WILDFOWL AND WADER COUNTS 1979-80

The Results of the National Wildfowl Counts and Birds of Estuaries Enquiry 1979-80

Edited by

D. G. Salmon,
The Wildfowl Trust, Slimbridge, Gloucestershire, GL2 7BT.

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National Wildfowl Counts organised by	The Wildfowl Trust.
Birds of Estuaries Enquiry organised by	The British Trust for Ornithology, Beech Grove, Tring, Hertfordshire, HP23 5NR.
Co-sponsors	The Wildfowl Trust and The Royal Society for the Protection of Birds, The Lodge, Sandy, Bedfordshire, SG19 2DL.
Published by	The Wildfowl Trust.
Printed by	Nimsfeilde Press Limited, Church Street, Nympsfield, Nr. Stonehouse, Glos. GL10 3UA. 1980.
Cover drawing by	Sir Peter Scott.

FOREWORD

Great Britain and Ireland are of major international importance for wildfowl and waders. Wildfowl winter in Britain and Ireland from all over the Palearctic, and Britain and Ireland contain the bulk of the world population of some species of geese. The major estuaries are used by migrant waders from Siberia in the east to northern Canada in the west. Some wader species pass through these estuaries on migration while others remain here for the winter. Hence Britain and Ireland have a major responsibility for the conservation of these species.

Counts of wildfowl and waders in Britain and Ireland have been used in the past to evaluate the relative importance of sites for these groups of birds. This evaluation is a continuous process and requires counts to be made of the main areas each year. In addition the schemes provide an important monitoring function in that the numbers and distribution of waterfowl within Britain (and within Europe, through the International Waterfowl Research Bureau) can be monitored. The reasons for any changes can then be sought.

The wetlands of the Palearctic are generally under great pressure for development by many sources including industrial and agricultural enterprises. Information on the numbers and distribution of waterfowl is an important component in providing evidence to ensure that the most important sites can be conserved and to assist in the management of other wetland sites.

The Nature Conservancy Council (NCC) provides financial support to both the Wildfowl Trust and the British Trust for Ornithology through long-term research contracts. It would be impossible to gather information regularly on wildfowl and waders in Britain and Ireland in a comprehensive way without the cooperation of a huge army of volunteers. The NCC's contractual support to these organisations is thus an important contribution to the cooperation between professional and amateur ornithologists for the benefit of waterfowl.

Wildfowl and wader counts provide an important background to other studies of these birds. For example, the Nature Conservancy Council has commissioned Durham University to investigate different estuaries in Britain in relation to the movements of groups of waders between them within one non-breeding season. National wader counts are an important adjunct to this project in providing the essential background of the total populations of the species involved. Also, the counts of geese are widely used to assess breeding success and are particularly important in allowing an assessment of the distribution of the population in relation to conflicts with agriculture.

It is intended that this report will be the first of an annual series. Thus in the autumn of each year a report will be produced on the wildfowl and wader counts done in the preceding winter. Everyone who has participated in these two important count schemes will receive a copy of this report each year. Each

individual contribution can thus be placed in a regional and national context, which will emphasise the important role each individual plays in contributing to the whole.

R.C. Steele
Director General
Nature Conservancy Council
19/20 Belgrave Square
London

1979–80 was the 33rd season of organised monthly wildfowl counts in Britain. Since 1957–58 these have concentrated on the period from September to March, when the wintering populations are with us.

In 1979–80 the set dates for the counts, corresponding to the middle Sunday in each month, were: September 16th, October 14th, November 18th, December 16th, January 13th, February 17th and March 16th. For the purposes of this report, if, for any reason (such as to coincide with a high tide), a visit was made on a date other than that allotted, the record has still been accepted. Where more than one count from a site is available for a particular month, the one on or nearest to the set day has been used. Records for the summer months, though not specifically requested, have been received from some localities. These have been referred to where the numbers of birds involved merit it.

Wildfowl data for several places which were covered for the Birds of Estuaries Enquiry only have kindly been provided by the BTO.

Northern Ireland and the Irish Republic have been omitted from this section, as the wildfowl data available at the time of writing were too incomplete for any realistic assessments to be made. All the totals quoted, therefore, refer to England, Scotland and Wales only.

The Voous (1973) order of species has been used throughout.

In both the tables and the text all counts and totals of 95 or above have been rounded to the nearest 10.

Acknowledgements

As always we are totally indebted to the hundreds of volunteer observers who obtained the counts, often braving extremely difficult conditions to do so. Some have been contributing to the scheme for over 30 years.

We are extremely grateful to the Nature Conservancy Council for their continued financing of the scheme.

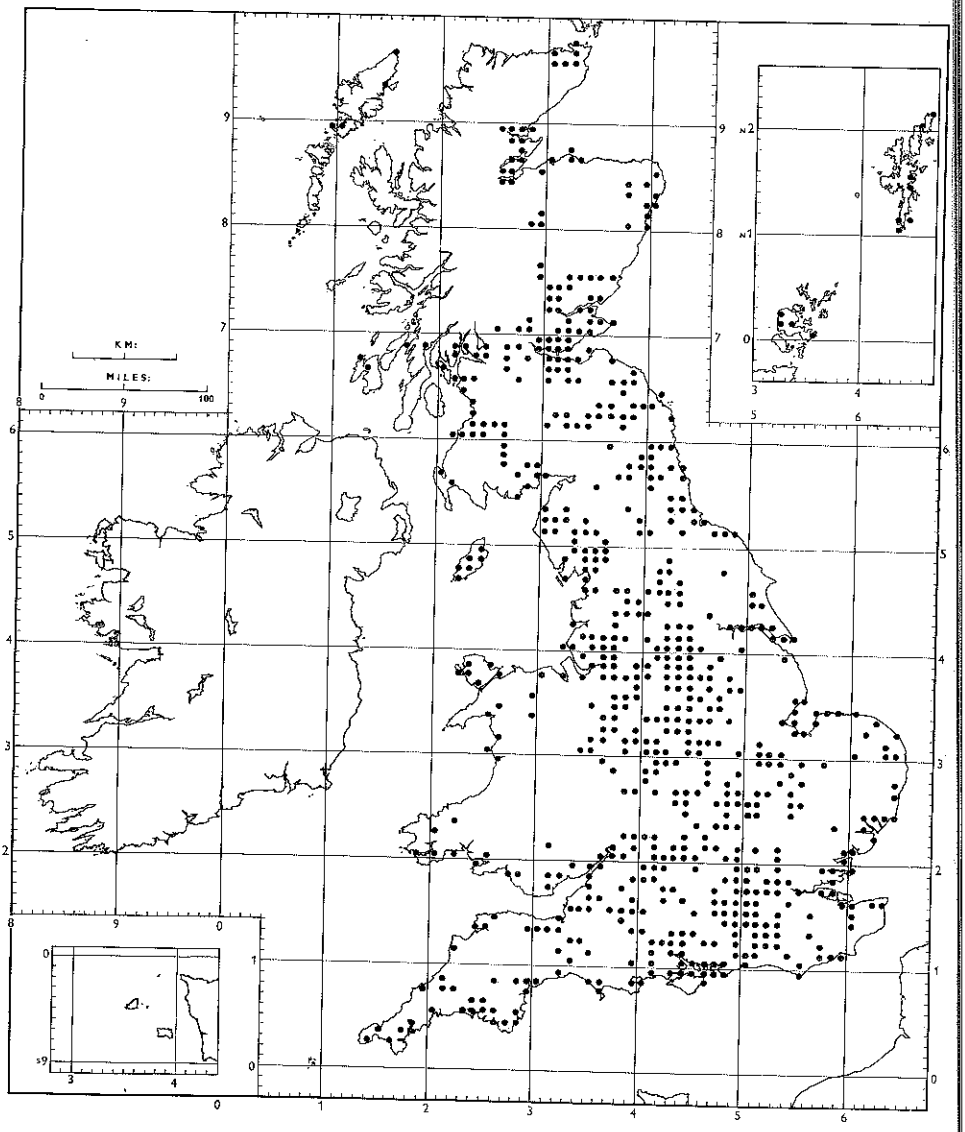
The computer programs were written by Dr Myrfyn Owen, who also kindly read and commented on a draft of this section; the raw data for 1979–80 and, during the course of the previous year, all earlier seasons from 1960–61 were typed in by Mrs Pauline Jackson.

