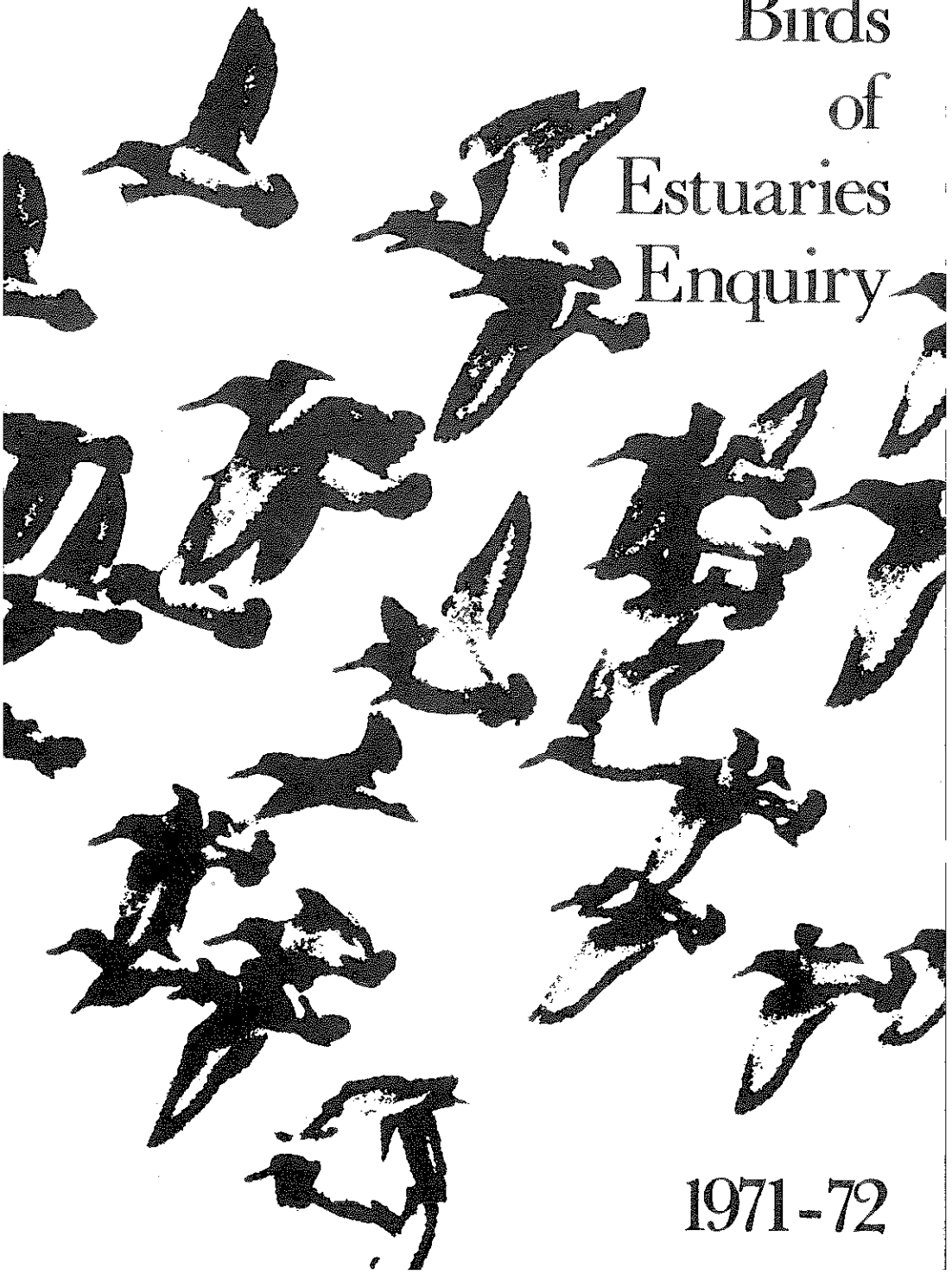
Birds of Estuaries Enquiry



1971-72

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Introduction

Towards the end of the period covered by this report the Wildfowl Trust officially became a co-sponsor of the enquiry. This means that the section on ducks, geese and swans has been written by them, in particular by G Atkinson-Willes and Miss J Coldrey, and their expertise has considerably improved this section. I would like to thank them for their efforts.

The wildfowl counts have been made for over 20 years in Britain and for 10 years on an international level, and thus the populations of north-western Europe are known with some accuracy; the section on wildfowl incorporates some of these figures. The international wader counts are still in their infancy and little reference is made to them. It is hoped that in a future report we may be able to discuss our wader populations on a similar basis.

In the Republic of Ireland the Irish Wildbird Conservancy has put much effort into the enquiry; they have developed it further to include inland waters and therefore have made it a complete "Wetlands Enquiry". This work has clearly demonstrated the very different bird fauna in Ireland and has already produced much information, with more to come in future years.

Coverage has continued to improve in all areas, particularly in Northern Ireland, the Republic of Ireland and Scotland. This has given a much more balanced picture of estuarine bird distribution than was previously possible. However the 1971–72 winter was very mild and this must be borne in mind. The relative importance of each estuary will probably vary depending on the severity of the winter and in this context it would be interesting if we had a cold winter so that we could compare the counts.

As we are now about midway through the main effort of the Birds of Estuaries Enquiry the value of additional information included on bird and habitat maps is becoming apparent. Many of these maps have already proved useful in the assessment of the effects of proposed development plans. I would like to stress here, as I did in the midwinter 1972–73 newsletter, that these maps are important and that we need them for every estuary and each section within an estuary.

We have continued our liaison with many conservation bodies to ensure the accurate interpretation of the counts. Apart from the combined outlets of the British Trust for Ornithology, the Royal Society for the Protection of Birds and the Wildfowl Trust, we have continued to provide the Nature Conservancy, the International Waterfowl Research Bureau, the County Trusts and local ornithological societies with vital information for international, national and local conservation problems. This part of the work is expanding at a considerable rate as more planners and conservationists become aware of our enormous store of information.

Again this report follows the format of the two previous reports. I must also repeat the warning that direct comparisons between the three years figures are difficult to make unless the details of coverage are known. The counts of divers, grebes, ducks, geese, swans and gulls are summarised under group headings. For waders the countries are divided as follows:

(1) Scotland: including the north Solway
(2) Wales: Flintshire to Monmouthshire, excluding the west shore of the Dee
(3) North Irish Sea: The Dee–south Solway
(4) South-west England: Devon–Gloucestershire

(5) Southern England: Dorset–Sussex
(6) Eastern England: Kent–Northumberland
(7) Northern Ireland
(8) Republic of Ireland

Divers

Not many divers were recorded but again the main numbers were in Scotland and Ireland. Four areas recorded five or more Great Northern Divers *Gavia immer*; they were Strangford Lough (22, March), Dundrum Bay (8, March), Cumberland coast (6, March) and Laytown (5, April). Six areas reported concentrations of Red-throated Divers *G. stellata* which exceeded 10 birds; they were the Firth of Forth (48, January), Laytown (30, April), Moray Firth (27, March), and 16 on each of the Blackwater/Dengie (March), Colne (April) and Cumberland coast (March). Few Black-throated Divers *G. arctica* were seen; the only areas with more than one were Chichester Harbour and Hamford Water both with two.

Grebes

As noted last year by far the largest concentration of Great Crested Grebes *Podiceps cristatus* was seen on Conway Bay, and this year it reached 335 in July. Other areas had no more than 100, though the Firth of Forth (96, September), Langstone Harbour (83, November), Larne Lough (67, December), Alt (52, March) and Malahide (50, November) had small concentrations. Slavonian Grebes *P. auritus* were more frequently seen than Black-necked Grebes *P. nigricollis*. Slavonians were present on 19 estuaries with concentrations at Pagham Harbour (40), Exe (26) and Portland Harbour (22). Only nine estuaries had Black-necked Grebes and only Poole Harbour (11), Loch Ryan (5) and Burry Inlet (4) had more than two birds. Red-necked Grebes *P. grisegena* were less common and only occurred on four areas with the Firth of Forth (8) and Lindisfarne (4) supporting the largest number. Little Grebes *Tachybaptus ruficollis* were again widely recorded, the largest concentrations being on Strangford Lough (60), Vartry River (50) and Chichester Harbour (41).

Other Water Birds

Surprisingly few concentrations of Cormorants *Phalacrocorax carbo* were noted; by far the largest was in the Solway where there were 970 in the south in December and 267 in the north (and 570 in the south) in January. The only other areas with over two hundred were the Cromarty Firth (225) and Firth of Clyde (219). Shags *P. aristotelis* were less common; only the Firth of Forth (176) and Firth of Clyde (103) had over one hundred. Wintering Spoonbills, *Platalea leucorodia* were present in Ballymacoda again and Christchurch Harbour. A Little Egret *Egretta garzetta* was recorded at Clonakilty. All the areas which supported over 500 Coot *Fulica atra* were on the south coasts of England and the Republic of Ireland. The main areas were Fleet (3,000) and Chichester Harbour (2,335).

