The Wetland Bird Survey 1994-95:
Wildfowl and Wader Counts

The results of the Wetland Bird Survey in 1994-95

by

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with the assistance of

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This report is provided free to all WeBS counters, none of whom receive financial rewards for their invaluable work. Further feedback from BTO and WWT HQs is provided to counters in the form of the *WeBS Newsletter*. More detailed data than presented in this report can be obtained through the relevant organiser.

ACKNOWLEDGEMENTS

This book represents the sixteenth combined report of the Wetland Bird Survey (previously the National Waterfowl Counts and the Birds of Estuaries Enquiry). It provides a national overview of the count information, collected during 1994-95 and previous years, which is critical to the conservation of waterfowl populations both within the United Kingdom and internationally. It is entirely dependent on the many thousands of dedicated volunteer ornithologists who supply the data and to whom we are extremely grateful. The Local Organisers who co-ordinate these counts deserve special thanks.

We are also grateful to the following people for providing technical assistance, supplementary information and comments on the draft texts, and especially to those who wrote sections of text for the report:

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The maps of coverage and sites were produced using DMAP. The section on weather was summarised from monthly weather logs published in the journal *Weather*.

The cover painting of Wigeon is by Martin Ridley. Other illustrations in this report are by Joe Blossom, Mark Hulme and S. Cull. Grateful thanks to all.

PREFACE

As was previously highlighted in the preface to the 1993-94 report, publication of WeBS results has, for several years, been much later than intended. Ideally, this report should be available as soon after the March count as possible, but various factors, not least the increase in size and complexity of the report, have caused lengthy delays. Our aim is to publish in mid to late winter of the following year (i.e. the results for 1995-96 to be published in February 1997) and, following a number of changes to our internal handling of data in the near future, we believe this is realistic.

However, in order to carry out these changes and get back on schedule, we have decided to produce a much shorter report for the 1994-95 season. Thus, the species accounts for Core Counts and the site accounts for Low Tide Counts have been omitted. Whilst appreciating that this will reduce the interest of the report for counters, we would like to stress that such drastic action is very much an isolated event. WeBS is currently reviewing the scope of its annual reporting but remains committed to the rapid dissemination of results following each count year; indeed, annual publication of sites meeting national and international importance is a key objective of the WeBS scheme.

We hope that you will appreciate the reasons for this decision and bear with us whilst we improve the schedule of WeBS reporting. Obviously, most of the counts that would have appeared in a full report for 1994-95 will appear in the tables in the 1995-96 report (which will appear in early 1997), and any salient points relating to 1994-95 counts will be discussed in that report also. We would stress that all data received for 1994-95 are held by the WeBS partners as before. Please contact BTO or WWT should you require urgently more detailed data and information.

We are confident that this approach will allow us to produce future reports of the standard of recent years to a more acceptable timetable. Our sincere apologies for any disappointment caused by this shortened report.

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CONTENTS

ERRATA

Given the amount of data processed and presented, it is perhaps inevitable that some mistakes will occur in preparing this report. Where we are made aware of these, they will be corrected in future years' reports, whilst data received late may similarly alter figures in the tables from one year to the next. However, we have introduced an *Errata* section to highlight significant errors in previous reports, particularly where it is not possible to provide corrections in the main part of subsequent reports.

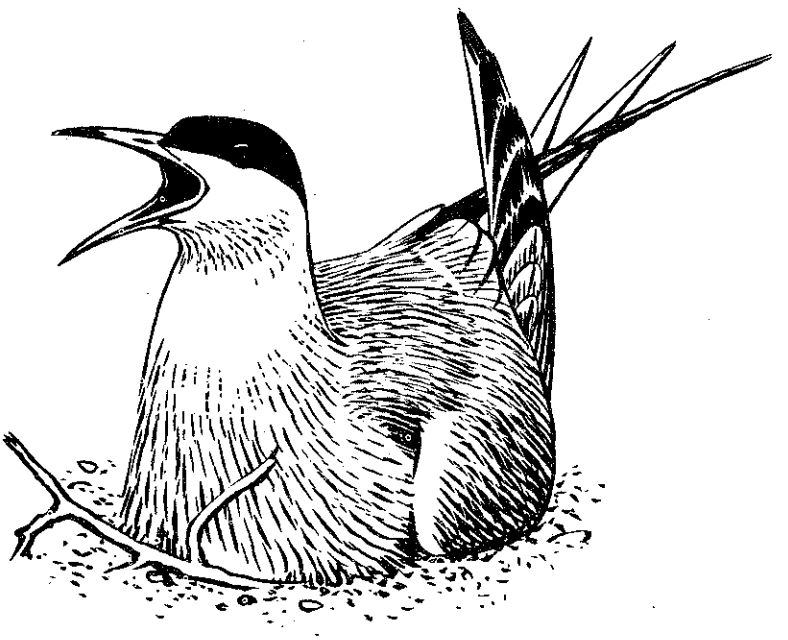
Corrections to the 1993-94 report

p27 An error at the printers lead to the tern totals for Great Britain being given under the wrong month headings. Figures for September should read for July, for October as August, for November as September and for December as October.

pp122-123 The Tees Estuary was omitted from tables of 'top sites' for terns. Peak counts were 1,665 Sandwich Tern (Aug), 338 Common Tern (Aug) and 106 Arctic Tern (Aug).

Our apologies to the counters involved and to all readers for any confusion caused.

An error has come to light in the published paper on the size of British populations of wildfowl (Kirby 1995). The number of Common Scoter in Great Britain should be 34,500, giving a 1% threshold for national importance of 350 birds, not 230 as used in previous *Wildfowl and Wader Counts*. Thus, using the data presented in the 1993-94 report, the sites of Water Sound, Broad Bay, Lindisfarne, Loch of Stenness, Sound of Taransay, North Norfolk Coast and Loch of Harray, no longer qualify as nationally important.



INTRODUCTION

The UK is of outstanding international importance for waterfowl, especially during winter when they are attracted by the relatively mild climate and extensive areas of wetland, notably estuaries. As such, the UK has an obligation to protect and conserve both these waterfowl and the wetlands upon which they depend. This is the main rationale for the Wetland Bird Survey (WeBS).

WeBS aims to monitor all non-breeding waterfowl in the UK to provide the principal data on which the conservation of their populations and wetland habitats is based. To this end, WeBS has four main objectives:

- to assess the size of non-breeding waterfowl populations in the UK;
- to assess trends in their numbers and distribution;
- to assess the importance of individual sites for waterfowl; and
- to understand the ecology of waterfowl, including the effects of habitat change and anthropogenic impact.

This report presents syntheses of data collected in 1994-95 and previous years in line with these objectives. Further detail will be presented also in the succeeding report for 1995-96 as explained in the Preface.

Although the WeBS scheme was only officially launched in October 1993, it continues the traditions of two, long running count schemes which had formed the mainstay of waterfowl monitoring in the UK since 1947. The WeBS scheme is funded by the British Trust for Ornithology (BTO), The Wildfowl & Wetlands Trust (WWT), Royal Society for the Protection of Birds (RSPB) and the Joint Nature Conservation Committee (JNCC) (the last on behalf of English Nature (EN), Scottish Natural Heritage (SNH) and the Countryside Council for Wales (CCW), and the Department of the Environment for Northern Ireland (DoENI)), thus pooling the interests and expertise of each organisation. All four WeBS partners take an active role in the planning of the scheme and the rolling programme of analyses that use WeBS data.

Core Counts are made at a wide variety of wetlands throughout the UK, including lakes, lochs/loughs, ponds, reservoirs, gravel pits, rivers, freshwater marshes, canals, sections of open coast and, in particular, estuaries. Synchronised counts are conducted once per month, normally on pre-selected dates. With the aim of monitoring non-breeding waterfowl, September to March are identified as priority months, although some sites are counted year round.

In addition, Low Tide Counts are undertaken on selected estuaries with the aim of identifying key areas used during the low tide period, principally by feeding birds; areas otherwise not noted for their importance due to Core Counts normally being conducted during high tide.

The day-to-day running of the Core and Low Tide Count schemes is the responsibility of three National Organisers, listed inside the cover of this report, with assistance from a number of other staff. We recommend that these people are contacted in the first instance by anyone with queries regarding this report or requiring further information.

The success and growth of all of these count schemes reflects accurately the enthusiasm and dedication of the several thousands of volunteer ornithologists throughout the UK who participate. It is largely due to their efforts that monitoring in the UK is held in international high regard.

PROGRESS AND DEVELOPMENTS

Wetlands International

In October 1995, the International Waterfowl and Wetlands Research Bureau, responsible for co-ordination of research and conservation of wetlands and waterfowl at an international level in Europe and Africa, merged with its equivalent organisations, the Asian Wetland Bureau and Wetlands for the Americas. This has resulted in the formation of Wetlands International.

The new organisation's mission statement is "To sustain and restore wetlands, their resources and biodiversity for future generations through research, information exchanged and conservation activities, worldwide", in recognition of the need for new initiatives and stronger partnerships to address the continuing loss and degradation of wetlands worldwide. The organisation and its programmes will draw on the input of national delegates, specialist groups, partner agencies and networks of wetland experts, including WeBS partners, developed during the 40 year existence of the founding organisations.

Wetlands International will continue to organiser the International Waterfowl Census (IWC) for which WeBS provides the UK input. In May 1995, the IWC Steering Group held its first meeting at JNCC's offices

in Peterborough and WeBS partners have given guidance to the IWC and that and subsequent meetings. Next year's WeBS report will give more detail on current IWC activity and future developments.

SURVEYS AND PROJECTS

The behaviour and habits of many of the UK's waterfowl require surveys additional to the WeBS Core Counts to monitor adequately their populations, distribution and habitat requirements. Often, these involve different methodologies, such as dawn or dusk counts at roost sites, searching non-wetland areas by day, or breeding surveys. Many of these surveys have been drawn upon in this report to complement the WeBS Core Counts and, along with those adopting similar methodology or involving a large input from the WeBS counter network, are outlined below.

International Swan Census

Since 1984, international censuses of Whooper and Bewick's Swans have been made at regular intervals, organised by the Wetlands International Swan Specialist Group. Although Britain and Ireland support substantial proportions of these species, WeBS counts record relatively few birds, particularly of Whooper Swans due to their wide distribution. Thus, the aim of the census is to obtain accurate population estimates. Previously, censuses of Whoopers occurred every five years, and for Bewick's every three. In 1995, these were combined and will be conducted in future at five yearly intervals. WWT and the Irish Wildbird Conservancy organised counts in Britain and Ireland, whilst synchronous counts were made in Iceland to ensure complete coverage of the Icelandic Whooper population in particular. Counts were scheduled for 22 January 1995, coinciding with the I-WeBS and WeBS Core Counts. Volunteers, particularly in Northern Ireland, visited additional 'non-WeBS' and 'non-I-WeBS' sites to locate as many birds as possible. Ring details were also recorded to identify the origins and trace movements of the birds.

Results of the census are being analysed concurrently with the preparation of the WeBS report. Provisional census totals are included in the totals tables. Further details will be included in next year's report.

WWT and other Goose Censuses

In 1994-95, as in previous years, there were national surveys of Pink-footed and Icelandic Greylag Geese in October and November (Mitchell & Hearn 1995), involving counts of birds flying to or from roosts. Additional, supplementary counts of key roosts were also made in January and March (Mitchell 1995). Censuses of the native Scottish population on the Uists were made in August 1994 and February 1995 (Mitchell *et al.* 1995). Full censuses of Greenland White-fronted Geese, including birds in Ireland, were undertaken in autumn 1994 and spring 1995 by the Greenland White-fronted Goose Study (Fox & Francis 1995). Greenland Barnacle Geese were counted regularly by SNH and others on Islay (R. Lilley *in litt.*) and the Svalbard population was counted frequently on the Solway Firth by WWT staff (WWT unpubl. data) and as part of an SNH project (Armstrong & McCaul 1996). Dark-bellied Brent Geese were censused in January and February by the WeBS network, with counters at key sites making special effort to locate birds using adjacent areas, particularly fields, which would ordinarily be missed during normal Core Counts. Fortnightly counts of Light-bellied Brent Geese at Lindisfarne were made throughout the 1994-95 winter. Many of the above surveys included age-counts of arctic nesting geese, made to assess the often dramatically varying breeding productivity of these birds. The results of these censuses are included in the relevant tables.

Shorebirds, Sediments and Satellites Project

Estuaries are not only attractive to vast numbers of waterfowl but also offer opportunities for land reclamation and industrial development such as power generation from tidal barrage schemes. In 1993 the BTO, in collaboration with the Institute for Terrestrial Ecology, set up the Shorebirds, Sediments and Satellites Project which considered the possibility of predicting the effects such developments might have on waterfowl densities by looking at how these developments would change their environment.

The distribution of waterfowl on estuaries is closely linked to the abundance of their invertebrate prey but our ability to predict how tidal barrages might affect waterfowl has been hampered by the difficulty of predicting how food availability might change. However, the abundance of these prey species is affected by sediment composition and, in turn, the size and shape of the estuary. Predicting post-development changes in these factors promises to be more reliable than predicting post-development changes in invertebrate availability. This project was able to develop ways of estimating waterfowl densities directly from the sediment and estuary measurements, thus overcoming the problem of predicting changes in

prey availability.

Twenty seven British estuaries were selected for the project to cover a wide range of bird densities and geographic locations. Information regarding waterfowl numbers was collected by local volunteers. Sediment cover was mapped using data obtained from airborne and satellite images. Measurements were made of estuary size, shape and features such as tidal range and exposure to wind and wave action.

For many of the waterfowl species considered, densities on the east and south coasts of Britain were much higher than those on the west coast. There were also marked differences in the character of estuaries between these two regions, both with regard to their shape and the nature of their intertidal sediments. East and south coast estuaries are very muddy compared to west coast estuaries, which are subject to higher tidal ranges, and greater exposure to wind and wave action, and have more open mouths.