Coverage in 1979–80

1,174 sites in Great Britain, of all sizes and representing all kinds of wetland habitat, were counted. Just over half were visited in all seven months from September to March, and about two-thirds in six or more months.

Of the 688 ten-kilometre squares marked in Figure 1, over a third contained more than one count-point. The largest number of sites in any square was nine, in the Borders region of Scotland. The county in which the most localities were recorded was Derbyshire, with 55.

Figure 1 Count points, 1979–80



Each dot marks a 10 km national grid square in which one or more wildfowl counts were undertaken.

NB: The component count-sectors are shown for the following estuaries: Firth of Forth, Firth of Tay, Cromarty Firth, Dornoch Firth, Clyde, Solway Firth, Morecambe Bay, Severn, Solent, Swale, Inner Thames, Wash and Humber.

Table 1 Sites with a maximum total count of 10,000 or more wildfowl,

	Highest total count	Month	Seasonal Pinkfoot
*The Wash, Norfolk/Lincs	44,930	Jan	6,450
Mersey Estuary, Ince, Cheshire/Merseyside	40,880	Jan	–
Ouse Washes, Cambs/Norfolk	28,150	Dec	–
Lindisfarne, Northumberland	27,890	Nov	–
Firth of Forth, Lothians/Central/Fife	24,090	Jan	4,000
Loch Leven, Perth and Kinross	22,530	Oct	13,460
*Humber, Lincs/Humberside	18,880	Jan	810
Foulness, Essex	17,480	Nov	–
*Blackwater Estuary, Essex	16,600	Feb	–
*Medway Estuary, Kent	16,410	Jan	–
Outer Firth of Tay, Fife/Angus	15,460	Oct	Eiders
Hamford Water, Essex	15,250	Jan	–
Swale, Kent	15,170	Jan	–
Chichester Harbour, W. Sussex	14,850	Jan	–
Dee Estuary, Merseyside/Cheshire/Clwyd	14,790	Dec	–
Lower Derwent Ings, Humberside/N. Yorks	14,700	Feb	–
*Ribble Estuary, Lancs/Merseyside	13,610	Jan	5,000
Monikie Reservoir, Angus	11,860	Nov	10,650
Cromarty Firth, Highland	11,670	Nov	1,150
Loch Eye, Highland	10,970	Nov	–
Loch of Strathbeg, Grampian	10,590	Nov	5,000
†Caerlaverock, Dumfries and Galloway	10,500	Oct	3,280
Severn Estuary, Avon/Glos/S. Glam/Gwent	10,170	Feb	–

– Under 100
* Only three complete counts
+ 1,500 in August
† The Solway Firth counts were too incomplete

1979–80

maxima:

Greylag	D-b Brent	Shelduck	Wigeon	Teal	Mallard	Pintail	Pochard	Tufted
–	1,140	20,050	3,490	1,010	2,810	550	–	160
–	–	7,380	8,040	17,400	1,760	10,030	–	–
160	–	–	19,340	1,870	4,460	860	4,710	470
3,000	–	580	22,000	2,180	890	–	–	–
110	–	2,920	900	560	3,030	–	1,380	670
2,900	–	–	1,000	660	2,730	–	660	4,500
–	930	1,190	7,930	580	8,430	–	–	–
–	15,390	1,010	3,310	280	570	–	170	110
–	12,500	2,430	800	940	1,410	150	110	160
–	1,000	2,150	6,130	3,320	3,610	640	–	–
only counted								
–	8,200	1,620	490	3,780	670	300	–	–
160	1,290	2,790	7,520	2,000	840	150	140	–
–	9,500	2,010	1,200	1,990	550	160	–	–
–	–	4,420	750	880	1,980	6,700	–	–
–	–	–	5,580	2,970	5,400	110	3,120	260
–	–	1,500	6,640	410	610	–	–	–
1,210	–	–	–	–	330	–	–	–
2,800	–	320	7,200	660	680	350	–	–
5,000	–	–	6,000	1,100	600	–	500	600
5,000	–	–	700	450	1,550	–	1,250	1,500
–	–	110	550	280	420	1,800	–	–
100	–	620	5,220	+620	1,290	210	400	500

for meaningful consolidated figures to be produced

The gaps in the cover are partly explained by the tracts of unsuitable habitat, such as in the Scottish Highlands, the Cambrian Mountains, the North York Moors and Dartmoor. However, more counters are urgently required from East Anglia, the old county of Herefordshire, South Wales and north-west Scotland.

Weather

Unlike the previous winter, 1979–80 was mild. There were three brief cold spells in north-west Europe – in late December, early January and mid-January – but none resulted in an unusually large influx of weather migrants, or caused widespread movements within Britain.

International importance

As agreed at the International Conference on the Conservation of Wetlands and Waterfowl, Heiligenhafen, FDR, in December 1974 (Smart 1976), a wetland which REGULARLY supports 1% of the biogeographical population of a species of waterfowl, or REGULARLY supports 10,000 ducks, geese and swans (see Table 1) is deemed 'internationally important.'

Scott (1980) has produced a revised set of 1% levels, which should be regarded as provisional. For north-west Europe, the region in which Britain lies, the qualifying levels for the wildfowl are as follows:

Mute Swan	1,200	Wigeon	5,000
Bewick's Swan	120	Gadwall	550
Whooper Swan	100	Teal	2,000
Bean Goose	700	Mallard	10,000
Pink-footed Goose		Pintail	750
(Iceland/Greenland pop.)	750	Shoveler	1,000
European White-fronted Goose	2,000	Pochard	2,500
Greenland White-fronted Goose	150	Tufted Duck	5,000
Greylag Goose		Scaup	1,500
(Iceland pop.)	700	Eider	10,000
Barnacle Goose		Long-tailed Duck	5,000
(Greenland pop.)	300	Common Scoter	10,000
(Svalbard pop.)	100	Velvet Scoter	2,000
Dark-bellied Brent Goose	1,300	Goldeneye	2,000
Light-bellied Brent Goose		Smew	200
(Svalbard pop.)	100	Red-breasted Merganser	400
(Canada/Greenland pop.)	150	Goosander	750
Shelduck	1,250		

Sites with over 10,000 wildfowl, 1979–80

Table 1 lists all the sites where the total number of ducks, geese and swans in at least one month of 1979–80 exceeded 10,000. For each site, the month in