Ducks

The counts of most species were much more comprehensive than in the previous season. Along the North Sea and Channel coast, and around the Irish Sea, the coverage of the main resorts was virtually complete, at any rate for November and January. Large gaps were still apparent along the Atlantic coast of Scotland and Ireland, but for quite a number of species these areas seem relatively unimportant.
In order to make this section of the report as complete as possible the Wildfowl Trust has

made available the records obtained through the National Wildfowl Counts, and the International Waterfowl Censuses. Special attention has been paid to the species which rely predominantly on British and Irish estuaries for their winter quarters. To highlight the importance of some of these sites the counts are related to estimates of the total population in Britain, or in northwest Europe as a whole. It is now accepted that any site supporting more than 1% of the estimated "flyway" population of a species should be regarded as internationally important. In this context the northwest European flyway is taken to include northern Russia, Scandinavia, Poland, Germany, the Netherlands, Belgium, France, Switzerland, Spain, Portugal, the British Isles and Iceland.

Mallard *Anas platyrhynchos* By far the most numerous duck in the British Isles (with a population of about 400,000) but the flocks are widely dispersed and even the most favoured resorts seldom hold 1% of the national total. In autumn 1971 the largest coastal gatherings were in the Humber (5,200), Wexford Harbour (3,000), the Medway (2,450), North Kent marshes (2,000), and Strangford Lough (1,956). Other estuaries which recorded their peak counts in winter were the Swale (2,621), Blackwater (2,385) and the Duddon (2,045). A further 13 estuaries held peaks of 1,000–1,600, six in autumn and the rest between November and January.

Teal *Anas crecca* The numbers recorded and the pattern of occurrence were virtually the same as in 1970–71. The same six estuaries again held maxima of more than 1,000, which were as follows: Mersey (5,786, February), the Medway (4,300, November), Strangford Lough (1,450, January), the Bull, Co Dublin (1,350, December), the Foyle (1,200, October) and Poole Harbour (1,000, December). There was also a record of 1,300 from the Dyfi in October. The concentration on the Mersey represented nearly 3% of the northwest European population which is estimated at 200,000. The Medway is another internationally important site.

Wigeon *Anas penelope* The total population in northwest Europe is estimated at 500,000, of which 200,000 winter in the British Isles. (The IWRB censuses produced UK–Irish totals of 196,000 in January 1971 and 155,000 in the milder January of 1972.) Table 1 emphasises the importance of British and Irish estuaries, especially during the period October–January. With full cover the totals for estuaries would certainly be higher, reaching perhaps 140,000.

Table 1 Monthly totals of Wigeon *Anas penelope* recorded on British and Irish estuaries 1971–72

	England Scotland and Wales	Ireland	Total
September	29,625	4,675	34,300
October	76,925	21,215	98,140
November	85,200	27,270	112,470
December	87,250	29,250	116,500
January	91,240	12,450	103,690
February	58,200	11,230	69,430
March	18,800	1,640	20,440

As in 1970–71 there were seven estuaries which held more than 5,000 Wigeon (1% of the estimated northwest European population). Six of these appeared in the previous list and should undoubtedly be regarded as centres of international importance (see Table 2). The Wash, the Fleet and the Dornoch Firth are placed provisionally in the same category,

pending further records. Two further sites, the Ribble and Montrose Basin, each held 4,000 birds, and another five held more than 3,000. In Scotland the peaks occurred in October, elsewhere between November and January.

Table 2 British and Irish estuaries of international importance for Wigeon *Anas penelope* 1970–71 and 1971–72

	1970–71	1971–72
Lindisfarne	27,000	26,000
Strangford Lough	18,590	20,420
Medway	8,500	8,200
Foyle	6,930	7,865
Cromarty Firth	7,520	7,190
Wash	—	6,210
Exe	5,000	5,000
Dornoch Firth	—	4,850
The Fleet, Dorset	5,800	4,600

Note: the only inland site of international importance for Wigeon is on the Ouse Washes; the numbers here increased from 19,500 in December 1971 to a peak of 35,550 in February 1972.

Pintail *Anas acuta* Another species which depends primarily on estuaries for its winter roosts and feeding grounds. The northwest European population is quite small, probably not more than 70,000. In Britain its numbers are increasing steadily, and are now estimated at about 14,000. The great majority of these are included in the monthly totals set out below; the low December figure is due to the lack of records from several important areas.

Table 3 Monthly totals of Pintail *Anas acuta* recorded on British and Irish estuaries 1971–72

	England Scotland and Wales	Ireland	Total
September	1,460	60	1,520
October	6,280	825	7,105
November	11,620	1,500	13,120
December	7,550	1,030	8,580
January	10,280	785	11,065
February	9,760	605	10,365
March	3,235	75	3,310

By far the largest concentration was on the Mersey, which held a November peak of 6,960 (*c* 10% of the northwest European population); in December and January there were 4,000 and in February 5,320. Other gatherings of international importance were located on the Medway (1,250), Burry (755) and Solway Firth (740).

Shoveler *Anas clypeata* The numbers of this species on several estuaries were substantially higher than in 1970–71, but were still relatively unimportant in the European context. The only notable exception was on the Swale where an astonishing peak of 3,100 was recorded in December (*c* 5% of the northwest European population), the count in November came to 2,400, in January to 1,050, and in February to 1,200. The highest record in the previous season was 84. Elsewhere there only four estuaries with more than 150 birds; the Bull, Co Dublin held 360 in November, the Solway Firth 340 in September, and the Medway and the North Kent marshes about 300 each, the former in February, the latter in January.

Freshwater Diving Duck In midwinter, Tufted Ducks *Aythya fuligula* were recorded in numbers on Radipole Lake, Weymouth (430), the Exe (280), North Kent marshes (250), Poole Harbour (215) and Strangford Lough (210). Flocks of more than 200 Pochard *A. ferina* were also found at several places. The most remarkable concentration was on the

Thames below Woolwich, where the numbers increased from 2,500 in December and January to a February peak of 4,000 (nearly 2% of the northwest European population). This is the second season in which big flocks have been seen here; in 1970–71 a single count at Woolwich in November produced a total of 1,500. The other main resorts were Lady's Island Lake, Co Wexford (600), Radipole Lake (441), the Fleet, Dorset (360), and the North Kent marshes (350).

The Scaup *A. marila* deserves special attention. Because of its specialised requirements, a very large proportion of the European population is concentrated on to a few major resorts, all but one of which are on the coast, in areas where oil pollution is a constant hazard. The total numbers in northwest Europe are estimated at 150,000, of which about 25,000 winter regularly in the British Isles; the remainder are concentrated in the western Baltic and the Netherlands. The British population, which presumably includes the bulk of the Icelandic breeding stock, is particularly vulnerable to oil pollution; at least 80%—often 90%—of the of the birds are concentrated on one short stretch of the Firth of Forth, between Leith and Musselburgh. Table 4 demonstrates the importance of this area.

Table 4 The total numbers of Scaup *Aythya marila* recorded (a) on British and Irish estuaries 1971–72 and (b) on the Firth of Forth

	All estuaries	Firth of Forth
October	343	170
November	9,134	7,032
December	10,827	10,004
January	24,357	22,216
February	20,532	18,584
March	7,368	6,013

The other British resorts may seem insignificant but they could become important if disaster overtook the flock on the Firth of Forth. In 1971–72 only six of them produced counts of more than 100 birds: Loch Indaal, Islay (1,050); Carlingford Lough (985); Solway Firth (780); Wexford Harbour (460); and Tacumshin, Co Wexford (143). A further ten estuaries held peaks of more than 20.

Marine Diving Duck Most of the species in this group are more numerous on the coast, especially in the northern islands, than in estuaries, and the counts are far from complete. Long-tailed Ducks *Clangula hyemalis* were recorded in quite large numbers on the Dornoch Firth (650), Spey Bay (356), Firth of Forth (293) and Moray Firth (284). Common Scoters *Melanitta nigra* were found in flocks of more than 500 only on the Firth of Forth (877) and the Moray Firth (705). The Firth of Forth also held 550 Velvet Scoters *M. fusca* and the Dornoch Firth a mixed flock of 2,000 of the two species. No other site had more than 50 Velvet Scoters. Eiders *Somateria mollissima* were again recorded in very large numbers at the mouth of the Firth of Tay; 15,100 were present in November. Elsewhere there were flocks of 1,000 or more on the Firth of Forth (3,280), the Ayrshire coast (2,140), the inner Clyde (1,350), Lindisfarne (1,200) and the Dornoch Firth (1,020). A King Eider *S. spectabilis* was reported on the Ayrshire coast in December.

The total number of Goldeneye *Bucephala clangula* wintering in the British Isles is probably less than 15,000, *c* 10% of the northwest European population. Their main resort is on the Firth of Forth, on the stretch between Leith and Musselburgh. More than 2,000 were present here from December until March, with a peak of 4,270 in January. The next most important resorts were on the Ayrshire coast (470), Strangford Lough (445), Cromarty Firth (410), Firth of Tay (340), inner Clyde (330) and Moray Firth (280). Eight sites held

a peak of 1–200, and a further 15 held more than 50. The monthly totals for the estuaries of Britain and Ireland amounted to 3,780 in November, 4,530 in December, 7,885 in January, 5,880 in February and 4,685 in March.
Saw-billed Ducks were also numerous in Scotland. Seven estuaries held more than 150 Red-breasted Mergansers *Mergus serrator*, three in Scotland, two in England, one in Wales and one in Ireland. Most of the peaks occurred between November and January; the Firth of Forth and Strangford Lough both held 340 at this time, the Firth of Tay 310, and Portland Harbour and Poole Harbour 150 each. September peaks were recorded on Loch Ryan (265) and Conway Bay (235). A further 23 estuaries held flocks of 50 or more. The total count on British and Irish estuaries increased from *c* 1,550 in September and October to 2,655 in January. In the British Isles as a whole, the population probably amounts to 10,000 and in northwest Europe, to not less than 40,000.
The only large concentration of Goosanders *M. merganser* was on the Beauly Firth, where 324 were present in February. In the previous winter the flock here reached a December peak of nearly 900.