Relationships between the densities of 17 of the main waterfowl species and environmental factors were used to construct mathematical models which enable us to predict waterfowl densities from straightforward measurements of sediment and estuary features. This worked exceptionally well for Oystercatcher, Dunlin and Redshank, three of the numerically most important and widespread species.

Highest densities of Oystercatcher were found on less muddy, short and/or wide estuaries with a high degree of wave action and exposure to swell. For east and south coast estuaries the most reliable predictions of waterfowl densities were obtained by using latitude and the total area of sediments that are intermediate between mud and sand. However for west coast estuaries shore width alone was sufficient. Within the estuaries Oystercatcher density was generally found to increase with the distance from the high water mark and was highest on the less muddy parts of the estuaries.

Dunlin and Redshank densities were higher on east and south coast estuaries than on west coast estuaries, with the highest densities on very muddy estuaries, particularly in the south-east of Britain. Both species appear to favour narrow estuaries with a wide shore and low tidal range, while Redshank avoid areas exposed to high wave action. Longitude, latitude and tidal range were found to be the best predictors of the densities of both species, while for Redshank estuary length and width were also useful. Many thanks to all counters who were willing to carry out these bird counts in addition to their regular counts for WeBS.

Non-estuarine Coastal Waterfowl Pilot Survey 1994-95

During the 1994-95 winter, a pilot survey of the non-estuarine coasts of the United Kingdom (NEWS) was conducted under the auspices of WeBS. The full survey should take place during the 1997-98 winter and will aim to repeat the success of the 1984-85 Winter Shorebird Count (WSC) which covered 90% of the non-cliff coasts of the UK. During the pilot, WeBS counters covered 509 sections or 9.5% of the coast. When the results of these counts were compared to the original WSC data, some evidence was found of a decline in Ringed Plover, Turnstone and Purple Sandpiper numbers (Browne *et al.* 1996).

The pilot survey demonstrated that the highest densities of Ringed Plover, Turnstone, Sanderling and Purple Sandpiper, those species found mainly on non-estuarine coasts, tend to occur, as expected, in Scotland and the North of England (Table i). The one exception, a short section in Kent, had an unusually high total density, but this may have been a chance event due to a flock of birds aggregating in an area with good feeding conditions.

Table i. NON-ESTUARINE COASTAL WATERFOWL PILOT SURVEY 1994-95: NUMBERS AT THE TOP TEN SITES

County	Length (km)	RP	TT	SS	PS	Total	Density (km^{-1})
Kent	0.1	22	64	46	2	134	1,340
Argyll/Tiree	1.5	11	80	244	36	371	247
Northumberland	1.0	0	45	0	150	195	195
Argyll/Tiree	1.3	28	35	107	66	236	182
Cleveland	0.5	0	79	0	0	79	158
Grampian	0.5	0	15	0	56	71	142
Northumberland	0.1	0	10	0	4	14	140
Argyll/Tiree	2.5	234	3	95	0	332	133
Cleveland	1.9	9	41	116	86	252	133
Argyll/Tiree	3.0	146	222	0	22	390	130

RP Ringed Plover; TT Turnstone; SS Sanderling; PS Purple Sandpiper

CONSERVATION AND MANAGEMENT

Site designations

Any site recognised as being of international ornithological importance qualifies for classification as a Special Protection Area (SPA) under the EEC Directive on the Conservation of Wild Birds (EC/79/409), whilst a site recognised as an internationally important wetland qualifies for designation as a Ramsar site under the Convention on Wetlands of International Importance especially as Waterfowl Habitat. Criteria for recognising internationally important concentrations of waterfowl have been agreed by the Contracting Parties to the Ramsar Convention and require a site regularly to support either at least 1% of the international population of a particular species or sub-species, or a total of more than 20,000 waterfowl of all species (see Appendix 1 for further details). A list of potential SPAs and Ramsar sites in the UK, including those identified for their importance for waterfowl, is maintained by JNCC (see Stroud *et al.* 1990). A further 20 Ramsar Sites and 28 SPAs were designated in the UK between 1 January 1995 and 1 May 1996 (see Appendix 1 for further details).

Proposed changes to European hunting seasons

During 1994-95, considerable attention was focused on a proposal by the European Commission to amend Article 7 of the EEC Birds Directive. The Commission's proposal derived from a European Court of Justice Case which found against aspects of existing hunting practice in France (which allows killing of migratory birds on their spring return to their breeding areas). Legalising shooting during spring migration may result in poor population management because migrating populations will have already suffered much natural mortality during the winter. Birds being shot in spring are therefore 'core' breeding stock. The spring shooting of migrating birds has long been recognised as contrary to principles of wise use in the international management of migratory bird populations.

In response to considerable public concern, a sub-committee of the House of Lords European Communities Committee considered evidence from RSPB, JNCC and other interested parties in May 1995. Evidence presented drew heavily on information on the UK status of species derived form WeBS counts. Evidence presented by JNCC noted that whilst there would be no direct implications of the proposals for the UK in terms of requirements to modify shooting seasons for our existing quarry species, the proposed Directive amendment has the potential to affect migratory populations of UK birds on migration to the UK through other European Union member states. Given that the amendment may lead to the killing of potential UK breeding stock on migration in Europe, this should be considered poor population management. Stress was given to the urgent need to develop proposals for common standards of monitoring across all EU Member States.

The House of Lords Committee reported its conclusions in August 1995, upheld the conservation arguement, and recommended that the Commission proposal be withdrawn.

WEATHER

Spring began cool and wet, eventually giving way to warmer, drier weather later in the summer. Cool conditions returned in early Autumn to be followed by one of the wettest winters this century, with mild conditions generally prevailing and no prolonged periods of sub-zero temperatures. Consequently, no restraints or statutory bans on wildfowling were warranted.

April 1994 got off to a wet and wintry start, though a period of warmer weather towards the end of the month ensured overall temperatures were similar to long-term averages. A north-south divide was evident during **May**, with most of Scotland receiving below average rainfall and southern England being particularly wet. Temperatures throughout the UK generally failed to reach the long-term means. **June** was one of the driest for 50 years for many parts of the UK, above average rainfall being confined to western Scotland. In many central, southern and eastern districts it was also a warm month, with mean maxima of 1-2°C above normal. The warm weather continued in these regions during **July**, though the remainder of the UK had temperatures only a little above normal. A more typical **August** followed, slightly wetter than average in the west, though thundery downpours created many localised variations.

September saw torrential rain in some areas of eastern England at the start of the month, though by the end most areas of England and Wales had received above average rainfall. Northern Ireland and most parts of Scotland were generally drier than normal. It was a cool start to the autumn, most parts of the UK recording average temperatures 1-2°C below long-term means.

A brief 'Indian Summer' during early **October** yielded several warmer, drier days, with occasional isolated frosts at night. Weather fronts from the west brought heavy rain to England and Wales during the latter part of the month, with some areas, such as Manchester, receiving almost twice the average rainfall. In contrast, the relatively dry spell continued in Scotland and Northern Ireland.

In the warmest **November** since before 1659, all parts of the UK experienced temperatures 2-4 °C above normal, and there was an almost complete lack of night-time frosts. Heavy rain fell on northern and western districts in the first half of the month, especially in Northwest England and North Wales. Rainfall in many central, southern and eastern areas was below average, some places receiving little or no measurable precipitation during the latter half of the month.

Mild conditions continued into **December** with warm southwesterly winds prevailing. Prolonged heavy rain early in the month caused severe flooding in and around Glasgow, with 350mm (14 inches) recorded elsewhere in Strathclyde during the space of one week. Most parts of the UK recorded above average rainfall, the wettest areas being western Scotland, Cumbria, parts of Wales and Southwest England.

The vein of wet weather continued into **January 1995** following a brief cold spell in Scotland over the New Year. A series of low pressures brought heavy rain and high winds to many areas in the second half of the month, and putting many rivers in southern counties on flood alert. Temperatures and rainfall were above long-term means in all parts of the UK, with some areas of Southeast England receiving two and a half times their normal January rainfall.

February saw no respite from the wet conditions. Bands of heavy rain sweeping from the Southwest across many of the already waterlogged areas of England and Wales created high water levels at many wetland sites, including the Somerset Levels, where extensive flooding inundated some dwellings. Cold spells on the 8th/9th and 24th/25th were short-lived, and most marked in Scotland. Temperatures were again above average across the UK, particularly in England and Wales.

March saw a return to more normal weather conditions, temperatures and rainfall generally being around the monthly long-term average, the wettest areas being northwestern and southeastern districts.

The weather pattern in much of Northwest Europe to a large extent mirrored the UK situation, with midwinter months being notably wet and mild. Many Baltic countries received two to three times the expected rainfall in September, which was followed by a cool October. November to February remained warmer than average, with January and February proving particularly wet and causing serious flooding along the Rhine. In contrast to most of mainland Europe, Iceland recorded below average temperatures throughout the whole winter period, whilst many Mediterranean parts remained warmer and drier than usual.

WeBS Core Counts

INTERPRETATION OF WATERFOWL COUNTS

Caution is always necessary in the interpretation and application of waterfowl counts given the limitations of these data. This is especially true of the summary form which, by necessity, is used in this report. The primary aim here remains the rapid feedback of key results to the many participants in the WeBS scheme. More detailed information on how to make use of the data for research or site assessment purposes can be obtained from the appropriate headquarters.

Explanation of the basis for the qualifying levels used for defining both the international and national importance of sites is provided in Appendix 1. It is necessary to bear in mind the distinction between sites that *regularly* hold wintering populations of national/international importance and those which may happen to exceed the appropriate qualifying levels only in occasional winters. This follows the recommendation of the Ramsar Convention, which states that key sites identified on the basis of numbers of birds should support such numbers on a regular basis (calculated as the mean winter maxima from the last five seasons for most species in this report, although fewer seasons' data are available for those species only recently included in the WeBS scheme). Nevertheless, sites which irregularly support nationally/internationally important numbers may be extremely important at certain times, e.g. when the UK population is high, during the main migratory periods, or during cold weather, when they may act as refuges for birds away from traditionally used sites. For this reason also, the ranking of sites according to the total numbers of birds they support (as in Table 8) should not be taken as a rank order of the conservation importance of these sites, since certain sites, perhaps low down in terms of their total 'average' numbers, may nevertheless be of critical importance to certain species or populations at particular times.

Peak counts derived from a number of monthly visits to a particular site in a given season will reflect more accurately the relative importance of the site for the species than do single visits. It is important to bear this in mind since, despite considerable improvements in coverage, data for a few sites presented in this report derive from single counts during 1994-95. Similarly, in assessing the importance of a site, peak counts from several winters should ideally be used, as the peak count made in any one year may be unreliable due to gaps in coverage and disturbance- or weather-induced effects. The short-term movement of birds between closely adjacent sites may lead to altered assessments of a site's apparent importance for a particular species. More frequent counts than the normal once-monthly WeBS visits are necessary to assess more accurately the rapid turnover of waterfowl populations that occurs during times of migration or cold weather movements.

It should also be noted that the majority of count data are collected between September and March, when most species of waterfowl are present in the UK in highest numbers. Data are collected during other months and have been presented (see *Data Presentation*) where relevant. However, caution is urged regarding their interpretation both due to the relative sparsity of counts from this period and the different count effort for different sites.

Information collated by WeBS and other surveys can be held or used in a variety of ways. Data may also be summarised and analysed differently depending on the requirements of the user. Consequently, calculations used to interpret data and their presentation may vary between this and other publications, and indeed between organisations or individual users. The terminology used by different organisations may not always highlight these differences. This particularly applies to summary data. Such variations do not detract from the value of each different method, but offer greater choice to users according to the different questions being addressed. This should always be borne in mind when using data presented here.

DATA PRESENTATION

The format of data presentation follows closely that of recent reports. The recording year adopted by WeBS is from April to March of the following calendar year. The period covered comprehensively by this report comprises the entire winter (September to March for wildfowl, November to March for waders), when most counts are made. Counts of wildfowl made outwith the September to March period have been used in calculating site totals where they represent the maxima for the count year.

Following the progressive inclusion of various species or species groups in the count scheme in recent years, the amount of data considered in this report will differ

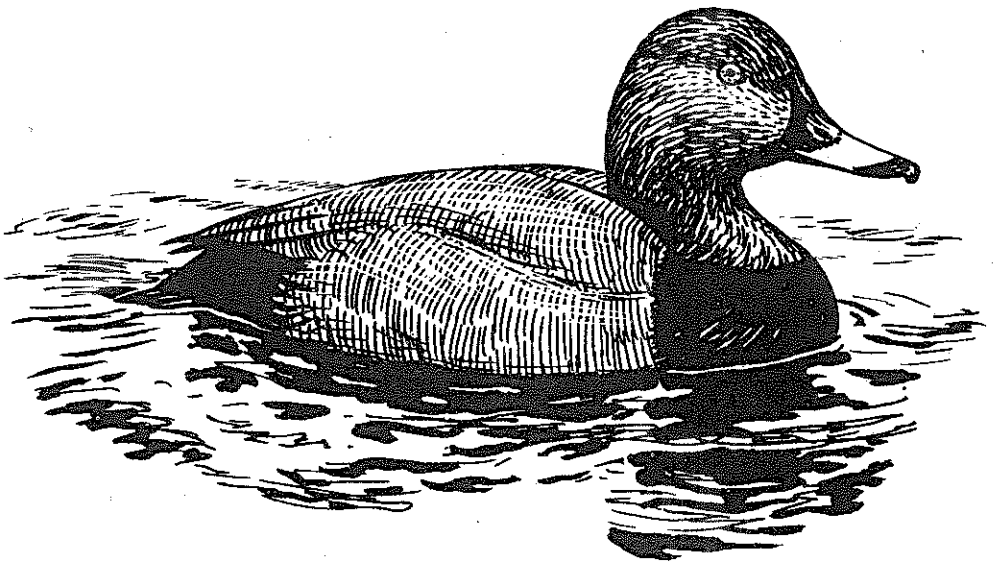
for each. For most wildfowl and waders, which have been monitored for many decades, most site assessments are based on counts from five years. For other species of wildfowl, divers, rarer grebes and some rails, and for waders at inland sites, site assessments are based only on four years' data. Consequently, assessments of site importance for these species should be viewed with more caution. It should also be noted that the recording of gulls and terns was optional, and thus these data do not exist for many sites. Thus, national totals are incomplete for these species.