Table 2 Total monthly counts

	1979–80							1978–79 Maxima (Month of occurrence)	
	September	October	November	December	January	February	March		
No. of sites counted	829	853	900	898	1,071	925	1,014		
Mute Swan	6,080	6,180	6,230	6,360	7,040	5,700	5,120	6,450	(Jan)
Bewick's Swan	0	9	1,080	1,500	4,100	4,610	640	4,360	(Jan)
Whooper Swan	19	690	2,980	1,540	1,430	1,150	700	1,480	(Nov)
Eur. Whitefronted Goose	4	15	93	340	3,840	3,310	150	8,400	(Jan)
Canada Goose	16,100	15,480	13,190	12,280	16,170	10,530	8,740	14,830	(Sep)
Dark-bellied Brent Goose	560	14,610	38,210	50,440	74,140	55,630	19,130	57,710	(Jan)
Light-bellied Brent Goose	0	0	46	710	1,050	810	280	2,170	(Jan)
Shelduck	9,820	12,620	19,840	44,580	63,870	44,200	26,620	71,270	(Jan)
Wigeon	17,350	74,820	106,560	112,920	175,470	93,930	46,460	210,140	(Jan)
Gadwall	1,620	2,360	1,670	1,820	2,300	1,720	1,110	1,870	(Sep)
Teal	24,290	36,430	47,240	69,700	80,380	53,760	22,490	70,340	(Dec)
Mallard	104,100	118,570	118,780	138,810	178,820	90,320	41,540	150,560	(Jan)
Pintail	3,180	12,680	10,600	20,910	21,650	11,130	2,380	13,620	(Jan)
Shoveler	5,130	6,380	5,470	5,700	4,770	4,010	3,440	6,990	(Nov)
Pochard	10,760	22,780	28,040	30,050	30,950	28,600	8,250	34,120	(Dec)
Tufted Duck	33,860	37,650	40,840	42,750	42,320	33,950	28,780	39,940	(Dec)
Scaup	130	1,030	530	3,180	5,160	5,050	1,110	5,720	(Dec)
Goldeneye	130	490	4,800	7,030	9,460	8,990	7,370	9,220	(Jan)
Smew	0	0	3	9	60	36	16	230	(Feb)
Red-breasted Merganser	690	950	1,330	1,630	3,440	1,820	1,290	1,960	(Feb)
Goosander	84	250	440	1,200	2,190	1,690	1,190	1,860	(Jan)
Ruddy Duck	390	510	550	700	720	550	510	510	(Oct)

which the highest total occurred is given, together with the season's maxima for the principal species. The latter do not necessarily include all the biggest counts of each species in the country, for which see the individual summaries which follow.

The following places in Table 1 have shown significant increases in their totals in recent years: The Wash, Mersey Estuary, Humber, Hamford Water, Swale, Lower Derwent Ings, Monikie Reservoir and Loch Eye. The last three carried over 10,000 for the first time in 1979–80. Four areas which had held over 10,000 at some time in the 1970's failed to do so in 1979–80: the Outer Moray Firth, Abberton Reservoir (Essex), Martin Mere (Lancashire) and Rutland Water (Leicestershire).

Please note that throughout this section 'Firth of Forth' refers to Tyninghame Estuary–Cambus–Largo Bay inclusive, and 'Severn Estuary' signifies Taff/Ely Estuary–Slimbridge–Yeo Estuary inclusive.

Total numbers of individual species

Table 2 shows the total count of each species in Great Britain month by month for 1979–80, together with the maxima for 1978–79. Note that, as always, appreciably more waters were visited in the International Census months (January and March) than at other times, as a special effort is made in those months to gain as complete a coverage as possible throughout the western Palearctic.

The following geese have been omitted from Table 2, since a large proportion is missed by the regular monthly counts (mainly owing to their tendency to feed by day on fields some distance from the water): Bean, Pinkfooted, Greenland Whitefronted, Greylag and Barnacle. The results of the special goose censuses are given later, in Table 3. Four seaducks (Eider, Long-tailed Duck, Common Scoter and Velvet Scoter) have been excluded, as their records are seriously incomplete and erratic, together with Garganey, a summer visitor.

It should be emphasised that the totals given merely indicate how many were counted, and are not intended as estimates of the actual populations in the country.

The proportion of the true numbers represented by the counts varies considerably from one species to another, and is discussed in the individual summaries.

Species accounts

Swans

Mute Swan *Cygnus olor*. The British population is non-migratory, hence the comparatively uniform level of the monthly totals in Table 2. The only movements are small local ones from the breeding sites to the wintering flocks. The high January total was attributable mainly to the good cover in that month.

Mute Swans occur on a large number of small lakes and stretches of river not included in the counts; a British population of 18,400 has been estimated from the results of the summer 1978 Census (Ogilvie in press).

In mid-winter 1979–80, over 900 were present on the Chesil Fleet, Dorset, which always holds the country's largest concentration, emanating from the unique breeding colony at Abbotsbury. Other major gatherings were at the Ouse Washes (370, February), the Loch of Strathbeg (310, October) and Loch Eye (270, December).

Bewick's Swan *Cygnus columbianus bewickii*. The first birds arrive from their Siberian breeding grounds in mid- or late October.

The European population, concentrated in winter almost entirely into the north-west, has grown markedly in recent years, and probably now amounts to 12,000–13,000, compared with fewer than 7,000 seven years ago (Atkinson-Willes 1976). In Britain, the increase has been centred in the last few years on the Ouse Washes (the most important locality in Europe in mid-winter) and the nearby Nene Washes (which until recently had never held more than one or two hundred). In January 1979 there were a record 2,300 on the Ouse Washes, but very few on the Nene Washes. By February the numbers at the former had dropped to 860, but there were 800 on the Nene Washes. In March they held 800 and 1,000 respectively. In January 1980 the figures were 2,050 and 560; in February 2,120 and 1,410. There was no full count on the Nene Washes in March. Unfortunately, the counts at these two sites usually take place a few days apart, so there may have been duplication caused by birds moving from one site to the other. However, there were probably at least 3,000 in the area in February 1980.

The other major haunts have remained relatively stable. The next highest counts in 1979–80 were on the Severn Estuary (390, January), Lower Derwent Ings (190, January) and Somerset Levels (170, January).

Whooper Swan *Cygnus cygnus*. These arrive several weeks earlier than the Bewick's Swans, and build up more quickly. Most of the British birds breed in Iceland, but there is doubt about the origin of those in East Anglia, which, it has been thought, may come from the Siberian population. In November 1980 three Whooper Swans which were neck-collared in Iceland last summer were seen at the Ouse Washes.

In November 1979 a complete census was carried out in Britain and Ireland, organised by M. Brazil (Stirling University) and J. Kirk. Unfortunately, their results had not been fully analysed at the time of writing. The following account and the totals in Table 2 are therefore based solely on the returns from the regular wildfowl counts.

A large proportion of the Whooper Swans, like some of the geese, feed on fields away from their wetland roosts, and so are normally missed by the counts. However, a huge gathering of over 1,000 was found at Loch Eye in November,

when there were also over 500 at the Loch of Strathbeg. In contrast, Lindisfarne, with 180 in the same month, held its lowest peak for 16 years. These flocks had mostly dispersed later in the season, but mid-winter maxima were recorded at Holywell Ponds, Northumberland (160, December), the River Teviot near Nisbet, Borders (160, January) and Islesteps, Dumfries and Galloway (140, December).

Geese

Table 3 The peak numbers of geese in Britain, 1975–76 to 1979–80

	1975–76	76–77	77–78	78–79	79–80
Pink-footed	73,000	71,000	69,000	78,000	80,000
Greenland White-fronted: Islay	4,150	4,210	3,300	3,380	2,920
European White-fronted	4,000	6,000	5,000	9,500	3,840
Greylag	63,000	56,000	63,000	76,000	81,000
Barnacle: Solway	6,050	7,200	6,800	8,800	7,700
Islay	20,200	24,000	22,000	22,000	17,300
Dark-bellied Brent	49,000	49,000	40,000	63,000	74,140
Light-bellied Brent: Lindisfarne	550	780	1,000	2,170	1,050

Bean Goose *Anser fabalis*. The only regular flocks in Britain, both of the Western race *fabalis*, are on the Yare marshes, near Great Yarmouth, Norfolk, and at Threave, Dumfries and Galloway. In 1979–80 these amounted to 67 and 40 respectively. The Norfolk group has remained fairly constant for some years, but the Scottish birds have declined steadily.

Scattered individuals and small parties may appear anywhere during the winter.