Shelduck *Tadorna tadorna* More than twice as many Shelduck were counted in 1971–72 as in the previous season, due partly to improved cover and partly to the presence of exceptional numbers at many of the main resorts. (The Wildfowl Trust's seasonal index of abundance was the highest in 25 years.)

Table 5 Monthly total of Shelduck *Tadorna tadorna* recorded in the British Isles

	1970–71	1971–72
September	4,452	6,475
October	6,853	19,594
November	14,435	31,175
December	19,109	36,341
January	29,568	68,617
February	30,936	61,115
March	24,115	37,235

These figures confirm that the British Isles are the main wintering area for Shelduck in northwest Europe. The total northwest European population is estimated at 105,000; of these about half normally come to Britain, but in this exceptional season the proportion may have been as high as 70%. No fewer than 24 estuaries held peaks of 1,000 or more, thus qualifying as sites of international importance. Many of them also held large numbers in 1970–71 (see Table 6 over page). On the Cheshire Dee and in Bridgwater Bay the peaks occurred in October, at Teesmouth in November, and at the other resorts between January and March.

Geese

Dark-bellied Brent Goose *Branta bernicla bernicla* In January 1972 the world population stood at 34,000, a decrease of 4,500 on the estimate for the previous year. The numbers counted in Britain at this time amounted to 21,826, *c* 64% of the total. This level of population was in fact maintained for four consecutive months, from November 1971 until February 1972. Throughout the winter all the main resorts were counted regularly, with the exception of the northeast corner of the Wash, which was covered only in November and January. The only other sites not visited were the north Norfolk harbours at Blakeney and Wells which hold several hundred; the flock at Scolt Head is included in the total for the east coast.

Table 6 British and Irish estuaries of international importance for Shelduck *Tadorna tadorna* 1970–71 and 1971–72

	1970–71	1971–72
Wash, Norfolk/Lincs	5,217	13,930
Morecambe Bay, Lancs		6,169
Dee, Cheshire/Flints	2,567	5,823
Chichester Harbour, Sussex/Hants	3,500	3,900
Blackwater, Essex	2,150	3,854
Medway, Kent	2,900	3,420
Langstone Harbour, Hampshire	1,975	2,950
Stour, Essex/Suffolk	1,831	2,680
Inner Thames, Essex/Kent		2,600
Mersey, Cheshire/Lancs		2,280
Firth of Forth	1,589	2,025
North Kent marshes		2,000
Ribble, Lancs	1,089	1,970
Teesmouth, Yorks/Durham	1,406	1,965
Poole Harbour, Dorset	2,582	1,780
Orwell, Suffolk		1,650
Strangford Lough, Co Down	1,236	1,560
Colne, Essex		1,500
Hamford Water, Essex		1,500
Solway, north shore		1,450
Bridgwater Bay, Somerset		1,400
Swale, Kent	1,325	1,400
Eden, Fife	1,722	1,160
Cork Harbour, Co Cork	1,187	1,050

The results in table 7 present, therefore, an almost complete summary of the numbers and distribution of the species within Britain.

Table 7 The numbers of Dark-bellied Brent Geese *Branta b. bernicla* recorded on the east and south coasts of England 1971–72

	Wash	East coast	South coast	Total
October		8,704	314	9,018
November	3,076	14,492	3,254	20,822
December		13,109	5,940	19,049
January	2,755	12,224	6,809	21,788
February		12,994	6,659	19,653
March		5,469	4,915	10,384

The numbers at the main resorts are listed in Table 8. The first column shows the highest counts during the course of the season; the remaining columns indicate the percentage of the world population (34,000) recorded at the various sites in each month between October and March. The sites are arranged in approximate order of importance, taking into account both the size of the population and the period during which large numbers were present. The percentages are rounded down to the nearest whole number, if the counts failed to reach 340 (1%) the peak month is marked with an asterisk.

Pale-bellied Brent Geese *Branta bernicla hrota* Flocks of more than 50 were recorded on 14 estuaries, of which 13 were in Ireland. The coverage was a considerable improvement on the previous season, but it was still far from complete. The biggest counts were from Strangford Lough (14,920 an unusually high number), the Bull, Co Dublin

Table 8 The highest counts of Dark-bellied Brent Geese *Branta bernicla bernicla* and the percentage of the world population using the various sites in each month

		Oct	Nov	Dec	Jan	Feb	Mar
Foulness, Essex	7,058	16	20	16	9	7	1
Langstone Harbour	3,730	—	6	9	9	11	8
Blackwater	3,820	2	6	11	7	8	5
Chichester Harbour	3,080	—	2	7	9	7	4
Wash	3,076	—	9	—	8	—	—
Leigh, Essex	2,006	3	3	4	5	2	—
Dengie, Essex	2,000	2	5	1	1	4	1
Colne	1,510	—	—	1	2	4	3
Scolt Head, Norfolk	1,000	—	1	3	2	2	2
Hamford Water	1,580	—	—	—	4	3	1
Medway/Swale	550	—	—	1	1	1	—
Stour, Essex/Suffolk	320	—	—	—	—	*	—
Exe, Devon	290	—	—	—	—	*	—

In addition, there were small flocks on the Crouch (165), Newtown, Isle of Wight (110), Keyhaven (100), Orwell (100), Pagham Harbour (80) and Portsmouth Harbour (60)—nearly all in February.

(1,066), Lindisfarne (700), Rogerstown, Co Dublin (475), and Tacumshin, Co Wexford (450). These same five places also held substantial numbers in 1970–71. An interesting September record of 47 birds came from the former stronghold on the Moray Firth, which seems to have been deserted for the past 30 years.

Grey Geese Most of the records received were misleadingly low, because by day the majority of the geese which roost on estuaries are away to their inland feeding grounds. There were, however, a number of notable counts; very large numbers of Pink-footed Geese *Anser brachyrhynchus* were located on the Scottish shore of the Solway Firth in January (9,337), and on the English side in March (10,966). In February there were 3,350 European White-fronted Geese *A. albifrons albifrons* on the Severn at Slimbridge, and a further 1,360 on the North Kent marshes, Swale and Medway. (The British population reached a peak of only 6,000 in 1971–72, 3–4,000 fewer than in some recent years.) Greenland White-fronted Geese *A. albifrons flavirostris* were present in strength on Islay (2,200 in November) and on the Wexford Slobs (5,950 in March-April).
Islay also held very large numbers of Barnacle Geese *Branta leucopsis*, 16,500 in November, 9,640 in February and 17,000 in March—more than 35% of the world population. The flock on the Solway Firth totalled 3,870 in November and 2,518 in April. Poole Harbour held 377 Canada Geese *B. canadensis* in September, and a single Snow Goose *Anser caerulescens* was present on Islay for much of the winter.

Swans

One estuary held internationally important concentrations of both Whooper and Bewick's Swans, *Cygnus cygnus* and *C. bewickii*, and a further four held similar gatherings of one or other species (see Table 9). The Bewick's Swan resorts are particularly important because of the smallness of the European population (*c* 6,500) and because of the recent losses of specialised habitat in the Netherlands and elsewhere. The Whooper Swan is more numerous with a north European population of 17,500. This includes the Icelandic population of

c 4,000 which migrates almost exclusively to the British Isles and comprises the bulk of our winter numbers. In this context, the herd on the Cromarty Firth, which formerly totalled 4–5,000, is still of very considerable importance, and is therefore included in the list below.

Table 9 British and Irish estuaries of international importance for Whooper and Bewick's Swans *Cygnus cygnus* and *C. bewickii*

	Whooper Swans *C. cygnus*	Bewick's Swans *C. bewickii*
Foyle	861	140
Strangford Lough	619	
Severn estuary		311
Lindisfarne	403	
Wash		137
Cromarty Firth	139	

No site in the British Isles held more than 1,200 Mute Swans *C. olor* (1% of north European population). There were, however, a number of estuaries which supported an appreciable proportion of the resident British and Irish populations (estimated at *c* 18,000 and 5–6,000 respectively). The highest counts in England and Scotland were on the Fleet, Dorset (736), Essex Stour (382), Cromarty Firth (271) and Montrose Basin (218). In Ireland there were records of 830 on Strangford Lough and 700 on Lady's Island Lake, Co Wexford.

Waders

In the second full year of this enquiry the coverage has continued to improve, both in the areas visited and the number of monthly counts made. Many observers are now counting in July and May, both very interesting passage periods, and effort is being made to ensure that we obtain a full picture of the migration year.

Comments on the improvement of coverage have already been made in the introduction, and are expanded in the regional sections which follow, so they will not be repeated here. However, it must be pointed out that they do affect the total number of each species recorded and this must be considered before drawing any conclusions from the figures presented here.

