

Waterfowl Counts in the UK 1990-91

JO FERNS and JEFF KIRBY



The National Waterfowl Counts (NWC - formerly the National Wildfowl Counts) Programme is organized by The Wildfowl & Wetlands Trust and involves the monitoring of numbers, distribution and trends of swans, geese, ducks, grebes, Cormorant *Phalacrocorax carbo* and Coot *Fulica atra* throughout the United Kingdom. Many thousands of volunteer ornithologists throughout the UK take part, and the success of the programme to date reflects accurately their enthusiasm and dedication. Instigated in 1947, the core activity in the counts programme comprises once-monthly wildfowl counts, which take place on a wide variety of wetland habitats including estuaries and coastal bays, reservoirs, lochs/loughs, gravel pits, freshwater marshes, rivers, canals and ponds. Most counts take place during the autumn and winter period, between September and March, although valuable information from other times of the year is currently also received. To complement the monthly counts, additional surveys of certain swans and geese are organized in most years, as some species prove difficult to census completely by the monthly counts alone. Also 'special surveys' of breeding and moulting waterfowl are carried out. The NWC programme receives financial support from the Joint Nature Conservation Committee (JNCC - the successor body to the Nature Conservancy Council and with statutory responsibility for nature conservation in the United Kingdom), the Royal Society for the Protection of Birds (RSPB) and the Department of the Environment for Northern Ireland (DoENI).

A grand total of 2504 wetland sites in Britain and Northern Ireland was covered at least once during 1990-91, the 44th consecutive season of waterfowl counts. This represents an all-time record for the NWC programme and is considerably higher than the total of 1910 sites achieved in 1989-90. Furthermore, the coverage in Britain improved in every month compared with

the previous season, most significantly due to considerable efforts expended by counters in northwest England for a special project there.

Although the comprehensive coverage of northwest England was evident, so too were gaps in eastern and northeast Wales, in Kent, East Anglia, northern England and throughout many regions of Scotland. On the coast, incomplete counts were received from the estuaries of the Humber, Rough Firth and Dulas Bay. Numerous supplementary surveys of geese were accomplished in 1990-91 and extra information for seaducks in the Moray Firth was supplied by the RSPB, courtesy of British Petroleum.

The Table shows the highest counts of each species in Great Britain and Northern Ireland, with the months in which these peaks occurred. The totals give a good idea of the true population sizes of most species, but are less reliable for the grebes, Mute Swan *Cygnus olor*, Canada Goose *Branta canadensis*, Mallard *Anas platyrhynchos* and Coot, which are particularly widespread. Also the counts of sea-ducks must be treated cautiously as they are difficult to survey.

The NWC scheme only covers a rather small proportion of the population of Little Grebe *Tachybaptus ruficollis* in the UK. The peak number counted in the UK was 3565 in September, slightly more than the 3345 recorded in 1989-90. This is probably due to the increase in the number of smaller freshwater sites counted. Loughs Neagh and Beg (342) and Strangford Lough (122) supported the highest numbers although there were fewer recorded at Loughs Neagh and Beg than might be expected from the counts made in recent winters. The total number of Great Crested Grebe *Podiceps cristatus* counted in Britain was higher than in 1989-90, almost certainly because of the increased site coverage and the expansion of the species on the gravel pits and reservoirs complexes in lowland England. The count of 1038 birds at Rutland Water is the

Table 1. Maximum total counts of wildfowl in the UK, September 1990 to March 1991.