Pink-footed Goose *Anser brachyrhynchus*. The annual November Censuses of Pink-footed and Greylag Geese, and also, on Islay, Barnacles and Greenland Whitefronts, include all the flocks feeding on fields, and so provide an accurate assessment of the actual population levels (see Table 3).

Almost the entire Icelandic breeding contingents of Pinkfeet and Greylags winter in Britain, mainly in Scotland. The comparative ease of carrying out sample age-counts on feeding geese makes it possible to monitor the breeding success each year. This varies less markedly in Pinkfeet and Greylags than in some other geese, the proportion of young in the wintering flocks usually amounting to between 10% and 20% (15% and 18% respectively in 1979–80).

The gradual increase which has occurred in these two species over the last twenty years is probably due to a reduction in shooting pressure and changes in farming practice.

European White-fronted Goose *Anser albifrons albifrons*. Ogilvie (1980) attributes the continuing decline of this subspecies in Britain to the birds being content to go only as far as the Netherlands, where conditions are ideal and the huge wintering population is increasing. In 1979–80 the maximum at the main British resort, on the Severn Estuary at Slimbridge, was only 2,100, compared with a peak of 7,600 in 1969–70. Of the lesser areas, the Swale held 1,260, the North Kent Marshes 460 and the Hampshire Avon 230.

The percentage of young among the Slimbridge birds was fairly high at 30%, following good summer conditions in Siberia.

Greenland White-fronted Goose *Anser albifrons flavirostris*. In the first review of the status of this race (which winters entirely in Britain and Ireland) for over 20 years, Ruttledge and Ogilvie (1980) estimated the total numbers at 15,000. An increase in Scotland has been more than offset by a sharp decline in Ireland, while the resorts in England and Wales have been almost deserted.

In 1979–80 there were approximately 12% young among the Islay flocks, well below average. On the Argyll mainland, there were 500 at Rhunahaorine and 360 at Machrahinish in April.

Greylag Goose *Anser anser*. 1979 was the first autumn in which more Greylags were counted than Pinkfeet.

Very few occur farther south than Northumberland, apart from numerous feral flocks, which are not included in the totals in Table 3.

See also Pink-footed Goose.

Canada Goose *Branta canadensis*. The July 1976 Census of the (entirely feral) British population produced an estimate of 19,000, an increase of 85% in eight years (Ogilvie 1977). Since then the numbers at most resorts have continued to rise. From Table 2 it is clear that a few thousand are missed by the winter counts, as they are feeding well away from the water.

The largest gatherings reported in 1979–80 (with the 1978–79 figures in brackets) were at: Stratfield Saye, Hampshire 1,380 (800); Kedleston, Derbyshire 1,360 (720); Shavington, Staffordshire 1,000 (500); Drakelow, Derbyshire 840 (500); Holkham, Norfolk 800 (450); and the river Ure near Ripon, N. Yorkshire 750 (890).

Barnacle Goose *Branta leucopsis*. A breeding failure (3.5% juveniles in the autumn) in 1979 among the Svalbard (Spitsbergen) population, caused by bad weather, resulted in a big decline in their sole wintering area, the Inner Solway, centred at Caerlaverock. However, the 1979–80 figure was still the second

highest ever, and the 1980 summer was extremely successful.

The Greenland population, wintering in Ireland and the Hebrides, did only slightly better in 1979, with 8% young.

Dark-bellied Brent Goose *Branta bernicla bernicla*. It is believed that the counts, at least in January, give an extremely accurate estimate of the true numbers; nearly all the regular haunts are visited, and those birds feeding inside the sea-wall, as now commonly happens, are included in the returns from the appropriate estuaries.

The increase in this subspecies (which breeds in Siberia) has been spectacular: the world population, confined in winter to the Netherlands, Britain and France, has risen from 34,000 in 1971–72 to 167,000 in 1979–80, as a result of improved protection and a series of very good breeding seasons. The percentage occurring in Britain (still, surprisingly, confined to the coast between the Burry Inlet, W. Glamorgan, and the Humber) has declined slightly, but the numbers have gone up over the same period from 22,500 to 74,100.

In 1979–80 the three largest concentrations were all on the east coast at: Foulness, where the customary autumn gathering reached 15,390 in October; the Blackwater Estuary, with 12,490 in February; and the Wash, where a record 11,390 were counted in January. On the south coast, four estuaries held record numbers in January: Chichester Harbour (9,500); the adjacent Langstone Harbour, Hampshire (6,420); Pagham Harbour, W. Sussex (2,700); and the Exe, Devon (2,400). At Portsmouth Harbour, Hampshire, there was an unprecedented influx in November, amounting to 2,450.

Light-bellied Brent Goose *Branta bernicla hrota*. The only regular flock in Great Britain is at Lindisfarne, which normally receives about half the birds breeding in Svalbard, the remainder stopping in Denmark. During the hard weather of 1978–79 all the Danish birds came on to Lindisfarne.

After a steady decline between the mid-1950's and early 1970's (Cramp *et al* 1977), this small population may be increasing again.

The Irish wintering birds breed in Canada and Greenland.

Ducks

Shelduck *Tadorna tadorna*. The main return from the German moulting grounds in 1979 did not occur until December. In that month there was a total of 11,790 on the adjacent Dee and Mersey Estuaries (see Table 4). Many more arrived in Britain in January, when a record count of 20,050 was made on the Wash, representing nearly a third of those in the country at the time.

The British mid-winter population has apparently stabilised after a steady rise between the mid-1960's and mid-1970's. Only two estuaries have shown a significant improvement since then: the Swale (2,970 in 1979–80); and the

Essex/Suffolk Stour (2,510). At Teesmouth, where reclamation has continued, the numbers have dropped from 3,500 in 1976–77 to 1,600 in January 1980.

In recent years two small moulting concentrations have been discovered in Britain: on the inner Firth of Forth at Kinneil, near Grangemouth (amounting to 2,710 in August 1979, including 2,210 in wing-moult); and on the Wash (Bryant 1978 and in prep).

Table 4. The peak numbers of Shelduck, Wigeon, Teal and Pintail on the Mersey Estuary at Ince, 1970–71 to 1979–80

	Shelduck	Wigeon	Teal	Pintail
1970–71	750	1,370	3,050	5,450
1971–72	920	1,490	5,670	6,960
1972–73	1,560	3,270	9,750	9,800
1973–74	2,590	7,700	13,700	14,800
1974–75	2,380	2,960	6,220	6,830
1975–76	4,260	2,930	13,070	9,300
1976–77	4,020	2,940	8,750	9,200
1977–78	3,840	4,060	5,310	15,500
1978–79	7,080	3,470	12,870	8,240
1979–80	7,380	8,040	17,400	10,030

Wigeon *Anas penelope*. As usual, very few arrived until October, when there was a big influx, especially into northern Scotland. The combined total for Loch Eye and the Cromarty and Dornoch Firths in that month came to 16,720. Lindisfarne held its normal huge autumn concentration with 22,000 in November, the largest gathering reported in Britain all season.

On the Ouse Washes, usually the leading site, the high water-levels in the New Year caused a reduction in the suitable feeding area, and the December figure of 19,340 remained the season's peak. At most English resorts, however, there was a major increase in January, especially on the Mersey Estuary (from 4,540 in December to 8,040 in January), Humber (2,870 to 7,930), Swale (2,130 to 7,520), Ribble (120 to 6,640) and Medway (530 to 6,130).

The mild February weather brought a sharp reduction in most areas, but the wet conditions on the Lower Derwent Ings and by the Severn at Slimbridge attracted over 5,000 at each.

Gadwall *Anas strepera*. The status of the small north-west European population is confused. In Britain, the scattered breeding population is augmented by migration from Iceland, and several large gatherings occur in the autumn. At

Loch Leven, where 20–30 pairs breed (Allison and Campbell 1974), 160 were counted in October 1979. In about November the Scottish breeders move into Ireland and England.