Several supplementary surveys of geese and other species using non-WeBS methodology were also conducted at WeBS and other sites in 1994-95 (see *Surveys and Projects*). Data derived from sources other than the WeBS Core Counts are clearly identified throughout, either by means of specific reference or by use of a cross (+) to identify counts derived from WWT's goose censuses. The flagging of goose counts in this way is important as such surveys rely on different methodology (e.g. dawn/dusk flight counts) from that adopted in the mid-monthly visits to wetlands. Furthermore, the dates of goose surveys have frequently differed from those used for the Core Counts.

In Tables 1 & 2, total counts for all species have been presented except for hybrid and domestic wildfowl. This enables an assessment of the true scale of WeBS monitoring with regard to particular species. In order to save space, the following abbreviations for wetland types have been used for site names in all tables:

Br.	Broad(s)	GP(s)	Gravel pit(s)
R.	River	Est.	Estuary
Hbr	Harbour	Rsr	Reservoir(s)
Fth	Firth(s)	Lo.	Loch(s) or Lough(s)
WP	Water Park		

The location of all sites mentioned in this report are given in Appendix 2, whilst the location of key sites, including all estuaries, are also shown in Figure 2.



COVERAGE

Co-ordinated, synchronous counts are advocated to prevent double counting or birds being missed and consequently priority dates are recommended for the monthly WeBS Core Counts. In 1994-95 these were:

10 April	9 October
15 May	6 November
12 June	4 December
10 July	22 January
21 August	19 February
11 September	19 March

Due to differences in tidal regimes around the country, counts at a few estuaries were made on other dates to match the most suitable conditions. Weather and counter availability also result in some counts being made on alternative dates. Where more than one count per month was made at an individual site, that nearest the priority date or, alternatively, the count co-ordinated with nearby sites where there is considered to be significant interchange between sites, was used in this report. As in previous years, extra effort in January was directed towards covering as many extra sites as possible for the International Waterfowl Census organised by the then IWRB (now Wetlands International), whilst effort for the International Swan Census (see *Surveys and Projects*) probably also resulted in a increase in coverage.

Counts were received from 1,940 sites of all habitats for the count year, April 1994 to March 1995, comprising 2,809 count units (the sub-divisions of large sites for which separate counts are provided). Both figures represent increases from previous years, although the increase in the number of count units continues to result partly from the increased detail of data provided in response to the request for large sites to be divided into discrete areas, and in particular for pit-by-pit data to be provided for gravel pit complexes.

Much of the increase in the number of sectors was due to improved coverage in Scotland, with Strathclyde (147 count units), Central (113) and Highland (100), and the 50 or more units counted in each of Tayside, Dumfries & Galloway, Fife and Borders contributing to the total of 725. The total of 30 counts units from the Channel Islands was more than double the previous total, whilst the Isle of Man improved slightly from 1 to 2 in 1994-95. Data for slightly fewer count units than last year were submitted for England (1,795), Wales (209) and Northern Ireland (103). Submissions from Lincolnshire (102) and Lancashire (92) were notable, whilst Cumbria, Hampshire, Derbyshire, Oxfordshire, Kent, Suffolk, Devon, Cornwall, Nottinghamshire, Essex and Northamptonshire all provided counts for 50 or more count units. Gwynedd (90) and Dyfed (68) again provided most records in Wales, whilst count units in County Down (79) again formed the bulk of records for Northern Ireland.

Counts were made at all estuarine sites at least once in the 1994-95 winter except at Ogmore, Ythan, Spey and the Irt/Mite/Esk estuaries. Complete counts were carried out at least once at all other estuaries, except at Christchurch Harbour, Traeth Bach, Alnmouth* and the Dart estuaries. In addition over 100 open coast sites were covered, mostly in Scotland.

WeBS coverage in 1994-95 is shown by 10 km squares in Figure 1. The location of a count unit is shown using only its central grid reference. Thus, for example, the 19 count sectors of the North Norfolk Marshes fall in four 10 km squares, broadly indicating the extent of the whole site. However, Lough Neagh is represented by just one dot indicating the centre of the count unit, even though the extent of the counted area stretches over several 10 km squares. In all, 1,073 10 km squares contained WeBS count units that were visited in 1994-95, a slight decrease on the 1,097 of the previous year. As ever, areas with few wetlands or small human populations are apparent on the map as areas with little coverage. It is particularly welcome, therefore, to have received data from nearly all of the far flung parts of Scotland, with especially good coverage of the Northwest mainland coast. Although no WeBS counts were received from around Cape Wrath, this area was visited for the International Swan Census. However, very few waterfowl were recorded on the many lochs visted. Particularly impressive also is the more or less blanket coverage of central Scotland.

The location of many of the key sites mentioned in the report and all estuaries are shown in Figure 2. The county and grid reference of all sites mentioned by name in this report are given in Appendix 2.

** see footnote to Appendix 2*

Figure 1. COVERAGE BY 10 KM GRID SQUARES FOR THE WETLAND BIRD SURVEY IN 1994-95.
Small dots represent 1-2 WeBS count unit per 10 km square, medium dots represent 3-4 units and large dots represent five or more units.

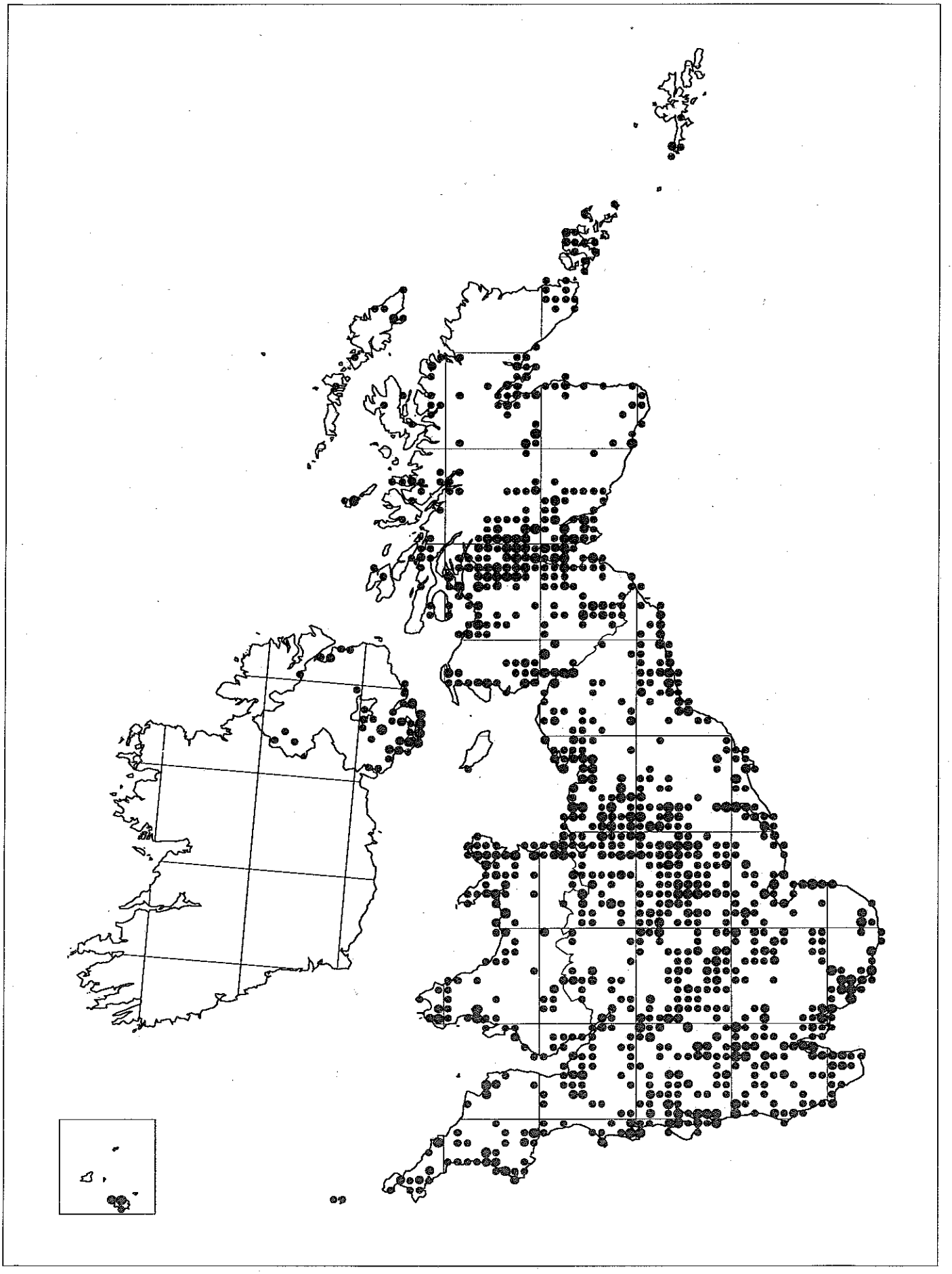
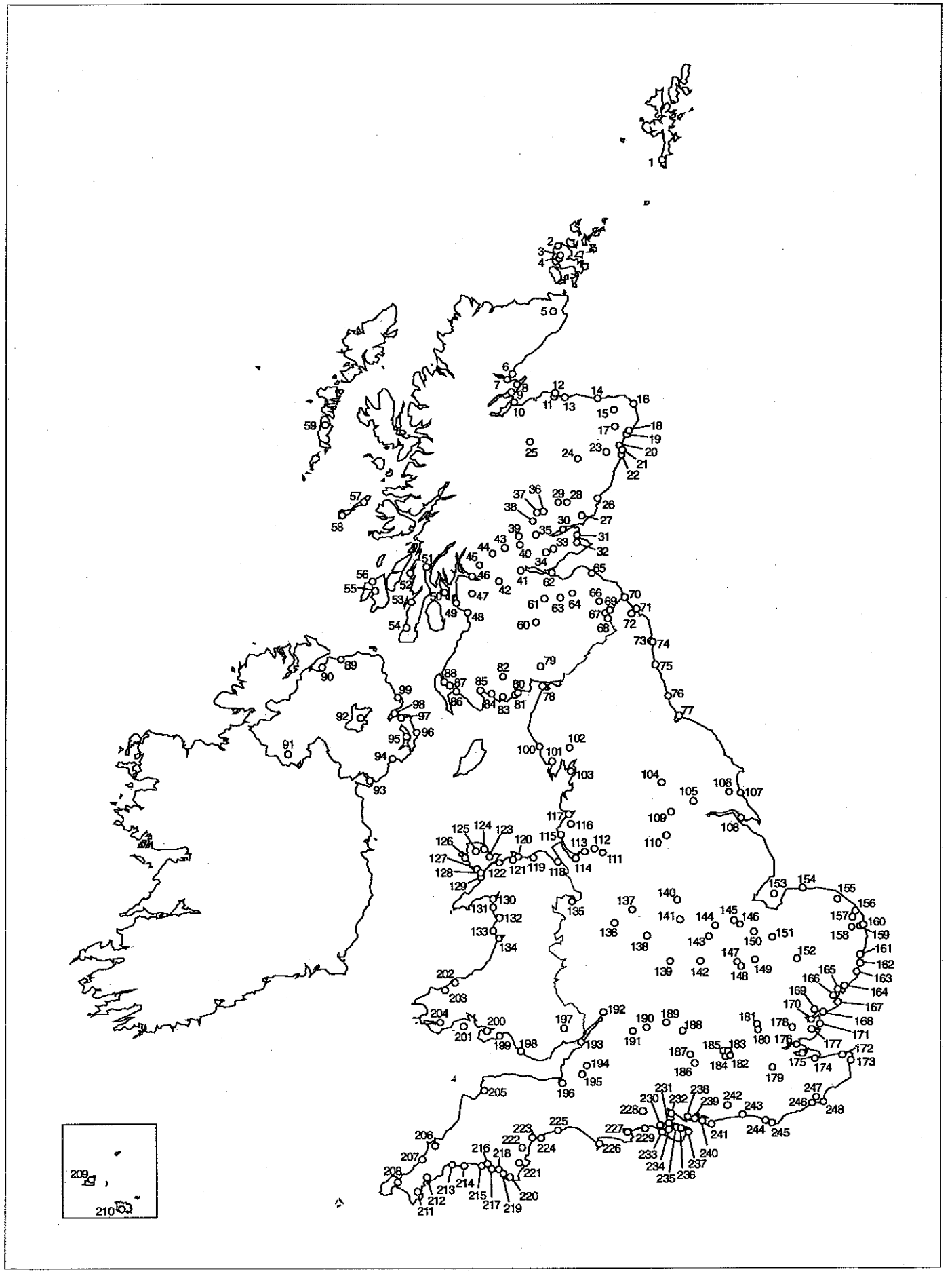


Figure 2. LOCATION OF IMPORTANT WeBS SITES

Circles show the central position of 248 important WeBS sites, including all estuaries, in the UK. Sites chosen include most internationally important sites, but also sites of regional importance in areas with few wetlands or few sites counted by WeBS. Thus, the inclusion of a site does not imply any measure of relative conservation importance. The county and grid reference for each site are given in Appendix 2.