	Great Britain	Northern Ireland
Little Grebe <i>Tachybaptus ruficollis</i>	2878 (Sep)	722 (Nov)
Great Crested Grebe <i>Podiceps cristatus</i>	8803 (Sep)	1518 (Nov)
Cormorant <i>Phalacrocorax carbo</i>	13866 (Nov)	1529 (Dec)
Mute Swan <i>Cygnus olor</i>	15220 (Jan)	2184 (Dec)
Bewick's Swan <i>C. columbianus bewickii</i>	7905 (Jan)	584 (Feb)
Whooper Swan <i>C. cygnus</i>	4556 (Jan)	1875 (Nov)
Bean Goose <i>Anser fabalis</i>	509 (Jan)	0
Pink-footed Goose <i>A. brachyrhynchus</i>	194752 (Nov)	0
Eur. White-fronted Goose <i>A. a. albifrons</i>	4025 (Feb)	0
Gd. White-fronted Goose <i>A. a. flavirostris</i>	15180 (Mar)	55 (Mar)
Greylag Goose <i>A. anser</i> (Icelandic)	114678 (Nov)	1113 (Mar)
(feral)	15334 (Jan)	
Canada Goose <i>Branta canadensis</i>	37994 (Oct)	252 (Nov)
Barnacle Goose <i>B. leucopsis</i>	33523 (Dec)	71 (Sep)
Dark-bellied Brent Goose <i>B. b. bernicla</i>	124067 (Feb)	0
Light-bellied Brent Goose <i>B. b. hrota</i>	2706 (Nov)	15903 (Oct)
Shelduck <i>Tadorna tadorna</i>	79949 (Feb)	3738 (Feb)
Mandarin Aix <i>galericulata</i>	209 (Oct)	0
Wigeon <i>Anas penelope</i>	238369 (Jan)	18660 (Oct)
Gadwall <i>A. strepera</i>	7497 (Dec)	241 (Sep)
Teal <i>A. crecca</i>	135423 (Jan)	6133 (Jan)
Mallard <i>A. platyrhynchos</i>	214458 (Jan)	10864 (Sep)
Pintail <i>A. acuta</i>	23091 (Feb)	253 (Jan)
Garganey <i>A. querquedula</i>	17 (Sep)	0
Shoveler <i>A. clypeata</i>	8975 (Sep)	274 (Oct)
Pochard <i>Aythya ferina</i>	37419 (Jan)	41364 (Dec)
Tufted Duck <i>A. fuligula</i>	48425 (Jan)	23138 (Nov)
Scaup <i>A. marila</i>	6492 (Feb)	1821 (Feb)
Eider <i>Somateria mollissima</i>	44232 (Feb)	1382 (Dec)
Common/Velvet Scoter <i>Melanitta</i> sp.	9072 (Feb)	2480 (Nov)
Long-tailed Duck <i>Clangula hyemalis</i>	1865 (Dec)	69 (Feb)
Goldeneye <i>Bucephala clangula</i>	17102 (Feb)	15201 (Feb)
Smew <i>Mergus albellus</i>	270 (Feb)	0
Red-breasted Merganser <i>M. serrator</i>	3891 (Dec)	584 (Sep)
Goosander <i>M. merganser</i>	3249 (Dec)	1 (Nov)
Ruddy Duck <i>Oxyura jamaicensis</i>	3087 (Jan)	34 (Oct)
Coot <i>Fulica atra</i>	85806 (Sep)	8426 (Oct)

highest number ever recorded at an inland site in Britain. In contrast, fewer were recorded in Northern Ireland and there were fewer at Loughs Neagh and Beg (612). In Britain, the Cormorant population appears to be expanding, especially in inland areas. Loughs Neagh and Beg supported 904 birds in December and Morecambe Bay held 991 in September. At several sites, such as the Medway (1280) and Forth (962) numbers are increasing.

The total counts of Mute Swans in Britain clearly reflect a continuation of the population increase in this species following the ban on the sale of lead weights for angling, and the later prohibition of its use by water companies and others. This is also confirmed by both the September and January population indices. Despite the increase in coverage, the total count obtained from the NWC scheme still accounts for less than 60% of the number known to be in Britain from the summer surveys, but it does provide a good year-on-year estimate of the trend in numbers. There was a spectacular

flock on the Loch of Harray (1205) and relatively large numbers on The Fleet/Wey complex (1029) in October. Loughs Neagh and Beg held 1205 in September. Elsewhere numbers were similar to that found in recent years. This suggests that the species may be spreading to smaller waters and increasing on rivers, possibly because its major haunts are already at capacity.