Table 10 presents the estuaries which supported a peak count of over 15,000 waders. Seventeen of these 29 estuaries recorded similar numbers to those of 1970–71, nine recorded high numbers (six of these being very much higher), two recorded decreases and one new area was included. With this pattern of similarity it is not surprising to find that the order in this list is quite similar to what it was last year. The most notable change (due to improved coverage) was the vast number of waders noted in the Solway, making it the most important area after Morecambe Bay, with the Wash closely following in third position.

Again Table 11 (see over page) only presents the grand totals from Britain because not all the estuaries in Ireland were counted in each month. For most species the numbers involved and the trends observed were fairly similar to those in 1970–71 (see p. 8 of the 1970–71 report) though the numbers were slightly higher this year. One major departure from this was the much great number wintering in January and February. This was due partly to the special effort made for the international count in January but this could not have been the sole reason. What affects the numbers is not certain but perhaps the continuing series of mild

Table 10 British and Irish estuaries which supported over 15,000 waders 1971–72

	Peak count†	1970–71	1969–70
Morecambe Bay	227,181	252,443	224,527
Solway	207,620	79,876*	75,833*
Wash	181,366	161,009*	65,539*
Ribble	123,164	119,826	72,708*
Dee	121,772	121,425	147,944
Humber	85,672	44,064	35,365
Firth of Forth	70,214	37,568*	31,574*
Severn	68,433	49,116	35,338
Strangford Lough	49,738	45,090	28,853
Chichester Harbour	36,172	17,271	22,967
Burry Inlet	35,372	46,653	44,210
Duddon	33,611	31,146	17,942
Swale	31,421	19,652	26,653
Langstone Harbour	30,664	16,261	23,698
Foulness	29,748	20,130	14,938
Lindisfarne	29,321	33,320	3,682*
North Bull	28,915	26,676	NC
Blackwater/Dengie	24,939	24,146	6,081*
Teesmouth	24,212	25,127	21,307
Exe	21,905	20,975	25,638
Ayr coast	20,471	10,549*	7,370*
Firth of Clyde, inner	18,728	17,026	23,325
Mersey	18,680	19,710	NC
Conway Bay	18,376	16,850	19,011
Portsmouth Harbour	17,221	16,913	16,051*
Cork Harbour	16,636	23,815	NC
Lough Foyle	16,304	15,149	NC
Little Brosna	15,565	NC	NC
Colne	15,436	12,671	6,206*

†The peak count is the summation of the highest monthly count for each species, regardless of which month the peak occurs.
*Counts known not to be complete.

winters combined with good breeding seasons have resulted in a greater abundance of waders on the northern part of their wintering area. Some indirect evidence for this was that the only two estuaries to record significant decreases in number were two in the southwest, the Burry Inlet and Cork Harbour (see Table 10), where one would expect greater numbers to be in cold weather, when the birds are forced south and west. Additionally many Scottish and eastern estuaries recorded larger numbers than 'normal'. The number present in January deserves a closer attention. In Britain just under 1,410,000 waders were recorded and if the incomplete Irish figures are added this rises to a massive 1,516,000. This includes almost half a million Dunlin *Calidris alpina* and only slightly fewer Knot *C. canutus*. The significance of these numbers can be seen if put into an international context, when it becomes clear that we have found as many waders wintering here as are known from the whole of the rest of Europe and northwest Africa.

In order to understand the fluctuations of wader numbers in our estuaries, we are working closely with the ringers and the Wader Study Group. With the knowledge of the migration routes taken, of the turnover in each estuary, of the populations involved and of the use each species makes of different parts of each estuary in different months, we expect to be able to correctly interpret the counts.

Table 11 The monthly population levels of waders in British Estuaries 1971–72

	July*	August	September	October	November	December	January	February	March	April*	May* 4
Oystercatcher *Haematopus ostralegus*	24,107	106,566	174,891	172,362	160,709	158,164	193,614	134,682	101,825	37,283	18,87
Lapwing *Vanellus vanellus*	9,514	23,469	37,574	29,696	32,384	64,785	109,320	43,366	10,978	2,512	1,580
Ringed Plover *Charadrius hiaticula*	2,783	18,392	13,191	7,302	6,270	5,358	7,237	4,395	3,668	3,913	16,946
Grey Plover *Pluvialis squatarola*	570	6,204	4,068	3,726	3,713	4,539	6,284	7,350	4,078	3,528	3,878
Golden Plover *P. apricaria*	956	6,972	21,312	20,722	18,643	25,402	54,946	22,581	11,601	10,069	164
Turnstone *Arenaria interpres*	1,859	6,313	9,050	7,801	8,223	7,338	12,891	10,169	9,270	6,129	4,804
Common Snipe *Gallinago gallinago*	144	533	750	1,478	1,551	1,589	1,432	1,698	1,360	510	123
Jack Snipe *Lymnocryptes minimus*	—	4	4	29	33	24	28	18	28	10	—
Curlew *Numenius arquata*	21,075	54,798	61,405	51,863	39,276	39,065	55,564	44,470	40,060	21,870	3,853
Whimbrel *N. phaeopus*	393	835	259	51	9	1	3	—	9	144	1,983
Black-tailed Godwit *Limosa limosa*	1,480	4,023	4,043	4,012	2,858	2,536	2,737	1,524	2,928	2,730	156
Bar-tailed Godwit *L. lapponica*	2,382	13,581	24,263	33,636	22,783	41,512	36,069	34,369	11,995	1,739	1,104
Green Sandpiper *Tringa ochropus*	37	127	74	35	15	18	15	9	14	16	18

Wood Sandpiper *T. glareola*	3	27	3	—	—	—	—	—	—	—	3
Common Sandpiper *T. hypoleucos*	442	693	186	17	13	21	6	6	10	40	103
Redshank *T. totanus*	14,106	47,314	67,620	65,711	56,375	57,300	69,365	43,104	41,194	29,917	4,296
Spotted Redshank *T. erythropus*	31	256	427	338	79	20	48	27	39	56	27
Greenshank *T. nebularia*	260	706	686	395	156	97	99	30	75	40	52
Knot *Calidris canutus*	22,939	133,115	132,474	176,346	193,299	294,583	387,345	335,908	215,177	131,418	5,645
Dunlin *C. alpina*	75,510	103,077	84,918	165,873	255,881	323,922	464,214	351,701	243,037	97,974	88,444
Sanderling *C. alba*	8,845	6,155	6,292	5,248	3,000	2,320	7,106	4,146	5,829	5,829	23,794
Ruff *Philomachus pugnax*	27	350	121	68	129	191	212	380	191	26	2
Little Stint *Calidris minuta*	5	45	28	21	2	—	1	1	—	4	4
Curlew Sandpiper *C. ferruginea*	27	256	44	5	—	—	—	—	—	—	4
Purple Sandpiper *C. maritima*	3	4	4	37	104	344	1,156	450	145	123	33
Avocet *Recurvirostra avosetta*	50	183	84	63	72	44	68	97	62	161	216
TOTAL	187,548	533,998	643,771	746,835	805,577	1,029,173	1,409,760	1,040,481	701,758	356,041	176,106

*Due to incomplete coverage these counts are not strictly comparable with the others.

Scotland

In January, for the first time, there was virtually a complete count for the whole of the Scottish mainland. The most important additions were the counts from the north Solway, made between September and March. These showed that this area from Gretna to Kirkcudbright Bay supported a quarter of the Scottish wader population in midwinter. Again there were extremely valuable counts from the Moray Firth Basin where complete coverage was made in January and March; here many observers counted throughout the year. The only areas not previously covered were the rocky coasts of Fife and Angus; these were completely covered in January and very large numbers of some species, notably Turnstones *Arenaria interpres* and Purple Sandpiper *Calidris maritima* were recorded. By and large the peak counts shown in Table 12 were similar to those of 1970–71 though there were record numbers in the Solway and the Firth of Forth. The population of the latter was double that of any previous year, mainly due to an enormous influx of Knot and Dunlin in midwinter. Counts being made on new areas on the Firth of Tay also increased the peak count.

Table 13 shows a tremendous increase of species. While this certainly reflects the increased coverage, part must be due to the mild winter. The counts on the Solway resulted in larger numbers of Oystercatchers *Haematopus ostralegus*, Ringed Plover *Charadrius hiaticula*, Knot, Dunlin and Turnstone, while, as mentioned previously, this last species and Purple Sandpiper were numerous on the sections of rocky shore visited. The high Grey Plover *Pluvialis squatarola* number is of additional interest, with a peak count of about twice the previous highest count, again probably reflecting the mild weather. The principal estuaries for the Knot were the Firth of Forth, Solway Firth and Montrose Basin.

Table 12 Principal estuaries for waders in Scotland 1971–72

	Peak count	Highest monthly count	Month of highest count
Solway, north	74,642	56,134	January
Firth of Forth	70,214	66,331	February
Ayr coast	20,471	14,087	September
Firth of Clyde, inner	18,728	18,694	January
Eden	14,836	11,656	November
Moray Firth	14,025	12,891	January
Cromarty Firth	13,864	11,818	January
Firth of Tay	12,710	8,077	September
Montrose Basin	12,329	10,298	January
Angus coast	6,215	single count	January
Islay	5,179	4,335	February
Bute	5,162	3,805	October
Piltanton/Luce	5,000	2,530	January
Dornoch Firth	3,375	1,791	March
Loch Fleet	2,797	1,960	September
Beauly Firth	2,730	2,091	March
Ythan	2,431	2,009	October
Wigtown Merse	2,420	1,943	November
Loch Ryan	2,161	1,661	September
Fife coast	1,740	single count	January
Loch Linnhe	1,252	1,171	September
Brora	1,057	860	January

Other smaller estuaries counted and their peak counts were; Isle of Arran (982), Add (307), Dee (255), Philorth (179), Don (174), Spey (138) and the Deveron (94).