The English breeding population consists mostly of introduced and feral stock but there is evidence from ringing that some migrate for the winter (Cramp *et al* 1977). The main centre is East Anglia, where the first introductions were made in the 19th century. A remarkable concentration has occurred at Gunton Park, Norfolk, in most recent autumns; a record 580 were found there in October 1979, a quarter of the total counted in Britain in that month. This flock disperses quickly and very few remain during the winter. A similar pattern has emerged in Leicestershire, at Rutland Water, which held 350 in October 1979, but much smaller numbers thereafter.

At some places, the peak occurs later in the season, when immigrants from the Baltic countries have reached Britain.

Teal *Anas crecca*. The January total was exceptionally high, but 22% were at one site, the Mersey Estuary, which held 3,700 more than the previous record, in December 1973 (see Table 4).

The first major increase in Teal on the Mersey occurred in the mid-1950's, and they reached 5,000 during the nationwide influx of the early 1960's. By the mid-1960's they had dropped to just over 1,000, before rising again almost immediately. In the early 1970's there was another influx into Britain, but this time it was centred on the Mersey, and other areas showed only a small gain. Since then, the Mersey has consistently held between 10% and 25% of the British population.

Three sites in eastern England also carried record numbers in 1979–80: Hamford Water (3,780, January); the Lower Derwent Ings (2,970, February); and the Nene Washes (2,860, February). Otherwise the only places with over 2,000 were the Medway Estuary (3,320, January), Martin Mere, Lancashire (3,000, December) and the Swale (2,000, November).

Mallard *Anas platyrhynchos*. Even when the autumn and winter flocks have built up, so many are scattered throughout the country on tiny stretches of water not included in the counts that it is likely that well over half the British population is missed. On occasions more Wigeon than Mallard have been recorded, whereas Mallard are probably always much the more numerous.

Nevertheless, the counts give a reasonable idea of the pattern during the season. The high autumn totals mostly consist of the resident breeding population, but there is a steady movement into Britain from the north and east until the New Year. The return migration and dispersal to the breeding sites start in early February, and by March very few sizeable flocks remain.

Despite their great abundance, huge concentrations of Mallard are rare; nowhere in Britain holds as many as 10,000. The nearest is the Humber, where there were 8,430 in January 1980, the majority on the Refuge between Faxfleet

and Brough. The next largest gatherings were at the Lower Derwent Ings (5,900, December, the highest ever), Abberton Reservoir, Essex (4,540, October), the Ouse Washes (4,460, February) and the Medway Estuary (3,610, January).

Pintail *Anas acuta.* In the last ten years there has been a great increase in the north-west European population, over a quarter of which winters in Britain. As with Teal, there was a vast influx on the Mersey Estuary in the early 1970's, and the numbers have been maintained (see Table 4). In January 1980 46% of the British total were at this one site.

Since the expansion on the Mersey, the nearby estuaries of the Dee and Ribble have often carried enormous concentrations for short periods. On the Dee, the December 1979 count was the highest ever, but the Ribble has held very few in the last three seasons between December and February, the only period in which counts have been made. At Martin Mere, just inland from the Ribble, there has been a regular, though greatly fluctuating, autumn gathering in recent years, amounting to 1,200 in October 1979.

Elsewhere, the main haunts in 1979–80 were Caerlaverock, where the autumn passage produced a peak of 1,800 in October, the Burry Inlet (730, November) and, inland, the Nene and Ouse Washes (1,820 and 860 respectively in February).

Shoveler *Anas clypeata.* The British population has stabilised since a slight increase in the late 1960's and early 1970's. The highest numbers are present during the autumn passage, when the native breeding birds are augmented by Icelandic and continental immigrants.

The largest flocks in 1979–80 were at Chew Valley Lake, Avon (480, December), Rutland Water (470, September), the Ouse Washes (330, March), Abberton Reservoir (310, October) and Queen Elizabeth II Reservoir, Surrey (300, September).

Garganey *Anas querquedula.* This is the only species of wildfowl which is exclusively a summer visitor to Britain. It is now very scarce, and regular only in southern England.

A few are usually found during the September and March counts (6 and 8 respectively in 1979–80).

Pochard *Aythya ferina.* For the second successive season, the huge flock which formerly roosted at Duddingston Loch, Edinburgh, reaching a peak of 8,200 in January 1975, failed to appear. Apart from a brief peak of over 900 in late December (when the loch was frozen, in common with all the others in the area), the highest count was only 330. This sudden decline may well be connected with the change in conditions on the Firth of Forth (see Scaup). 1,800 Pochard appeared on the firth at the same time as the peak at Duddingston, but in general the numbers in the last two winters have been very

small. There has been no significant change elsewhere in southern Scotland in this period, but in the north, the Loch of Harray, Orkney, had its lowest number for eight years (1,100) in 1979–80.

Three places in England have shown a dramatic increase. On the Lower Derwent Ings several hundred have often occurred when the depth of floodwater is right, but last winter over 3,000 were present in February. At the same time 1,490 were counted on the Idle floods near Misterton, Nottinghamshire, compared with a previous highest of 500. The biggest influx has been at Staines Reservoir, Surrey, where the numbers of Pochard and Tufted Duck suddenly rose from a few hundred each, which had been the maximum for some twelve years, to 1,200 and 1,700 respectively in 1978–79, and to 5,000 and 4,000 in 1979–80.

Despite these increases there has been a slight drop in the British total overall.

The moulting flock at Abberton Reservoir contained 2,380 birds in August 1979.

Tufted Duck *Aythya fuligula*. The high September total consisted largely of the native breeding population, which may contain as many as 4,000–5,000 pairs (Sharrock 1976). Of the principal sites, the following carried their peak numbers in the autumn: Loch Leven, which has a large breeding colony (4,500, September); Grafham Water, Cambridgeshire, which formerly held its maximum in mid-winter (a record 3,050, November); Rutland Water (2,210, September); and the Loch of Strathbeg (1,500, October).

Having risen substantially in the early 1970's, the mid-winter population has apparently maintained its new level. The chief waters with December or January maxima in 1979–80, apart from Staines Reservoir (see Pochard), were: Loch Ussie, Highland (1,000, December); the Loch of Harray (920, January, the fewest for eight years); and Walthamstow Reservoir, London (890, January). The combined total for the London area reservoirs in January was 7,460, of which 54% were at Staines. Stoke Newington Reservoir had only 290, having held over 1,000 in seven of the previous eight winters.

At Abberton Reservoir, the moulting flock amounted to 2,480 in August, but the numbers for the rest of the season were low.

Scaup *Aythya marila*. Having attained a peak of at least 25,000 in the late 1960's, the gathering on the Firth of Forth around Edinburgh has declined severely (see Table 5 below). The proportion of the British population occurring in that area has fallen from 85% to less than 30%. The sudden drop in 1976–77 was attributed by Campbell (1977) to external factors. However, a year later, in February 1978, the first stage of the newly-installed sewage treatment system began operation at Seafield, Edinburgh, rendering redundant some of the raw sewage outfalls which, directly and indirectly, had provided food for both Goldeneye and Scaup (Campbell 1978 b). Unlike the Goldeneye, the Scaup showed no immediate decline, merely a movement farther east within the same

area (Campbell 1979), but last winter's reduction, to under a thousand, may well be a longer-term effect of the introduction of the new sewage regime. Raw sewage is still being pumped out at Granton, to the west of Seafield, but there has been no apparent movement of Scaup in that direction.

The numbers on the north side of the Firth of Forth, at Largo Bay, have increased only marginally during the period of decline on the south side and have generally been between 1,500 and 3,500; there were 2,530 in 1979–80. The lesser resorts have also shown no significant change. In 1979–80 these carried the following: Loch Indaal, Islay, 950 (December); Carsethorn Bay, Dumfries and Galloway, 600 (February); Dee Estuary 380 (February); Dornoch Firth 270 (February); and Inner Clyde 200 (January).

