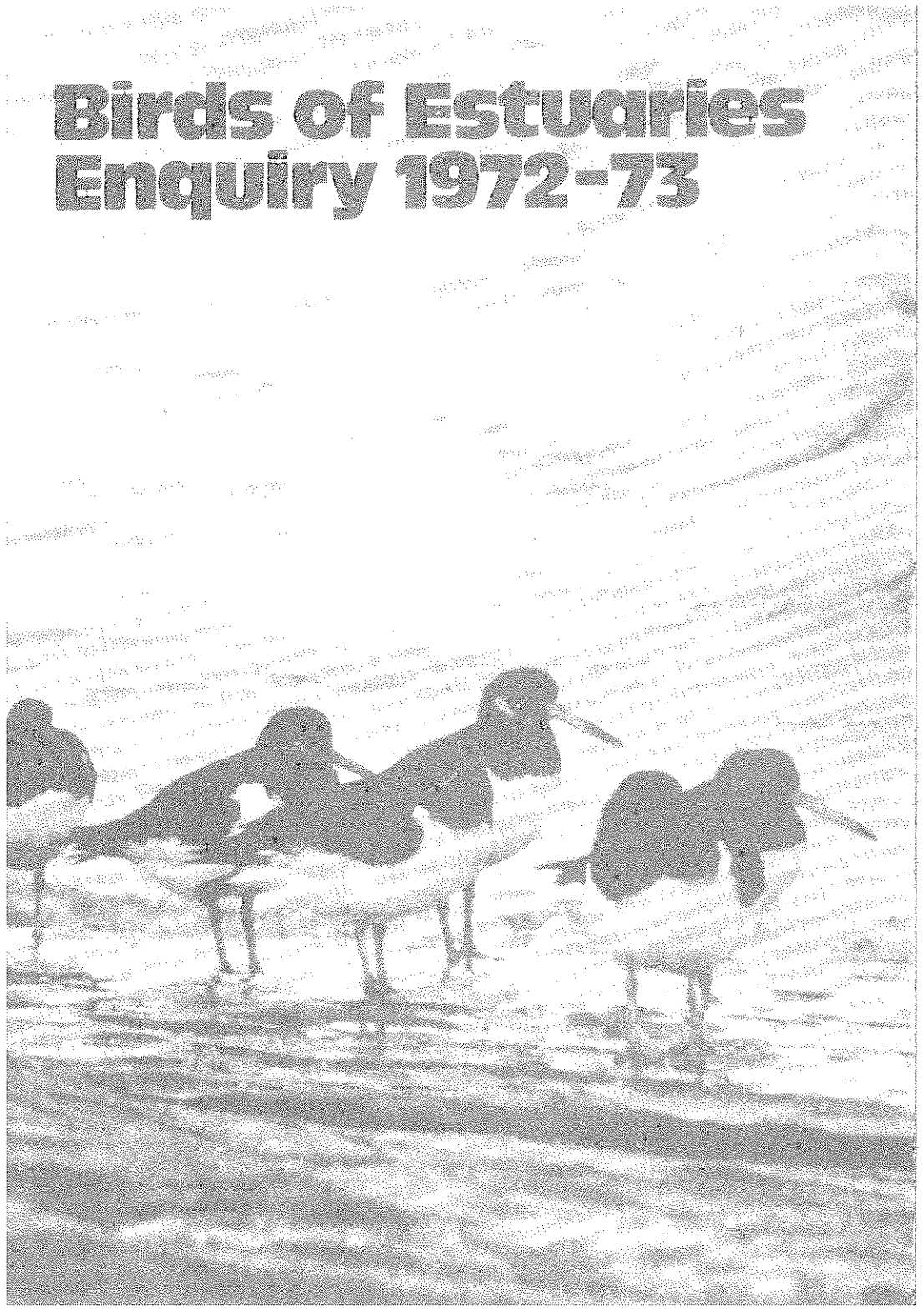
Birds of Estuaries Enquiry 1972-73



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Introduction

This report covers the third year, from July 1972 to May 1973, 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, and the second year of the Irish Wildbird Conservancy *Wetlands Enquiry*. We have already been able to build up fairly comprehensive dossiers on most of the British and Irish estuaries, and feel that by the time the first phase of the enquiry finishes in May 1975 we will have achieved our first objectives. It is hoped that all counters will make a special effort over the last year to obtain full monthly reports.

Coverage in the Republic of Ireland improved markedly during 1972–73; elsewhere the highly satisfactory level achieved in 1971–72 was maintained. A welcome aspect was the increasing number of counts made in May, June and July. These counts provide important information on the status of passage migrants and summering birds.

When assessing the importance of an estuary, the peak count of each species has usually been taken as the main criterion. There is, however, a drawback in this method, for an area which has a large migrant population for one month may appear to be much more important than one with a smaller number for many months. The use of peak counts has been continued, though once adequate data has been obtained the ultimate assessment will take into account the regular population levels.

During the year, the *Birds of Estuaries Enquiry* has been involved in assessing the threats to three of our major areas—the Wash, the Dee and Foulness. The Wash Reservoir Feasibility Study involved co-ordination of the duck, geese, wader and gull counts. The research was carried out by a team from the Coastal Ecology Research Station (Institute of Terrestrial Ecology). A detailed report is now being written which draws heavily on the counts of the *Estuaries Enquiry*. Close liaison was maintained with the newly created Dee Estuary Conservation Group. The Group is assessing the potential impact of the suggested scheme for large reservoirs and a road crossing at the head of the estuary.

The Department of the Environment awarded the BTO a contract for an investigation into the distribution of estuarine birds on the Essex coast in relation to the development of London's third airport at Foulness. Richard Blindell was appointed local full-time organiser of the counts in Essex and has, with the enthusiastic help from local counters, already provided a considerable amount of information on many important areas. This project also involved liaison with the team from the Coastal Ecology Research Station and the Wildfowl Trust team studying the movements of Brent Geese.

Results from the *Estuaries Enquiry* were used at public enquiries involving Langstone Harbour and the Bull Island, at which the organiser was asked to give evidence; in addition the results have been used by many regional officers of the Nature Conservancy (now the Nature Conservancy Council) when considering planning applications concerning estuaries.

It is with great regret I have to report that Mr G B G Benson, who had organised the counts in Suffolk since 1969, died during 1973. His efforts and detailed knowledge greatly aided counts in that area. Another valuable organiser, the Reverend J Beckerlegge, who has organised counts in Cornwall since 1969, has had to resign owing to ill health and I should like to wish him a speedy recovery.

This report follows closely the format of the previous one. The section on ducks, geese

and swans has again been written by the Wildfowl Trust, in particular by G Atkinson-Willes, M A Ogilvie and D Salmon. As far as the wader section is concerned the countries have been divided as follows:

(1) Scotland: including the north Solway (S)
(2) Wales: Flintshire to Monmouthshire, excluding the west shore of the Dee (W)
(3) North Irish Sea: The Dee–south Solway (NWE)
(4) South-west England: Devon–Gloucestershire (SWE)
(5) Southern England: Dorset–Sussex (SE)
(6) Eastern England: Kent–Northumberland (EE)
(7) Northern Ireland (NI)
(8) Republic of Ireland (RI).

Divers

Records for the period confirmed that the majority of Great Northern Divers *Gavia immer* occurred in Ireland and Scotland. The largest concentrations were on the Shannon/Fergus (6, January) and Dundrum Bay (4, November); they were recorded at only nine other sites. In contrast there were many more Red-throated Divers *G. stellata* seen in England where the largest concentration was on the Blackwater (29, March). Elsewhere the main flocks were on the Firth of Forth (17, November and March), Moray Firth (11, September) and ten on each of Dengie flats (March) and Dundrum Bay (November). As with last year, Hamford Water had two Black-throated Divers *G. arctica*; singles were seen on only four other estuaries.

Grebes

The largest flock of Great Crested Grebes *Podiceps cristatus* was on the Firth of Forth, where 352 were present in January. A large flock was also present in Conway Bay. Following the pattern of the previous two years they reached their peak number (this year of 332) in July, slowly dropped through the winter but rose to a second smaller peak (200) in March. These were probably post and pre-breeding season assemblies, though presumably involving birds from some distance away as the local breeding population is not large. A build-up in March to 108 was also noted on the Wash. Fifty or more Great Crested Grebes were recorded on only five other estuaries, Wexford Harbour, Larne Lough, Langstone Harbour, Blackwater and the Essex/Suffolk Stour. A late winter build-up was noticed of both Black-necked Grebes *P. nigricollis* and Slavonian Grebes *P. auritus*. Black-necked Grebes were only seen on ten estuaries, with 41 on Langstone Harbour in February being by far the largest number, followed by nine in April on the Blackwater. Slavonian Grebes were seen on 19 estuaries with a March count of 42 on the Firth of Forth being the only number over ten, though a flock of 11 Slavonian/Black-necked Grebes was seen on Conway Bay in February.

Red-necked Grebes *P. grisegena* were only recorded on the Firth of Forth (17, October), Lindisfarne (3) and the Wash (2). Apart from 50 Little Grebes *Tachybaptus ruficollis* in Lough Swilly, Co Donegal in August and 52 in Milford Haven in February, the main numbers were seen in November in Strangford Lough (71), Chichester Harbour (58) and Southampton Water (52).

Other water birds

Migrant Spoonbills *Platalea leucorodia* were seen on the Teign (2, May), Stour (1, July) and Teesmouth (4, July). Two were present on the Dee in November, subsequently one was

seen first at Malahide in December and then at the adjacent Rogerstown estuary from January until May. Another wintering Spoonbill was present at Ballymacoda in January. Only a single migrant Little Egret *Egretta garzetta* was recorded. While Flamingos *Phoenicopterus* sp. were seen on four estuaries, three of these may have involved the same individual moving between Milford Haven, the Dee and the Mersey between July and April; two occurred on the Humber in May.

More Cormorants *Phalacrocorax carbo* were recorded this year with eight estuaries having over 200 birds. The main numbers were usually seen in autumn when the South Solway had 1,337, the Firth of Tay 416 and Lindisfarne 300; in contrast, the largest count (339) in the inner Clyde, was made in winter. Once again many fewer Shags *P. aristotelis* were seen, with only Dundrum Bay (135), Firth of Forth (113) and Loch Linnhe (110) supporting over a hundred.

Ducks

Regular counts were made at nearly all the main wildfowl centres in England, Scotland and Wales; a number of important Irish estuaries were included for the first time, notably Castlemaine Harbour and the Shannon. As in the 1971–72 report, this section includes records obtained through the National Wildfowl Counts and the International Waterfowl Censuses. In presenting the data, our aim has been to compare the results with those obtained in previous seasons, and to highlight the estuaries which are of special importance to individual species.

In 1972–73 there were 15 estuaries in Britain and Ireland which held a total of more than 10,000 ducks, geese and swans, and which qualified as internationally important on this account (see Table 1). In each case the totals included a major concentration of one or more species, which further confirmed their importance.

Table 1 British and Irish estuaries which held internationally important concentrations of 10,000 or more ducks, geese and swans during the winter of 1972–73

	Peak count	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Firth of Forth	33,383			*	**	*	*	*
Lindisfarne	25,432		*	**	*	*		
Strangford Lough	24,568		**	*	*	*		
Mersey	22,790				*	**	*	
Firth of Tay	21,642	**		*				
Islay	21,000	nc	nc	**	nc	nc	nc	*
Wash	20,458				*	**	*	*
Solway Firth (incomplete)	20,227			*		**	*	*
Medway	19,579				*	**	*	
Lough Foyle	14,700		**					
Morecambe Bay	14,665	nc	nc		nc	**	nc	nc
Cromarty Firth	13,921		*	**				
Foulness	13,879				**			
Castlemaine Harbour	12,148	nc	*	**				nc
Shannon/Fergus	10,226	nc			nc	**	nc	

* *months in which counts exceeded 10,000*
** *peak month*
nc *no count*

Dabbling Ducks

Mallard *Anas platyrhynchos* A widespread species which is often under-recorded due to its habit of feeding in fields. Only four estuaries held concentrations of over 2,000 birds, compared with eight in 1971–72. The largest numbers were again recorded on the Humber, where the autumn peak of 5,165 was virtually the same as in the previous season. The Wash held 3,487 in December, Morecambe Bay 3,370 in January and the Firth of Forth 2,112 in November. Fourteen other estuaries held peaks of 1,000 or more, seven of them in autumn.