Key

1 Loch of Spiggie
2 Loch of Boardhouse
3 Loch of Harray
4 Loch of Stenness
5 Loch Watten
6 Loch Fleet
7 Dornoch Firth
8 Loch Eye
9 Cromarty Firth
10 Inner Moray Firth
11 Loch Spynie
12 Lossie Estuary
13 Spey Estuary
14 Deveron Estuary
15 Fedderate Reservoir
16 Loch of Strathbeg
17 Haddo House Lakes
18 Ythan Estuary
19 Meikle Loch Slains
20 Corby Loch
21 Don Estuary
22 Dee (Scotland) Estuary
23 Loch of Skene
24 Dinnet Lochs
25 Loch Garten
26 Montrose Basin
27 Crombie Reservoir
28 Kinnordy Loch
29 Loch of Lintrathen
30 Tay Estuary
31 Eden Estuary
32 Cameron Reservoir
33 Ballo Reservoir
34 Loch Leven
35 Dupplin Lochs
36 Loch Clunie
37 Loch of the Lowes
38 Loch Tullybelton
39 Drummond Pond
40 Carsebreck & Rhynd Lochs
41 Carron Valley Reservoir
42 Gadloch
43 Loch Mahaick Doune
44 Lake of Menteith
45 Loch Lomond: Endrick Mouth
46 Inner Clyde Estuary
47 Castle Semple & Barr Lochs
48 Irvine/Garnock Estuary
49 Hunterston Estuary
50 Loch Quien
51 Loch Gilp
52 Loch na Cille
53 Rhunahaorine
54 Machrhanish
55 Loch Indaal
56 Loch Gruinart
57 Coll
58 Tiree
59 Loch Druidibeg
60 Cowgill Reservoirs
61 West Water Reservoir
62 Forth Estuary
63 Gladhouse Reservoir
64 Fala Flow
65 Tyninghame Estuary
66 Hule Moss
67 River Tweed: Kelso to Coldstream
68 Hoselaw Loch
69 Hirsel Lake
70 Tweed Estuary
71 Lindisfarne
72 Holborn Moss
73 Alnmouth*
74 Coquet Estuary
75 Blyth (Northumberland) Estuary
76 Durham Coast
77 Tees Estuary
78 Solway Estuary
79 Castle Loch (Lochmaben)
80 Rough Firth
81 Auchencairn Bay
82 Loch Ken
83 Kirkcudbright Bay
84 Fleet Bay
85 Wigtown Bay
86 Luce Bay
87 Black & White Lochs (Loch Inch)
88 Loch Ryan
89 Bann Estuary
90 Lough Foyle
91 Upper Lough Erne
92 Loughs Neagh & Beg
93 Carlingford Lough
94 Dundrum Bay
95 Strangford Lough
96 Outer Ards Shoreline
97 Clandeboye Lake
98 Belfast Lough
99 Larne Lough
100 Irt/Mite/Esk Estuary
101 Duddon Estuary
102 Windermere
103 Morecambe Bay
104 Hay-a-Park Gravel Pits
105 Lower Derwent Valley
106 Tophill Low Reservoirs
107 Hornsea Mere
108 Humber Estuary
109 Fairburn Ings
110 Wath & Broomhill Ings
111 Rostherne Mere
112 Woolston Eyes
113 Fiddlers Ferry Lagoons
114 Mersey Estuary
115 Alt Estuary
116 Martin Mere
117 Ribble Estuary
118 Dee (Eng/Wal) Estuary
119 Clwyd Estuary
120 Colwyn Bay
121 Conwy Estuary
122 Lavan Sands
123 Red Wharf Bay
124 Dulas Bay
125 Alaw Reservoir
126 Inland Sea
127 Cefni Estuary
128 Braint Estuary
129 Foryd Bay
130 Traeth Bach
131 Artro Estuary
132 Mawddach Estuary
133 Dysynni Estuary
134 Dyfi Estuary
135 Ellesmere Group
136 Belvide Reservoir
137 Blithfield Reservoir
138 Kingsbury/Coton Pools
139 Draycote Water
140 Attenborough GPs
141 Swithland Reservoir
142 Pitsford Reservoir
143 Eyebrook Reservoir
144 Rutland Water
145 Baston/Langtoft GPs
146 Deeping St James Gravel Pits
147 Grafham Water
148 Little Paxton GPs
149 Fen Drayton Gravel Pit
150 Nene Washes
151 Ouse Washes
152 Lackford Gravel Pits
153 The Wash
154 North Norfolk Marshes
155 Gunton Park
156 Hickling Broad
157 St Benets Levels
158 Middle Yare Marshes
159 Berney Marshes
160 Breydon Water
161 Blyth (Suffolk) Estuary
162 Minsmere
163 Alde Complex
164 Deben Estuary
165 Orwell Estuary
166 Stour Estuary
167 Hamford Water
168 Colne Estuary
169 Abberton Reservoir
170 Blackwater Estuary
171 Dengie Flats
172 Thanet Coast
173 Pegwell Bay
174 Swale Estuary
175 Medway Estuary
176 Thames Estuary
177 Crouch/Roach Estuary
178 Hanningfield Reservoir
179 Sevenoaks Wildfowl Reserve
180 King George V Reservoir
181 Cheshunt Gravel Pits
182 Queen Mary Reservoir
183 Staines Reservoir
184 Thorpe Water Park
185 Wraysbury Gravel Pits
186 Stratfield Saye
187 Theale Gravel Pits
188 Dorchester Gravel Pits
189 Lower Windrush Valley Gravel Pits
190 Cotswold Water Park East
191 Cotswold Water Park West
192 Walmore Common
193 Severn Estuary
194 Chew Valley Lake
195 Blagdon Lake
196 Somerset Levels
197 Llandegfedd Reservoir
198 Ogmore Estuary
199 Swansea Bay
200 Burry Inlet
201 Carmarthen Bay
202 Teifi Estuary
203 Nevern Estuary
204 Cleddau Estuary
205 Taw/Torridge Estuary
206 Camel Estuary
207 Gannel Estuary
208 Hayle Estuary
209 Guernsey Shore
210 Jersey Shore
211 Helford Estuary
212 Fal Complex
213 Fowey Estuary
214 Looe Estuary
215 Tamar Complex
216 Plym Estuary
217 Yealm Estuary
218 Erme Estuary
219 Avon Estuary
220 Kingsbridge Estuary
221 Dart Estuary
222 Teign Estuary
223 Exe Estuary
224 Otter Estuary
225 Axe Estuary
226 Fleet/Wey
227 Poole Harbour
228 Christchurch Harbour
229 Mid Avon Valley
230 North-West Solent
231 Beaulieu Estuary
232 Southampton Water
233 Yar Estuary
234 Newtown Estuary
235 Medina Estuary
236 Wootton Estuary
237 Brading Harbour
238 Portsmouth Harbour
239 Langstone Harbour
240 Chichester Harbour
241 Pagham Harbour
242 Pulborough/Amberley Brooks
243 Adur Estuary
244 Newhaven Estuary
245 Cuckmere Estuary
246 Rye Harbour/Pett Levels
247 Walland Marsh
248 Dungeness Gravel Pits

** see footnote to Appendix 2*

TOTAL NUMBERS

The total numbers of waterfowl recorded by the WeBS scheme in winter 1994-95 are given in Tables 1 & 2 for Great Britain (including the Isle of Man but excluding the Channel Isles) and Northern Ireland, respectively. Figures in these tables are derived from the WeBS Core Counts, goose censuses and the International Swan Census only. Thus, totals for certain species, e.g. some sea-ducks, are considerably under-estimated. The totals for England, Scotland, Wales, the Isle of Man and the Channel Islands are each given separately in Appendices 3 to 7.

Numbers of waders are provided separately for estuarine/coastal and inland sites within the tables. This allows comparison of coastal figures with previous reports and also provides some indication of the proportion of each species that utilises inland wetlands.

Numbers of gulls and terns are also listed, but counts are not included in the total numbers of waterfowl to allow comparison with previous reports. Further, coverage of these species was optional and thus incomplete at a national level.

Divers, grebes and Cormorant

Counts of most divers were similar to those in previous years, although the counts of Black-throated Divers in Great Britain, including 31 at Loch Indaal in October, were the highest since these species were included in the count scheme and those in Northern Ireland represented the first recorded here by WeBS. High numbers of all grebes, with the exception of Great Crested, were recorded in Great Britain. An exceptional count of 328 Little Grebes on the Thames Estuary boosted numbers over 3,000 for the first time, whilst the total of Red-necked Grebes, including 89 on the Forth Estuary, approached the estimated population size for Great Britain. Such numbers are perhaps all the more unusual given the mild weather on the continent. Conversely, numbers of Great Crested Grebes in Northern Ireland were considerably higher than the normal peak count of around 2,000, aided by a record count of over 2,500 on Loughs Neagh & Beg. Numbers of Cormorants throughout the UK were similar to recent years.

Herons and Spoonbill

The recorded British totals of Little Egret in the 1994-95 winter were around double the value of the previous year, whereas Grey Heron numbers were similar in both winters. Data for Bittern and Spoonbill appear in the table, data having been input for the first time in 1994-95.

Wildfowl

The large number of Mute Swans recorded in Great Britain in early winter shows that the increase of recent winters has continued. The results of the International Swan Census in January 1995, which included all WeBS and I-WeBS counts, recorded 15,842 birds wintering in Iceland, Ireland and Britain (Cranswick *et al.* in press). Some of these birds were from the Scandinavian/Russian population, whilst around 400 Icelandic birds were estimated to have wintered in conintental Europe, giving a total of 16,000 birds in the Icelandic population. This represents a decline of over 12% since the last census in 1991. Further details will be provided in next year's report.

The count of Pink-footed Geese, in the 35th consecutive annual, national census, shows the increase of the last decade continuing unabated. The dramatic fall in numbers during the winter reflects the less comprehensive coverage in January and March but also highlights the increased difficulty of locating birds once they have dispersed from key autumn arrival sites. Numbers of European White-fronted Geese continue to give some cause for concern, representing one of the few wildfowl species apparently declining in the UK. It is likely, however, that this relates to birds 'short-stopping' on the continent. The low numbers of Greylag were considered to be an under-estimate, partly due to poor counting conditions during the autumn census (Mitchell & Hearn 1995), although relatively high numbers were found in Northern Ireland. Counts of Canada Geese remained similar to previous years in both Great Britain and Northern Ireland. Numbers of Barnacle Geese on Islay increased, with a record count of 28,298 in March. Due to difficulties in the early winter co-ordinated count of the Svalbard population on the Solway, an estimate of 13,200 has been adopted, based on the previous year's total and the proportion of young recorded in 1994-95. Numbers of Dark-bellied Brents in Great Britain were rather fewer than in recent years, perhaps as a result of mild weather. Interestingly, the peak was in December, with numbers having fallen considerably by January and February, the more normal months for maximum counts, suggesting birds returned early to the continent. The peak count of Light-bellied Brents in Northern Ireland was slightly lower than normal, but was longer lived, with large numbers arriving early and

a substantial proportion arriving remaining until late autumn.

The peak numbers of Shelduck in Great Britain, like Dark-bellied Brents, were around 10,000 lower than normal, again suggesting favourable conditions around the North Sea coast of the continent where large numbers of both species occur. Of note is the continued fall in numbers of Shelduck using the Wash. Numbers of Wigeon, however, reached record heights, with by far the largest British total bolstered by over 110,000 birds on the Ribble Estuary. Given the large uncertainty regarding the numbers of Mallard, and the fact that a large proportion of that population consists of released birds, the Wigeon may now be the most numerous 'wild' duck in the UK. Gadwall numbers continued to rise, with over 10,000 recorded for the first time in Great Britain, including a return to former levels at the key site of Rutland Water which held 1,671 birds in November. Although very much smaller, record numbers were recorded in Northern Ireland also. Large numbers of Teal were also in both Great Britain and Northern Ireland, being the highest for several years. Mallard numbers were about normal in Northern Ireland and, although about the same as in 1993-94, remained rather lower than previously in Great Britain. Counts of Pintail, which can fluctuate considerably from year to year, and of Shoveler were about average. Pochard numbers in Northern Ireland were similar to recent winters but, lacking the large mid-winter peak, remained much lower than in the early 1990s. Numbers in Great Britain were rather higher than normal. Numbers of Tufted Duck remained stable compared with previous years, but numbers of Scaup were slightly higher in Great Britain and remarkably higher in Northern Ireland, as a result of almost 5,000 birds on Loughs Neagh & Beg in late winter. Sea-ducks are notoriously under-represented in WeBS counts and counts remained similar to previous years, with the notable exception of Common Scoter. Thanks to large counts from most of the key areas, including the Forth/Eden area, North Norfolk, the Moray, Liverpool Bay and Carmarthen Bay, counts in most months exceeded the normal yearly maximum. Only half the normal count of Goldeneye was recorded in Northern Ireland, though average numbers were found in Great Britain. With the exception of large counts of Red-breasted Mergansers in Great Britain, sawbill numbers remained similar to those of recent winters. Counts of Ruddy Duck were also similar to those of the last few years. In addition to the established populations of introduced wildfowl, such as Canada Geese and Mandarin, a further 12 species were recorded that undoubtedly have been introduced or escaped from collections.

Rails and Crane

Counts of Water Rail and Moorhen, although still very much smaller than their true population sizes, were the highest since these species were included in the count schemes, perhaps as a result of a greater willingness on the part of counters to record them. Coot numbers in Northern Ireland returned to more normal levels after a fall in 1993-94, with an increase in Great Britain seeing numbers pass the 100,000 mark. Crane appears in the totals for the first time in 1994-95, although counts were not input previously.

Waders

The UK totals presented in Tables 1 & 2 should approximate the total UK population size for those species which are heavily concentrated on estuaries, i.e. Grey Plover, Knot, Dunlin, Black-tailed Godwit and Bar-tailed Godwit. Although a few estuarine sites may not be counted by WeBS in particular months, the number of birds involved is generally relatively small. However, recorded UK count totals for Purple Sandpiper, Turnstone, Sanderling and Ringed Plover will be well below the national population level since WeBS covers only part of the non-estuarine or open coast shores. Open coast waders were comprehensively counted only in 1984-85 for the Winter Shorebird Count, so a repeat survey is long overdue. Recorded WeBS national totals for Lapwing, Golden Plover, Snipe, Jack Snipe, Ruff and Green Sandpiper will also be very conservative under-estimates of the total national population since these species are either difficult to count or occur on uncounted areas in large numbers. Other wader populations excluded from WeBS are the sizeable flocks of Lapwing and Golden Plover that are present on agricultural land well away from any wetland.