Table 5 The peak numbers of Scaup, Eider and Goldeneye between Cramond and Musselburgh*, Firth of Forth, 1975–76 to 1979–80

(1975–76 data from Campbell 1976 et seq.; 1979–80 from National Wildfowl Counts)

	1975–76	76–77	77–78	78–79	79–80
Scaup	10,280	1,530	3,640	2,270	980
Eider	3,800	3,890	2,490	1,670	2,190
Goldeneye	3,050	2,070	2,190	1,080	1,290

* 10 mile stretch around Edinburgh.

Eider *Somateria mollissima*. The British population, which is almost entirely resident, is estimated at 50,000–60,000 (Atkinson-Willes 1978), but fewer than 30,000 are normally found in the counts. There are thousands along the unsurveyed parts of the west coast of Scotland.

Five surveys of the Outer Firth of Tay during 1979–80 produced a maximum of 15,460 in October, compared with approximately 10,000 in the previous two autumns (Milne 1977, 1978) and 10,000–15,000 in 1970–71 (Pounder 1971).

Elsewhere the largest concentrations were on the Firth of Forth (3,620, December), where the decline on the south shore (see Table 5) was thought by Campbell (1979) to be unconnected with the new sewage treatment system; Lindisfarne, near the most south-easterly breeding colony (at the Farne Islands) in Britain (3,060, March), Inner Clyde (2,990, September) and Ythan Estuary, Grampian (1,700, September). 22 other flocks of over 100 were located, three of them in southern England or Wales.

Long-tailed Duck *Clangula hyemalis*. The main British centre, the Outer Moray Firth, held at least 6,000 in January 1980, compared with a possible 10,000 in 1977–78 and 1978–79 (Mudge and Allen 1980). However, in 1979–80 the survey work was less intensive. The monthly counts at Lossiemouth Beach, in Spey Bay, Moray, which had often held a large proportion of the Moray Firth birds, produced a maximum of only 35. Scapa Flow, the second most important area, was not surveyed.

Otherwise the highest counts were received from the Firth of Forth (690, January), Melbost Sands, Lewis, Western Isles (180, January), Loch of Stenness, Orkney (160, October) and Lindisfarne (140, February).

Common Scoter *Melanitta nigra*. The scoters are the most under-recorded of all the seaducks. They usually occur well off-shore, where they can be difficult to locate and count. Some of the largest known British concentrations of Common Scoters, such as that in Carmarthen Bay, have not been censused regularly, and there are probably numerous smaller flocks all round the coast which are normally missed.

In 1979–80 there was a sudden major reduction in the Moray Firth, which held up to 14,000 in the 1970's. 500–800 scoters (Common and Velvet) were found in the Cromarty-Rosemarkie-Nairn area, and 1,800–2,300 in the rest of the firth.

Gatherings of over 200 were also reported from the following places: Gullane Bay, Firth of Forth (1,000, October); Lindisfarne (900, February); Largo Bay, Firth of Forth (640, February, including Velvet Scoters); St Andrew's Bay, Fife (320, January); The Wash (240, December); and Luskentyre, Lewis (210, September).

Velvet Scoter *Melanitta fusca*. The added difficulty of identifying this species among flocks of Common Scoters probably means that an even smaller proportion of the true numbers are detected; it sometimes proves impossible to distinguish between the two. The highest counts of Velvet Scoters alone in 1979–80 were of 50–100 in January in the Moray Firth (where up to 5,000 were observed in the late 1970's) and 49 at Gullane Bay in December.

Goldeneye *Bucephala clangula*. These are less seriously under-counted than the other seaducks, as they prefer sheltered areas of coast. They are also found in significant amounts inland.

The main British resort is the Firth of Forth around Edinburgh (see Table 5), where Campbell (1979) attributed their decline, and an eastward shift to Musselburgh, directly to the new sewage system. There has been only a slight gain at the two long-standing haunts on the north shore of the firth; at Largo Bay the maximum in 1979–80 was 780, and at Kirkcaldy there was a brief influx of 600 in December.

At the lesser sites there was no major change. Two freshwater locations held over 300 – Abberton Reservoir (510, March) and the Loch of Strathbeg (320, December); and four estuarine areas – the Cromarty Firth (390, November), Blackwater Estuary (350, January), Turnberry-Dipple shore, Ayrshire (340, January) and Inner Clyde (300, January).

Smew *Mergus albellus*. Although the exceptional influx of the hard winter of 1978–79 was not repeated, the 1979–80 total was still slightly higher than in most recent years. As usual, very few arrived until January.

Groups of five occurred at Abberton Reservoir, Bewl Bridge Reservoir (Kent/East Sussex) and Staines Reservoir in January, and Shepperton Gravel Pits (Surrey) in February.

In Scotland there were three at the Loch of Strathbeg in March and two at Carsebreck and Rhynd Lochs, Perthshire, in January.

Red-breasted Merganser *Mergus serrator*. The native breeding population, which provides most of the wintering birds, has been slowly expanding for many years, and the number located in the counts has risen steadily. However, there are many scattered along the unrecorded stretches of the Scottish coast.

The gathering on the Firth of Forth amounted to 1,300 in January, mostly divided between Cramond, where there has been a large increase, and Kinneil, which has shown no significant change of late.

Elsewhere, the largest counts were at Poole Harbour (540, December, the highest ever), Cromarty Firth (450, January) and Morecambe Bay, Lancashire/ Cumbria (180, January).

Goosander *Mergus merganser*. As with the Merganser, the native breeders have gradually spread southwards.

Although by the winter the majority are distributed among the larger inland waters, having been joined by continental immigrants, by far the largest concentration is usually on the Beauly Firth, near Inverness. The size of this flock varies considerably from year to year, the greatest ever having been 1,200 in December 1974; in January 1980 there were 900.

Otherwise the only site to exceed 100 was Eccup Reservoir, W. Yorkshire (120, February).

Ruddy Duck *Oxyura jamaicensis*. The small introduced population of the American subspecies *jamaicensis* has continued to increase and spread from its original centres in Somerset/Avon and the west Midlands.

In the latter area the autumn concentration at Belvide Reservoir was much smaller than normal in 1979–80, with 200 in September and 140 in October, compared with the usual recent peak of over 300. They then apparently moved to a shallow mere nine miles north-west, where 140 were counted in November, with virtually none at Belvide, thence to Blithfield Reservoir, 15 miles east,

where the mid-winter assembly comprised 300 in January, compared with a previous highest of 200 in February 1978. In March 330 were roughly equally divided between Belvide and Blithfield, prior to the dispersal to their breeding sites.

At Chew Valley Lake, Avon, the numbers remained fairly constant between October (130) and January (170) but there was then a sharp decline, although there was no similar increase elsewhere in the vicinity.

The success with which this species has established itself in its new areas is shown by the maxima at other sites in 1979–80: 87 at Cropston Reservoir, Leicestershire; 81 at Combermere, Cheshire; 79 at Ellesmere, Salop; and 76 at Rostherne Mere, Cheshire. Ruddy Ducks did not appear regularly at any of these until the mid-1970's.

Other species

The following occur regularly in the counts in small numbers: King Eider and Surf Scoter, as wild vagrants to the north of Scotland; Snow Goose, Egyptian Goose, Ruddy Shelduck, Carolina or Wood Duck, Mandarin and Red-crested Pochard, as escapes or introductions (Egyptian Goose and Mandarin having been established for many years); and, of uncertain origin, Ring-necked Duck and Ferruginous Duck.

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WADERS

This section presents the wader counts made during the tenth year of the joint BTO/WT/RSPB Birds of Estuaries Enquiry.