Bewick's Swans *Cygnus columbianus bewickii* reached Britain exceptionally early in autumn 1990 with over 100 individuals recorded at Slimbridge, 740 at Welney and 975 in the Martin Mere area by the end of October. Such early movements were thought to be a result of shortages of *Potamogeton*, and relative drought, in the Lauwersmeer area of The Netherlands. Peak numbers were not particularly high in the 1990-91 winter; the maximum in the UK as a whole was almost 8400. Bewick's Swans bred well in 1990, with nearly 20% juveniles in the wintering flocks at WWT Centres. The Ouse Washes are outstanding in their importance for this species and the num-

bers there (5100 mainly at the Trust's reserve at Welney), at Martin Mere (1046) and Slimbridge, together exceeded more than 6400 birds, the vast majority of the British total. In contrast to the situation for the Bewick's Swan, Whooper Swans *Cygnus cygnus* were slow to arrive in the autumn of 1990, with the main influx at Trust Centres not occurring until November. They had enjoyed a moderately successful breeding season with 16.4% young in flocks at Welney, 17.6% at Martin Mere and 16.9% at Caerlaverock. The total numbers counted at NWC sites were not as high as in 1989-90, but there were more than 6000 counted in the UK in January. The counts indicate that the swans move between their major haunts in the course of the winter, presumably in relation to decline in food resources. As usual, Loughs Neagh and Beg had a large flock of 1110 but this was exceeded this year by a group of 1115 counted in the Loch Eye/Cromarty Firth area in November. This is thought to be because of exceptional growth of submerged aquatic plants in 1990, providing a rich food source for the swans.

A record total number of Bean Geese *Anser fabalis* was present in the Yare Valley, peaking at 485 in January, noticeably higher than in recent years. Elsewhere, the only record of more than 10 birds came from Loch Ken (20). Smaller numbers appeared at numerous other localities. The 1990 breeding season was relatively good for Pinkfeet *Anser brachyrhynchus* with averages of 21.5% young and 2.2 young per pair present in autumn flocks. The number counted in the October and November censuses was almost 176,000 and 195,000 respectively, the latter representing the highest total yet. Unlike in other recent years, there was no widescale census in spring 1991, but more than 74,000 were counted in Britain in March, mainly in Scotland, with more than 17,000 as far south as the Solway. The Loch of Strathbeg (37,100) and Dupplin Loch (42,000) supported very large numbers in 1990-91 compared with earlier years, whilst the numbers on the Wash, reaching over 25,000 in the January cold spell were unprecedented, these birds presumably having moved south from Lancashire. Relatively low counts were recorded at Westwater (24,700) and Cameron Reservoirs (3820) compared with recent years.

Despite the recent spectacular increase in

Siberian breeding European White-fronted Geese *Anser albifrons albifrons*, the number wintering in Britain continues to decline. Improvements in feeding conditions and protection in The Netherlands, and recently in the Nord-Rhein Westfalia region of Germany, means that few need to migrate to traditional wintering areas further from the breeding grounds. Total numbers recorded in Britain in 1990-91 reached only 4025, almost 1800 fewer than in 1989-90, and the population index fell to its lowest level for a number of years. The numbers at Slimbridge on the Severn Estuary were particularly disappointing (only 2600), and few were recorded on the Thames and the North Norfolk Marshes. Within Britain, they appear to be contracting in range and shifting eastwards. The Greenland White-fronted Goose Study/National Parks and Wildlife Service censuses produced 29,388 birds in spring 1991. This compares with total counts of 26,845 and 27,341 in the autumns of 1989 and 1988, respectively. The British totals were 14,762 in autumn and 15,180 in spring, with c.56% and c.58% counted on Islay, their principal resort. There was 19.0% young amongst flocks aged on Islay, and 18.8% amongst those aged in Scotland as a whole. This compares with 19.3% in the previous winter. The numbers have doubled since this subspecies was protected, first in Scotland and subsequently in Ireland and in Greenland. Despite the increasing numbers, there appears to be continued contraction in range, especially in Ireland. Most of the increase in numbers is accommodated at the Wexford Slobs, whereas sites holding smaller numbers in the remainder of Ireland are barely holding their own. The same trend is evident in Britain; the increasing numbers are concentrated at the major sites Islay (8857) and Machrihanish (1240).