Waders on estuaries and coastal wetlands

The combined wader totals of around 1.6 million birds in Britain in 1994-95 are close to the average of the previous five winters. Recorded British totals of the main wader species were generally above those of the previous winter and for those species included in indexing, this was confirmed by increases in their winter index values. Record totals were recorded for Avocet (2,707 in November), for Grey Plover (53,721 in March) and for Black-tailed Godwit (13,052 in March). High totals were also recorded for Lapwing, Golden Plover, Snipe, Curlew and Sanderling. As the first three of these species cannot be adequately indexed we rely on national totals to give an approximate indication of population size. The relatively high

recorded total of Snipe is particularly welcomed since in recent years a decline in wintering numbers has been suggested. Another species excluded from indexing is Purple Sandpiper, for which British totals recorded in the 1994-95 winter were rather low. Most birds of this species, however, winter on uncounted open coastline. Following the pilot survey of 1994-95 (see *Surveys and Projects*) it is planned to carry out complete coverage of these uncharted shores during the full Non-estuarine Coastal Waterfowl Survey in 1997-98.

In Northern Ireland most of the main wader species peaked in January but the all species total was about average for recent years. Although only 712 Grey Plover were counted, this was almost certainly the largest ever total for Northern Ireland.

Waders on inland wetlands

British totals of all waders recorded in the 1994-95 winter were around double the values of the previous years. This is unlikely to be due to the 10% increase in the number of sites counted, since the rise in numbers is almost entirely due to more Lapwing being recorded. Other species showing increases in 1994-95 were Golden Plover, Ruff, Jack Snipe, Curlew, Redshank and Green Sandpiper. Similarly in Northern Ireland the all wader totals were well above those of the previous winter, again due largely to increased numbers of Lapwing and Golden Plover.

Gulls and terns

The counting of gulls and terns remains optional at WeBS sites but in 1994-95 (the first complete 12 month period since WeBS was launched) these groups were counted at over 1,000 sites in most months of the winter and more than 500 sites during the summer. British totals of gulls recorded in the winter of 1994-95 were somewhat greater than those of the previous year. The largest increases in numbers were recorded for Common and Lesser Black-backed Gulls, particularly in January and February. A count of 40,000 Common Gulls on the Inner Moray Firth in February was exceptionally large.

Amongst the terns British totals were also greater than those of the previous year, especially in August and September. In Northern Ireland recorded totals of gulls remained around the 10,000 mark as in 1994-95.

Kingfisher

As expected the recorded totals of Kingfisher in the 1994-95 winter were about four times the numbers recorded the previous year. This must largely be due to the inclusion of Kingfisher on the second batch of WeBS forms printed for 1994-95.

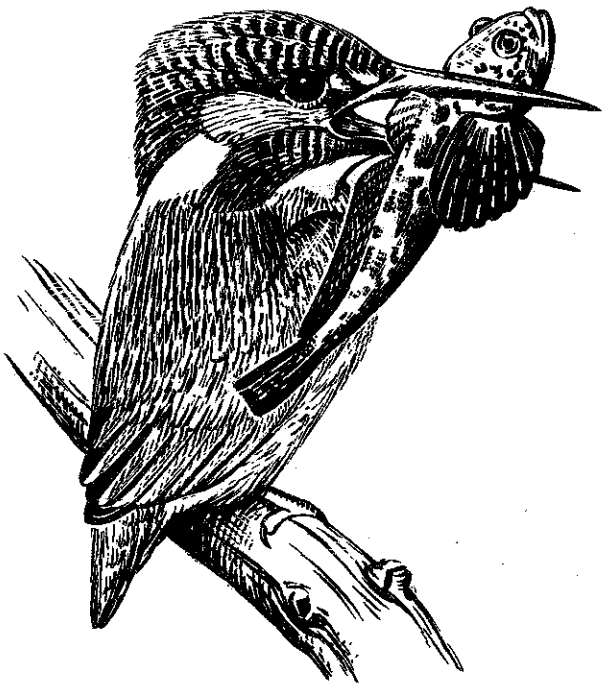


Table 1. TOTAL NUMBERS OF WATERFOWL RECORDED BY WeBS IN GREAT BRITAIN DURING 1994-95.

Wildfowl at all wetland habitats	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Number of units counted	*1,628*	*2,088*	*2,120*	*2,176*	*2,321*	*2,252*	*2,179*
Red-throated Diver	48	364	288	305	386	456	292
Black-throated Diver	2	35	13	38	51	24	32
Great Northern Diver	2	17	16	38	34	31	18
White-billed Diver	0	1	0	0	0	0	0
Unidentified diver	0	0	0	1	1	0	8
Little Grebe	2,901	3,505	3,391	2,996	2,683	2,241	2,128
Great Crested Grebe	7,500	8,456	8,743	6,471	7,424	7,121	7,273
Red-necked Grebe	38	27	62	102	43	33	19
Slavonian Grebe	8	82	133	174	158	254	105
Black-necked Grebe	17	23	37	25	52	37	32
Cormorant	12,129	13,375	13,769	12,691	13,395	12,570	10,670
Bittern	0	1	4	11	8	8	2
Little Egret	314	343	308	349	278	257	275
Grey Heron	3,055	3,465	3,006	2,718	2,314	2,755	2,437
Spoonbill	0	1	2	1	3	4	1
Mute Swan	13,225	14,510	15,927	15,313	14,272	12,835	11,448
Black Swan	14	16	12	12	11	8	9
Trumpeter Swan	0	2	0	0	0	0	0
Bewick's Swan	3	11	2,072	5,060	7,206	4,260	59
Whooper Swan	17	273	2,614	3,695	§5,016	3,129	2,433
Unidentified yellow-billed swan	0	0	0	278	0	0	0
Swan Goose	1	26	28	28	32	9	10
Bean Goose	2	3	43	193	12	44	12
Pink-footed Goose	1,026	+260,486	+183,314	124,494	+168,276	41,465	48,348
White-fronted Goose[1]	0	0	5	15	44	107	0
European Whitefront	2	6	380	703	3,615	3,798	7
Greenland Whitefront	0	374	+19,251	795	245	679	+16,635
Lesser White-fronted Goose	1	1	0	2	3	1	2
Greylag Goose: Icelandic[2]	0	+40,575	+86,132	31,476	+48,227	16,170	9,641
Greylag Goose: feral[2]	13,429	14,032	12,564	11,560	12,033	8,841	7,761
Bar-headed Goose	13	22	25	13	14	16	15
Snow Goose	45	63	55	61	30	104	42
Ross's Goose	2	1	1	1	0	1	0
Emperor Goose	0	0	1	1	0	2	1
Canada Goose	29,731	35,005	36,301	33,679	35,153	26,453	20,690
Barnacle Goose	141	12,110	+35,968	9,686	+42,153	7,728	+40,612
Brent Goose[1]	1	1	0	8	1	0	6
Dark-bellied Brent	88	15,703	86,261	103,699	91,756	80,558	49,376
Light-bellied Brent	253	1,371	2,184	1,723	418	219	62
Red-breasted Goose	0	0	1	1	1	0	0
Egyptian Goose	220	109	44	52	62	81	76
Feral/hybrid Goose	31	57	74	70	60	65	84
Ruddy Shelduck	20	10	10	10	2	5	7
Cape Shelduck	0	0	1	0	0	0	0
Shelduck	21,745	39,386	64,650	65,780	65,976	63,459	51,772
Muscovy Duck	61	128	127	121	107	82	14
Wood Duck	2	6	3	6	5	3	5
Mandarin	184	74	113	63	173	99	85
Wigeon	15,964	158,775	321,293	391,855	340,374	236,965	107,151
American Wigeon	0	0	1	0	0	1	0
Chiloe Wigeon	1	0	0	1	2	0	0
Gadwall	6,483	8,025	10,107	10,698	8,329	6,134	4,206
Teal	42,512	74,146	106,552	121,393	129,449	87,377	56,948
Mallard	115,367	139,366	144,332	148,140	136,030	90,616	52,636
Pintail	2,984	13,256	18,869	20,412	22,036	13,461	2,403
Bahama Pintail	0	0	0	0	1	1	0
Garganey	16	9	4	1	0	0	7
Blue-winged Teal	0	0	1	1	0	0	0
Shoveler	6,616	8,533	9,763	8,905	7,451	7,868	6,114
Ringed Teal	0	0	0	0	0	1	0

	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Red-crested Pochard	63	90	83	59	71	91	48
Pochard	9346	19,808	37,601	35,857	39,989	38,649	9,198
Ring-necked Duck	0	0	1	3	1	1	2
Ferruginous Duck	0	0	2	1	1	0	0
Tufted Duck	33,150	38,871	50,857	49,425	49,150	41,513	35,032
Scaup	295	1,221	1,672	2,144	3,530	2,630	1,597
Eider	21,438	23,521	23,138	17,683	14,221	18,848	18,020
King Eider	2	1	0	0	0	0	1
Long-tailed Duck	0	166	1,038	2,595	1,603	1,682	1,288
Common Scoter	1,166	2,224	3,811	16,522	7,401	8,493	5,110
Surf Scoter	0	0	1	7	4	4	4
Velvet Scoter	74	129	479	677	528	371	313
Goldeneye	169	1,365	8,109	13,298	15,803	16,149	12,136
Smew	0	1	20	46	87	104	33
Red-breasted Merganser	1,759	3,814	3,725	5,157	4,677	4,709	3,746
Goosander	1,064	1,440	1,425	2,290	2,488	2,645	1,680
Ruddy Duck	1,718	2,404	2,485	2,703	2,967	2,567	1,804
Feral/hybrid Mallard type	80	167	116	195	210	164	168
Hybrid Aythya	0	1	0	1	2	2	6
Water Rail	65	138	276	218	219	199	184
Spotted Crake	0	1	0	0	0	0	0
Moorhen	7,535	10,535	9,478	9,306	10,281	9,265	7,933
Coot	84,607	94,560	100,819	94,821	88,998	55,222	39,952
Crane	0	4	2	0	0	2	2
TOTAL WILDFOWL[3]	**455,346**	**1,062,784**	**1,430,626**	**1,385,809**	**1,404,988**	**938,627**	**647,382**

	Nov	Dec	Jan	Feb	Mar
Waders at estuarine/coastal sites					
Number of sites counted	*178*	*184*	*191*	*187*	*181*
Oystercatcher	231,346	231,228	237,017	220,008	131,827
Avocet	2,707	1,985	2,388	2,683	1,573
Black-winged Stilt	1	0	1	1	1
Little Ringed Plover	0	0	0	0	3
Ringed Plover	11,101	10,399	7,307	8,399	4,635
Kentish Plover	0	1	1	1	0
Dotterel	0	1	1	0	0
Golden Plover	135,970	102,962	96,554	103,803	21,439
Grey Plover	48,857	49,415	38,654	47,74	153,721
Lapwing	320,549	292,051	313,152	255,368	14,412
Knot	222,238	246,703	193,821	217,157	148,524
Sanderling	9,665	7,136	5,802	5,508	7,360
Little Stint	14	3	1	3	3
Curlew Sandpiper	1	0	0	0	0
Purple Sandpiper	740	1,240	1,180	1,269	907
Dunlin	441,938	536,036	406,475	441,663	194,443
Ruff	155	63	150	237	142
Jack Snipe	40	31	32	13	15
Snipe	3,154	3,020	2,747	2,533	1,866
Woodcock	23	4	0	6	3
Black-tailed Godwit	10,455	9,982	10,194	8,413	13,052
Bar-tailed Godwit	24,232	28,807	32,372	44,034	9,472
Whimbrel	21	5	5	4	88
Curlew	76,143	72,915	84,648	88,009	61,645
Spotted Redshank	72	78	80	50	42
Redshank	80,906	83,435	67,653	83,847	64,494
Greenshank	246	223	168	182	190
Green Sandpiper	47	55	30	34	30
Wood Sandpiper	3	0	0	0	0
Terek Sandpiper	0	1	0	0	0
Common Sandpiper	20	25	22	16	20
Turnstone	15,390	15,064	12,053	14,939	12,815
Grey Phalarope	0	1	2	0	0
TOTAL	**1,636,034**	**1,692,869**	**1,512,510**	**1,545,921**	**742,722**

Waders at inland sites	Nov	Dec	Jan	Feb	Mar
Number of sites counted	*1,060*	*1,076*	*1,180*	*1,145*	*1,151*
Oystercatcher	279	306	1,442	6,754	8,444
Avocet	0	0	0	0	121
Little Ringed Plover	0	0	0	0	11
Ringed Plover	61	44	15	96	182
Golden Plover	22,963	36,845	35,399	38,893	11,441
Grey Plover	7	7	24	1	12
Lapwing	127,652	145,967	204,822	152,067	14,860
Knot	5	1	44	0	23
Sanderling	0	0	0	0	1
Little Stint	6	0	0	1	1
Curlew Sandpiper	2	0	0	1	0
Purple Sandpiper	1	0	0	0	0
Dunlin	1,861	4,040	2,778	1,570	4,302
Ruff	348	221	317	286	586
Jack Snipe	57	119	73	53	60
Snipe	6,100	7,289	4,568	3,530	3,273
Woodcock	29	53	30	43	20
Black-tailed Godwit	299	259	115	659	2,634
Bar-tailed Godwit	3	0	0	0	6
Curlew	3,396	2,898	7,430	5,650	6,581
Spotted Redshank	3	0	0	0	1
Redshank	520	510	1,010	1,108	1,989
Greenshank	7	9	5	18	1
Green Sandpiper	103	83	51	54	67
Common Sandpiper	17	5	7	6	3
Spotted Sandpiper	1	1	1	0	0
Turnstone	0	16	26	0	17
TOTAL	**163,720**	**198,673**	**258,157**	**210,790**	**54,636**
TOTAL WADERS	**1,799,754**	**1,891,542**	**1,770,667**	**1,756,711**	**797,358**
TOTAL WATERFOWL[4]	**3,230,380**	**3,277,351**	**3,175,655**	**2,695,338**	**1,447,740**