This is the first report summarising wader counts made during the Enquiry since 1975–76. Owing to work on the analysis and writing up of the 1969–75 data for a book, and staff changes within the BTO, the 1976–79 data have not yet been published. For this reason no wader population indices for 1979–80 are presented here. These will be included in a future report, which will cover the 1976–79 counts. Any enquiries relating to data for those years should be directed to the BoEE organiser, BTO, Beech Grove, Tring, Herts., HP23 5NR.

Counts were only specifically requested for the three mid-winter months of December (2nd), January (20th) and February (17th), this being the current aim of the Enquiry. Counts made in other months were still welcomed, however, as they provide information on the passage populations in autumn and spring.

Estuaries counted during 1979–80

A complete list of those estuaries and coast-lines on which waders were counted during 1979–80 is given in Table 6. 128 sites were covered in at least one of the three mid-winter months, although most were counted in all three. 70 sites were also counted in other months of the year; incomplete or single counts made outside the mid-winter period only brought the grand total covered during 1979–80 to 131. This included all the major estuaries in Britain, although no information was received for the English side of the Severn. Fewer small estuaries in Wales, Cornwall and Scotland were counted than in 1975–76, and many fewer in the Republic of Ireland. The results from the Republic are included by courtesy of P. Smiddy, the national organiser there.

Wader counts, 1979–80

Table 7 lists all the estuaries in Britain and Ireland with peak counts exceeding 2,000 waders. In most cases these totals are comparable with those given in all previous BoEE reports. However, owing to the shift of emphasis of the Enquiry away from year-round coverage, fewer of the large estuaries were counted outside the mid-winter period.

Note that the counts on the Solway Firth were not as comprehensive as in 1975–76 and that the Severn figure refers only to the Gwent side of the estuary. The February count on the Wash was ruined by fog.

There were several changes in the numbers of waders compared with the 1975–76 totals. Langstone Harbour saw a decrease of over 20,000, mainly owing to a fall-off in the Dunlin numbers. Teesmouth, on the other hand, had a peak of some 10,000 more than in 1975–76, with many more Knot and Lapwing.

Fewer counts were received in 1979–80 for estuaries which had supported

3,000–7,000 waders in the 1975–76 mid-winter period. Very large numbers again wintered on the important Irish Sea estuaries, although the peak counts were down in all cases compared with 1975–76. From the January totals, there appeared to be many fewer Dunlin and Redshank in this region. Several of the east coast estuaries supported more waders than in 1975–76, the increased Wash total being largely the result of more Knot, Bar-tailed Godwit and Dunlin in mid-winter. There were decreases at some south-western and Irish sites, although fewer monthly counts had been made in some cases.

On total waders alone, 22 estuaries were of International Importance (i.e. supported 20,000+ waders) and a further 12 were of National Importance (10,000+ waders). Many of those in the latter category supported internationally important populations of individual species, viz.: Oystercatcher (Conway Bay and Duddon), Ringed Plover (Blackwater, Inner Clyde and Southampton Water), Grey Plover (Blackwater, Eden, Portsmouth Harbour and Southampton Water), Curlew (Blackwater, Conway Bay, Lough Foyle and Taw/Torridge), Bar-tailed Godwit (Eden and Lough Foyle), Redshank (Blackwater, Inner Clyde, Conway Bay and Leigh/Canvey) and Sanderling (Duddon).

The total numbers of waders counted during the mid-winter period are presented in Table 8. Although data were available for fewer estuaries than in 1975–76, the January total on British estuaries still exceeded one million. Had a satisfactory count been possible on the Wash in February, and had further data been available for the Inner Clyde and Morecambe Bay, the December and February totals would also have been substantially higher. Only a sample of sites in the Republic of Ireland were counted in January 1980, and these are listed at the foot of Table 8. When allowances are made for the areas which were not covered in 1979–80, there were few notable departures from the monthly totals, compared with those for 1975–76. The national indices for the latter season showed that the majority of the waders wintering in Britain that year had reasonably high population levels, with the exception of Knot and a few of the less numerous species, such as Black-tailed Godwit. An examination of the January numbers of five of the most numerous estuarine waders (excluding Lapwing and Golden Plover) at 16 of the major British estuaries counted in both 1975–76 and 1979–80 revealed increases in Oystercatchers and Knot, decreases in Redshank and Dunlin and little change in Curlew numbers. One species, the Bar-tailed Godwit, showed an obvious increase, with the January 1980 total almost 12,500 up on that for January 1976. More informed comments on the population trends will perhaps be possible when the figures and indices for 1976–77 to 1978–79 become available.

Table 6 Areas counted for Birds of Estuaries Enquiry, 1979–80

SCOTLAND (31)

Ardrossan, Strathclyde
Arran, Strathclyde
Ayr/Pow Burn, Strathclyde
Ballantrae, Strathclyde
Banff Harbour, Grampian
Beauly Firth, Highland
Brora/Golspie, Highland
Clyde (inner), Strathclyde
Cromarty Firth (inner), Highland
Dipple/Chapeldonan, Strathclyde
Doon, Strathclyde
Dornoch Firth, Highland
Eden, Fife
Forth, Fife/Central/Lothian
Hunterston, Strathclyde
Irvine/Garnock, Strathclyde
Loch Fleet, Highland
Loch Ryan, Dumfries and Galloway
Lossie, Grampian
Luskentyre, Western Isles
Macduff, Grampian
Maidens Harbour, Strathclyde
Melbost, Western Isles
Moray Firth (inner), Highland
Northton, Western Isles
Portessie, Grampian
Solway, Dumfries and Galloway
Tay (outer), Tayside/Fife
Urr, Dumfries and Galloway
Whitehills, Grampian
Ythan, Grampian

NORTH-WEST ENGLAND (7)

Alt, Merseyside
Dee, Merseyside/Cheshire/Clwyd
Duddon, Cumbria
Mersey, Cheshire/Merseyside
Morecambe Bay, Lancs./Cumbria
Ribble, Lancs./Merseyside
Solway, Cumbria

WALES (18)

Afon Wen, Gwynedd
Angle Bay, Dyfed
Artro, Gwynedd
Blackpill, West Glam.
Burry Inlet, West Glam.
Cleddau, Dyfed
Clwyd, Clwyd
Conway Bay, Gwynedd
Foryd Bay, Gwynedd
Inland Sea/Beddmanarch Bay, Gwynedd
Mawddach, Gwynedd
Menai Straits (north), Gwynedd
Nevern, Dyfed
Pwllheli Harbour, Gwynedd
Red Wharf Bay, Gwynedd
Severn, Gwent
Taff/Ely, South Glam.
Traeth Bach, Gwynedd

SOUTH-WEST ENGLAND (14)

Avon, Devon
Axe, Devon
Dart, Devon
Erme, Devon
Exe, Devon
Hayle, Cornwall
Kingsbridge, Devon
Otter, Devon
Plym, Devon
Tamar, Devon/Cornwall
Tavy, Devon
Taw/Torridge, Devon
Teign, Devon
Yealm, Devon

SOUTHERN ENGLAND (14)

Beaulieu River, Hants.
Brading Harbour, I.O.W.
Chichester Harbour, W. Sussex/Hants.

Fleet/Lodmoor/Radipole/Portland, Dorset
Langstone Harbour, Hants.
Newtown, I.O.W.
Pagham Harbour, W. Sussex
Poole Harbour, Dorset
Portsmouth Harbour, Hants.
Ryde Harbour/Pett Level, E. Sussex
Solent, Hants
Southampton Water, Hants.
Sussex, coastal
Wootton Creek, I.O.W.