Autumn 1990 age counts of Icelandic Greylag Geese *Anser anser* revealed 20.7% young overall and 2.5 young per pair on average, suggesting that they had bred very well. Complete censuses in October and November resulted in just over 76,000 and almost 115,000 birds, respectively, but this is still considered to represent an under-estimate of the true size of this population. Dinnet Loch/River Dee supported 16,000 in November. A relatively large count was made at the Loch of Skene (19,150 in January) and Loch Eye/Cromarty Firth held 18,593 in November. Several sites supported fewer

than might be expected from previous winters however, especially the Loch of Strathbeg, Carsebreck and Holborn Moss. The feral Greylag population, which resides mainly in England and Wales but also in parts of Scotland, may now number in excess of 22,000 birds, and was the focus of a 'special survey' to assess population size and distribution in summer 1991. The number counted on NWC sites in 1990-91 peaked in January at 15,300 birds. Numbers recorded in Northern Ireland (1107), which will largely be feral birds, are well up on 1989-90 when a maximum of just 456 was recorded. A post-breeding census of the non-migratory native Greylag population that occupies the far north and west of Scotland in August 1990 produced almost 2000 birds, and similar numbers were counted in January 1991. Breeding success, averaging 3.72 young per pair on North Uist and 4.16 young per pair on South Uist, was similar to previous years. The Canada Goose continues to flourish, with peak numbers in Britain in October 1990 (almost 38,000 birds) exceeding the equivalent figure of last season by almost 4000 birds. Numbers appear to remain constant at least in some areas, and further evidence of this comes from the population index which in fact fell below that of the previous two winters. However, because the species may feed far from water, birds may be missed during the NWC counts on some occasions. The 'special survey' undertaken in 1991 will reveal the true size of the Canada Goose population.

The Scottish component of the Greenland population of the Barnacle Goose *Branta leucopsis* winters mainly on Islay and here they numbered 30,208 in early December 1990, the highest number ever counted there, and 22,172 in March 1991. The numbers of juveniles present in Islay flocks indicated an excellent breeding season with more than 20% young. Thus, a large proportion of the increased population (c.6,000) would be birds of the year. This means that the Greenland population as a whole is considerably larger now than the 34,500 counted in 1988. The only other sizeable flocks likely to comprise birds from this population included 375 birds at Craiglin Lochan in March. Almost daily counts of the Svalbard population at Caerlaverock resulted in a maximum count of 12,100 in October, indicating that the population appears to have stabilised at around 12,000 birds. The pro-

portion of juvenile birds in flocks averaged 12.0%; breeding success has declined in recent years; this is now only matching the mortality rate, which has remained constant. Sites supporting smaller flocks during 1990-91, that are likely to belong to this population, included the Loch of Strathbeg (356), Gladhouse Reservoir (275) and Portmore Loch (115), all in October.

In 1990, breeding performance by the Dark-bellied Brent Goose *Branta bernicla bernicla* was moderately good, with 21.4% juveniles and 3 young per pair overall in autumn flocks in Great Britain. Midwinter censuses in January and February 1991 resulted in a maximum count of around 115,000 birds, though further counts have been received subsequently to bring this figure up to 124,000 birds. This is by far the highest total yet recorded in Britain and provides welcome evidence of a continuing population increase in this subspecies. Counts made in 1990-91 were relatively high, compared with those made in recent years, at numerous sites; on the Blackwater Estuary, Hamford Water, Pagham Harbour, Swale, North West Solent and Portsmouth Harbour, and especially so on the Thames (with a staggering 33,109 birds) and Crouch estuaries. The key sites for Light-bellied Brent Geese *Branta bernicla hrota* are Strangford Lough (13,237) and Lough Foyle (6007), these birds originating from the population breeding in arctic Canada and Greenland, whilst those at Lindisfarne (2700) are from the Svalbard population. The numbers at Strangford Lough and Lindisfarne appear relatively stable, whilst the maximum number at Lough Foyle was very much higher than in recent years.

