 | Orwell | 13,628 |
| Lindisfarne | 60,145 | Thames, inner | 9,320 |
| Humber | 41,231 | Crouch | 7,514 |
| Swale | 39,698 | Breydon Water | 6,451* |
| Foulness | 33,510 | Roach | 5,480 |
| Hamford Water | 29,961 | Holkham/Stiffkey Marshes | 5,332** |
| Blackwater | 29,239 | Pegwell Bay | 5,227 |
| Dengie | 24,770 | Deben | 4,453 |
| Medway | 20,332 | Blyth, Suffolk | 3,498 |
| North Kent Marshes | 20,311 | Ore | 2,111 |
| Stour, Essex/Suffolk | 20,119 | Alde | 1,995* |
| Leigh/Canvey | 16,852 | Butley Creek | 1,789 |
| Colne | 15,611 | Jarrow Slake | 1,630* |
| Teesmouth | 14,923 | Washington ponds | 1,061 |

Other smaller areas counted and their peak counts were: Beadnell coast (539*); Wansbeck (339); Coquet (311); Aln (244); Blyth, Northumberland (157).

Note: * *incomplete counts*

** *single count*

Northern Ireland

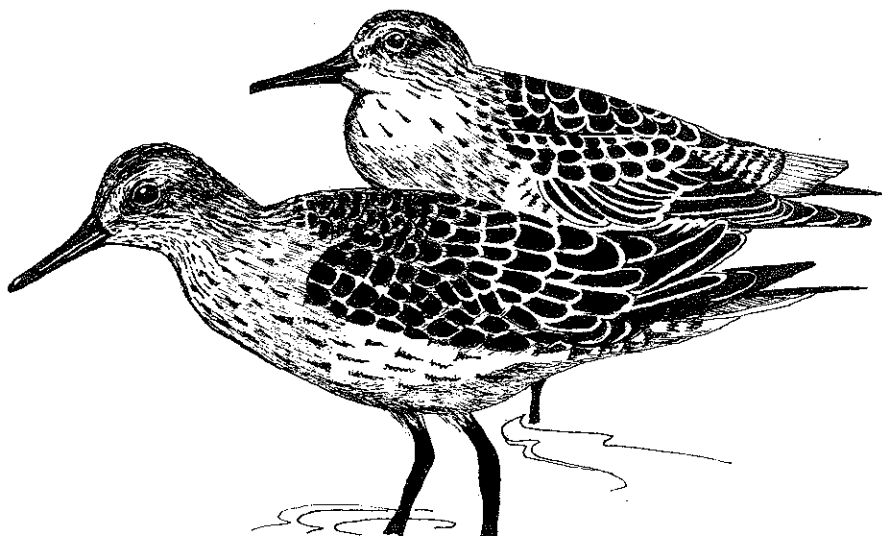
Most estuaries were counted regularly between September and February. A welcome addition was a count of part of Belfast Lough. Early autumn counts were received from Carlingford Lough, Dundrum Bay and the River Bann, the first two also providing spring counts. The cover of Carlingford Lough was particularly comprehensive as for the first time a series of complete counts was made including the Lough shore.

Table 20 presents the peak counts of the seven areas. Only on Lough Foyle was an increase recorded. This was due to a general rise in numbers rather than an increase in one species. The dramatic drop in numbers on Strangford Lough, where the 1974-75 peak count was less than half that for 1973-74, was mainly due to many fewer Knot being present. This species fluctuates dramatically here, the peak counts during the last six years being 1969-70 — 13,650; 1970-71 — 15,565; 1971-72 — 22,786; 1972-73 — 12,327; 1973-74 — 30,230 and now 1974-75 — 6,660. The Knot has an extremely limited distribution in Northern Ireland. In December 1974-75 when Strangford Lough had its maximum numbers, there were only another 39 observed on the other five estuaries. Generally wader numbers were slightly lower or similar to those of the previous year.

Table 20 Principal estuaries for waders in Northern Ireland 1974-75.

| | peak count |
|-------------------|------------|
| Strangford Lough | 28,321 |
| Lough Foyle | 19,949 |
| Carlingford Lough | 7,138 |
| Bann | 6,501 |
| Dundrum Bay | 3,150 |
| Belfast Lough | 3,008** |
| Larne Lough | 2,841 |

Note: ** *single, part count*



Republic of Ireland

The information included in this section has been provided by the Irish Wildfowl Conservancy's *Wetlands Enquiry*. Coverage was highly satisfactory; in particular, counts were made in most months on Dundalk Bay. A complete midwinter count of Cork Harbour, the first for six years, and extensive and almost complete counts of the Shannon/Fergus in September, October, November, February and March were also of note. More counts were obtained from smaller west coast areas.