Table 13 Autumn winter and peak counts of waders in Scotland 1971–72

	September	January	Peak	Month of peak count
Oystercatcher *Haematopus ostralegus*	48,496	36,062	48,496	September
Lapwing *Vanellus vanellus*	13,411	18,632	18,632	January
Ringed Plover *Charadrius hiaticula*	2,017	1,613	2,017	September
Grey Plover *Pluvialis squatarola*	84	178	178	January
Golden Plover *P. apricaria*	9,046	11,161	11,161	January
Turnstone *Arenaria interpres*	1,107	4,252	4,252	January
Common Snipe *Gallinago gallinago*	99	138	292	October
Jack Snipe *Lymnocryptes minimus*	1	1	8	November
Curlew *Numenuis arquata*	10,595	10,192	10,595	September
Whimbrel *N. phaeopus*	3	—	34	May
Black-tailed Godwit *Limosa limosa*	211	82	211	September
Bar-tailed Godwit *L. lapponica*	3,549	7,324	7,324	January
Green Sandpiper *Tringa ochropus*	4	2	6	August
Wood Sandpiper *T. glareola*	—	—	1	August
Common Sandpiper *T. hypoleucos*	3	—	59	July
Redshank *T. totanus*	14,514	19,428	19,428	January
Spotted Redshank *T. erythropus*	2	—	2	September
Greenshank *T. nebularia*	81	35	85	July
Knot *Calidris canutus*	2,103	64,572	64,572	January
Dunlin *C. alpina*	4,777	34,726	34,726	January
Sanderling *C. alba*	212	269	269	January
Ruff *Philomachus pugnax*	18	8	30	August
Little Stint *Calidris minuta*	—	—	6	October
Curlew Sandpiper *C. ferruginea*	—	—	16	August
Purple Sandpiper *C. maritima*	2	974	974	January
	110,335	209,649		

Wales

Again the coverage in Wales was excellent though unfortunately counts were not made on the three Carmarthen estuaries of the Taf, Tywi and Gwendraeth, due to observers moving away from these areas. Elsewhere, the expansion of counts in Caernarvonshire and Anglesey was particularly encouraging.

Table 14 presents the wader populations of the Welsh estuaries. The Burry Inlet, despite a small decrease of numbers, again was the most important area. In Conway Bay similar numbers to the previous years were recorded, while on the Monmouth coast a drop of about a third was noted, primarily due to the very low numbers of Lapwing *Vanellus vanellus* and Golden Plover *Pluvialis apricaria*.

Table 15 shows that the peak population of almost every species of wader recorded in 1971–72 was remarkably similar to those of both the previous years. The only notable exceptions were Lapwing and Golden Plover, which were very much lower. The interesting May passage was noted again for Ringed Plover, Sanderling *Calidris alba* and Dunlin, especially on the Dyfi, Burry Inlet and the Monmouth Severn. This ties in closely with a similar passage of these species in the North Irish Sea area.

Table 14 Principal estuaries for waders in Wales 1971–72

	Peak count	Highest monthly count	Month of highest count
Burry Inlet, Glam	35,372	24,136	October
Conway Bay, Caerns	18,376	14,793	December
Severn, Monmouth	15,973	11,873	February
Conway River, Caerns	9,688	7,980	January
Milford Haven, Pembs	9,191	5,919	December
Dyfi, Cards/Merioneth	8,235	5,246	May
Taff, Glam	7,095	6,676	December
Blackpill, Glam	5,247	4,180	February
Traeth Bach, Merioneth/Caerns	2,625	2,129	September
Clwyd, Flints/Denbigh	2,515	2,177	December
Afon Ceint, Anglesey	1,562	1,163	January
Neath River, Glam	1,528	842	September
Beddmanarch Bay, Anglesey	1,434	single count	January
North Burry, Carms	1,286	852	November

The other two smaller estuaries counted and their peak counts were south Menai Straits, Anglesey (773) and Foryd Bay, Caerns (697).

Table 15 Autumn winter and peak counts of waders in Wales 1971–72

	September	January	Peak	Month of peak count
Oystercatcher *Haematopus ostralegus*	29,741	25,215	30,398	October
Lapwing *Vanellus vanellus*	2,606	5,124	7,420	November
Ringed Plover *Charadrius hiaticula*	927	1,025	2,291	August
Grey Plover *Pluvialis squatarola*	96	400	462	February
Golden Plover *P. apricaria*	194	381	866	October
Turnstone *Arenaria interpres*	229	669	1,234	November
Common Snipe *Gallinago gallinago*	69	63	143	December
Jack Snipe *Lymnocryptes minimus*	—	—	2	November and March
Curlew *Numenuis arquata*	5,700	3,800	5,700	September
Whimbrel *N. phaeopus*	12	—	164	May
Black-tailed Godwit *Limosa limosa*	279	—	279	September
Bar-tailed Godwit *L. lapponica*	152	865	865	January
Green Sandpiper *Tringa ochropus*	4	2	6	August
Common Sandpiper *T. hypoleucos*	8	—	43	August
Redshank *T. totanus*	3,700	3,784	5,134	October
Spotted Redshank *T. erythropus*	21	3	21	September
Greenshank *T. nebularia*	48	21	48	August and September
Knot *Calidris canutus*	154	7,782	10,358	February
Dunlin *C. alpina*	1,750	25,202	25,202	January
Sanderling *C. alba*	349	248	625	May
Ruff *Philomachus pugnax*	4	—	4	September
Little Stint *Calidris minuta*	2	—	2	September
Curlew Sandpiper *C. ferruginea*	5	—	5	September
Dowitcher *Limnodromus* sp.	—	—	1	October
	46,050	74,584		

North Irish Sea

Here the excellent coverage was maintained by the large teams of counters. The most encouraging aspect was the continuation and expansion of counts on the Mersey, which supports a very different bird fauna from that found in nearby estuaries.

Table 16 presents the peak counts of the eight estuaries. Again Morecambe Bay supports a population of only a little under a quarter of a million waders, while the South Solway, Ribble and Dee all support over 100,000. This region is clearly the most important for waders in Britain or Ireland.

Table 17 shows that the numbers in 1971–72 were considerably above those of the previous two years and in fact the January total exceeded half a million birds, certainly the largest concentration in Europe. Of the increases shown by any species perhaps the most dramatic was the peak count of 31,700 Bar-tailed Godwit *Limosa lapponia* in December, when there were over 10,000 on each of Morecambe Bay and the south Solway. In the 1970–71 report I mentioned that the Dunlin arrived in force between late October and mid-November, however in 1971–72 they were a month later in arriving, with their number doubling between the November and December counts. The very large spring passage of Ringed Plover (almost 12,000) and Sanderling (almost 22,000) was again recorded.

Table 16 Principal estuaries for waders in the North Irish Sea 1971–72

	Peak count	Highest monthly count	Month of highest count
Morecambe Bay	227,181	192,394	January
Solway, south	151,368	145,078	January
Ribble	123,164	106,915	August
Dee	121,772	107,524	December
Duddon	33,611	30,313	January
Mersey	18,680	13,628	February
Alt	14,476	11,940	January
Esk	9,082	8,999	December

Table 17 Autumn winter and peak counts of waders in North Irish Sea 1971–72

	September	January	Peak	Month of peak count
Oystercatcher *Haematopus ostralegus*	68,490	107,589	107,589	January
Lapwing *Vanellus vanellus*	10,385	44,977	44,977	January
Ringed Plover *Charadrius hiaticula*	4,022	2,268	11,815	May
Little Ringed Plover *C. dubius*	—	—	2	August
Grey Plover *Pluvialis squatarola*	547	865	1,820	May
Golden Plover *P. apricaria*	7,083	23,849	23,849	January
Turnstone *Arenaria interpres*	2,768	4,325	4,325	January
Common Snipe *Gallinago gallinago*	86	385	385	January
Jack Snipe *Lymnocryptes minimus*	—	13	13	January
Curlew *Numenuis arquata*	22,752	22,032	25,498	August
Whimbrel *N. phaeopus*	76	—	105	May
Black-tailed Godwit *Limosa limosa*	547	556	931	August
Bar-tailed Godwit *L. lapponica*	10,787	19,135	31,707	December
Green Sandpiper *Tringa ochropus*	8	1	18	August
Wood Sandpiper *T. glareola*	—	—	1	July and August
Common Sandpiper *T. hypoleucos*	9	—	62	July
Redshank *T. totanus*	22,300	22,500	22,500	January
Spotted Redshank *T. erythropus*	8	1	12	August
Greenshank *T. nebularia*	92	21	101	August
Knot *Calidris canutus*	91,993	169,193	169,193	January
Dunlin *C. alpina*	31,534	146,343	146,343	January
Sanderling *C. alba*	3,004	4,465	21,949	May
Ruff *Philomachus pugnax*	5	18	69	February
Little Stint *Calidris minuta*	1	—	3	July
Curlew Sandpiper *C. ferruginea*	—	—	13	July
Purple Sandpiper *C. maritima*	—	113	113	January
Grey Phalarope *Phalaropus fulicarius*	1	—	1	September
	276,498	568,649		

South-west England

Again there was a good coverage of this very complex area, with its numerous small estuaries many of which are difficult to survey.