Gulls at all wetland habitats[5]	Oct	Nov	Dec	Jan	Feb	Mar
Number of sites where gulls counted	*1,025*	*1,029*	*1,050*	*1,151*	*1,115*	*1,108*
Mediterranean Gull	28	41	41	32	73	15
Franklin's Gull	0	0	1	0	0	0
Little Gull	9	16	1	4	3	16
Sabine's Gull	0	1	0	0	0	0
Black-headed Gull	196,743	243,695	194,945	238,096	217,962	123,359
Ring-billed Gull	0	1	2	0	1	6
Common Gull	39,140	58,889	26,301	60,972	86,249	37,206
Lesser Black-backed Gull	10,800	11,261	5,961	5,438	16,517	20,923
Herring Gull	65,827	58,401	63,684	61,665	59,748	47,674
Iceland Gull	0	0	1	9	6	3
Glaucous Gull	2	3	3	8	8	8
Great Black-backed Gull	14,211	7,805	10,499	11,226	5,142	3,118
Ross's Gull	0	0	0	0	1	0
Kittiwake	562	40	573	433	61	353
TOTAL	**327,322**	**380,153**	**302,012**	**377,883**	**385,771**	**232,681**

	Jul	Aug	Sep	Oct
Terns at all wetland habitats[5]				
Number of sites where terns counted	*611*	*650*	*921*	*1,184*
Sandwich Tern	5,718	7,704	4,323	48
Roseate Tern	8	2	6	0
Common Tern	2,049	5,211	2,577	67
Arctic Tern	512	330	127	13
Little Tern	493	289	89	5
Black Tern	3	52	117	6
TOTAL	**8,783**	**13,588**	**7,239**	**139**

	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Kingfisher at wetland habitats	118	274	222	172	144	135	129

\+ *Counts include data from the following goose censuses: national census of Pink-footed and Greylag Geese in October and November, with a census of key roosts in January; international censuses of Greenland White-fronted Geese in November/December and March/April; November, January and March censuses of Greenlandic Barnacle Geese on Islay (note that, due to double-counting of Barnacles by WeBS on the Solway in January, the estimate of 13,200 has been used in the January figures).* See Surveys and Projects *for more details.*

§ *Total from the Icelandic Whooper Swan Census. WeBS counts alone recorded 3,265 birds.*

1 *Indicates White-fronted and Brent Geese which were not identified to subspecies*

2 *In all months except September, the feral component of this species is approximated by totalling counts from English (excluding Northumberland) and Welsh sites only and adding 2,340 (after Delany 1992) for the feral birds in Scotland. All other birds in Great Britain (apart from the native population in the Outer Hebrides, Coll, Tiree, Colonsay and parts of Sutherland) are considered to be from the Icelandic population*

3 *Total wildfowl represents numbers of all divers, grebes, Cormorant, swans, geese, ducks and rails*

4 *Total waterfowl represents numbers of all wildfowl (as above), waders and herons*

5 *Counting gulls and terns was optional, and thus totals are incomplete at a national level*

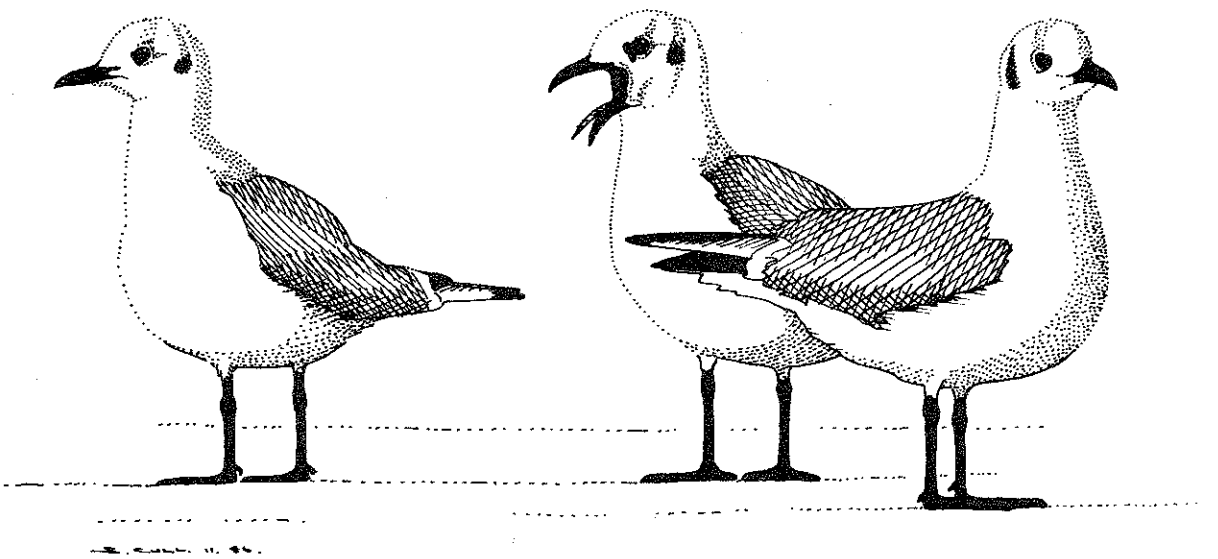


Table 2. TOTAL NUMBERS OF WATERFOWL RECORDED BY WeBS IN NORTHERN IRELAND DURING 1994-95.

Wildfowl at wetland habitats	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Number of sites counted	*29*	*53*	*94*	*92*	*90*	*56*	*83*
Red-throated Diver	1	11	8	54	15	3	4
Black-throated Diver	0	0	0	3	2	0	0
Great Northern Diver	0	0	1	18	5	5	0
Unidentified diver	0	0	0	0	0	1	0
Little Grebe	563	751	643	531	555	249	138
Great Crested Grebe	3,819	2,170	1,476	2,235	1,656	1,848	527
Slavonian Grebe	3	8	4	7	1	0	3
Cormorant	1,295	999	1,531	1,091	980	876	485
Grey Heron	160	125	104	277	89	41	38
Mute Swan	1,938	2,003	2,054	2,129	1,871	1,354	1,308
Bewick's Swan	0	0	27	52	87	68	90
Whooper Swan	3	682	1,606	1,883	§2,783	1,077	1,201
Pink-footed Goose	1	0	0	0	0	0	0
Greenland Whitefront	0	6	+108	71	1	8	+147
Greylag Goose[1]	82	220	162	281	1,039	761	871
Canada Goose	185	272	369	285	261	79	70
Barnacle Goose	97	96	97	96	95	84	57
Dark-bellied Brent	0	0	10	0	1	1	0
Light-bellied Brent	11,159	11,951	8,489	4,681	3,020	2,981	2,903
Shelduck	89	883	2,256	2,871	3,723	3,049	1,356
Wigeon	6,501	8,900	5,999	7,221	6,371	3,848	1,848
Gadwall	427	179	229	132	171	120	167
Teal	2,580	2,527	3,011	4,465	2,874	2,027	851
Mallard	9,685	8,927	6,425	5,852	4,983	2,744	1382
Pintail	2	38	66	222	198	80	14
Shoveler	96	184	233	216	110	109	61
Pochard	653	5,305	14,355	20,246	16,671	5,529	975
Tufted Duck	8,968	16,059	21,491	17,414	17,771	11,773	11,062
Scaup	31	1,488	314	218	1,793	3,546	4,955
Eider	566	761	386	486	812	465	165
Long-tailed Duck	0	6	28	12	2	5	0
Common Scoter	3	0	1	1	0	0	0
Velvet Scoter	0	0	0	3	0	0	0
Goldeneye	257	793	3,459	7,121	7,753	7,737	6,802
Red-breasted Merganser	581	490	639	733	366	305	205
Ruddy Duck	31	45	35	0	0	5	4
Water Rail	0	0	1	2	2	0	0
Moorhen	239	395	356	382	293	387	247
Coot	7,553	7,201	7,714	7,582	3,772	2,547	1,960
TOTAL WILDFOWL[2]	**57,408**	**73,350**	**83,487**	**88,595**	**80,037**	**53,671**	**39,752**

Waders at estuarine/coastal sites	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Number of sites counted	*8*	*9*	*9*	*8*	*7*
Oystercatcher	15,916	15,575	12,463	9,635	4,954
Ringed Plover	802	743	810	428	115
Golden Plover	7,069	7,609	10,112	6,193	8,990
Grey Plover	231	270	226	712	139
Lapwing	7,256	13,520	16,802	12,709	444
Knot	3,745	2,400	8,075	6,835	695
Sanderling	7	1	9	21	0
Purple Sandpiper	60	48	108	57	36
Dunlin	10,047	14,631	16,583	14,648	2,487
Ruff	0	1	0	3	3

	Nov	Dec	Jan	Feb	Mar
Jack Snipe	1	2	0	0	0
Snipe	152	161	137	50	96
Black-tailed Godwit	389	379	376	200	18
Bar-tailed Godwit	1,091	1,578	3,860	3,406	1,347
Curlew	4,203	4,020	4,384	6,042	2,716
Spotted Redshank	1	1	1	1	0
Redshank	7,329	6,535	4,831	6,651	3,293
Greenshank	80	50	63	57	52
Turnstone	2,643	2,381	1,457	1,465	1,035
TOTAL	**64,566**	**73,156**	**83,044**	**72,274**	**29,266**

Waders at inland sites	Nov	Dec	Jan	Feb	Mar
Number of sites counted	*19*	*19*	*19*	*16*	*16*
Oystercatcher	0	0	0	5	7
Golden Plover	6,418	4,456	3,767	4,827	3,443
Lapwing	4,491	5,959	8,328	3,577	226
Dunlin	37	103	358	370	54
Snipe	33	12	52	21	4
Curlew	752	995	915	660	487
Redshank	2	20	78	33	37
TOTAL	**11,733**	**11,545**	**13,498**	**9,493**	**4,258**
TOTAL WADERS	**76,299**	**84,701**	**96,542**	**81,767**	**33,524**
TOTAL WATERFOWL[3]	**159,786**	**173,296**	**176,579**	**135,438**	**73,276**

Gulls at all wetland habitats[4]	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Number of sites where gulls counted	*15*	*15*	*16*	*16*	*14*	*13*	
Black-headed Gull		6,282	8,645	5,291	6,029	5,603	5,170
Common Gull		1,174	1,317	1,047	1,698	1,300	874
Lesser Black-backed Gull		16	21	9	30	117	12
Herring Gull		1,482	1,910	1,120	2,370	1,135	893
Iceland Gull		0	0	0	1	0	0
Glaucous Gull		0	0	0	1	0	1
Great Black-backed Gull		377	337	204	245	152	152
Kittiwake		1	0	11	7	4	0
TOTAL		**13,420**	**12,230**	**7,682**	**10,381**	**8,311**	**7,102**

Terns at all wetland habitats[4]	Jul	Aug	Sep	Oct
Number of sites where terns counted	*3*	*3*	*6*	*15*
Sandwich Tern	87	54	237	9
TOTAL	**87**	**54**	**237**	**9**

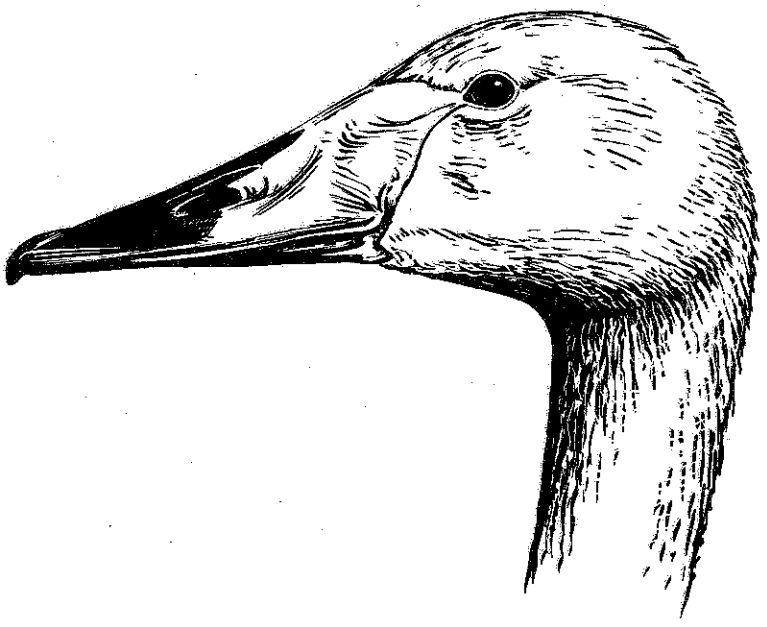
Kingfisher at all sites	Sep	Oct	Nov	Dec	Jan	Feb	Mar
	2	1	7	0	0	0	0

UK Totals

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Wildfowl[2]			51,274	1,136,134	1,514,113	1,474,404	1,485,025	992,298	687,134
Waders									
at estuarine/coastal sites					1,700,600	1,766,025	1,595,554	1,618,195	771,988
at inland sites					175,453	210,218	271,655	220,283	58,894
at all sites					1,876,053	1,976,243	1,867,209	1,838,478	830,882
Waterfowl[3]					3,390,166	3,450,647	3,352,254	2,830,776	1,518,016
Gulls[4]				340,742	392,383	309,694	388,264	394,082	239,783
Terns[4]	8,870	13,642	7,746	148					
Kingfisher			120	275	229	172	144	135	129

§ *Total from the Icelandic Whooper Swan Census. WeBS counts alone recorded 2,332 birds.*

1 *It is not possible to separate the feral from the wild component of this population in Northern Ireland*
2 *Total wildfowl represents numbers of all divers, grebes, Cormorant, swans, geese, ducks and rails*
3 *Total waterfowl represents numbers of all wildfowl (as above), waders and herons*
4 *Counting gulls and terns was optional, and thus totals are incomplete at a national level*



MONTHLY FLUCTUATIONS

The vast majority of the wintering populations of most wader species is found on estuaries. Coverage of estuaries by WeBS remained at a relatively high and more or less constant level throughout winter 1994-95, enabling meaningful comparisons of total monthly counts to be made for many species. However, the number of sites of different habitats counted in each month can differ quite widely, e.g. a much larger number of inland sites was counted in January to coincide with the International Waterfowl Census. Since wildfowl are more widely distributed across both inland and coastal habitats than waders, changes in monthly count totals given in Tables 1 & 2 may not necessarily reflect true changes in relative abundance during the season. Also, the presentation of data for seven months, which includes the migratory periods for some species, means that there are real fluctuations in total numbers of wildfowl during the period considered in this report.