Table 21 presents the peak counts of each estuary. The improved cover of Dundalk Bay showed that it is one of the most important coastal areas in Ireland, even with the generally lower levels of most species in 1974-75 the peak count was over 66,000. Numbers on the Shannon/Fergus were considerably down due mainly to 12,000 fewer Black-tailed Godwit in spring, and 9,000 fewer Dunlin and 7,000 fewer Lapwing in winter. Otherwise there were few large changes in the maxima on the other estuaries.

Most species were present in fairly similar numbers to the previous year, although the addition of counts of Dundalk Bay altered the picture for several species. Here Oystercatchers exceeded 26,000 in September, making Dundalk Bay one of the most important passage areas for this species in Britain and Ireland. Winter numbers, however, were 5,000-7,000. In Ireland large numbers of Lapwing and Golden Plover use the estuaries, and of the larger areas only the North Bull does not have 5,000 or more of these two species. Although there was a decrease in numbers of Black-tailed Godwit on the Shannon/Fergus, this was mainly due to their occurrence further up the Shannon Valley. The March total almost reached 12,000 when the numbers on all wetlands were considered.

Table 21 Principal estuaries for waders in Ireland 1974-75.

| | peak count | | peak count |
|---------------------|------------|-------------------|------------|
| Dundalk Bay | 68,285 | Waterford Harbour | 5,359 |
| Shannon/Fergus | 44,757 | Tramore | 5,309 |
| Cork Harbour | 27,695** | Ballycotton | 4,842 |
| North Bull | 27,583 | Tacumshin | 4,611 |
| Ballymacoda Bay | 21,879 | Malahide | 4,337 |
| Bannow Bay | 19,511 | Rogerstown | 3,611 |
| Wexford Harbour | 18,112 | Tawin | 3,421* |
| Dungarven Harbour | 9,644 | Youghall Harbour | 2,904 |
| Lough Swilly | 9,450* | Tralee Bay | 2,839* |
| Cull | 7,963 | Lady Islands Lake | 2,635 |
| Barrow Harbour | 6,528 | Clonakilty | 2,263* |
| Boyne | 6,283 | Cummeen Stand | 2,004 |
| Castlemaine Harbour | 5,643* | Broad Lough | 1,022* |

Smaller estuaries counted were: Ballysodare Bay (956*); Courtmacsherry (816**); Drumcliff Bay (489**); Rosscarbery (416**); Laytown (374*); Akeragh Lough (234**).

Note: ** *single count*, * *incomplete count*.

Gulls

Despite considerable efforts by many observers the national picture of coastal gull populations remains incomplete. The numbers presented in Table 22 must therefore be treated with caution for the counts sent in rarely include night time roosting concentrations, which often exceed the numbers which feed and rest there during the day.

Table 22 Principal concentrations of gulls counted 1974-75.

| | peak count | | peak count |
|------------------|------------|---------------------|------------|
| Lindisfarne | 68,505 | Solway, north | 18,925 |
| Solway, south | 63,741 | Moray Firth | 16,859 |
| Wash | 46,308 | Wells Harbour | 14,000 |
| Beaulieu | 30,106 | Severn, Usk-Rhymney | 13,254 |
| Troon Bay, south | 29,347 | Langstone Harbour | 12,344 |
| Clyde, inner | 26,597 | Thames, inner | 11,071 |
| Ravenglass | 24,771 | Colne | 10,471 |
| Humber | 23,859 | Breydon Water | 10,421 |
| Firth of Forth | 22,303 | Swansea Bay | 10,377 |
| Cromarty Firth | 21,633 | Taff/Ely | 10,236 |

Table 23 The largest concentrations of the five principal gull species recorded 1974-75. The month of occurrence is given in parentheses.

| Great Black-backed Gull | | Lesser Black-backed Gull | | Herring Gull | |
|-------------------------|------------|--------------------------|------------|---------------|-------------|
| Wash | 3,673 (9) | Thames, inner | 1,600 (12) | Moray, Firth | 11,026 (11) |
| Lindisfarne | 3,500 (11) | Solway, south | 1,159 (8) | Lindisfarne | 10,000 (1) |
| Humber | 2,298 (9) | Alt | 801 (8) | Forth | 8,698 (11) |
| Teesmouth | 1,250 (1) | Wash | 583 (9) | Solway, south | 8,422 (3) |
| Forth | 1,212 (10) | Troon, south | 500 (3) | Solway, north | 6,862 (9) |
| Pegwell Bay | 1,200 (1) | Taff/Ely | 450 (10) | | |
| Leigh/Canvey | 1,153 (9) | Duddon | 402 (6) | | |