The total number of Shelduck *Tadorna tadorna* recorded on NWC sites in Britain increased markedly in 1990-91 reaching a February peak of 79,949, almost 6000 more than in 1989-90. Numbers were also up on last season in Northern Ireland, by c.900 birds, with the peak also occurring in February. The long-term index showed relatively little change on recent seasons however. The main resorts for Shelducks are the Wash (16,275), Medway (10,149) and the estuaries of northwest England. The peak Mandarin Aix *galericulata* count of 209 in October was similar to that of 1989-90 (226). The number counted on NWC sites then decreased in December to just 69 but had increased to 134 by January. The largest counts of Mandarin came from Virginia

Water (72), Hammer Pond (47) and Witley Park (39). Maximum total numbers of Wigeon *Anas penelope* in Britain were achieved in January (238,369), following a November/December influx. However, the peak number recorded was less than in 1989-90, when the maximum count was over 260,000. In Northern Ireland, numbers reached 18,660 in October and fell subsequently, with the majority of these birds occurring on Lough Foyle. Numbers on the Ribble Estuary continue to increase dramatically, this site now holding the largest concentration of birds in the UK (59,187).

The population index of Gadwall *Anas strepera* in Britain increased in both October and December to reach the highest ever levels. This increase may be related to expansion onto artificial waters in the inland southern lowlands. Rutland Water continues to hold the vast majority, perhaps some 20% of the British population (1323). The total numbers of Teal *Anas crecca* counted in the UK approached 142,000 birds, and maximum numbers were recorded in January overall. The December/January population index for Teal remained at its currently high level. The traditional sites of northwest England continued to support large numbers of Teal, with the Mersey (10,375), Ribble (9078) and Dee (4824) estuaries ranking as the best UK sites for this species. The total number of Mallard counted at NWC sites in Britain increased very considerably to reach c.214,500 birds, exceeding the 1989-90 peak by some 33,400. As the population index for Mallard did not change very much, the increased total count is presumably related to the fact that far more sites were counted in 1990-91 than in 1989-90. The total maximum count in Northern Ireland was similar to that of previous seasons. There was a massive count on the Swale Estuary (10,469) in January 1991. The Humber Estuary supported 4373 in February and Loughs Neagh and Beg 5318 in September. Conversely, relatively low maxima were recorded on the Dee Estuary, the Loch of Strathbeg, and the Solway and Thames estuaries. The peak total count of Pintail *Anas acuta* in Britain (23,091) was some 3300 birds fewer than that of 1989-90, whilst the peak in Northern Ireland was slightly higher, by 86 birds. The British population index for Pintail fell markedly. Whilst a number of sites recorded relatively low counts (e.g. Mersey Estuary, Wash, Martin Mere and the Duddon Estuary),

Morecambe Bay (3190) and the Solway Estuary (2208) held relatively large numbers in October. A total of 30 Garganey *Anas querquedula* were counted on NWC sites during autumn/winter, mainly in September and March, and six were recorded at Chew Valley Lake in August. The autumn/winter records were widespread, with birds occupying numerous gravel pits and freshwater marshes. The Shoveler *Anas clypeata* total count of 8975 recorded in Britain in September exceeded last seasons peak count by 10%, whilst the 1990-91 total from Northern Ireland (274) was slightly down. Maximum numbers at sites counted throughout the season were recorded in September and October. The October/November and January values for the British population index showed slight increases in 1990-91. Most sites held numbers that were similar to previous seasons, though Abberton Reservoir probably had a record count in September (1085). The Ouse Washes held 625 in March and Rutland Water 680 in September.

The total number of Pochard *Aythya ferina* counted in Britain reached almost 37,500, some c.4000 fewer than in 1989-90, and there was a noticeable drop in the January index. Conversely, more were counted in Northern Ireland in 1990-91 than in 1989-90, with the maximum totals being 41,364 and 36,946 respectively. Loughs Neagh and Beg (40,928) are overwhelmingly important for this species, whilst in Britain Abberton Reservoir held 4064. The maximum total number of Tufted Duck *Aythya fuligula* was recorded in January in Britain (48,425) and was similar to the peak total count of last season. In Northern Ireland however, there was a November peak of 23,138 birds which was substantially lower than in 1989-90 (30,402). Generally the numbers of Tufted Duck at the most important sites dropped, but there was a large increase at Walthamstow (1589) and King George V Reservoirs (2,500).