Teal *Anas crecca* As in 1971–72, the two main centres were on the Mersey and the Medway, both of which held record numbers. On the Mersey, in particular, the population has increased dramatically in recent years. During the six seasons 1967–68 to 1972–73 the annual peaks have been as follows: 1,100, 1,650, 2,200, 3,050, 5,787 and 10,395. The latest peak of over 10,000 in February 1973 represents *c.* 4% of the estimated population in northern and western Europe. On the Medway there was a peak of 5,100 in January, compared with 4,300 in November 1971. Large numbers were also recorded on the Shannon/Fergus estuary (2,331, January), Castlemaine Harbour, Co Kerry (2,300, November), Poole Harbour (1,811, January), Wexford Harbour (1,738, October), Southampton Water (1,625, February), Newtown Marsh, Isle of Wight (1,500, December) and the North Bull, Co Dublin (1,354, December). For comparison, the largest inland counts in 1972–73 amounted to *c.* 1,200, on each of Abberton Reservoir, Hickling Broad and Loch Leven.

Wigeon *Anas penelope* The counts throughout the winter of 1972–73 were substantially higher than in the previous season, due mainly but not entirely to improvements in the cover. The increase was particularly noticeable in November, when the total count amounted to 150,000—*c.* 30% of the estimated north-west European population.

Table 2 Monthly totals of Wigeon *Anas penelope* recorded on British and Irish estuaries 1972–73

	England, Scotland & Wales	Ireland	Total
September	31,649 (29,625)	10,164 (4,675)	41,813 (34,300)
October	86,417 (76,925)	31,776 (21,215)	118,273 (95,140)
November	111,783 (85,200)	38,950 (27,270)	150,733 (112,470)
December	95,026 (87,250)	27,303 (29,250)	122,329 (116,500)
January	112,111 (91,240)	21,549 (12,450)	133,660 (103,690)
February	61,873 (58,200)	12,990 (11,230)	74,773 (69,430)
March	22,009 (18,800)	7,628 (1,640)	29,637 (20,440)

1971–72 totals are shown in brackets

A total of 13 estuaries held concentrations of more than 5,000 Wigeon (1% of the estimated north-west European population). Eight of the sites concerned have already been listed as internationally important in earlier reports; the other five were either covered for the first time in this enquiry, or had previously failed to qualify (see Table 3). The only site with low numbers was the Wash. In addition to the sites listed below, there were two areas which held over 4,000 birds (Foulness and Montrose Basin); another four held over 3,000. The only inland concentration of major importance was on the Ouse Washes, where 29,400 were recorded in December 1972; in the previous season the peak exceeded 35,000 in February. The difference was perhaps due to the very low water levels in 1972–73.

Table 3 British and Irish estuaries of international importance for Wigeon *Anas penelope* 1970–71, 1971–72 and 1972–73. Annual maxima and month of peak count in 1972–73

	1970–71	1971–72	1972–73	
Lindisfarne	27,000	26,000	22,000	November and December
Strangford Lough	18,590	20,420	14,170	November
Lough Foyle	6,930	7,865	12,685	October
Cromarty Firth	7,520	7,190	10,830	November
Medway	8,500	8,200	9,135	January
Dornoch Firth	3,220*	4,850	7,900	October
The Fleet, Dorset	5,800	4,600	6,100	November
Castlemaine, Co Kerry	nc	nc	5,600	November
Shannon/Fergus	nc	nc	5,411	January
Morecambe Bay	5,449*	4,652*	5,167*	January
Exe	5,000	5,000	5,000	January
St John's Lake (Tamar)	5,500	800	5,000	January
Bridgwater Bay	1,600	3,500	5,000	December
Wash	2,816*	6,210	3,975	January

nc no count *irregular cover

Note Morecambe Bay area stretches from Walney Island to Fleetwood inclusive

Pintail *Anas acuta* The 1972–73 totals were substantially higher than in the previous season, due partly to the wider cover but mainly to a marked increase at all the main resorts. In recent years the numbers in the Netherlands have decreased following the damming of the Rhine delta, and fewer birds have wintered along the Atlantic coast of France. The present results may therefore reflect a re-distribution of the north-west European population. The most striking gains have been on the Mersey, where the peak counts over the past six years (1967–68 to 1972–73) have been as follows: 1,300, 3,900, 2,500, 5,450, 6,960 and 9,880. In both January and February 1973, this one site held more than half of the total number of birds recorded on British and Irish estuaries, and at the peak was probably holding *c.* 15% of the European population to the north and west of the Alps.

Table 4 The total numbers of Pintail *Anas acuta* recorded on British and Irish estuaries 1972–73 and on the Mersey estuary

	Britain	Ireland	Total	Mersey
September	2,744 (1,460)	75 (60)	2,819 (1,520)	905 (388)
October	9,538 (6,280)	2,352 (825)	11,890 (7,105)	4,900 (802)
November	7,734 (11,620)	3,906 (1,500)	11,640 (13,120)	2,396 (6,960)
December	11,667 (755)	2,173 (1,030)	13,840 (8,580)	5,980 (4,000)
January	17,882 (10,280)	1,803 (785)	19,685 (11,065)	9,880 (4,088)
February	12,389 (9,760)	1,039 (605)	13,368 (10,365)	7,647 (5,320)
March	2,805 (3,235)	343 (75)	3,148 (3,310)	1,112 (1,581)

1971–72 totals are shown in brackets

Note the difference in the timing of the peak counts

Important concentrations of Pintail were recorded on eight other estuaries besides the Mersey: Castlemaine Harbour, Co Kerry (2,000); the Cheshire Dee (1,552); Wexford Harbour (1,129); the Essex/Suffolk Stour (1,000); Medway (958); Duddon (800); Burry Inlet (788) and North Bull, Co Dublin (663). All these sites except the Medway showed an increase on the previous season.

Shoveler *Anas clypeata* By far the largest concentration was in Castlemaine Harbour, Co Kerry, a site which had not been covered previously. The numbers there reached 1,500 in October. Only four estuaries held flocks of more than 150; North Bull, Co Dublin, 309 (November); Medway, 230 (December); Strangford Lough, 195 (December) and the Ore, Suffolk, 150 (December). The very high counts on the Swale in 1971–72 were not repeated.

Freshwater and Estuarine Diving Ducks

Pochard *Aythya ferina* were recorded in very substantial numbers in two coastal areas. The largest flocks were at Seafield in the Firth of Forth, where 8,000 were recorded in early December, 1,010 in January and 3,500 in February. These presumably were the birds which are normally found roosting on Duddingston Loch on the outskirts of Edinburgh. The other concentration was on the Thames around Woolwich, where more than 1,000 were present from October until January, with a peak of 2,150 in November. In 1971–72 the area held 2,500 in December and January, and 4,000 in February. Flocks of 350 or more were recorded on Lough Swilly, Co Donegal (650), Strangford Lough (510), Rye Harbour (450) and Wexford Harbour (350). A further six sites held 150–300 birds.

Tufted Duck *Aythya fuligula* were found in relatively small numbers. Lough Swilly held 900 in November, and Poole Harbour, Radipole Lake and Wexford Harbour had 300–400 in January. Four other sites held 200–300 also in January.

Scaup *Aythya marila* As in previous seasons more than 85% of the birds counted in Britain and Ireland were concentrated on the Firth of Forth, between Leith and Musselburgh. In 1972–73 the totals were slightly higher than in 1971–72 and the peak occurred a month earlier. In both winters the Firth of Forth held rather more than 15% of the estimated north European population.

Table 5 The total numbers of Scaup *Aythya marila* recorded (a) on British and Irish estuaries 1972–73 and (b) on the Firth of Forth

	All estuaries	Firth of Forth
October	2,801 (343)	981 (170)
November	12,038 (9,143)	11,000 (7,032)
December	26,555 (10,827)	25,000 (10,004)
January	24,271 (24,357)	20,680 (22,216)
February	11,800 (20,532)	9,753 (18,584)
March	3,219 (7,368)	1,700 (6,013)

1971–72 totals are shown in brackets

Flocks of more than 100 Scaup were recorded on ten other estuaries and a further ten held 20 or more. The most notable gatherings were on Loch Indaal, Islay (1,500, January); the Solway Firth (1,111, October); in Wexford Harbour and Findhorn Bay (*c.* 400, January and February) and on the Wash, the Shannon/Fergus estuary and Carlingford Lough (200–250, January, March and November respectively).

Goldeneye *Bucephala clangula* The monthly totals throughout the winter of 1972–73 were appreciably higher than in the previous year. The main centre was as usual on the Firth of Forth, the numbers there amounting regularly to more than half the total count (see Table 6). Elsewhere there were 1,212 on the Cromarty Firth (three times as many as in 1971–72), 543 on the Ayrshire coast, 440 on the Inner Clyde, 404 on the Beauly Firth, 350 on the Tweed and 298 at the mouth of the Firth of Tay – all in January; the peak count of 386 on the Wash occurred in March. A further 13 sites held 100 or more.

Table 6 Monthly totals of Goldeneye *Bucephala clangula* recorded (a) on British and Irish estuaries 1972–73 and (b) on the Firth of Forth

	All estuaries	Firth of Forth
November	5,960 (3,780)	3,146 (1,490)
December	5,732 (4,530)	2,855 (2,133)
January	10,994 (7,885)	5,103 (4,271)
February	9,958 (5,880)	5,573 (2,925)
March	5,538 (4,685)	2,558 (2,125)

1971–72 totals are shown in brackets

Marine Diving Ducks

The information on these species is far from complete, the bulk of the birds occurring offshore in areas which are not normally covered by estuarine counts.

Long-Tailed Ducks *Clangula hyemalis* were recorded in quite large numbers in north-east Scotland: 1,320 were found in the Moray Firth in April, and 1,350 on the Sutherland coast between Golspie and Brora during May—possibly the same birds. The only winter gatherings of any size were at Lindisfarne (300) and on the Firth of Forth (200).

Common Scoter *Melanitta nigra* were present in strength on the Dornoch Firth (2,000, January), the Moray Firth (2,000, April), the Firth of Forth (1,241, March) and Castlemaine Harbour (800, November). The Moray Firth also held 349 Velvet Scoters *M. fusca* during April, and 76 were found on the Wash in the same month. In October there was a big mixed flock of 3,000 Common and Velvet Scoters on the Dornoch Firth, and another mixed flock totalling *c.* 550 was present between Brora and Golspie in December.

Eiders *Somateria mollissima* were once again recorded in very large numbers at the mouth of the Firth of Tay: 21,000 were present in September, a marked increase on the peak of 15,100 counted in November of the previous year. Only four other estuaries are known to have held more than 1,000: the Firth of Forth held a total of 3,835 in January; the Inner Clyde, 1,869, also in January; Lindisfarne, 1,750 in April, and the Brora-Golspie coast, 1,047 in December.

Saw-billed Ducks

Red-breasted Merganser *Mergus serrator* Totals of 150 or more were recorded on 11 coastal areas, the largest numbers being on the Moray Firth (598, September), the Firth of Forth (513, November) and Strangford Lough (405, September). On the other estuaries the peaks were scattered as follows throughout the year: August, the Kyles of Bute and Conway Bay (*c.* 250); September, South Solway (150); November, Loch Ryan (172); December, the Inner Clyde (187); February, Poole Harbour (259) and the Chesil Fleet (190). On Loch Indaal, Islay, a single count in October showed a total of 142.

Goosander *Mergus merganser* The Beauly Firth was as usual the only estuary with large numbers. A total of 371 was recorded there in February 1973, 50 more than in the previous year.

Shelduck *Tadorna tadorna*

In January 1973 *c.* 125,000 Shelducks were counted in north-west Europe, an increase of 25,000 on the totals recorded in most recent years. It is not yet clear whether this reflects a genuine increase, or merely an improvement in the cover, coupled perhaps with a favourable distribution at the time of the count. In both 1971–72 and 1972–73, the January counts

in Britain and Ireland produced an unprecedented total of about 69,000 of which *c.* 64,000 were in England, Scotland and Wales. As a result of these high totals it is clear that the north-west European population is considerably larger than the existing estimate of 105,000; in 1972–73 allowing for the numbers which are usually present on uncounted estuaries in Europe, there must have been at least 130,000, probably more.

Table 7 Monthly totals of Shelduck *Tadorna tadorna* recorded in Britain and Ireland. The 1970–71 totals are less complete than the others

	1970–71	1971–72	1972–73
September	4,452	6,475	8,066
October	6,853	19,594	15,007
November	14,435	31,175	20,688
December	19,109	36,341	26,954
January	29,568	68,617	69,454
February	30,936	61,115	49,605
March	24,115	37,235	37,860

Except in September, January and March the 1972–73 totals for Britain and Ireland were noticeably lower than those in 1971–72, as were the peak numbers recorded at many of the main resorts (see Table 8). The autumn shortage can probably be attributed to the late return of birds from the moulting grounds along the German coast. Later on it seemed that the population was more widely dispersed than in 1971–72 because in January 1973, when the total count was virutally the same as in 1972, the 20 most important estuaries were holding several thousand fewer birds (42,000 instead of 47,600).