| Common Gull | | Black-headed Gull (non-breeding) | | Black-headed Gull (summer 1975) | |
|---------------|-------------|-------------------------------------|-------------|------------------------------------|--------|
| Lindisfarne | 42,000 (12) | Solway, south | 30,794 (2) | Beaulieu | 30,000 |
| Troon, south | 25,000 (9) | Wash | 26,042 (9) | Ravenglass | 24,000 |
| Solway, south | 23,029 (1) | Clyde, inner | 21,753 (9) | Wash | 13,795 |
| Humber | 10,631 (11) | Lindisfarne | 13,000 (10) | Colne | 9,900 |
| Solway, north | 5,609 (2) | Severn, Rhy-Usk | 12,000 (1) | Ore | 4,075 |
| | | Wells Harbour | 11,300 (11) | Swale | 3,350 |
| | | Breydon Water | 10,000 (8) | Newtown | 2,000 |
| | | Langstone Hbr | 10,000 (10) | | |

Table 23 summarises the information submitted for the main species of gull. Great Black-backed Gulls *Larus marinus* were again most numerous on the east coast of England and Scotland, where all of the seven largest concentrations were found. Most birds were again seen in late autumn, September to November, although on Teesmouth and Pegwell Bay January peaks were recorded.

The Lesser Black-backed Gull *L. fuscus* was less numerous than in 1973-74. The majority were recorded between March and October. Only two areas, the inner Thames and Hamford Water, had midwinter peaks; studies in the Thames have shown that virtually all of these wintering birds are of the dark, Scandinavian form *L. f. fuscus*.

The principal numbers of Herring Gulls *L. argentatus* and Common Gulls *L. canus* were found in Scotland and northern England; numbers were slightly higher than the previous year.

Most Black-headed Gulls *L. ridibundus* again were recorded during the period August-November; almost all east coast estuaries fell into this category. Two, south Solway and Severn (Rhymney-Usk), of the three west coast estuaries on which major concentrations were seen, had peaks in midwinter. The three principal colonies at Needs Oar Point, Ravensglass and the Wash were counted.

Many fewer Kittiwakes *Rissa tridactyla* were recorded in 1974-75. Only on three areas were more than 500 seen. They were Isle of Arran (1,000 September), Beadnell (730 May) and the Wash (600 October).

Of the less common gulls Little Gulls *L. minutus* were seen on 22 estuaries with August-September peaks of 41 on the Alt and 38 on the south Solway. Fourteen estuaries had Glaucous Gulls *L. hyperboreus* with up to seven on south Troon Bay in May. Mediterranean Gulls *L. melanocephalus* were seen on four areas but were more numerous with up to six, mainly first summer birds, at Blackpill in May and two at each of Portland Harbour and Beaulieu River in April, the latter occurring in the gullery at Needs Oar Point. Exceptional sightings were of a Ring-billed Gull *L. delawarensis* at Blackpill, and a Bonaparte's Gull *L. philadelphia* and Ross's Gull *Rhodostethia rosea* at Christchurch Harbour.

Terns and Skuas

As in 1973-74, there were many Common/Arctic Terns *Sterna hirundo*/*S. paradisaea* recorded in the Irish Sea where 1,875 were on the Alt and 1,370 on the Dee in August and 2,000 on the Mersey in September. The only other post-breeding flock of a thousand was on the Eden in July. Much smaller numbers of Sandwich Terns *S. sandvicensis* were recorded this year. Only three estuaries had more than 500 outside the breeding season — they were the Firth of Forth (1,150), the Wash (835) and the Dee (500).

Of the eight estuaries where post-breeding Roseate Terns *S. dougalli* were seen, only the Firth of Forth (with 30 birds) had more than five together. Little Terns *S. albifrons* were again reasonably numerous. During the August count 860 were seen on the Dee although this total number involved an unknown amount of duplication of counts. Other areas where over a hundred were recorded were Foulness (253, July), the Wash (172, July), Pagham Harbour (160, July), Duddon (110, July) and Hamford Water (110, June), most flocks representing breeding concentrations. There was a fairly large coastal movement of Black Terns *Chlidonias niger* during the September count in south and east England when a total of 371 were recorded; principal numbers were on the Wash (145), Hamford Water (80) and Southampton Water (49).

All four species of skua *Stercorarius* spp were seen during counts; the only notable numbers were of Arctic Skuas *S. parasiticus* on the Dee (25) and the Wash (23).

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