Just over 8300 Scaup *Aythya marila* were counted in February in the UK. The Solway Estuary currently ranks as the best UK site for Scaup (3803), whilst Loughs Neagh and Beg are very important also (1539). The maximum number of Eider *Somateria mollissima* counted in Britain was in February (44,232), this total representing 7% fewer than in 1989-90 (when 50,403 were counted in November). In Northern Ireland, the peak of 1382 in December was almost double

that of last season (738). Most of the British total count of Eiders comes from the Outer Firth of Tay where over 20,000 were present in February 1991. Elsewhere, there was a relatively large number in Morecambe Bay (8,183) in 1990-91 compared with earlier seasons, and the RSPB/BP surveys found 2109 Eider in the Moray Firth in November. The Long-tailed Duck *Clangula hyemalis* winters in Britain and Ireland in localized concentrations, with flocks occurring in open coastal waters, mainly along the east coast of Scotland and the northern and western isles. The peak total count recorded in Britain was 1865 birds in December but the species is counted only very irregularly and is notoriously difficult to census. The prime Long-tailed Duck site is the Moray Firth and land-based counts peaked at 8037 in January, though roost counts at this time indicated an actual population of around 12,000. Lindisfarne (420) produced relatively large numbers, as did Water Sound (365) in Orkney. The Eden Estuary held 360 Long-tailed Ducks in December. Scoter peaked at 2836 in the Moray Firth in December when at least 1818 Common *Melanitta nigra* and a minimum 328 Velvet Scoter *M. fusca* were present. A survey of Carmarthen Bay on the 12th January produced a single flock of Common Scoter comprising 2500 birds which was seen off Pendine. At Cardigan Bay 1226 birds were observed in December.

There was clearly a cold weather influx of Smew *Mergus albellus* from the continent between the January and February count dates. Relatively large counts were recorded in February at Rye Harbour (22), Stain Hill Reservoirs (21), Goldhanger (18) and King George VI Reservoir (18), and smaller numbers occurred at many other sites in that month. The maximum total number of Goldeneye *Bucephala clangula* counted in Britain was 17,102 in February, considerably up on last seasons peak count of 12,702 in January. Not surprisingly, the January index for Britain increased in 1990-91. In Northern Ireland, the 15,200 birds counted in February also represented a substan-

tial increase on 1989-90 (12,170). Loughs Neagh and Beg (13,591) represent the only internationally important UK site for this species. The maximum count of Red-breasted Merganser *Mergus serrator* in Britain in 1990-91 (3891) was considerably higher than the previous year (2855) though the index shows a continuing decrease. The principal resort for Red-breasted Merganser *Mergus serrator* is the Inner Moray Firth, holding by far the highest numbers in the UK, though the peak count there in 1990-91 of 658 was relatively low. Across the Moray Firth, as a whole, RSPB/BP surveys revealed a maximum count of 1923, when 1130 birds were present over the Riff Bank. Other sites in the Moray Firth holding more than 100 birds were the outer Dornoch Firth (431), the Cromarty and Inner Moray Firths and Burghead Bay (104).

The total number of Goosander *Mergus merganser* in Britain reached a maximum of 3249 birds in December, well up on last season's peak of 2733 in January. The Inner Moray Firth (610) supports by far the largest counted concentrations, though numbers there were less than in earlier years. Elsewhere, there appears to be a sustained increase at Hirsle Lake (290) and perhaps also at a number of other sites e.g. Hay-a-Park gravel pits, Blithfield Reservoir, Rutland Water and Loch Leven.

The maximum number of Ruddy Duck *Oxyura jamaicensis* counted in Britain increased by 9.2% between 1989-90 and 1990-91, with a peak count in January of 3087. Blithfield Reservoir supported 899, Chew Valley Lake 435 and Rutland Water 750. The peak numbers of Coot recorded in Britain (85,806) and Northern Ireland (8304) were almost 13,000 and 1500 birds fewer, respectively, than in 1989-90, and the highest counts for both were made in September. Peak numbers recorded at most sites were very variable, but were relatively high in 1990-91 at Loughs Neagh and Beg 6685 in September and at the Cotswold Water Park East (2396) in December. The principal concentrations were found at Abberton Reservoir (9252) in September.