Table 8 British and Irish estuaries of international importance for Shelduck *Tadorna tadorna*. Annual maxima and date of peak count in 1972–73

	1970–71	1971–72	1972–73	
Wash	5,217	13,930	7,941	January
Cheshire Dee	2,567	5,823	4,585	November
Medway	2,900	3,420	3,650	January
Morecambe Bay	1,931*	6,169	3,615*	January
Chichester Harbour	3,500	3,900	2,925	February
Firth of Forth	1,589	2,025	2,851	December
Swale	1,325	1,400	2,611	January
Essex/Suffolk Stour	1,831	2,680	2,500	January
Poole Harbour	2,582	1,780	2,240	February
Mersey	750*	2,280	2,062	February
Humber	306	1,232	1,976	October
Titchwell Reach	nc	nc	1,936	January
Blackwater, Essex	2,150	3,854	1,934	February
Teesmouth	1,406	1,965	1,900	October
Inner Clyde	638*	164*	1,601	January
Deben	568*	nc	1,388	January
Langstone Harbour	1,975	2,950	1,300	February
Shannon/Fergus	nc	nc	1,288	January
Ribble	1,089	1,970	1,250	January
Strangford Lough	1,236	1,560	1,233	January
Inner Thames	2,980	2,600	1,220	January

nc *no count* **irregular or incomplete cover*

Geese

Dark-bellied Brent Goose *Branta bernicla bernicla* After an excellent breeding season in summer 1972, the world population rose to a new peak of 48,000, an increase of *c.* 14,000 on the previous year. The proportion of young birds was *c.* 44%. In Britain, a peak of 28,200 recorded in both December and January 1972–73 was about 59% of the total. The coverage of the main resorts was better than ever; North Norfolk was the only area not covered regularly each month. Most of the North Norfolk counts and some of those on the Wash were made from light aircraft.

The regional and national totals for 1972–73 are set out in Table 9. Note the apparent late arrival of the autumn influx to the east coast in 1972–73.

Table 9 The numbers of Dark-bellied Brent Geese *Branta B. bernicla* recorded in three regions of England 1972–73

	Wash/N Norfolk	Essex/Kent	South coast	Total
October	516* (nc)	5,164 (8,704)	33 (314)	5,713 (9,018)*
November	3,257* (3,076)	7,872 (14,492)	4,190 (3,254)	15,319 (20,822)
December	5,342 (nc)	17,063 (13,109)	5,815 (5,940)	28,220 (19,049)*
January	5,116 (2,775)	12,221 (12,224)	10,920 (6,809)	28,257 (21,788)
February	2,047* (nc)	12,732 (12,994)	10,728 (6,659)	25,507 (19,653)
March	3,336 (nc)	6,543 (5,469)	6,154 (4,915)	16,033 (10,384)

nc *no count* **incomplete cover 1971–72 totals are shown in brackets*

The peak numbers at the main resorts are listed in the left hand column of Table 10. The remaining columns show the percentage of the world population recorded, month by month, at each site. The order of importance is very similar to that in 1971–72. There were still 613 present on the Wash in May.

Table 10 The highest counts of Dark-bellied Brent Geese *Branta b. bernicla* and the percentage of the world population using the principal sites in each month 1972–73

		Oct	Nov	Dec	Jan	Feb	Mar
Foulness/Leigh	10,650	10	16	22	12	5	2
Langstone Harbour	5,610	*	4	7	12	12	6
Blackwater	4,453	*	*	8	7	9	5
Chichester Harbour	4,355	*	5	4	8	9	7
Wash	3,167	1	5	7	6	5	6
North Norfolk	2,175	nc	nc	5	4	nc	1
Colne	1,760	*	*	1	1	4	1
Dengie	1,500	*	*	2	1	3	2
Hamford Water	1,225	*	*	2	2	3	2
North Kent	1,155	*	*	*	1	2	1
Exe	700	*	*	1	1	*	*

nc *no count* **less than 1% (480)*

Small flocks were recorded at another 14 sites including Portsmouth Harbour (300), Upper Crouch (250), Newtown, Isle of Wight (244), Keyhaven (240), Pagham Harbour (175), Donna Nook (128), Orwell (107), Poole Harbour (81), Burry Inlet (61) and Essex Stour (58).

Pale-bellied Brent Goose *Branta bernicla hrota* The flock at Lindisfarne, belonging to the Spitsbergen breeding population, reached a peak of only 400 (700, 1971–72). No other gatherings of any size were recorded in England, Scotland or Wales.

The Irish population, which breeds in Greenland, was covered much more fully than in

previous years. Table 11 sets out the monthly records from the main resorts; the figures for November and February are based on the special Brent Goose censuses organised through the Irish Wildbird Conservancy. The rather low total recorded in February in comparison with the November count is attributed not so much to mortality as to failure in locating some of the flocks.

Table 11 Monthly counts of Pale-bellied Brent Geese *Branta bernicla hrota* on their main resorts in Ireland 1972–73

	Oct	Nov	Dec	Jan	Feb	Mar
Strangford Lough, Co Down	11,619	4,363	6,773	3,315	3,250	550
Castlemaine Harbour, Co Kerry	1,500	3,200	1,700	370	955	nc
Tralee Bay, Co Kerry	nc	3,100	nc	nc	1,300	nc
Cumeen Strand, Co Sligo	2,250	114	nc	nc	137	nc
North Bull, Co Dublin	6	40	540	1,000	660	470
Tacumshin, Co Wexford	—	—	95	560	298	120
Malahide, Co Dublin	—	—	36	165	260	400
Rogerstown, Co Dublin	—	—	—	362	296	230
Bannow Bay, Co Wexford	8	110	220	120	75	282
Trawbreaga Bay, Co Donegal	—	—	50	65	238	70
Dungarven Bay, Co Waterford	75	63	168	188	153	123
Elsewhere	65	178	116	225	566	244
Total	15,523	11,168	9,698	6,370	8,188	2,489

nc *no count* — *nil*

Barnacle Goose *Branta leucopsis* The Solway Firth held 4,400 Barnacle Geese throughout the winter—a post-war record. These birds, comprising the entire Spitsbergen breeding population, were concentrated mainly at Caerlaverock and Rockcliffe.
The Greenland population, which winters in Ireland and the Hebrides, was censused from the air in March–April 1973. The total amounted to 23,600, an increase of 18% on the 20,000 recorded in the last aerial survey in March 1966. As usual, the bulk of the population was concentrated on Islay throughout the winter, 17,300 in November 1972 and 15,000 in March 1973.

Grey Geese By day, the majority of the grey geese fed inland, and the counts on their estuarine roosts were often misleadingly low. In November 1972, the dawn and dusk counts, made during the annual census, produced a national total of 68,000 Greylags *Anser anser* and 73,000 Pink-footed Geese *A. brachyrhynchus;* the counts on the coast totalled 9,681 and 18,422 respectively. The most important estuaries at that time were, for Greylag: Ythan 4,700, Bute coast 1,177, Cromarty Firth 1,150, Montrose Basin 1,000, Lindisfarne 475, Beauly Firth 454—and for Pinkfoot: Firth of Tay 8,240, Ribble 4,100, Ythan 4,000 and Humber 1,160. In January, 4,760 Pinkfeet were counted on the Wash, and in March there were 7,080 on the south shore of the Solway Firth. European White-fronted Geese *A. albifrons albifrons* reached a January peak of 9,000, of which 6,000 were concentrated on the Severn estuary at Slimbridge, and 1,137 on the Swale, Medway and Halstow marshes, Kent; the remainder were mostly inland. Greenland White-fronted Geese *A. albifrons flavirostris* were recorded in large numbers on the Wexford Slob (5,350, January) and on Islay (2,600, November).

Swans

Whooper Swans *Cygnus cygnus* and Bewick's Swans *C. columbianus bewickii* were present in strength at all their main estuarine resorts. On some Irish estuaries the peak counts were

lower than in the previous year, due probably to differences in the distribution between coastal and inland waters. In 1971–72 and 1972–73 only eight sites held internationally important concentrations of one or other species.

Table 12 British and Irish estuaries of international importance for Whooper and Bewick's Swans 1972–73

Peak numbers	Whooper Swans	Bewick's Swans
Lough Foyle	334 (861)	146 (140)
Lough Swilly	800 (370)*	— (150)*
Strangford Lough	332 (619)	
Severn		325 (311)
Wexford Harbour		317 (120)
Lindisfarne	306 (403)	
Cromarty Firth	173 (139)	
Wash		94 (137)

1971–72 counts are shown in brackets **incomplete cover*

Mute Swans *C. olor* were recorded in herds of 200 or more on seven estuaries, the peak counts being mostly in early spring or summer. In March, there were 245 on the Cromarty Firth and 240 on the Essex Stour; in May, 600 on the Inner Thames around Woolwich and in August, 261 on Christchurch Harbour and 214 on Lough Swilly. Winter peaks were recorded on Strangford Lough (452, November) and The Fleet, Dorset (685, February).

Waders

The improvement in coverage noted last year was maintained and counts of waders are now providing valuable information. The peak counts of each estuary are presented in Table 13. Once again the order of importance is similar to previous years. The 'big five' clearly maintained their importance. Large increases were noted on both the Dee and the Ribble, particularly on the Ribble in autumn. The numbers on the Wash were down slightly, owing to the relatively small numbers of Knot *Calidris canutus*, while the numbers on the Solway were well down as the mild winter did not force many Lapwings *Vanellus vanellus* and Golden Plovers *Pluvialis apricaria* onto the shore.

Of the other major British and Irish estuaries in Table 13, three in Ireland had not been fully counted before; the Shannon/Fergus, Lurgan Green and Castlemaine Harbour. The first of these was partially counted in 1971–72, but its true importance was not established then. It is clearly one of the major European estuaries. On a further six estuaries, Ballymacoda, Moray Firth, Medway, Essex/Suffolk Stour, Montrose Basin and the Alt, the peak count exceeded 15,000 for the first time; the first four areas had increases of 7,000 or more waders.

Apart from the Wash and Solway which have been mentioned already, four other estuaries had fewer waders on them. They were the Humber, Strangford Lough, Duddon and the Swale. On all four estuaries the peak numbers of both Knot and Dunlin *Calidris alpina* were much lower; the former followed the national trend but the latter was rather surprising in view of the record numbers on many other estuaries. The rest of the decrease was due to Lapwings on both the Humber and Strangford Lough, and Oystercatchers *Haematopus ostralegus* on the Duddon. The monthly totals of each species for Britain are presented in Table 14. The populations of most species were at record levels following the apparently good breeding season in the Soviet Union. Dunlin were particularly numerous, the peak population of which exceeded half a million for the first time, and Grey Plover

Pluvialis squatarola, whose population was almost double the average winter numbers for 1971–72. The only species which showed a reduction in numbers was Knot, whose wintering population comes mainly from Greenland and Canada; there were 100,000 fewer than in 1971–72. Turnstone *Arenaria interpres*, which breed in this area, were also slightly reduced in numbers.

The passage periods of most species remained fairly similar although there was slight evidence that the usual midwinter influxes of some species did not occur. These changes may be due to a number of factors, such as an actual decrease in the populations, the mild winter which did not force birds away from the Waddenzee or because passage periods were different from previous years. The period which was taken as 'winter' was from November to February. The population levels for Ringed Plover *Charadrius hiaticula*, Redshank *Tringa totanus*, Knot, Turnstone and to a slightly lesser extent of Sanderling *Calidris alba* and Oystercatcher were relatively stable over this period. This was especially surprising for Knot, whose numbers normally build up to a January maximum.

This report contains a short article on the numbers and distribution of Bar-tailed Godwits *Limosa lapponica* in Britain and Ireland (Figures 1, 2 and 3) to illustrate some of the ways in which this information can be used, and how the count data becomes even more valuable when it is combined with international counts, migration watches and ringing data. The similarity between the numbers in different years clearly indicates the consistency of counts and shows that after the full five years of the survey we shall be able to describe accurately the migrations and distribution of almost all species.