Perhaps of greatest interest in Table 18 is the figure for the Severn. The numbers here were over three times higher than they were in 1970–71, though only a little higher than in 1969–70. The coverage of this area from Slimbridge to Bridgwater Bay has remained constant. Quite why the variation should be so large is difficult to say but an increase in several species in many parts of Britain and Ireland seems to have been correlated with a good breeding season. Most other estuaries recorded roughly similar numbers to previous years.

Table 19 presents the numbers of each species occurring. Most striking is the similarity of them to the 1969–70 counts though one or two species show some interesting changes. There was a very large passage of Ringed Plover in late August when over 3,800 were present on the Severn alone. This might be expected but the Grey Plover passage in February was not. At this period this species reached a peak of over double its previous highest total. It is interesting to note that both Wales and the Republic of Ireland also recorded maximum numbers in February. The main flock of Avocets *Recurvirostra avosetta*, again occurred on the Tamar and the slow build up of a wintering flock on the Exe continued, with up to 10 being regularly recorded in midwinter. The very large numbers of Whimbrel *Numenius phaeopus* recorded in May was due almost solely to the location and observation of a night-time roost of this species on Stert Island in Bridgwater Bay.

Table 18 Principal estuaries for waders South-west England 1971–72

	Peak count	Highest monthly count	Month of highest count
Severn, Som/Glos	55,953	46,912	January
Exe, Devon	21,905	17,039	January
Camel, Cornwall	10,751	9,609	February
Taw, Devon	9,970	7,144	January
Hayle, Cornwall	4,321	3,694	December
Tamar, Devon/Cornwall	3,055	1,585	October
Axe, Devon	1,831	1,361	January
Teign, Devon	1,416	1,097	January
Kingsbridge, Devon	1,008	single count	September

The peak wader counts for the small estuaries were: Torridge, Devon (711); Avon, Devon (610); Tresillian, Cornwall (330); Dart, Devon (233); Gannel, Cornwall (233); Erme, Devon (102) and Yealm, Devon (15).

Table 19 Autumn winter and peak counts of waders in South-west England 1971–72

	September	January	Peak	Month of peak count
Oystercatcher *Haematopus ostralegus*	5,013	4,197	5,013	September
Lapwing *Vanellus vanellus*	3,191	17,380	17,380	January
Ringed Plover *Charadrius hiaticula*	1,078	465	4,406	August
Grey Plover *Pluvialis squatarola*	159	272	780	February
Golden Plover *Pluvialis apricaria*	1,618	8,735	8,735	January
Turnstone *Arenaria interpres*	715	387	844	March
Common Snipe *Gallinago gallinago*	64	132	392	February
Jack Snipe *Lymnocryptes minimus*	—	—	1	December
Curlew *Numenius arquata*	3,632	2,839	3,632	September
Whimbrel *N. phaeopus*	15	2	1,434	May
Black-tailed Godwit *Limosa limosa*	2,259	836	2,259	September
Bar-tailed Godwit *L. lapponica*	119	773	773	January
Green Sandpiper *Tringa ochropus*	11	2	21	August
Wood Sandpiper *T. glareola*	—	—	1	August
Common Sandpiper *T. hypoleucos*	61	6	147	July
Redshank *T. totanus*	2,225	1,668	2,225	September
Spotted Redshank *T. erythropus*	19	3	19	August and September
Greenshank *T. nebularia*	104	12	104	September
Knot *Calidris canutus*	54	1,831	1,831	January
Dunlin *C. alpina*	1,808	40,469	40,469	January
Sanderling *C. alba*	27	41	259	October
Ruff *Philomachus pugnax*	7	63	63	January
Little Stint *Calidris minuta*	13	1	13	September
Curlew Sandpiper *C. ferruginea*	11	—	11	September
Purple Sandpiper *C. maritima*	—	3	5	December and March
Avocet *Recurvirostra avosetta*	2	67	94	February
	22,205	80,184		

Southern England

Almost complete coverage from August to March was obtained. Counts were extended in Chichester Harbour to include some roosts on Hayling Island which had not been counted previously. Since the start of the 'Birds of Estuaries Enquiry' many more waders have switched to using these roosts, which also draw a few birds from Langstone Harbour. Table 20 presents the peak counts of each estuary. They are fairly similar to those of the previous two years though Langstone and Chichester Harbours each recorded their highest counts. These two areas supported about twice as many waders in 1971–72 as they did in 1970–71.

Table 21 shows that most of this increase was due to the very large number of Dunlin present, though the population levels of Curlew *Numenius arquata*, Black-tailed Godwit *Limosa limosa*, Bar-tailed Godwit and Redshank *Tringa totanus* were all up. Again it is worth pointing out the scarcity of species common eslewhere such as the Knot and Oystercatcher and the relative abundance of Grey Plover and Black-tailed Godwit. The principal estuaries for the Grey Plover were Chichester, Langstone, Pagham and Portsmouth Harbours while the Black-tailed Godwit was more widely distributed on all major areas.

Table 20 Principal estuaries for waders in Southern England 1971–72

	Peak count	Highest monthly count	Month of highest count
Chichester Harbour	36,172	30,520	December
Langstone Harbour	30,664	26,825	February
Portsmouth Harbour	17,221	13,872	March
Southampton Water	10,722	8,426	November
Solent	8,300	7,698	February
Poole Harbour	8,078	6,504	December
Pagham Harbour	6,580	4,885	December
Beaulieu River	5,328	4,161	January
Sussex coast	4,945	3,534	January
Newtown River	2,480	1,269	February
Christchurch Harbour	1,227	934	November
Fleet	1,193	1,009	December
Rye Harbour	1,083	845	January

Other smaller estuaries counted plus their peak count were; Brading Harbour (705), Western Yar (622), Portland Harbour (545), Wootton Creek (484), Lodmor/Radipole (113).

Table 21 Autumn winter and peak counts of waders in Southern England 1971–72

	September	January	Peak	Month of peak count
Oystercatcher *Haematopus ostralegus*	2,413	3,109	3,750	October
Lapwing *Vanellus vanellus*	1,840	7,324	7,324	January
Ringed Plover *Charadrius hiaticula*	2,026	576	2,026	September
Little Ringed Plover *C. dubius*	1	—	1	August and September
Grey Plover *Pluvalis squatarola*	528	1,026	1,262	December
Golden Plover *P. apricaria*	78	1,274	1,274	January
Turnstone *Arenaria interpres*	694	631	1,042	October
Common Snipe *Gallinago gallinago*	71	401	642	February
Jack Snipe *Lymnocryptes minimus*	—	4	10	March
Curlew *Numenius arquata*	4,166	4,647	4,647	January
Whimbrel *N. phaeopus*	48	1	297	August
Black-tailed Godwit *Limosa limosa*	680	1,137	1,686	March
Bar-tailed Godwit *L. lapponica*	176	1,822	1,822	January
Green Sandpiper *Tringa ochropus*	18	1	28	August
Wood Sandpiper *T. glareola*	1	—	7	August
Common Sandpiper *T. hypoleucos*	30	—	149	August
Redshank *T. totanus*	6,933	4,169	6,933	September
Spotted Redshank *T. erythropus*	159	16	159	September
Greenshank *T. nebularia*	190	6	209	August
Knot *Calidris canutus*	9	708	1,595	December
Dunlin *C. alpina*	3,638	66,090	66,090	January
Sanderling *C. alba*	501	712	712	January
Ruff *Philomachus pugnax*	14	40	199	February
Little Stint *C. minuta*	3	—	3	August and September
Curlew Sandpiper *C. ferruginea*	2	—	19	August
Purple Sandpiper *C. maritima*	—	28	63	December
Avocet *Recurvirostra avosetta*	1	—	1	September
Dotterel *Eudromias morinellus*	—	—	1	August
Wilson's Phalarope *Phalaropus tricolor*	—	—	1	October
	24,220	93,722		

Eastern England

Although last year I reported that almost all of the major gaps in our coverage had been filled, this still left a number of smaller ones. In 1971–72 the majority of these were covered, most notably on the Wash, Hamford Water, and on the inner Thames between Woolwich and Barking. The two areas covered for the first time were a long section of coastline around Beadnell in Northumberland and parts of the western north Norfolk coast. Unfortunately the latter area was only counted during the autumn; however, cover there is likely to improve considerably in the future.

Table 22 presents the peak wader counts. Most areas supported similar or slightly higher populations than in 1970–71. The Essex estuaries carried slightly higher figures, justifying the concern about the threat of an airport at Foulness. Two estuaries in eastern England, the Swale and Humber, recorded much larger numbers without increased coverage.