These fluctuations may be examined by using only counts from sites covered in all seven months (September to March). Totals calculated for each month from these sites only can be compared directly (expressed as a percentage of the maximum numbers), thus revealing patterns of seasonality for the species considered. The 1994-95 figures are given in Tables 3 & 4 for Great Britain and Northern Ireland separately, with averages from the last five seasons for comparison. Non-migratory, scarce and irregularly counted species are omitted and only WeBS Core Counts have been used in this calculation. Caution should be used in interpreting figures for species which only occur in small numbers (see Tables 1 & 2). Thus, numbers tend to fluctuate more widely for many species in Northern Ireland as a result of the smaller numbers of birds involved.

Broad differences in the monthly values between species reflect their status in the UK. Resident species, or those with large UK breeding populations, such as the grebes, Mallard and, to a certain extent, Gadwall, are present in large numbers early in the winter. Declines through the winter result in part from mortality of first year birds, but also birds returning to remote or small breeding sites that are not covered by WeBS. The majority of UK wildfowl either occur solely as winter visitors, or have small breeding populations that are swelled by winter immigrants, with peak abundance generally occurring in mid winter.

Based on averages for the last five years, the majority of wildfowl and their allies in Great Britain occur in peak numbers in midwinter, particularly in December, although a number of species, notably the two grebes, Cormorant, Coot and Shoveler, peak in autumn. The 1994-95 values, however, show peaks over a wide period with peaks for four species in November. Thus, given the large total counts of several species, it appears that the cool October on the continent, perhaps combined with a relatively good breeding season, lead to sizeable influxes into Britain in early winter. However, the large peaks for several species were short lived, with the relative proportion of the peak present during the rest of the winter, particularly following the peak, being lower. This was the case for Bewick's Swan, Dark-bellied Brents, Wigeon, Gadwall, Mallard, Tufted Duck and Coot, suggesting that, following the early arrival, birds also either dispersed to sites not covered by WeBS or returned to the continent sooner than normal, perhaps tempted by the mild and wet conditions.

Peak numbers in Northern Ireland are more evenly spread throughout the winter, with a high proportion in early winter, suggesting a large proportion of birds are of more local origin. The picture revealed by five year means is not quite as clear cut as in Great Britain, probably due to the smaller number of sites involved, but also perhaps more fickle use of Ireland by wintering wildfowl, being at the western most limit of the range. Unlike Great Britain, the picture in 1994-95 almost exactly matched the five year average, with peaks for all but four species occurring in the same month as the peak five year mean value, and in the remaining four species, just one month different.

Table 3. PROPORTIONS IN EACH MONTH OF THE PEAK WINTER POPULATION OF CERTAIN WILDFOWL PRESENT ON 1,114 BRITISH SITES THAT WERE COUNTED IN ALL SEVEN MONTHS OF 1994-95.

Bracketed figures give averages for the 1990-91 to 1994-95 period.

	Sep		Oct		Nov		Dec		Jan		Feb		Mar	
Little Grebe	97	(99)	100	(95)	93	(80)	79	(74)	65	(64)	60	(62)	59	(57)
Great Crested Grebe	100	(100)	98	(96)	94	(86)	68	(76)	81	(76)	72	(75)	73	(78)
Cormorant	99	(93)	100	(100)	98	(91)	88	(88)	87	(86)	90	(89)	77	(76)
Bewick's Swan	0	(0)	0	(1)	30	(42)	64	(81)	100	(93)	52	(85)	0	(7)
Whooper Swan	1	(1)	4	(29)	76	(87)	92	(92)	97	(89)	100	(90)	72	(72)
European White-fronted Goose	0	(<1)	0	(2)	10	(14)	17	(42)	94	(86)	100	(88)	0	(25)
Dark-bellied Brent Goose	0	(2)	15	(57)	84	(84)	100	(95)	85	(93)	78	(94)	46	(53)
Shelduck	26	(30)	69	(64)	100	(82)	98	(91)	91	(97)	89	(93)	75	(78)
Wigeon	5	(14)	41	(52)	90	(83)	100	(97)	95	(93)	64	(77)	30	(42)
Gadwall	77	(82)	79	(88)	96	(97)	100	(99)	79	(88)	56	(75)	40	(48)
Teal	40	(49)	62	(68)	91	(84)	98	(98)	100	(91)	67	(69)	45	(37)
Pintail	12	(29)	52	(81)	79	(76)	72	(94)	100	(85)	60	(73)	9	(20)
Mallard	95	(90)	98	(92)	100	(94)	96	(97)	82	(92)	56	(63)	34	(36)
Shoveler	74	(91)	87	(94)	100	(89)	89	(85)	73	(73)	83	(73)	64	(63)
Pochard	33	(33)	54	(61)	98	(88)	93	(92)	100	(100)	93	(88)	24	(32)
Tufted Duck	85	(83)	79	(81)	100	(94)	97	(99)	86	(95)	73	(86)	65	(74)
Goldeneye	1	(2)	10	(15)	58	(55)	87	(82)	99	(91)	100	(100)	84	(84)
Goosander	33	(31)	53	(43)	51	(59)	80	(89)	100	(93)	81	(92)	70	(64)
Coot	100	(93)	93	(94)	82	(93)	82	(92)	76	(82)	49	(63)	36	(42)

Table 4. PROPORTIONS IN EACH MONTH OF THE PEAK WINTER POPULATION OF CERTAIN WILDFOWL PRESENT ON 23 NORTHERN IRELAND SITES THAT WERE COUNTED IN ALL SEVEN MONTHS OF 1994-95.

Bracketed figures give averages for the 1990-91 to 1994-95 period (only data from 1992-93 onwards are available for Light-bellied Brent Geese).

	Sep		Oct		Nov		Dec		Jan		Feb		Mar	
Little Grebe	85	(85)	100	(94)	79	(81)	60	(66)	60	(65)	30	(47)	14	(27)
Great Crested Grebe	100	(94)	41	(70)	13	(31)	17	(25)	7	(52)	9	(38)	19	(76)
Cormorant	100	(95)	84	(78)	95	(70)	57	(68)	37	(50)	57	(61)	44	(49)
Bewick's Swan	0	(0)	0	(16)	30	(48)	58	(62)	97	(72)	76	(95)	100	(32)
Whooper Swan	0	(0)	44	(60)	80	(87)	66	(66)	100	(86)	68	(77)	76	(73)
Light-bellied Brent Goose	93	(53)	100	(100)	71	(58)	36	(43)	23	(35)	23	(24)	22	(19)
Shelduck	3	(3)	29	(15)	76	(43)	90	(74)	100	(90)	76	(84)	45	(66)
Wigeon	73	(48)	100	(87)	58	(71)	71	(58)	52	(61)	42	(50)	21	(30)
Gadwall	100	(88)	42	(70)	51	(76)	28	(64)	40	(74)	27	(56)	37	(59)
Teal	66	(41)	66	(66)	69	(76)	100	(91)	49	(82)	46	(75)	21	(35)
Mallard	100	(98)	91	(90)	57	(66)	52	(66)	46	(55)	25	(37)	14	(20)
Pintail	1	(12)	17	(45)	30	(69)	100	(88)	89	(82)	36	(56)	6	(24)
Shoveler	38	(48)	71	(78)	100	(93)	73	(80)	53	(61)	52	(58)	30	(46)
Pochard	3	(8)	26	(28)	71	(61)	100	(74)	81	(81)	26	(37)	5	(7)
Tufted Duck	42	(24)	76	(68)	100	(88)	80	(80)	82	(88)	55	(68)	51	(44)
Scaup	0	(0)	30	(20)	6	(26)	0	(34)	34	(38)	60	(66)	100	(100)
Goldeneye	4	(3)	10	(13)	45	(53)	83	(66)	96	(93)	100	(87)	93	(54)
Coot	100	(89)	93	(93)	23	(66)	89	(76)	39	(46)	29	(39)	22	(25)

INDICES

Because the same WeBS sites are not necessarily covered each year, changes in waterfowl population sizes cannot be determined simply by comparing the total number of birds counted in each year. Consequently, indexing techniques have been developed which allow between year comparisons of populations, even if the true population size is unknown. A new technique has been developed in recent years specifically for waterbird populations, the 'Underhill index' (Underhill 1989), and has been adopted for use in this report.

Papers fully explaining this indexing process and its application for major waterfowl populations in the UK have recently been published (Underhill & Prŷs-Jones 1994, Kirby *et al.* 1995, Prŷs-Jones *et al.* 1994). In summary, the index calculates missing counts, i.e. when the site was not counted, using a formula that assumes that a count of a species at any site in any month and year can be represented by the combination of a site factor, a month factor and a year factor. This allows the 'holes' in the data to be filled and effectively means that data are available for the same set of sites in each year. The new total counts are thus directly comparable from one year to the next and the changes in the population can be calculated.

It should be borne in mind that the missing values are calculated anew each year. Because the index formula uses data from all years, each new year's counts will slightly alter the site, month and year factors. In turn, the missing counts may differ slightly and, as a result, the index values published each year are likely to differ from those published in the previous *Wildfowl and Wader Counts*. The indices published here represent an improvement on previous figures as the additional year's data allows calculation of the site, month and year factors with greater confidence.

Underhill (1989) recommends that, where possible, the index is based on counts from more than one month. The months chosen for each species are given in Tables 5, 6 & 7. The most appropriate grouping of months on which to base the annual index for waders is December, January and February, the period when the wintering population in Britain and Northern Ireland is most stable (Prŷs-Jones *et al.* 1994). However, the peak abundance of different wildfowl occur in different months according to species, and thus different months and different numbers of months were selected for each (Kirby *et al.* 1995).

Not all species are included in the indexing process. Notably, many of the goose populations are excluded, partly because their reliance on non-wetland sites requires different count methodologies, but also because regular censusing of substantially the whole of the British populations negates the need for an index to be calculated using the Underhill technique. Thus, the indices for Pink-footed and Greylag Geese have been derived from the highest total count during the October and November census of the population in each year (e.g. Mitchell & Hearn 1995), whilst that for Greenland White-fronted Geese has been calculated from the highest of the autumn and spring census totals (e.g. Fox & Francis 1995). Many sea-ducks are also excluded from the indexing process because of the extreme censusing difficulties involved. Waders excluded from the index include those for which large numbers occur away from wetlands, e.g. Lapwing and Golden Plover, and those that are difficult to count accurately using WeBS methods, e.g. Snipe and Jack Snipe. Waterfowl species which only occur in small numbers in Britain and Ireland have also been excluded.

Tables 5 & 6 give index values for wildfowl species in Britain and Northern Ireland, respectively. However, when index values calculated for the populations of waders in Northern Ireland were found to be statistically unreliable due to the small number of estuaries contributing to each index value. It was therefore decided to combine the Northern Ireland data with that for Great Britain to produce UK indices for waders and these are given in Table 7.

The size of the species population has been constrained to equal 100 in the base year (1970-71 for wildfowl in Great Britain, 1987-88 for wildfowl in Northern Ireland, and 1972-73 for waders). Indices presented in the tables are derived from sites with where at least 50% of the maximum possible number of counts, bearing in mind that different months are used for different species, were complete. Index values provided extend back to 1966-67 for wildfowl and 1973-74 for waders, representing the first years in which coverage was deemed sufficient for data to be included in the calculation of the index. A number of species were only first included in WeBS in the 1980s, whilst counts of wildfowl in Northern Ireland only began in earnest in 1985-86. For simplicity, the base year adopted for the recently monitored species in Great Britain and for all wildfowl in Northern Ireland is 1987-88 (see footnote for details). It should be reiterated that, since comparatively few years' data are available for these new species and for Northern Ireland, these index values should be viewed with caution. Many have comparatively large consistency intervals (which provide a measure of confidence in

the accuracy of the index, but are not given here due to lack of space). Since the Underhill technique uses data from all available years to calculate index values, future data will refine the index values further.

For all species, the long-term trends in index values indicate significant changes in overall wintering populations. Because short-term fluctuations provide a less rigorous indication of population changes, care should be taken in their interpretation.

Wildfowl

Interpretation of the additional year's index values are inevitably speculative to some extent, as increases or decreases may relate only temporary factors or natural fluctuations, and similarly may indicate interchange with other countries, especially during particularly cold or mild weather. Nevertheless, consistent trends over the most recent five years provide a degree of confidence that real long-term changes may be occurring, whilst values for individual years may reflect more accurately particular short-term changes than the total counts.