Table 13 British and Irish estuaries which supported over 15,000 waders in 1972–73

	Peak count*		Peak count*
Morecambe Bay	232,661	Ballymacoda	29,632
Wash	165,311	Mersey	29,276
Ribble	158,581	Firth of Clyde, inner	28,432
Dee	154,140	Dengie/Blackwater	25,032
Solway	144,191	Conway Bay	24,448
Hants/Sussex Harbour	100,328 †	Lough Foyle	22,889
Thames	83,719 †	Moray Firth	22,335
Severn	75,924	Medway	22,218
Firth of Forth	62,526	Duddon	22,155
Shannon/Fergus	55,949	Teesmouth	21,978
Chichester Harbour	44,887	Stour, Essex/Suffolk	21,429
Foulness	22,423	Portsmouth Harbour	20,890
Lindisfarne	38,849	Wexford Harbour	20,445
Langstone Harbour	38,329	Exe	20,072
Humber	37,586	Swale	18,371
Lurgan Green	37,002	Colne	17,533
Burry Inlet	34,720	Montrose Basin	16,764
Bull Island	29,952	Castlemaine Harbour	16,695
Strangford Lough	29,884	Alt	15,624

*peak count is summation of highest monthly counts for each species, regardless of month when peak occurred

† *In this table the peak figures for the Thames and Hants/Sussex harbours are given as are the peak counts of individual sub-units (i.e. Swale, Medway, N Kent Marshes, inner Thames and Foulness, and Portsmouth, Langstone and Chichester Harbours respectively). This amalgamation has been made to bring the counts of these estuarine complexes into line with the figures for the whole of other major estuaries.*

Table 14 The monthly population levels of waders in British Estuaries 1972–73

	July*	August	September	October	November	December	January	February	March	April*	May*
Oystercatcher *Haematopus ostralegus*	41,293	149,222	194,385	188,724	175,577	160,188	150,697	142,614	89,890	43,767	25,982
Lapwing *Vanellus vanellus*	19,829	35,317	44,753	35,374	25,546	76,201	82,704	74,769	16,922	5,192	2,043
Ringed Plover *Charadrius hiaticula*	3,570	24,254	13,530	9,459	6,845	6,331	6,430	6,224	3,869	5,659	13,392
Grey Plover *Pluvialis squatarola*	338	4,540	7,277	7,645	7,074	5,268	8,162	8,281	6,795	4,639	4,546
Golden Plover *P. apricaria*	1,235	8,265	16,303	12,949	13,770	35,238	30,546	23,744	16,313	6,800	227
Turnstone *Arenaria interpres*	2,593	9,626	7,684	7,939	7,689	7,611	7,807	8,383	8,287	7,567	7,986
Common Snipe *Gallinago gallinago*	238	461	958	1,243	1,510	4,228	4,089	2,095	1,569	461	79
Jack Snipe *Lymnocryptes minimus*	—	—	3	37	29	30	53	29	33	11	—
Curlew *Numenius arquata*	34,001	62,799	66,171	44,361	31,671	37,250	42,898	46,599	42,783	23,305	6,913
Whimbrel *N. phaeopus*	454	655	224	93	2	—	—	—	4	453	2,923
Black-tailed Godwit *Limosa limosa*	3,075	4,048	5,315	5,307	2,392	3,352	3,992	4,350	2,263	2,338	786
Bar-tailed Godwit *L. lapponica*	4,304	20,575	23,920	28,718	29,615	34,263	42,225	33,557	9,972	5,072	4,625
Green Sandpiper *Tringa ochropus*	110	127	67	26	11	12	10	4	18	13	4

Wood Sandpiper *T. glareola*	32	28	2	1	—	—	—	—	—	—	2
Common Sandpiper *T. hypoleucos*	619	602	163	30	14	11	12	11	15	32	226
Redshank *T. totanus*	24,707	82,038	102,686	81,533	64,291	58,530	62,141	62,194	61,939	38,282	7,025
Spotted Redshank *T. erythropus*	159	384	476	485	51	46	65	40	27	57	26
Greenshank *T. nebularia*	408	948	935	338	128	90	96	63	106	149	92
Knot *Calidris canutus*	57,563	155,099	165,369	161,678	240,562	284,418	252,979	281,386	186,651	127,710	25,030
Dunlin *C. alpina*	85,140	118,935	186,095	276,376	361,874	417,818	483,954	502,214	330,859	168,634	179,956
Sanderling *C. alba*	23,272	13,782	9,804	7,265	5,311	4,449	4,125	4,003	3,897	5,089	26,215
Ruff *Philomachus pugnax*	117	212	132	102	93	125	200	287	30	127	19
Little Stint *Calidris minuta*	7	48	102	29	1	3	5	7	3	2	16
Curlew Sandpiper *C. ferruginea*	74	317	234	16	—	—	—	1	1	—	1
Purple Sandpiper *C. maritima*	5	7	27	137	268	303	239	221	332	171	163
Avocet *Recurvirostra avosetta*	131	150	16	53	44	94	106	67	101	144	158
	303,274	692,444	846,631	869,934	974,368	1,135,859	1,183,535	1,201,143	782,649	445,674	308,435

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

Scotland

This year saw a notable increase in the cover of the Moray and Cromarty Firths, where good counts were obtained throughout the winter period. Regular counts were also made of the inner north Solway Firth. Unfortunately Tentsmuir Point on the Firth of Tay was only counted three times, there were no complete autumn or winter counts on the Eden and the Ythan was only counted in November. Elsewhere, however, cover remained excellent.

Table 15 emphasises the importance of both the Solway Firth and the Firth of Forth. With better counts the true importance of the Firth of Clyde and Moray Firth is becoming evident. The increasing number of counts from small north-western areas is particularly pleasing as information helps place the larger estuaries in their true perspective.

The numbers of each species (Table 16) were relatively similar to the numbers found in 1971–72, but a few species showed notable differences. One of these was the Grey Plover: in 1971–72 it was noted that the peak count of 178 was twice the previous highest figure. After its excellent breeding season in 1972–73 this rose to 343 and exceeded 178 in six of the eight months between September and April. The largest decrease was in Knot where the peak count dropped by 15,000 from 1971–72. June counts were made on six estuaries.

Table 15 Principal estuaries for waders in Scotland 1972–73

	Peak count	Highest monthly count	Month of highest count
Solway, north	70,752	52,588	October
Firth of Forth	62,526	58,101	January
Firth of Clyde, inner	28,432	23,294	January
Moray Firth	22,335	18,787	February
Montrose Basin	16,764	10,321	February
Cromarty Firth	14,997	10,922	January
Firth of Tay	14,336	10,700	January
Eden	11,300	10,103	January
Wigtown Merse	9,101	4,996	October
Irvine, Ayr	6,573	5,510	January
Dornoch Firth	4,917	4,144	January
Piltanton/Luce	4,370	2,809	December
Bute	4,169	3,005	August
Beauly Firth	3,824	2,457	September
Doon, Ayr	3,335	3,034	February
Barassie, Ayr	3,065	2,050	November
Hunterston, Ayr	2,790	1,872	January
Dipple, Ayr	2,635	1,675	September
Brora, Sutherland	1,764	1,005	November
Islay	1,259	single count	October
Loch Fleet	1,083	785	March
Ythan	1,078	single count	November
Arbroath shore	1,034	single count	October

Other smaller estuaries counted and their peak counts were: Ayr/Prestwick (844); Maidens Harbour, Ayr (695); Seamill, Ayr (538); Arran (511); Add, Argyll (458); Spey, Moray (431); Loch Carron, Ross (413*); Philorth, Aberdeen (318); Loch Torridon, Ross (213*); Loch Linnhe, Inverness (112); Kyle of Durness, Sutherland (97*); Deveron, Banff (92) and Don, Aberdeen (52).

single counts only

Table 16 Autumn, winter and peak counts of waders in Scotland 1972–73

	September	January	Peak	Month of peak count
Oystercatcher	36,208	41,834	43,241	October
Lapwing	15,750	18,447	18,447	January
Ringed Plover	1,593	950	1,593	September
Grey Plover	231	236	343	October
Golden Plover	4,147	9,291	10,582	February
Turnstone	1,141	1,762	1,980	October
Common Snipe	102	300	307	November
Jack Snipe	—	12	12	January
Woodcock	—	—	1	October
Curlew	11,855	8,853	11,855	September
Whimbrel	29	—	30	October
Black-tailed Godwit	215	101	274	October
Bar-tailed Godwit	4,037	8,103	8,533	November
Green Sandpiper	7	1	7	September
Common Sandpiper	13	—	103	May
Redshank	22,552	17,629	23,349	March
Spotted Redshank	8	—	25	October
Greenshank	83	19	83	September
Knot	2,480	49,403	49,403	January
Dunlin	7,650	40,443	40,443	January
Sanderling	151	101	151	September
Ruff	27	—	27	September
Little Stint	2	—	2	September and October
Curlew Sandpiper	22	—	22	September
Purple Sandpiper	3	114	247	March
Red-necked Phalarope	—	—	1	August
Grey Phalarope	—	—	2	August
	108,301	197,599		

Wales

Apart from the continued lack of counts on the Taf, Tywi and Gwendraeth, cover was again very good. More regular counts were made on the section of the Severn between the Usk and Rhymney estuaries, and in Anglesey. Counts were made for the first time on the Mawddach estuary.

Table 17 shows that peak numbers on each estuary were fairly similar to those made last year. The largest increases were obtained on the Gwent Severn, partly linked with increased cover, and on Conway Bay. Table 18 presents the autumn, winter and peak counts for each wader species. The total autumn and winter counts were basically similar, though the latter was up by 17% on the January 1972 figures. This difference is mainly a result of the relatively large number of Dunlin present (50% up), though Grey Plover (50–150%) and Bar-tailed Godwit (90% up) also contributed to the increase. Oystercatchers were about 15–20% down on 1971–72. June counts were made on six areas.

Table 17 Principal estuaries for waders in Wales 1972–73

	Peak count	Highest monthly count	Month of highest count
Burry Inlet, Glam	34,720	26,094	November
Conway Bay, Caern	24,448	19,559	January
Severn, Usk-Wye	21,198	14,384	October
Severn, Usk-Rhymney	17,109	16,194	March
Milford Haven, Pembs	8,324	6,796	December
Conway River, Caern	7,899	5,424	January
Taff/Ely, Glam	7,734	5,991	January
Dyfi, Card/Merioneth	5,898	3,434	May
Blackpill, Glam	5,063	4,417	January
Neath River, Glam	3,666	2,606	January
Traeth Bach, Merioneth	3,638	1,802	January
Afon Ceint, Anglesey	3,304	2,149	January
Beddmanarch Bay, Anglesey	3,274	2,347	September
Clwyd, Flints	3,250	2,956	January
Pwllheli Harbour, Caerns	2,907	2,556	February
Dulas Bay, Anglesey	2,253	1,800	January
Afon Wen, Anglesey	1,514	1,384	February
Menai Straits, south	1,510	922	December
Mawddach, Merioneth	1,454	838	February

Other smaller estuaries and their peak counts were: Taf/Tywi/Gwendraeth, Carm (911 part count*); Gronant, Flints (510*) and Foryd Bay, Caerns (273).

*single counts only

Table 18 Autumn, winter and peak counts of waders in Wales 1972–73

	September	January	Peak	Month of peak count
Oystercatcher	19,645	17,856	26,144	November
Lapwing	4,346	5,197	9,493	December
Ringed Plover	1,148	991	1,958	August
Grey Plover	127	671	1,116	March
Golden Plover	1,024	1,080	1,351	March
Turnstone	519	697	1,122	March
Common Snipe	37	160	160	January
Jack Snipe	—	1	1	December and January
Curlew	5,245	4,928	7,751	February
Whimbrel	20	—	171	May
Black-tailed Godwit	42	52	151	August
Bar-tailed Godwit	793	1,686	1,686	January
Green Sandpiper	1	1	9	August
Common Sandpiper	14	1	36	August
Redshank	5,771	4,334	5,771	September
Spotted Redshank	58	4	58	September
Greenshank	122	22	122	September
Knot	331	12,916	12,916	January
Dunlin	3,073	37,264	37,264	January
Sanderling	214	230	441	October
Ruff	—	—	4	August
Little Stint	2	—	4	August
Curlew Sandpiper	64	—	64	September
Purple Sandpiper	—	—	3	February
Avocet	1	—	1	September
	42,597	88,091		

North Irish Sea

The coverage of the eight important estuaries in this area remained good, and complete counts were achieved between August and April. Only the Duddon was not counted in May. The four southern estuaries were the only ones counted in July.

The peak counts (Table 19) showed some variation from last year, although the number in Morecambe Bay, almost a quarter of a million, was remarkably similar. Both the Dee and the Ribble had more birds, each with about 30,000 extra, while on the Solway numbers dropped by 60,000. These fluctuations in numbers give a fascinating and illuminating insight into the different patterns of migration in different years.