Table 23 shows that the numbers of nearly all species were up. The most striking increase was in the Dunlin, the winter population of which was up by about 60%. This, and increases in Grey Plover, Turnstone, Knot and Redshank were probably partly due to the improved cover, though other factors, such as a good breeding season and/or a mild winter, may have also affected the numbers here. The principal estuaries for the Knot were the Wash, Humber, Lindisfarne, Foulness and Teesmouth; these, with the exception of the Humber, were also the main areas for the Bar-tailed Godwit. In contrast the Grey Plover was numerous only on the Wash and in Essex (Blackwater/Dengie, Foulness) and in Kent (Swale).

Table 22 Principal estuaries for waders in Eastern England 1971–72

	Peak count	Highest monthly count	Month of highest count
Wash	181,366	151,719	January
Humber	85,672	65,416	February
Swale	31,421	26,938	January
Foulness	29,748	25,792	February
Lindisfarne	29,321	28,815	January
Blackwater/Dengie	24,939	18,856	January
Teesmouth	24,212	19,244	November
Colne	15,436	13,568	January
Stour, Essex/Suffolk	14,074	12,781	January
Medway	11,582	6,860	January
Hamford Water	6,912	3,663	March
Thames, inner	5,767	5,359	February
Breydon Water	5,664	5,327	February
Orwell	3,568	3,429	January
Deben	2,839	2,161	January
Blyth	2,726	2,181	January
Beadnell shore	1,992	1,487	September
Tweed	1,900	single count	January
Coquet	1,835	1,194	February
Ore	1,388	844	February
North Norfolk Coast	1,319	1,205	August
Washington Ponds	1,032	922	March

The other smaller estuaries counted and their peak counts were; Butley Creek (979), South Kent coast (821), Aln (673), Reculver (619), Roach (392) and Whitburn coast (182).

Table 23 Autumn winter and peak counts of waders in Eastern England 1971–72

	September	January	Peak	Month of peak count
Oystercatcher *Haematopus ostralegus*	20,738	17,422	25,727	October
Lapwing *Vanellus vanellus*	6,141	15,883	15,883	January
Ringed Plover *Charadrius hiaticula*	3,121	1,290	3,121	September
Little Ringed Plover *C. dubius*	2	—	5	August
Grey Plover *Pluvialis squatarola*	2,654	3,543	4,589	August
Golden Plover *P. apricaria*	3,293	9,546	9,546	January
Turnstone *Arenaria interpres*	3,537	2,627	3,537	September
Common Snipe *Gallinago gallinago*	361	313	432	October
Jack Snipe *Lymnocryptes minimus*	3	10	20	October
Curlew *Numenius arquata*	14,560	12,054	14,560	September
Whimbrel *N. phaeopus*	105	—	320	August
Black-tailed Godwit *Limosa limosa*	67	126	899	April
Bar-tailed Godwit *L. lapponica*	9,480	6,150	14,628	October
Green Sandpiper *Tringa ochropus*	29	7	48	August
Wood Sandpiper *T. glareola*	2	—	17	August
Common Sandpiper *T. hypoleucos*	75	—	333	August
Redshank *T. totanus*	17,948	17,816	17,948	September
Spotted Redshank *T. erythropus*	218	25	218	September
Greenshank *T. nebularia*	171	4	276	August
Knot *Calidris canutus*	38,161	143,259	143,259	January
Dunlin *C. alpina*	41,411	151,384	151,384	January
Sanderling *C. alba*	2,199	1,371	2,199	September
Ruff *Philomachus pugnax*	73	83	136	August
Little Stint *Calidris minuta*	9	—	36	August
Curlew Sandpiper *C. ferruginea*	26	—	211	August
Purple Sandpiper *C. maritima*	2	38	38	January
Avocet *Recurvirostra avosetta*	81	1	216	May
Pectoral Sandpiper *Calidris melanotos*	1	—	1	
Teminck's Stint *C. temminckii*	—	—	5	August
	164,468	382,792	409,596	

Northern Ireland

Coverage improved markedly in 1971–72 with two new areas, Carlingford Lough and Larne Lough, being counted. This only leaves the high security zone of Belfast Lough to be filled in future years. Despite this improved coverage December was the only month in which all areas were counted. The National Trust's wildfowl count team covered Strangford Lough between August and March, the Route Naturalists' Field Club and Ulster University Bird Club covered Lough Foyle between September and December; while Carlingford Lough, Dundrum Bay and Larne Lough were counted between December and May.

Table 24 presents the peak counts in the six estuarine complexes. All areas had similar or slightly higher numbers than had been previously noted.

Table 25 shows the numbers of each species of wader; numbers of almost all species were high. Perhaps the most striking aspect, and this holds true for the Republic of Ireland as well, is that quite large numbers of Bar-tailed Godwit are already present in September. The population which visits Europe comes solely from the Scandinavian and western Siberian breeding grounds, and it is perhaps surprising that it moves so far west early in the season.

Special thanks should go to the counters in Northern Ireland for their efforts in difficult times. This is clearly illustrated by the fact that one counter was actually fired at while he made his count on Carlingford Lough! Fortunately he was not hit and has continued to provide valuable information.

Table 24 Principal estuaries for waders in Northern Ireland 1971–72

	Peak count	Highest monthly count	Month of highest count
Strangford Lough	49,738	45,564	December
Lough Foyle	16,304	14,064	December
River Bann	7,567	5,452	February
Larne Lough	4,505	3,972	December
Carlingford Lough	2,908	2,152	February
Dundrum Bay	1,757	1,687	January

Table 25 Autumn winter and peak counts of waders in Northern Ireland 1971–72

	September	January	Peak	Month of peak counts
Oystercatcher *Haematopus ostralegus*	2,713	2,408	5,939	December
Lapwing *Vanellus vanellus*	2,990	10,563	16,430	December
Ringed Plover *Charadrius hiaticula*	336	185	398	March
Grey Plover *Pluvialis squatarola*	17	4	110	December
Golden Plover *P. apricaria*	887	2,268	5,156	December
Turnstone *Arenaria interpres*	208	511	511	January
Common Snipe *Gallinago gallinago*	51	8	51	September
Jack Snipe *Lymnocryptes minimus*	—	—	1	October
Curlew *Numenius arquata*	4,399	3,295	5,462	December
Whimbrel *N. phaeopus*	6	—	10	May
Black-tailed Godwit *Limosa limosa*	186	1	186	September
Bar-tailed Godwit *L. lapponica*	2,392	1,819	2,793	December
Green Sandpiper *Tringa ochropus*	—	—	1	August and October
Common Sandpiper *T. hypoleucos*	1	—	1	September and March
Redshank *T. totanus*	3,385	2,363	4,373	December
Spotted Redshank *T. erythropus*	1	—	1	September and December
Greenshank *T. nebularia*	117	86	162	December
Knot *Calidris canutus*	385	22,854	22,854	January
Dunlin *C. alpina*	734	6,797	6,797	January
Sanderling *C. alba*	400	2	400	September
Ruff *Philomachus pugnax*	3	—	3	September
Curlew Sandpiper *Calidris ferruginea*	7	—	7	September
Purple Sandpiper *C. maritima*	—	20	20	December and January
	19,218	53,184		

Republic of Ireland

Table 26 clearly demonstrates the enormous progress that has been made in the Republic of Ireland during 1971–72, with 30 areas being counted, 27 of which support over 1,000 waders. On the east and south coasts all major and most minor areas were counted, mostly on a regular basis. Elsewhere the first major efforts were made to count the waders on such important areas as the Shannon/Fergus and the Little Brosna. Although the latter site is well inland in the Upper Shannon Valley it supports a very large flock of Black-tailed Godwit as well as Lapwing and Golden Plover and some Dunlin. We can look forward to even more comprehensive counts in the western parts of the Republic of Ireland in future years. Despite the regular counts on many areas quite a number of estuaries were only occasionally covered. Therefore, the results in Table 27 do not give a true representation of the population; they have, however, been included here to give some idea of the relative abundance of the wader species. By and large, most species reach a figure of 10% of the British population, although some, notably Golden Plover, Lapwing and Greenshank *Tringa nebularia* are more numerous and the numbers of Black-tailed Godwit present are considerably above those in Britain. A few areas were counted in May but there was little or no sign of a heavy passage of either Ringed Plover or Sanderling, though a small increase in the Dunlin population was noted.

Table 26 Principal estuaries for waders in the Republic of Ireland 1971–72

	Peak count	Highest monthly count	Month of highest count
North Bull, Dublin	28,915	20,930	January
Cork Harbour, Cork	16,636	8,377	December
Little Brosna, Offaly	15,565	14,405	February
Ballymacoda, Cork	14,971	14,243	November
Dundalk Bay, Louth	14,245	single count	September
Shannon/Fergus, Limerick/Clare	10,658	part count	February
Bannow Bay, Wexford	10,642	7,413	February
Clonakilty, Cork	10,430	9,151	October
Dungarvan Harbour, Waterford	8,106	4,369	December
Wexford Harbour, Wexford	7,297	4,107	October
Rogerstown, Dublin	5,963	3,897	December
Courtmacsherry, Cork	5,844	5,394	October
Boyne, Louth Meath	5,084	4,217	January
Tramore, Waterford	5,084	3,783	February
Foyle, Donegal	4,254	single count	December
Ballycotton, Cork	3,324	1,790	December
Tacumshin, Wexford	3,191	2,050	January
Douglas River, Cork	3,090	2,058	February
Waterford Harbour, Waterford	2,913	1,807	February
Malahide, Dublin	2,539	1,692	November
Dublin Bay, south	2,007	1,710	December
Cull, Wexford	1,886	1,262	February
Laytown, Meath	1,603	1,303	January
Vartry River, Wicklow	1,580	1,527	December
Kilcoole, Wicklow	1,510	1,039	October
Rosscarbery, Cork	1,415	1,355	September
Baldoyle, Dublin	1,244	895	December

The three other smaller estuaries counted and their peak counts were; Lady Islands Lake, Wexford (797), River Erne, Donegal (453), and Lissagrifin Cork (270).