EASTERN ENGLAND (30)

Amble/Chevington, Northumb.
Beadnell/Seahouses, Northumb.
Blackwater, Essex
Blyth, Suffolk
Boulmer/Howick, Northumb.
Breydon Water, Norfolk
Colne, Essex
Crouch/Roach, Essex
Deben, Suffolk
Dengie, Essex
Esk, North Yorks.
Foulness, Essex
Hamford Water, Essex
Howick/Beadnell, Northumb.
Humber, Humberside/Lincs.
Leigh/Canvey, Essex
Lindisfarne, Northumb.
Medway, Kent
North Kent marshes, Kent
North Yorks. coast, N. Yorks.
Ore, Suffolk
Orwell, Suffolk
Seahouses/Budle Point, Northumb.
Stour, Essex/Suffolk
Swale, Kent
Teesmouth, Cleveland
Thames (inner), Essex/Kent/London
Tweed, Northumb.
Tynemouth/Seaton Sluice, Tyne and Wear/Northumb.
Wash, Lincs./Norfolk

NORTHERN IRELAND (5)

Bann, Londonderry
Carlingford Lough, Down/Louth
Dundrum Bay, Down
Lough Foyle, Londonderry
Strangford Lough, Down

REPUBLIC OF IRELAND (13)

Ballycotton, Cork
Baldoyle Bay, Dublin
Bannow Bay, Wexford
Bull Island, Dublin
Cahore, Wexford
Cork Harbour, Cork
Cull, Wexford
Galway Bay, Galway/Clare
Lady's Island Lake, Wexford
Rahasane, Galway
Sligo Bay, Sligo
Tacumshin, Wexford
Wexford Harbour and Slobs, Wexford

Table 7 Peak counts of waders at principal estuaries, 1979–80

(NB: Peak count is summation of highest monthly counts for each species, regardless of month when peak occurred).

**Morecambe Bay	169685	*Irvine/Garnock	8921
Wash	141531	*Alt	8799
*Dee (Cheshire etc.)	114961	Poole Harbour	8331
*Ribble	85725	Wexford Harbour	8254
Lindisfarne	62196	Dornoch Firth	7875
*Firth of Forth	55827	*Carlingford Lough	7707
*Humber	54261	Blackpill	6994
*Inner Solway (incomplete)	45104	Inland Sea/Beddmanarch Bay	6929
Foulness	44437	Tay, outer (incomplete)	6617
*Mersey	40542	West Solent	6615
Chichester Harbour	40395	Pagham Harbour	6225
Cork Harbour (incomplete)	37603	Tacumshin	6202
Strangford Lough	37561	Rye Harbour/Pett Level	5938
Severn (Gwent only)	36822	Medway	5501
Burry	35686	Dundrum Bay	5391
*Sussex, coastal	31573	Cleddau	4954
Hamford Water	28377	Loch Ryan	4895
**Bull Island	27731	Menai Straits (north)	4724
Teesmouth	24326	*Breydon Water	4475
Langstone Harbour	23664	*Orwell	3233
Duddon	20288	Tamar	3212
Stour, Suffolk/Essex	20247	*Clwyd	3196
Blackwater	19860	Loch Fleet	3056
Ythan	18640	Plym	3012
Taw/Torridge	17960	Newtown, Isle of Wight	2995
Southampton Water	15182	**Galway Bay	2955
Portsmouth Harbour	15172	**Foryd Bay	2937
*Inner Clyde	15022	Beaulieu River	2914
Eden	14490	N. Yorkshire coast	2536
Leigh/Canvey	14358	Swale	2505
*Conway Bay	14266	*Urr	2398
Exe	14107	*Amble–Cherington coast	2248
Lough Foyle	14087	Blyth	2156
Taff/Ely	12485	Bann	2153
Bannow Bay	9733	**Deben	2099
Crouch/Roach (incomplete)	9095	Esk, Yorkshire	2049

* Data available for mid-winter period (December–February) only; peak counts comparable with those in 1975–76 report only.

** Data available for one month only.

Table 8 Winter population levels of waders in U.K. estuaries 1979–80, and Republic of Ireland totals, January 1980.

	U.K.			Irish Republic+
Species	Dec 1979*	Jan 1980	Feb 1980†	Jan 1980
Oystercatcher	124801	198211	105336	4745
Lapwing	89023	63130	72552	3422
Ringed Plover	6652	5487	4374	493
Grey Plover	10834	14215	11782	768
Golden Plover	32941	19284	23534	587
Turnstone	8399	10393	7374	671
Common Snipe	1151	1364	1599	–
Jack Snipe	21	11	8	–
Curlew	29513	43581	43692	2960
Whimbrel	1	–	1	–
Black-tailed Godwit	2398	4771	3646	116
Bar-tailed Godwit	35662	54795	34154	3587
Green Sandpiper	10	15	15	–
Common Sandpiper	10	7	6	–
Redshank	40687	51301	42370	3371
Spotted Redshank	23	51	47	–
Greenshank	175	153	136	39
Knot	183158	193429	90839	9200
Dunlin	313697	415160	304763	15476
Sanderling	4833	7424	6989	165
Ruff	73	153	88	–
Little Stint	2	6	2	–
Curlew Sandpiper	–	1	–	–
Purple Sandpiper	676	980	1565	–
Avocet	33	70	103	–
TOTAL	884773	1083992	754975	45600

* Excluding Inner Clyde and Morecambe Bay.
† Excluding Morecambe Bay and the Wash.
\+ Irish sites counted: Baldoyle Bay, Ballycotton, Bannow Bay, Bull Island, Galway Bay, Lady's Island Lake, Rahasane, Tacumshin and Wexford Harbour and Slobs.

REGIONAL ORGANISERS

W = National Wildfowl Counts
E = Birds of Estuaries Enquiry

NB: National Wildfowl Counts: most of the organisers in England and Wales are appointees of the local ornithological societies. Those in Scotland are appointed by the Scottish Ornithologists' Club.
Except where otherwise indicated, the organisers for maritime counties cover both coastal and inland localities.

ENGLAND

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	E	M.A. Blick, 5 Aston Road, Billingham, TS22 5DF.
Cornwall	W	T. Langford, Miango, Trewirgie Road, Redruth.
	E	S.M. Christophers, 5 Newquay Road, St. Columb Major.
Cumbria (excl. Morecambe Bay)	W	(excl. Solway) Miss K.M. Atkinson, The Ferry House, Far Sawrey, Ambleside.
	E	(Solway) I. Armstrong, R.S.P.B. (N. England Office), 'E' floor, Milburn House, Dean Street, Newcastle-upon-Tyne, NE1 1LE.
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	E	Dr. D.J. Godfrey, 77 Merley Way, Wimborne, BH21 1QW.
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Essex	W&E	J. Howard, 6 St. Bride Court, Colchester, CO4 4PQ.
Gloucestershire	W	N. Crocker, 1 Westfield Terrace, Longford, Gloucester, GL2 9AX.
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	E	D. Steventon, 8 Jumar Close, Warsash, Southampton, SO3 6JP.
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(excl. Wash)	E	R.N. Goodall (same address).
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Dee	W&E	R. Gomes, Marsh Cottage, Denhall Lane, Burton, S. Wirral, Merseyside, L64 0TG.
Mersey	W&E	G.E. Thomason, 110 Coroners Lane, Widnes, Cheshire.
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Salop	W	P.R. Williams, 37 Oak Drive, Oswestry, SY11 2RK.
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Suffolk (cont.)	E	J. Shackles, Sunset Cottage, Church Lane, Blythburgh.
Surrey	W	I.C. Williamson, Apple Hill, Buckland.
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Wash	E	Dr. L.H. Campbell, R.S.P.B., The Lodge, Sandy, Bedfordshire, SG19 2DL.
Wiltshire	W	J.C. Rolls, Sparrow Cottage, 12 Wadswick Lane, Neston, Corsham.
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WALES

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Printed by Nimsfeilde Press Limited, Nympsfield, Glos.