Table 20 presents the seasonal change in numbers occurring in the region. The autumn was particularly good. The highlights were massive flocks of Knot on the Ribble (60,000 in September) and Redshank on Morecambe Bay (20,400 also in September). In contrast to the established pattern, midwinter numbers were generally low with Oystercatcher, Curlew *Numenius arquata*, Lapwing and Knot being well down. The increase in the wintering flock of Black-tailed Godwits *Limosa limosa* on the Dee again continued; there were almost 1,500 present in February—this flock was not recorded until 500 or so were seen two years ago. It is interesting to note that the peak of Grey Plover occurred in May, the same month as last year, and that on both occasions almost all birds were on the Ribble. June counts were made on two areas.

Table 19 Principal estuaries for waders in the North Irish Sea 1972–73

	Peak count	Highest monthly count	Month of highest count
Morecambe Bay	232,661	187,175	December
Ribble	158,581	132,372	September
Dee	154,140	103,400	February
Solway, south	95,534	65,219	December
Mersey	29,276	26,317	February
Duddon	22,155	19,041	October
Alt	15,624	12,792	August
Esk	10,201	9,153	December

Table 20 Autumn, winter and peak counts of waders in North Irish Sea 1972–73

	September	January	Peak	Month of peak count
Oystercatcher	107,021	64,380	107,021	September
Lapwing	15,651	10,722	37,833	February
Ringed Plover	6,201	1,497	11,564	August
Little Ringed Plover	1	—	1	August, September and May
Grey Plover	1,246	683	1,440	May
Golden Plover	8,647	3,851	14,209	December
Turnstone	2,423	2,538	4,711	August
Common Snipe	291	155	1,601	December
Jack Snipe	—	6	8	November
Curlew	25,161	11,317	26,673	August
Whimbrel	60	—	135	August
Black-tailed Godwit	1,985	1,209	1,985	September
Bar-tailed Godwit	12,556	21,176	21,176	January
Green Sandpiper	18	—	24	August
Wood Sandpiper	—	—	3	July
Common Sandpiper	8	—	72	August
Redshank	44,295	16,067	44,295	September
Spotted Redshank	52	3	52	September
Greenshank	201	—	248	August
Knot	113,994	99,887	153,209	February
Dunlin	81,853	141,147	150,535	February
Sanderling	7,504	1,395	24,568	May
Ruff	31	8	109	April
Little Stint	8	4	14	August
Curlew Sandpiper	24	—	98	August
Purple Sandpiper	10	41	70	February
Pectoral Sandpiper	—	—	1	August
	429,241	376,086		

South-west England

Cover in 1971–73 was unfortunately not as good as in previous years, although large teams made an excellent series of counts on the two major areas—the Severn and the Exe. No counts were received from the lower Tamar, Plym, Kingsbridge or the Fal complex. However, complete co-ordinated counts of the Taw/Torridge were achieved in January and April.

Generally the peak counts presented in Table 21 are very similar to those obtained last year. The Severn and Exe were again clearly the most important.

The total numbers recorded in autumn and winter (Table 22) were similar to last year's, as was the pattern of occurrence of most migrants. The late August passage of Ringed Plovers *Charadrius hiaticula* was again heavy, although not quite as dramatic as in August 1971. The Whimbrel *Numenius phaeopus* roost on Stert Island, Somerset, was again occupied in May when over 2,150 were present. The Avocets *Recurvirostra avosetta* began to change their feeding area during the winter. The Tamar flock, which has been feeding in a traditional site since the late 1940s, started their move into the upper Tavy estuary and by the end of the winter most of them were to be found there. The Exe flock continued to increase, with up to 13 present during the middle of the winter. June counts were made on three areas.

Table 21 Principal estuaries for waders in south-west England 1972–73

	Peak count	Highest monthly count	Month of highest count
Severn, Som/Glos	57,047	46,685	November
Exe, Devon	20,072	15,616	December
Camel, Cornwall	10,806	10,043	January
Taw/Torridge, Devon	9,646	9,254	January
Tamar, Cornwall	5,734	5,566	December
Hayle, Cornwall	5,673	4,981	December
Tavy, Devon	2,023	1,280	February
Teign, Devon	1,793	1,241	February
Dart, Devon	1,084	708	October

Other smaller estuaries and their peak counts were: Axe, Devon (955); Avon, Devon (486); Erme, Devon (178); west Somerset coast (162) and Yealm, Devon (17).

Table 22 Autumn, winter and peak counts of waders in south-west England 1972–73

	September	January	Peak	Month of peak count
Oystercatcher	2,738	2,974	4,851	August
Lapwing	2,235	16,977	16,977	January
Ringed Plover	1,115	920	3,413	August
Little Ringed Plover	—	—	1	July and August
Kentish Plover	—	—	1	October
Grey Plover	130	657	657	January
Golden Plover	363	8,012	8,104	December
Turnstone	900	369	900	September
Common Snipe	19	747	747	January
Jack Snipe	—	1	4	February
Curlew	2,439	3,934	3,934	January
Whimbrel	22	—	2,181	May
Black-tailed Godwit	240	567	808	July
Bar-tailed Godwit	231	422	1,082	November
Green Sandpiper	9	2	23	July
Wood Sandpiper	—	—	9	July
Common Sandpiper	25	9	110	July
Lesser Yellowlegs	1	—	1	September
Redshank	1,909	2,556	2,556	January
Spotted Redshank	22	3	23	August
Greenshank	63	47	73	August
Knot	97	597	817	March
Dunlin	4,001	40,489	44,169	November
Sanderling	104	389	389	January
Ruff	5	33	33	January
Little Stint	31	—	31	September
Curlew Sandpiper	34	—	42	August
Purple Sandpiper	—	1	2	March
Avocet	—	92	92	January
	16,733	79,798		

Southern England

Once again almost complete cover was obtained between August and March, although only one count came from Pagham Harbour before December. Unfortunately there were no counts from Sussex after March. Table 23 shows that on virtually all areas there were larger numbers than last year's peak counts. The major estuaries therefore kept their relative positions in order of importance; the only major departure was that a very large number of waders were recorded on the Sussex coast in January, three-quarters of them Lapwings.

Table 24 shows that the autumn and winter numbers were up, each by about 50% on the 1971–72 figures, and the increase was fairly evenly spread over all the species except for the Dunlin, whose numbers almost trebled in the autumn and were up by 25% in mid-winter. As this is by far the most numerous wader in the area, its fortunes have the greatest effect on the total population. During the whole of the period September 1972 to March 1973 the number of Grey Plover exceeded the peak total of the 1971–72 season. June counts were made on five areas.

Table 23 Principal estuaries for waders in southern England 1972–73

	Peak count	Highest monthly count	Month of highest count
Chichester Harbour, Sussex/Hants	44,887	37,541	February
Langstone Harbour, Hants	38,329	34,860	January
Sussex coast	22,136	21,890	January
Portsmouth Harbour, Hants	20,890	18,450	February
Southampton Water, Hants	13,263	10,850	January
Poole Harbour, Dorset	9,264	7,148	February
Solent, Hants	9,213	7,656	January
Pagham Harbour, Sussex	5,489	4,357	February
Christchurch Harbour, Hants	3,510	2,871	January
Beaulieu River, Hants	3,142	2,564	December
Newtown, Isle of Wight	2,941	2,763	January
Fleet, Dorset	2,292	1,622	December
Rye Harbour, Sussex	2,064	1,356	August

Other smaller estuaries and their peak counts were: Radipole/Lodmoor, Dorset (932); Brading Harbour, Isle of Wight (600); Wootton Creek, Isle of Wight (479) and Western Yar, Isle of Wight (63).

Table 24 Autumn, winter and peak counts of waders in southern England 1972–73

	September	January	Peak	Month of peak count
Oystercatcher	3,286	3,755	3,755	January
Lapwing	1,871	22,692	22,692	January
Ringed Plover	1,313	1,124	2,824	August
Little Ringed Plover	—	—	3	July
Grey Plover	1,350	1,463	1,705	February
Golden Plover	320	3,179	3,179	January
Turnstone	489	685	731	December
Common Snipe	190	2,390	2,390	January
Jack Snipe	1	29	29	January
Woodcock	—	—	1	October
Curlew	5,761	3,615	5,761	September
Whimbrel	14	—	226	August
Black-tailed Godwit	1,711	1,524	2,088	December
Bar-tailed Godwit	708	1,718	1,718	January
Green Sandpiper	8	4	28	July
Wood Sandpiper	1	—	15	August
Common Sandpiper	35	1	158	August
Redshank	8,596	3,900	8,596	September
Spotted Redshank	121	39	121	September
Greenshank	280	5	280	September
Knot	23	1,647	1,647	January
Dunlin	9,824	86,873	96,467	February
Sanderling	283	829	885	December
Ruff	18	92	151	February
Little Stint	13	1	13	September
Curlew Sandpiper	13	—	39	August
Purple Sandpiper	—	51	51	January
Avocet	3	2	3	September
Red-necked Phalarope	1	—	1	September
	36,233	135,618		

Eastern England

Excellent cover was maintained. There was a gap on the outer part of the south Humber but otherwise almost every area was counted in each month. The relative numbers on the major estuaries remained fairly constant (Table 25) although mid-winter numbers on the largest estuaries were slightly down. One large increase was on the Medway, where the numbers almost doubled. The Wash again supported a very large number of waders, almost four times as many as the next largest flock. It was particularly pleasing to see that the extension of counts in Essex revealed 44,400 waders on the Foulness/Canvey area, thus emphasising its importance.

Table 26 shows the counts for each species. Rather surprisingly, the mid-winter numbers were down on 1971–72, but the autumn ones were well up. Generally the numbers were similar to those of the previous year, though the decrease of almost 60,000 in the numbers of Knot was particularly striking. Black-tailed Godwits were numerous with the return of the large wintering flock of about 500 on the Essex/Suffolk Stour. Eight areas were counted in June, mainly in Essex and on the Wash.

Table 25 Principal estuaries for waders in eastern England 1972–73

	Peak count	Highest monthly count	Month of highest count
Wash, Norfolk/Lincs	165,311	133,206	September
Foulness, Essex	44,423	41,314	February
Lindisfarne, Northumb	38,849	35,360	January
Humber, Yorks/Lincs	37,586	30,479	January
Medway, Kent	22,218	17,796	February
Teesmouth, Yorks/Durham	21,978	17,878	November
Stour, Essex/Suffolk	21,429	20,643	February
Swale, Kent	18,371	14,711	January
Colne, Essex	17,533	14,539	February
Dengie, Essex	17,323	10,644	December
Hamford Water, Essex	13,191	10,225	March
Blackwater, Essex	10,910	9,849	February
Thames, inner, Essex/Kent	9,261	8,478	December
Stour, Kent	5,709	4,741	November
Orwell, Suffolk	4,953	4,385	February
N. Kent, Marshes	4,854	4,538	January
Blakeney, Norfolk	4,454	2,811	September
Breydon Water, Suffolk	4,420	4,082	February
Blyth, Suffolk	3,573	2,819	December
Wells/Stiffkey, Norfolk	3,457	2,518	October
Deben, Suffolk	2,514	2,166	January
Alde, Suffolk	2,374	2,199	December
Tweed, Northumberland	2,310	Single count	January
Beadnall Shore, Northumberland	1,819	1,320	September
Ore, Suffolk	1,620	1,052	January
Coquet, Northumberland	1,086	735	December
Butley, Suffolk	1,034	762	March

Other smaller areas and their peak counts were: Washington Ponds, Durham (621); south Kent coast (562*); Reculver/Minnis Bay, Kent (513); Aln, Northumberland (432) and Whitburn coast, Durham (255).