Table 27 Autumn winter and peak counts of waders in the Republic of Ireland 1971–72

	September	January	Peak	Month of peak counts
Oystercatcher *Haematopus ostralegus*	12,788	4,973	12,788	September
Lapwing *Vanellus vanellus*	1,446	7,305	17,844	February
Ringed Plover *Charadrius hiaticula*	711	547	799	August
Grey Plover *Pluvialis squatarola*	268	830	978	February
Golden Plover *P. apricaria*	11,566	3,256	19,478	October
Turnstone *Arenaria interpres*	614	636	735	April
Common Snipe *Gallinago gallinago*	76	128	394	December
Jack Snipe *Lymnocryptes minimus*	—	1	2	August
Curlew *Numenius arquata*	7,725	3,837	8,113	October
Whimbrel *N. phaeopus*	9	—	20	May
Black-tailed Godwit *Limosa limosa*	5,910	641	6,560	October
Bar-tailed Godwit *L. lapponica*	2,464	3,797	3,797	January
Green Sandpiper *Tringa ochropus*	4	1	4	September
Common Sandpiper *T. hypoleucos*	8	—	14	April
Redshank *T. totanus*	6,457	2,583	6,457	September
Spotted Redshank *T. erythropus*	6	—	51	October
Greenshank *T. nebularia*	201	62	251	October
Knot *Calidris canutus*	118	13,191	15,076	November
Dunlin *C. alpina*	2,969	11,429	12,549	February
Sanderling *C. alba*	18	298	613	November
Ruff *Philomachus pugnax*	29	2	30	October
Little Stint *Calidris minuta*	1	—	11	October
Curlew Sandpiper *C.ferruginea*	5	—	7	October
Purple Sandpiper *C. maritima*	—	18	18	January
Avocet *Recurvirostra avosetta*	—	4	4	January and February
Pectoral Sandpiper *Calidris melanotos*	3	—	3	
Buff-breasted Sandpiper *Tryngites subruficollis*	1	—	1	
Solitary Sandpiper *Tringa solitaria*	1	—	1	
Lesser Yellow Legs *T. flavipes*	—	—	1	
Dowitcher *Limnodromus* sp.	—	—	3	
White-rumped Sandpiper *Calidris fuscicollis*	—	—	1	
	53,398	53,539		

Gulls and Terns

Once again data on these species was poor and no estimate could be made of their coastal populations. I would like to encourage observers to record the numbers of gulls they observe within the estuary when they are making their count. High tide roosts of gulls appear to represent the birds which have been feeding on the estuary; by counting these we can discover how many do this, as they do play an important role in the ecology of an estuary. In addition to this, a specific night-time roost count is also valuable; this has to be carried out as the birds fly in to the roost in the evening or perhaps as they leave in the morning. Such a count will provide a census of the gulls using the estuary and adjacent countryside, and should be made at high tide if at all possible to concentrate the birds. These roost counts of gulls are more difficult to make than day counts and a special effort is needed. However, the results justify this effort for very large numbers are usually recorded. Only the major concentrations noted are presented below so it must be remembered that these records are far from a comprehensive record of our coastal populations.

Once again the east coast of England and Scotland reported the largest concentrations of Great Black-backed Gulls *Larus marinus*, all during the period August to November. They were in Teesmouth (3,062, August), Humber (1,400, October), Lindisfarne (1,000, October), Wash (909, November), Coquet (706, October) and Firth of Forth (700, October). On the other hand very few Lesser Black-backed Gulls *L. fuscus* were recorded with the largest concentration being 750 on Conway Bay. The Duddon, Firth of Forth, Ribble and Lindisfarne were the only other estuaries to record over 500 of this species which is known to occur freely inland on migration.

More concentrations of Black-headed Gulls *L. ridibundus* were noted. In May, the Beaulieu River had its usual 40,000, and at Ravenglass (Esk, Cumberland) 17,500 breeding birds were present. Non breeding season concentrations occurred on the inner Thames (21,960), Cork Harbour (15,000), Lindisfarne (15,000), Langstone Harbour (12,945), Firth of Forth (11,000), Humber (10,000) and Solway (10,000). At the last mentioned site the enormous total of 151,416 Common Gulls *L. canus* was also recorded in November; this number overshadows the other records of this species though 17,000 at Lindisfarne and 6,000 on the Firth of Forth are notable. Large numbers of Herring Gulls *L. argentatus* were recorded on three of these major estuaries. The Solway had 32,540 (November), the Firth of Forth 16,000 (January) and Lindisfarne 10,000 between September and December. One other notable concentration was 6,000 on the North Bull.

Of the less common gulls Little Gulls *L. minutus* were recorded on 20 estuaries, with maxima of 42 on the Alt, 14 on the Firth of Tay and 12 on the Firth of Forth. Glaucous Gulls *L. hyperboreus* were only recorded on three estuaries while only single Iceland *L. glaucoides*, Mediterranean *L. melanocephalus* and Sabines *L. sabini*, Gulls were seen. Kittiwakes *Rissa tridactyla* were quite numerous with the largest concentrations in northeastern England; here Teesmouth had 6,360, Coquet 1,591 and the shore at Beadnell 800 during the autumn.

Again only relatively small post-breeding concentrations of terns were seen. The largest concentration of Common/Arctic Terns, *Sterna hirundo*, *S. paradisaea* was 1,888 on the Ribble and only three other sites had a thousand or more—they were Teesmouth (1,496), Firth of Forth (1,000) and the Montrose Basin (1,000). Six other areas, Dee, Eden, Mersey, Loch Ryan, Beaulieu River and the Wash had over 500 birds. Teesmouth again recorded the most Sandwich Terns *S. sandvicensis* (2,235) but the Montrose Basin was the only other area to have more than 1,000. The Firth of Forth, Beaulieu River, Dee and the Wash had over 500 of this species. Very few Roseate Terns *S. dougalli* were recorded, 10 at Baldoyle being

the largest group. Only the Montrose Basin (*c* 150) had over 100 Little Terns *S. albifrona* although the Wash (93) almost reached this total. To show how few Little Terns are found only eight other sites recorded more than 30 of this species. Some Black Terns *Chlidonias niger* were seen and Teesmouth had a White-winged Black Tern *C. leucopterus*.
Following the terns inevitably come the skuas; all four species were noted though only the Arctic Skua *Stercorarius parasiticus* was at all numerous. The Firth of Forth, Lindisfarne, Teesmouth and the Wash were the only estuaries to record more than 15 together.

Appendix Publications involving the use of data for the Birds of Estuaries

Enquiry to May 1973

Birds of Estuaries Enquiry	*BTO News* No 39	July 1970
Birds of Estuaries Enquiry: provisional results	*BTO News* No 41	December 1970
Avocets in Britain	*BTO News* No 43	March 1971
Bar-tailed Godwit and Black-tailed Godwit: provisional results	*BTO News* No 45	June 1971
Ringed Plover and Grey Plover: provisional results	*BTO News* No 46	September 1971
Knot distribution revealed	*BTO News* No 47	October 1971
International Wader Counts	*BTO News* No 48	December 1971
Sanderling statistics	*BTO News* No 49	February 1972
Ruff—returning wanderer	*BTO News* No 50	March 1972
Water shortage and waders	*BTO News* No 51	May 1972
A million waders	*BTO News* No 52	June 1972
Estuary Redshank numbers	*BTO News* No 56	February 1973
Greenshank numbers	*BTO News* No 58	May 1973

Report on the pilot survey (1971), duplicated report, 28 pp.
Report on the 1970–71 counts (1972), duplicated report, 25 pp.
The Wader Populations of Essex Estuaries (1972), duplicated report, 10pp.
Preliminary report on the distribution and numbers of waders on the Wash, August 1969—December 1972 (1973), duplicated report, 8 pp.
Counts of Waders made in Ireland in January 1971 (1971). *Irish Bird Rep.*, No 18: 10–15.
The Numbers and Distribution of waders on the Dee between August 1970 and May 1971 (1972). *Cheshire Bird Rep.*, 1971: 37–46.
The wader populations of the Essex Coast (1972). *Essex Bird Rep.*, 1971: 52–60.
Coastal wader counts made in Britain and Ireland, August 1970–May 1971 (1972). *Bull. IWRB*, No 33: 11–14.
Grieve, A (1972). Report on counts made on the Firth of Forth 1971–72, duplicated report, 13 pp.
Wilson, J (1973). Wader populations of Morecambe Bay, Lancashire. *Bird Study*, 20: 9–23.
Nature Conservancy (1971). *Wildlife Conservation in the North Kent Marshes*, Report, 85pp.
Nature Conservancy (1972). *A prospectus for Nature Conservation within the Moray Firth*, Report, 81 pp.

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