*single count only

Table 26 Autumn, winter and peak counts of waders in eastern England 1972–73

	September	January	Peak	Month of peak count
Oystercatcher	25,487	19,898	25,487	September
Lapwing	4,900	8,669	8,669	January
Ringed Plover	2,160	948	3,385	August
Little Ringed Plover	4	—	6	July
Grey Plover	4,193	4,452	5,157	February
Golden Plover	1,802	5,133	5,133	January
Dotterel	1	—	9	May
Turnstone	2,212	1,756	2,759	April
Common Snipe	319	337	562	October
Jack Snipe	2	4	17	March
Woodcock	—	1	12	October
Curlew	15,710	10,251	15,710	September
Whimbrel	79	—	413	May
Black-tailed Godwit	1,122	539	1,205	August
Bar-tailed Godwit	5,595	9,120	10,009	August
Green Sandpiper	24	2	52	August
Wood Sandpiper	1	—	9	August
Common Sandpiper	68	1	244	July
Redshank	19,563	17,655	19,563	September
Spotted Redshank	215	16	274	October
Greenshank	186	3	408	August
Knot	48,444	88,529	88,529	January
Dunlin	79,694	137,738	153,222	February
Sanderling	1,548	1,181	1,958	July
Ruff	56	67	120	February
Little Stint	46	—	46	September
Temminck's Stint	—	—	1	August and October
Curlew Sandpiper	77	—	123	August
Purple Sandpiper	14	32	39	March
Broad-billed Sandpiper	—	—	1	May
Avocet	12	12	158	May
Red-necked Phalarope	1	—	1	September and May
	213,535	306,344		

Northern Ireland

The improvement of the cover in Northern Ireland, which was commented on in the last report, was not only maintained but continued to expand with an excellent series of counts for Larne Lough, received from the Greenisland Ornithologists' Club. Apart from Belfast Lough, all the major estuaries were counted between October and February with most counts continuing into May. Additional early autumn counts would be of considerable interest.

Table 27 shows that most estuaries had similar numbers of waders to those in 1971–72, though Strangford Lough had many fewer. This was mainly due to the small number of Lapwing and Knot. The former species may not have needed to come on to the shore because the mild winter provided plenty of feeding inland and also did not cause any cold weather movements out of Britain. The generally low numbers of Knot were clearly reflected here.

Table 28 shows that these two species were 30% and 45% down on last year's peak figures, whereas most of the other species were present in relatively similar numbers. Care is necessary in assessing counts of some species in Northern Ireland and the Republic of Ireland, as there is an enormous area of wet grassland available during mild winters where Lapwing and Golden Plover, Curlew and Redshank find good feeding. These birds may only resort to the estuaries habitat in severe weather and fluctuations in their numbers may only reflect local movements.

Table 27 Principal estuaries for waders in Northern Ireland 1972–73

	Peak count	Highest monthly count	Month of highest count
Strangford Lough	29,884	24,553	February
Lough Foyle	22,889	14,648	February
Bann	5,753	3,826	November
Larne Lough	4,626	3,182	January
Carlingford Lough	3,115	2,821	December
Dundrum Bay	2,214	1,418	October

Table 28 Autumn, winter and peak counts of waders in Northern Ireland 1972–73

	September	January	Peak	Month of peak count
Oystercatcher	4,119	5,344	5,344	January
Lapwing	1,282	8,646	10,359	February
Ringed Plover	364	445	445	January
Grey Plover	89	144	144	January
Golden Plover	1,439	3,198	5,273	November
Turnstone	159	383	383	January
Common Snipe	19	229	229	January
Jack Snipe	—	4	5	February
Curlew	3,204	3,486	5,745	February
Whimbrel	3	—	20	May
Black-tailed Godwit	190	70	214	October
Bar-tailed Godwit	543	3,131	3,131	January
Common Sandpiper	—	—	2	May
Redshank	4,045	4,095	5,091	November
Spotted Redshank	1	—	1	September and February
Greenshank	76	74	95	November
Knot	373	6,312	12,413	February
Dunlin	1,200	6,675	7,071	December
Sanderling	100	42	213	August
Ruff	1	—	1	September and November
Little Stint	1	—	1	September
Curlew Sandpiper	5	—	23	August
Purple Sandpiper	—	—	25	December
	17,213	42,278		

Republic of Ireland

The Irish Wildbird Conservancy's *Wetlands Enquiry* has progressed from strength to strength. A further seven areas were counted this year and more regular cover obtained on many others. The counts made between October and February in Castlemaine Harbour, the expansion of counts in the Lurgan Green/Dundalk Bay and a complete mid-winter count of the Shannon/Fergus estuary were of particular note. The only area where counts were slightly fewer was in Co Cork with Ballymacoda being the exception.

Table 29 presents the peak counts on Irish estuaries. The efforts made to count the Shannon/Fergus in January paid off handsomely; the very large count placed the area in the eighth position of importance in Britain and Ireland. The important areas have now been identified and further work is being carried out to fill in the details. Of the new areas counted, Castlemaine Harbour is clearly of major significance and the single count at Killala Bay demonstrated the potential importance of areas on the Mayo/Sligo coastline.

Table 29 Principal estuaries for waders in the Republic of Ireland 1972–73

	Peak count	Highest monthly count	Month of highest count
Shannon/Fergus	55,949	48,818	January
Lurgan Green, Louth	37,002	25,593	February
North Bull, Dublin	29,952	22,342	January
Ballymacoda Bay, Cork	29,632	27,403	January
Wexford Harbour	20,455	15,097	December
Castlemaine Harbour, Kerry	16,695	10,086	December
Dundalk Bay, Louth	14,320	single count	March
Bannow Bay, Wexford	13,936	8,913	December
Dungarven Harbour, Waterford	8,671	6,060	January
Killala Bay, Mayo	7,803	single count	November
Cork Harbour	7,487	part counts	
Tramore, Waterford	7,163	4,605	February
Malahide, Dublin	6,310	2,706	March
Cull, Wexford	5,588	2,864	December
Boyne, Louth/Meath	5,449	4,679	January
Rogerstown, Dublin	5,031	2,670	March
Waterford Harbour, west	4,428	3,594	January
Clonakilty, Cork	3,975	2,607	January
Broad Lough, Wicklow	2,729	1,959	February
Lough Swilly, Donegal	2,688	1,594	September
Tacumshin, Wexford	2,340	1,562	December
Lough Foyle, Donegal	2,224	part counts	November
S Dublin Bay	1,846	single count	August
Clew Bay, Mayo	1,833	part single count	November
Ballycotton, Cork	1,825	962	August
Lady Islands Lake, Wexford	1,684	960	January
Ballisadare Bay, Sligo	1,160	single count	October
Kilcoole, Wicklow	1,084	850	February

Other smaller estuaries and their peak counts were: Kinsale, Cork (900*); Trawbeaga Bay, Donegal (832); Laytown, Meath (750); Courtmacsherry, part, Cork (743*); Baldoyle, Dublin (697); Rosscarbery, Cork (608*); Cumeen Strand, part, Sligo (550*); Ballymascanlow, Louth (452*) and south Carlingford Lough (346*).

*single counts only

With the improvement in cover, the numbers recorded in Table 30 increased significantly —with over three times the number being observed in January 1973 compared with that in January 1972. The important concentration of 33,000 Dunlin, 3,600 Redshank and 6,500 Black-tailed Godwits on the Shannon/Fergus perhaps had the most significant effects on total numbers, though worthy of note are the 400 Ringed Plover, 565 Sanderling and 60 Greenshank *Tringa nebularia* wintering at Castlemaine. Bar-tailed Godwit were very numerous with up to 6,000 at Lurgan Green and 3,000 at Castlemaine representing the majority of the increase. There was no complete national cover in any month, though January was particularly well covered; the numbers are therefore still well below the true national total. Five areas were counted in June.

Table 30 Autumn, winter and peak counts of waders in the Republic of Ireland 1972–73

	September	January	Peak	Month of peak count
Oystercatcher	14,227	8,757	15,255	October
Lapwing	2,292	24,833	24,833	January
Ringed Plover	1,184	1,073	1,184	September
Grey Plover	222	830	956	March
Golden Plover	1,344	36,697	39,617	November
Turnstone	588	524	702	March
Common Snipe	93	330	330	January
Jack Snipe	—	3	3	October and January
Curlew	7,359	8,061	10,180	November
Whimbrel	20	—	41	May
Black-tailed Godwit	4,608	3,756	9,030	March
Bar-tailed Godwit	3,709	9,373	12,943	November
Green Sandpiper	2	—	2	September
Wood Sandpiper	—	—	2	July
Common Sandpiper	3	—	11	August
Redshank	6,484	6,827	7,223	October
Spotted Redshank	19	23	23	January
Greenshank	311	214	311	September
Knot	363	17,090	17,090	January
Dunlin	5,067	67,298	67,298	January
Sanderling	432	523	754	November
Ruff	30	8	30	August, September and March
Little Stint	11	—	11	September
Curlew Sandpiper	64	—	64	September
Purple Sandpiper	—	—	9	November
	48,432	186,220		

Gulls

A much greater effort was made to record gull numbers in 1972–73 and, because almost all observers now make an estimate of the numbers present rather than using the relatively imprecise order of frequency, we are beginning to gain an idea of the national picture. Even so, the figures are still incomplete. The peak counts made on each of the major estuaries are presented in Table 31. These counts are not strictly comparable as they do not differentiate between breeding colonies, diurnal concentrations and nocturnal roosts, but at this stage it does not seem justifiable to divide the table. The estuaries marked with (b) are ones where the breeding colonies of Black-headed Gulls *Larus ridibundus* make up over 80% of the peak count (for comparison see Table 23). By far the largest number of gulls was again recorded on the south Solway where a nocturnal roost count in November revealed almost 110,000 Common Gulls *L. canus*. The counts on the inner Firth of Clyde, Wash and Taff all included nocturnal roost counts, and this gives some idea of the very large numbers that can occur. It is hoped that in future years we will be able to provide a much more accurate picture of the relative importance of gulls on all estuaries.

Table 32 presents the major concentrations recorded of each species. The general picture of occurrence and distribution of Great Black-backed Gulls *L. marinus* was similar to that found previously. The nine largest flocks were on the North Sea coast from the Moray Firth to Pegwell Bay. Five of the seven counts over one thousand were made during the August to November period, though this year the peak count on Teesmouth and the Humber did not occur until January. Lesser Black-backed Gulls *L. fuscus* were recorded more frequently this year. In contrast to the previous species the five largest concentrations were all on the west coast of Britain. Once again numbers dropped off very sharply during the late autumn and all the major numbers were seen during the autumn. Herring Gulls *L. argentatus* were widely distributed.

Most areas had peak numbers in autumn between August and October, though in the Moray Firth the largest number was present in April, in the inner Clyde it was in December and at Lindisfarne the numbers were fairly constant between October and February.

Apart from the massive flock of Common Gulls on the Solway in November and the large Wash flock in September, the other main concentrations occurred in either January or February; this was true for both the east and west coasts of Britain. The largest post-breeding concentrations of Black-headed Gulls occurred in Septmber on the inner Clyde and on the Wash. Most of the other major numbers, however, did not occur until midwinter.

Of the less common gulls, Kittiwakes *Rissa tridactyla* were present in much smaller numbers, mostly restricted to the area between Teesmouth and the Firth of Forth; the major numbers were seen in early autumn. Little Gulls *Larus minutus* were much more widespread this year, being recorded on 23 estuaries. The peak counts were of 71 on the Alt in July and 45 on Tacumshin in June. Glaucous Gulls *L. hyperboreus* were seen on 11 estuaries, only two of which—the Moray and Dornoch Firths—had two birds together. The spread of Mediterranean Gulls *L. melanocephalus* continues; they were recorded on six estuaries, always alone except for three together at Blackpill in the spring.

Table 31 Peak counts of Gulls on estuaries in 1972–73

Solway, south	136,357	Cromarty Firth	6,396
Clyde, inner	45,266	Clwyd	6,379
Wash	42,867	Christchurch Harbour	5,566
Beaulieu River	40,096(b)	Clonakilty	5,300
Taff	21,860	Cork Harbour	4,664
Teesmouth	19,964	Burry Inlet	4,509
Humber	18,356	Malahide	4,475
Lindisfarne	16,850	Ore	4,342(b)
Esk, Cumb	16,730(b)	Beadnallshore	3,830
Foulness	15,146	Poole Harbour	3,729
Duddon	14,514	Exe	3,704
Doon, Ayr	13,895	Strangford Lough	3,696
Stour, Kent	13,750	Bute	3,684
Southampton Water	12,953	Neath River	3,643
Langstone Harbour	12,465	Deveron	3,620
Breydon Water	11,000	Taw/Torridge	3,581
Moray Firth	10,930	Usk, Gwent	3,325
Severn, Gwent	10,488	Bull	3,235
Solent	10,332(b)	Conway Bay	3,053
Dublin Bay, south	10,267	Spey	3,010
Colne	10,251(b)	Teign	2,882
Alt	9,749	Yealm	2,755
Tay	9,709	Stour, Essex/Suffolk	2,685
Forth	9,404	Blackwater	2,610
Blackpill	9,011	Beddmanarch Bay	2,532
Dee	8,200	Lurgan Green	2,530
Bannow Bay	7,851	Ballymacoda	2,503
Orwell	7,293	Foyle	2,499
Swale	6,465	Tamar	2,339
Severn, Som/Glos	6,434	Eden	2,300

(b) large breeding concentrations occurred

NB These counts are not strictly comparable, see text.

Table 32 The largest concentrations of the five principal Gull species recorded 1972–73

Great Black-backed Gull		Lesser Black-backed Gull		Herring Gull	
Stour, Kent	3,500	Duddon	3,020	Solway, south	16,225
Teesmouth	3,372	Solway, south	1,070	Dublin Bay, south	6,500
Wash	2,807	Bute	900	Wash	6,269
Foulness	2,180	Taff	750	Clyde, inner	6,193
Beadnall shore	2,060	Alt	667	Alt	5,300
Humber	1,471	Lady Islands lake	600	Moray Firth	5,025
Moray Firth	1,414	Stour, Kent	450	Lindisfarne	5,000
Spey	1,200	Lindisfarne	400	Duddon	4,072
Coquet	751	Severn, Som/Glos	312	Tay	3,915
Swale	597	Doon	300	Taff	3,000

Common Gull		Black-headed Gull	
Solway, south	109,285	Wash	45,132
Wash	7,909	Beaulieu River	40,000
Doon	6,500	Clyde, inner	32,890
Clyde, inner	5,819	Taff	18,000
Humber	5,638	Esk	15,000
Teesmouth	4,401	Southampton Water	12,000
Langstone Harbour	2,549	Breydon Water	10,000
Blackpill	2,200	Colne	10,000
Forth	1,600	Lindisfarne	10,000
Cromarty Firth	1,584	Severn, Gwent	10,000
		Solent	10,000

Terns and Skuas

All the records in this section were of post-breeding flocks seen in early autumn and therefore excluded breeding concentrations. Common/Arctic Terns *Sterna hirundo/S. paradisaea* were the most numerous with the main concentrations being in South Dublin Bay (3,000, August), Alt (1,500, July) and the Dee (1,500, August); the only other flocks to exceed 500 were at Lindisfarne (750) and Teesmouth (672). Very few Roseate Terns *S. dougalli* were seen, apart from the impressive concentration of 442 on South Dublin Bay. Sandwich Terns *S. sandvicensis* did not occur in large numbers except on the Wash, where 1,500 were seen in August. Only four other areas had flocks of over 250; they were Lindisfarne (600), Teesmouth (584), Dee (465) and Firth of Forth (370). Many more Little Terns *S. albifrons* were recorded this year. Three sites had over a hundred; they were Foulness (120), Dee (118) and Hamford Water (100) but Chichester Harbour, Bull, Wash, Colne and Dundrum all had over 50 birds during the autumn. Few Black Terns *Childonias niger* were seen; the largest number (11) was on the Kent Stour.

The only area with more than 20 Arctic Skuas *Stercorarius parasiticus* was the Wash, where 65 were seen in August. This month also saw the highest counts of Great Skuas *S. skua* (4) and Long-tailed Skuas *S. longicaudus* (3); surprisingly, the largest number of Pomarine Skuas *S. pomarinus* (4) was seen on the Moray Firth in January.

Bar-tailed Godwit numbers and distribution

The Bar-tailed Godwits *Limosa lapponica* which visit Europe probably come from the populations breeding in the area from northern Scandinavia to the Taimyr Peninsula in the Soviet Union. There is another form, distinguished by its darkish rump and underwing coverts, which breeds further east and winters in Australasia, but this has not yet been recorded in Europe. Unlike many of our other waders, the Bar-tailed Godwit does not breed in Iceland, Greenland or Canada.

After breeding, the adults migrate west and south-west to the Atlantic coast where they moult. The greatest numbers migrating past Ottenby, on the Swedish coast of the Baltic Sea, are observed in the last week of July and the first two weeks of August (Edelstam, 1972). Many stop on the Waddenzee, where the highest autumn numbers are usually seen in August; fewer birds occur elsewhere in western Europe. In the British Isles (Figure 1) the largest numbers occur in eastern England, exclusively on the Wash and in north-western England, particularly on the Ribble, Solway and Morecambe Bay. Figure 2 shows that the British population is probably about 15,000–20,000 during August.

In most north-west European countries, the number of Bar-tailed Godwits decreases as the autumn draws on, despite the later influx of juvenile birds. The number in Britain and Ireland, however, continues to rise steadily so that by the time most of the adult population is in moult, in September-October (Green, 1973), between 30,000–35,000 birds are present. The greatest numbers occur in Britain and Ireland in midwinter; however, the Wash is unique among British estuaries in that the peak numbers of Bar-tailed Godwits occur during late autumn, the winter numbers only comprised about 30% of this peak. In November 1971, there was an unexplained decrease in the British totals, which appeared to affect the major wintering flocks in the Irish Sea and Scotland. This was probably a real decrease though strong winds may have reduced the efficiency of counting in several areas.

The midwinter peak occurred in January, in 1970–71 and 1972–73, and in December, in 1971–72. The average midwinter total for Britain is about 41,000 and for Ireland about 16,000, though this latter figure may be an underestimation, as the coverage on the west coast is not complete. The International Waterfowl Research Bureau's International Wader Censuses have revealed that in January there are only 40,000—50,000 Bar-tailed Godwits in the rest of Europe and Morocco, so at that time Britain and Ireland support about 55% of the birds in Europe. Little is known about the numbers south of Morocco, but they are probably relatively small except on the Banc d'Arguin in Mauritania. Here, Petetin and Trotignon (1972) estimated that there were well over 100,000 in January 1972. A recent British expedition to this area found that 213,000 were already present by late October 1973 (W J A Dick in preparation).

The spring departure of Bar-tailed Godwits from Britain and Ireland starts in February and is more or less complete by the end of March. The parallel increase of numbers in the Waddenzee indicates that most of our wintering population moves there to fatten up, in preparation for the spring migration back to their breeding grounds. A month after our wintering birds have left, observers on the south coast of England at Dungeness, Kent; Beachy Head, Sussex; Hurst Beach, Hampshire, and St Catherine's Point, Isle of Wight, regularly record a very heavy movement of Bar-tailed Godwits in an eastward direction. The peak of this movement usually takes place between 20 April and 5 May, and can involve very large numbers. For example, in 1971 over 2,000 were seen at Dungeness on 24 April

and 3,350 passed Beachy Head between 25 and 26 April; in 1972 Dungeness recorded a record 3,853 on 26 April. These birds do not seem to stop for more than a few hours on our estuaries but probably assemble in the Waddenzee as peak numbers occur there in May. It is highly probable that this large movement involves the Bar-tailed Godwits which have wintered far south in Mauritania.

Very small numbers are present on our estuaries in April and May, probably less than 4,000 in most years, and they are mainly found on the very large areas of the Wash, Ribble, Dee, Solway and the Firth of Forth. These birds almost invariably remain in winter plumage and must be immature. The numbers present in spring were higher in 1973 than in any previous year, which clearly reflects the excellent breeding season that most Siberian species, including the Dunlin and Grey Plover, had in 1972.

Figure 3 presents the distribution of Bar-tailed Godwits obtained from average peak counts made on British and Irish estuaries. This distribution is strikingly similar to that of Knot, and clearly shows that relatively few estuaries support the majority of Bar-tailed Godwits. The most important ones are the Wash (up to 12,300), Morecambe Bay (10,850), Ribble (7,850), Dee (8,350), Solway (10,450) and Dundalk Bay (6,000); it is of note that all but the Wash face on to the Irish Sea. The most important areas after these are the north-east coast from Lindisfarne to the Dornoch Firth (where there are six flocks of between 1,000 and 2,500; and Ireland where, apart from Dundalk Bay, there are large flocks on the Bull Island and on Castlemaine Harbour, in the Republic of Ireland, and on Lough Foyle and Strangford Lough, in Northern Ireland.

The relative abundance of Bar-tailed Godwits in the western parts of the British Isles is striking as are the very small numbers in Wales, southern England and north-west Scotland. Most of the areas where Bar-tailed Godwits are found are fairly sandy, and it may be that this a major factor influencing their distribution. It is particularly interesting to see that many sandy beaches in the west, from Islay in Scotland to Ballycotton in Co Cork, have small (100–200) flocks of Bar-tailed Godwits on them, while this is not the case for apparently similar areas in England and Wales.

This very brief summary of the status of Bar-tailed Godwits in Britain and Ireland shows that although our wintering population is relatively small compared with that of Dunlin and Knot, it still represents over half of those wintering in Europe. In addition there are few estuaries on which large numbers occur. This illustrates that even though a species may be numerous, if most individuals are restricted to a few favoured areas, the species can still be seriously threatened by the development of a few estuaries.

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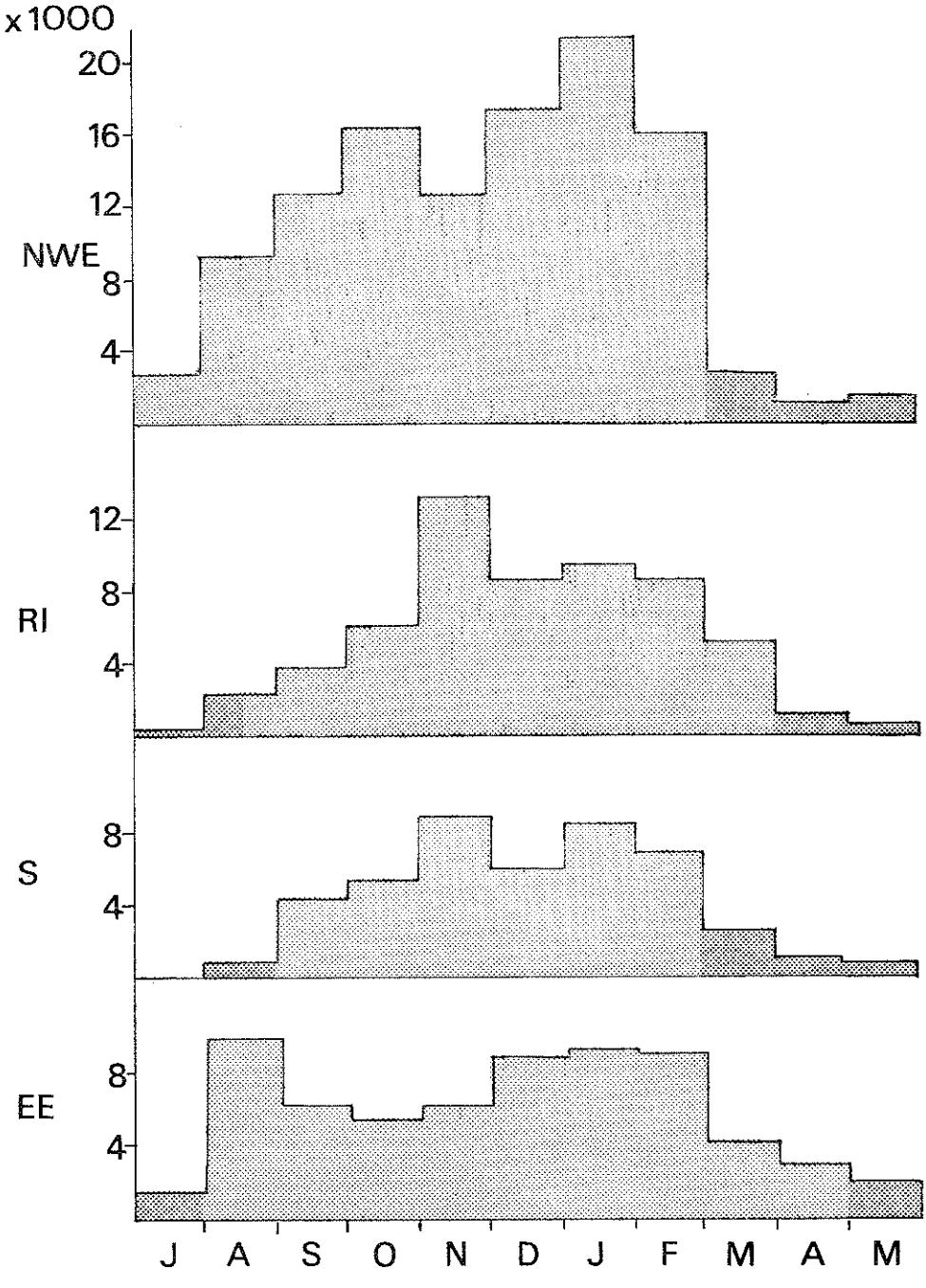

Figure 1. Regional breakdown of Bar-tailed Godwit numbers in 1972-73

The figures for the Republic of Ireland are not complete. The regional initials are explained on page 3.

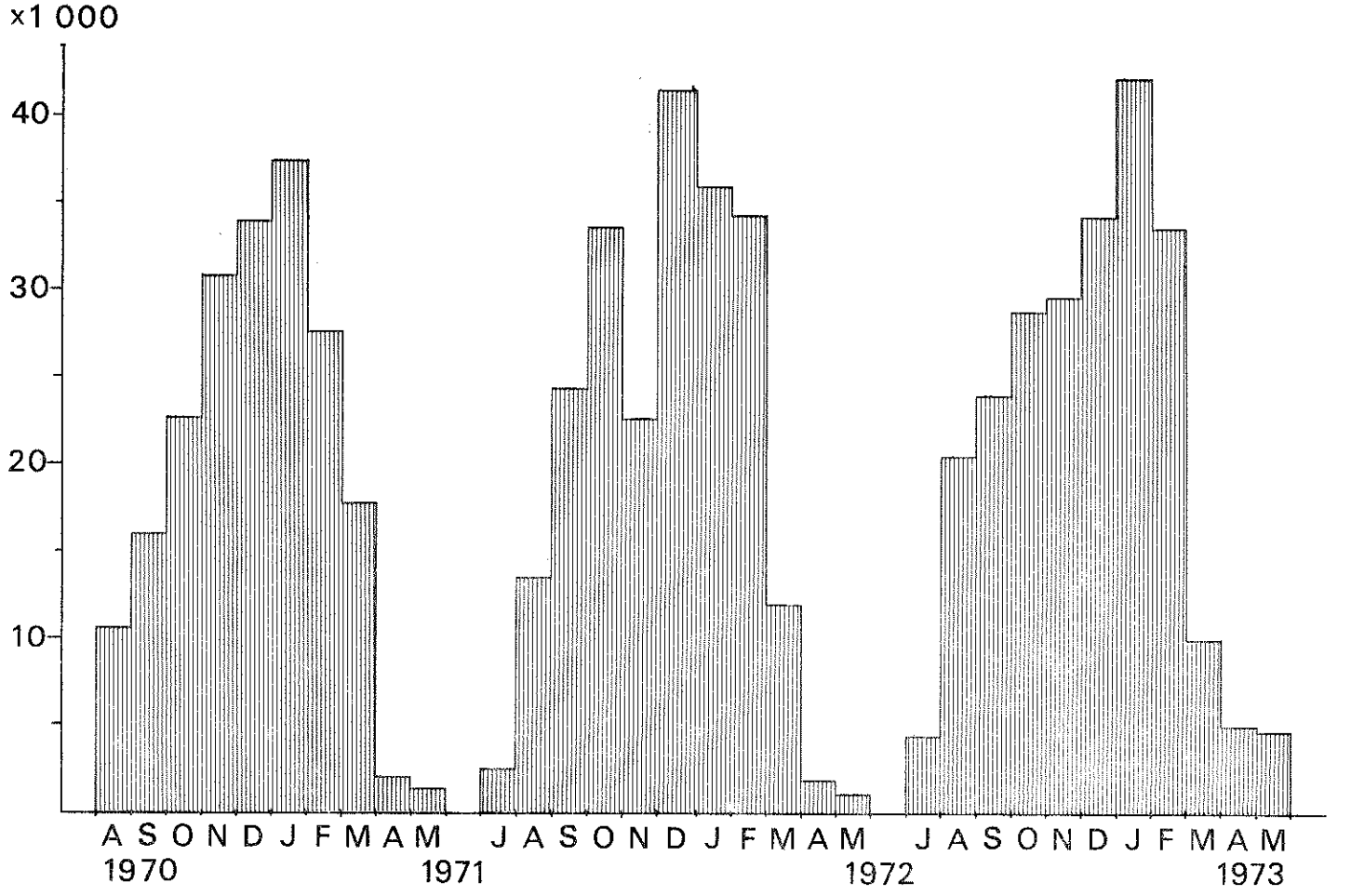

Figure 2. The British monthly totals of Bar-tailed Godwits 1970-73

This includes only data from England, Scotland and Wales.

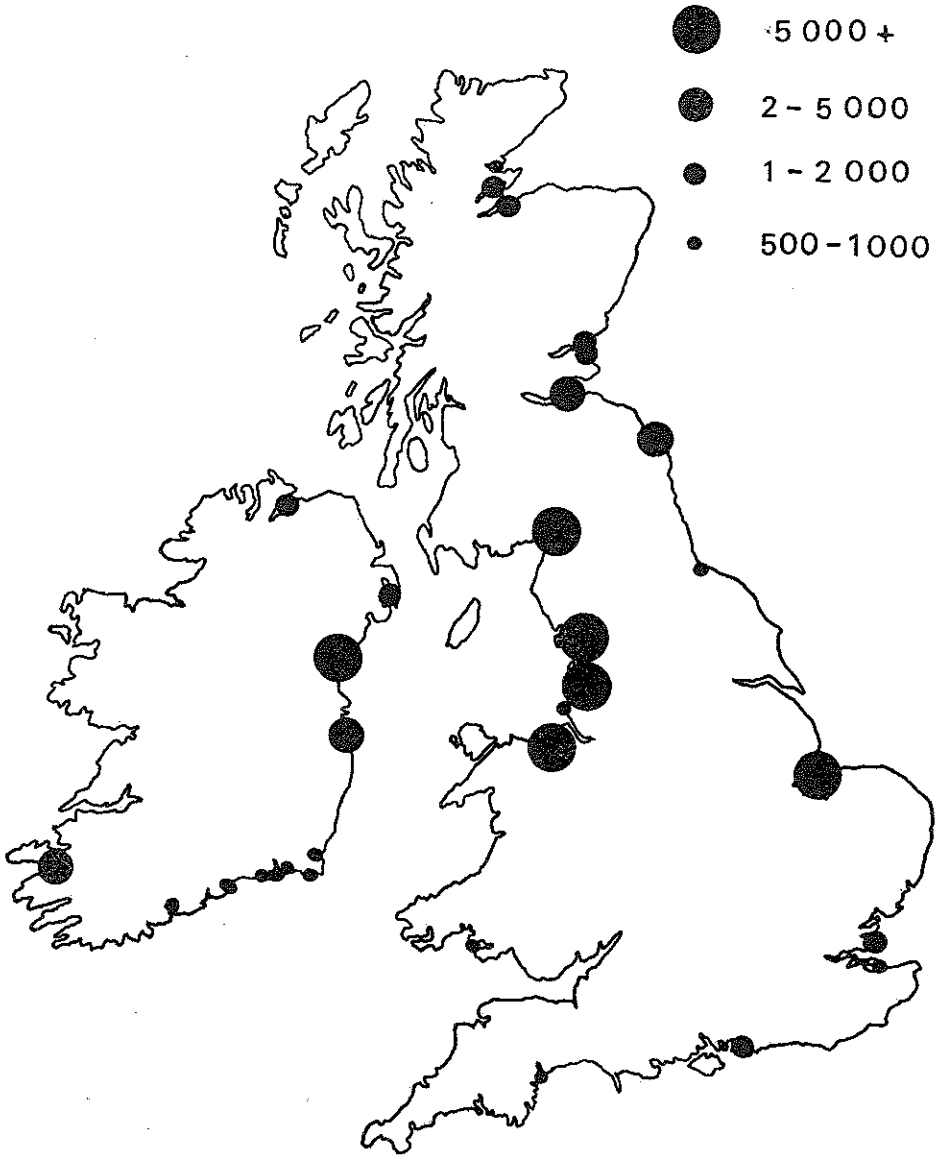

Figure 3. Distribution of Bar-tailed Godwits in Britain and Ireland

Based on average peak counts 1970-73.

Publications involving the use of data for the Birds of Esutaries Enquiry: June 1973-May 1974

Report on the 1971–72 counts (1973)	33pp	
Estuary Bird Survey 1971–72	*BTO News* No 60	September 1973
Essex under attack (R M Blindell)	*BTO News* No 61	October 1973
Spotted Redshank numbers	*BTO News* No 62	December 1973
Oystercatchers v Cockles	*BTO News* No 64	March 1974

Blindell, R M *Report on Counts in Essex 1972–73.* Duplicated report 33 pp.

Ballantyne, J *Report on Estuary bird counts in the Firth of Forth between October 1972 and March 1973.* Duplicated report 10 pp.

Gibson, I *Report for 1972–73: Inner Clyde.* Duplicated report 21 pp.

Prater, A J (1973). The wintering population of Ruffs in Britain and Ireland. *Bird Study* 20: 245–250.

Prater, A J (1973). The 1972 Midwinter census of Waders in Scotland. *Scott. Birds,* 7: 391–398.

Erratum

In the 1971–72 report

Pale-bellied Brent Geese p. 8. The peak figure of 14,920 for Strangford Lough should be replaced by 10,500.

Swans p. 10. The former herd on the Cromarty Firth should be 400–500 not 4,000 to 5,000.

Regional organisers

England

Cornwall	Rev J E Beckerlegge, who organised the area, has had to resign owing to ill health. No regional organiser has yet been appointed.
Devon	S Griffiths, 8 Longford Park, Kingsteignton, Newton Abbot, Devon.
Dorset	Dr D J Godfrey, 77 Merley Ways, Wimborne, Dorset.
Essex	R M Blindell, c/o Layer Breton Farm, Layer Breton, Colchester, Essex CO_2 oPU.
Hampshire	D Steventon, 8 Jumar Close, Warsash, Southampton SO_3 6JP.
Isle of Wight	J Stafford, Westering, Moor Lane, Brighstone, Isle of Wight.
S Lancashire, Merseyside Dee	Dr P H Smith, 3 Sycamore Grove, Trap Hill, Formby, Lancashire. R Eades, 18 Woodlea Close, Bromborough, Wirral, Cheshire.
N Lancashire, S Cumbria	J Wilson, Myers Farm, Silverdale, Carnforth, Lancashire.
Northumberland	B Galloway, 115 Southway, S W Denton, Newcastle-upon-Tyne, NE15 7RD.
N Cumbria	N Hammond, 39 Outgang Road, Aspatria, Carlisle, Cumbria.
Gloucestershire, Avon, Somerset	K Fox, Vernwood, 32 Ash Hayes Road, Nailsea, Bristol BS19 2LW.

Suffolk	Sadly G B G Benson who organised counts since the start of the enquiry died during 1973. Counts are now organised by J Shackles, Sunset Cottage, Church Lane, Blythburgh, Suffolk.
Sussex	M Shrubb, Fairfields, Sidlesham, Chichester, Sussex.
Humberside	D B Cutts, 81 Beverley Road, South Cave, Nr Brough, Humberside.
Teesmouth	E Crabtree, 101 Harlsey Road, Hartburn, Stockton, Teesside.
Wash	Dr C J Cadbury, RSPB, The Lodge, Sandy, Bedfordshire.

Wales

N Gwynedd	Dr P J Dare, Tan-yr-allt, Trefriw, Gwynedd.
S Gwynedd	P Hope Jones, Bedwen, Bro Enddwyn, Dyffryn Ardudwy, Gwynedd.
Dyfi	P Davis, Ty Coed, Tregaron, Dyfed.
S W Dyfed	D H V Roberts who organised the area has now handed over to C Street, 40 Penyfan Road, Llanelli, Dyfed.
W Glamorgan	R J Howells, Ynys Enlli, 14 Dolgoy Close, West Cross, Swansea.
S Glamorgan, Gwent	Dr P Ferns, University College, PO Box 78, Cardiff CF1 1XL.

Scotland

Ayr/Wigtown	A G Stewart who organised the area has now handed over to W R Brackenridge, 24 Craigie Road, Ayr.
Inner Clyde	I Gibson, 41B Mossvale Street, Paisley, Renfrew.
Firth of Forth jointly	J Ballantyne, 6 Mansfield Place, Edinburgh EH3 6NB. Dr L Vick, 93 Charterhall Grove, Edinburgh EH9 3HT.
Moray/Cromarty/ Dornoch Firths	A Currie, Balnabeen House, Duncanston, Conon Bridge, Ross & Cromarty.
N Solway	J G Young who organised this area has now handed over to Miss J Martin, 63 King Street, Castle Dougles, Kirkcudbrightshire DG7 1AE.
Tay/Eden	R Summers who organised this area has now handed over to N Atkinson, 90 Bellevue Gardens, Arbroath, Angus DD11 5BQ.

Northern Ireland

National Organiser	B Coburn, RSPB, 58 High Street, Newtownards, Co Down.
Strangford Lough	National Trust, c/o P P Mackie, Mahee Island, Comber, Co Down.

Republic of Ireland

National Organiser	C D Hutchinson, Flat 6, Tower Court, St Johns Road, Sandymount, Dublin 4.
Wexford	O Merne, North Slob Wildfowl Refuge, Wexford.

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