Long-term increases in the numbers of wildfowl in Great Britain and, to some extent, Northern Ireland also have been well documented (e.g. Owen *et al.* 1986, Kirby *et al.* 1995). Although numbers of nearly all species remain at significantly higher levels than during the 1960s, it appears that several are undergoing periods of stabilisation or declines from recent peaks. In particular, indices show numbers of Bewick's Swans to have dropped considerably in both Great Britain and Northern Ireland, perhaps being forced out of more northerly sites by the increasing numbers of Whooper Swans. Similarly, numbers of Mallard in Great Britain have continued to decline, albeit slowly, in a consistent manner for seven years. The 1994-95 value equals the lowest, and rather anomalous, value since indexing began, recorded in 1977-78. The decreases in index values for Greylag, Dark-bellied Brent and Shelduck in Great Britain mirror the actual counts, but seem unlikely to represent anything more than yearly fluctuations. The decreases in Pochard and Goldeneye in Northern Ireland appear to be more sustained, although numbers of many duck species at Loughs Neagh & Beg, which supports the majority of these populations, are known to fluctuate widely due to a number of factors, not least of which may be the mildness of the weather elsewhere in Northwest Europe and which may tempt birds to winter further east. Indices for Canada Geese show the population to have largely stabilised over the last seven years.

In addition to the increase in Little Grebe numbers in Great Britain, index values show that this species continues to flourish in Northern Ireland. Cormorants, the continuing subject of much press, especially in angling circles, also continue to fare well, with over 1,000 recorded at Morecambe Bay in 1994-95 and 800 at Abberton Reservoir in May. The fortunes of both Wigeon and Gadwall are evident from the indices, with increases of 46% and 38% respectively over the last five years. Index values indicate an obvious increase in Pochard numbers, much higher than the very stable numbers of the early 1990s and a welcome change of fortune for a species that had previously caused some concern as one of the few declining wildfowl in the UK. Values for Red-breasted Merganser are the highest since the peak of 1986-87, since when values fell by almost half, but have since almost re-doubled. Numbers of Ruddy Duck are again increasing, whilst index values confirm the increase in Coots in both Great Britain and Northern Ireland.

Table 5. LONG-TERM INDICES FOR WINTER WILDFOWL NUMBERS IN GREAT BRITAIN

	Month†	Mean 66-67 to 69-70	Mean 70-71 to 74-75	Mean 75-76 to 79-80	Mean 80-81 to 84-85	Mean 85-86 to 89-90	90-91	91-92	92-93	93-94	94-95
Little Grebe	SO	-	-	-	-	187	337	319	302	367	443
Great Crested Grebe	SON	-	-	-	113	106	126	123	139	136	138
Cormorant	SONDJFM	-	-	-	-	107	160	146	148	169	181
Mute Swan	SONDJFM	111	102	98	104	126	162	151	150	161	170
Bewick's Swan	JF	53	68	117	189	221	276	294	200	178	140
Whooper Swan	ND	106	119	119	124	208	270	187	184	156	186
Pink-footed Goose	O or N	98	105	104	128	221	266	324	275	312	362
Greenland Whitefront	N or M	-	-	-	69	103	126	135	127	142	160
Greylag Goose	O or N	92	107	106	127	156	177	136	152	153	133
Canada Goose	S	64	109	137	227	320	337	378	346	355	315
Dark-bellied Brent	DJF	79	117	195	270	319	380	464	310	397	319
Shelduck	JF	92	96	109	121	123	129	133	110	124	108
Wigeon	J	96	87	90	99	123	108	137	135	137	153
Gadwall	SONDJFM	45	110	164	312	457	554	488	505	607	695
Teal	D	87	124	181	252	237	274	261	230	283	275
Mallard	D	84	86	78	85	90	79	76	76	68	67
Pintail	ONDJ	62	141	165	212	182	162	193	141	134	147
Shoveler	SO	113	153	153	171	183	223	220	168	174	191
Pochard	NDJ	108	120	114	101	99	98	95	92	99	112
Tufted Duck	NDJF	83	114	111	109	110	110	101	105	116	112
Goldeneye	F	82	123	93	93	102	128	120	118	121	117
Red-breasted Merganser	ONDJFM	80	83	104	130	164	137	128	136	156	188
Goosander	DJF	80	111	112	158	178	154	133	129	120	122
Ruddy Duck	SONDJFM	51	201	1,126	3,513	5,328	6,126	6,353	4,938	5,060	5,853
Coot	SONDJ	-	-	-	105	108	101	100	103	118	119

- indicates data are not available for these years

† the first letter of the months September to March is used to indicate those months used in calculating indices for each species

Table 6. INDICES FOR WINTER WILDFOWL NUMBERS IN NORTHERN IRELAND

	Month†	86-87	87-88	88-89	89-90	90-91	91-92	92-93	93-94	94-95
Little Grebe	SON	178	100	383	406	338	364	397	428	508
Great Crested Grebe	SONDJFM	76	100	121	92	81	93	116	74	160
Cormorant	SOND	10	100	215	271	198	161	226	200	216
Mute Swan	SONDJ	89	100	108	119	116	117	116	108	132
Bewick's Swan	NDJF	68	100	97	172	189	93	45	77	25
Whooper Swan	ONDJFM	76	100	101	78	90	81	85	74	81
Greenland Whitefront	N or M	109	100	118	98	103	105	95	75	97
Light-bellied Brent	SONDJFM	44	100	95	98	118	121	87	78	96
Shelduck	DJFM	116	100	172	118	138	113	103	120	130
Wigeon	SONDJFM	86	100	123	89	113	103	78	67	74
Gadwall	SONDJ	73	100	117	152	122	133	171	133	176
Teal	DJ	57	100	100	106	122	92	64	65	67
Mallard	SO	139	100	121	141	136	136	117	122	138
Pintail	ONDJFM	180	100	144	78	124	158	120	117	78
Shoveler	SONDJFM	152	100	113	100	92	122	79	135	108
Pochard	NDJF	93	100	142	128	131	139	102	89	85
Tufted Duck	ONDJFM	52	100	106	111	105	117	109	112	111
Goldeneye	DJFM	88	100	83	77	99	107	94	65	69
Red-breasted Merganser	SONDJFM	61	100	115	108	105	85	110	81	102
Coot	SONDJFM	79	100	99	121	116	110	121	66	105

† the first letter of the months September to March is used to indicate those months used in calculating indices for each species

Footnote: The selection of months for calculating indices was made by first calculating monthly index values for all months September to March, and selecting that with the highest index value and any adjacent months with overlapping consistency intervals. Months selected for each species are given in Tables 5 & 6. Data from all years from 1966-67 onwards were used for calculating the index for each species, as recommended in Kirby *et al.* (1995), with the exception Little Grebe - 1985-86 onward, Great Crested Grebe - 1982-83, Cormorant - 1986-87, Coot - 1982-83, all species in Northern Ireland - 1986-87. The parameters used for indexing each species follow Kirby *et al.* (1995).

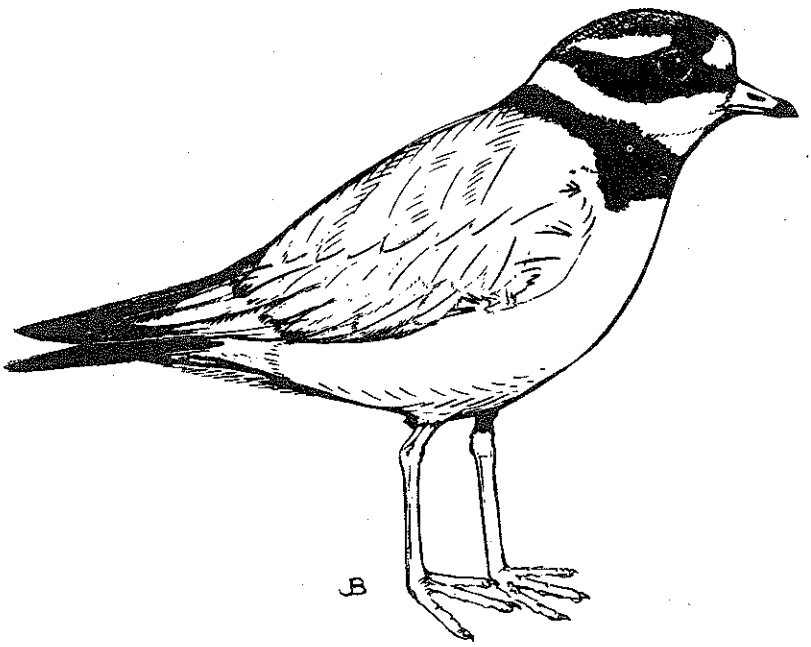
Waders

Unusually, none of the main wader species showed a decline in the winter index in 1994-95 compared to the previous winter, and six species showed increases of greater than 10%. Most remarkable was the 50% increase for Sanderling, although the 1994-95 index remains below the value of three years earlier. Most Sanderling occur on our open coasts, many of which are not counted by WeBS, so small scale movements can make major differences to the recorded index. Around half Britain's Sanderling recorded by WeBS in winter occur on the Ribble Estuary, where numbers were around 50% above average in 1994-95. Grey Plover continue to increase at a phenomenal rate with the winter index comfortably exceeding the 600 mark, due to a 19% increase on the previous year's value. Winter index values rose both for Redshank (18%) and Curlew (23%), with the 1994-95 indices for both species reaching their greatest values for at least five years. Dunlin continues to have a winter index value below 100, despite an increase in 1994-95 of 12% on the previous winter.

Table 7. LONG-TERM INDICES FOR WINTER WADER NUMBERS IN THE UK

	Month†	Mean 70-71 to 74-75	Mean 75-76 to 79-80	Mean 80-81 to 84-85	Mean 85-86 to 89-90	90-91	91-92	92-93	93-94	94-95
Oystercatcher	DJF	101	127	134	153	162	149	144	133	141
Ringed Plover	DJF	99	108	92	116	116	106	106	105	108
Grey Plover	DJF	113	160	236	385	468	480	445	529	632
Knot	DJF	103	69	75	89	88	91	94	80	85
Sanderling	DJF	109	117	93	102	98	116	81	74	111
Dunlin	DJF	98	100	78	77	104	99	83	86	96
Black-tailed Godwit	DJF	78	90	98	146	145	173	183	243	261
Bar-tailed Godwit	DJF	108	117	122	121	130	104	103	95	95
Curlew	DJF	108	108	106	127	122	145	149	135	165
Redshank	DJF	96	99	83	108	99	109	100	103	122
Turnstone	DJF	100	117	109	145	133	144	127	125	131

† *the first letter of the months September to March is used to indicate those months used in calculating indices for each species*



PRINCIPAL SITES

Table 8 lists the principal sites in terms of overall waterfowl numbers in the UK as recorded by WeBS, including all internationally important sites. All sites regularly holding a total of at least 10,000 waterfowl (i.e. divers, grebes, Cormorant, herons, wildfowl, waders and rails) and all sites supporting internationally important numbers of one or more species (see Appendix 1), according to average winter maxima calculated over the five-year period 1990-91 to 1994-95, are included. All estuaries are also included. Sites are ranked according to their average winter maxima over the five-year period 1990-91 to 1994-95. Gull and tern numbers are not included in these totals due to the different coverage these species received (see *Data Presentation*).

It is important to note that the ranking of sites given in Table 8 relates to waterfowl numbers, rather than conservation importance (see *Interpretation of Waterfowl Counts*). Also, some sites which may be of critical importance to certain waterfowl species or populations will not be included in this list, for example, sites that are important only in times of severe weather or during migratory periods, or sites that are not covered by WeBS. The locations of the sites in Table 8 are given in Appendix 2 and Figure 2.

The peak counts at each site are calculated by summing the highest count for each individual species during the winter season, irrespective of the month in which it occurred. The table shows the average peak counts at each site over the period 1990-91 to 1994-95, and the peak counts of all waterfowl, wildfowl and waders in 1994-95 in successive columns. For most inland sites, the numbers of waders present has only been recorded for the past four years. A number of wildfowl species, e.g. rare grebes, have also only been recorded for the past four years. Only WeBS Core Counts and the censuses of Pink-footed and Greylag Geese, Greenland White-fronted Geese and Barnacle Geese are included in calculating totals. Additional counts, such as those of sea-ducks on the Moray Firth, made using different methodologies, are not currently incorporated into the WeBS databases. Thus, it should be borne in mind that other sites that are important for certain waterfowl species are not included in the table, whilst the sites listed may be of greater importance for the species listed if additional data were included. The number of Internationally Important Populations (IIP) at each site, and corresponding species codes, are given in the final two columns.

Though the table requires careful interpretation, it does serve to identify many of the UK's important wetlands, and some of the species for which these sites have special value. Readers should refer to the sections on *Interpretation of Waterfowl Counts* and *Data Presentation* for further guidance.

Around 80 WeBS sites continue to hold, on average, more than 10,000 waterfowl and at 53 of these the peak waterfowl total in 1994-95 was above the average of the past five winters. Careful interpretation is needed to distinguish real trends as opposed to short term fluctuations, some of which may be substantial. Fifty six sites now average over 20,000 waterfowl and in 1994-95 counts at 12 of these were at least 30% above or below these averages. The 1994-95 peak was more than 30% below the average for only two of these sites, namely the Stour and Tay Estuaries, largely due to low counts of Lapwing and Dunlin, respectively. Of the ten sites registering 1994-95 counts more than 30% above the average the greatest increase (69%) was recorded at Carmarthen Bay. Here, and at several of the other nine sites, Lapwing and Golden Plover were recorded in well above average numbers, although numbers of these two species are known to fluctuate considerably at many WeBS sites, due to both short and long distance movements. Large counts of geese were also responsible for the increases, with counts of 58,150 and 62,000 Pink-footed Geese at Loch of Strathbeg and Dupplin Lochs, respectively, and 33,119 Greylags at Dupplin Lochs being particularly noteworthy.

Of those sites averaging between 10,000 and 20,000 waterfowl, five recorded 1994-95 counts more than 30% above their average value, whereas four registered counts more than 30% below the average figure. As with those sites averaging over 20,000 waterfowl high 1994-95 counts of Lapwing were responsible for many above average counts, including at the Beaulieu Estuary where the average waterfowl total was exceeded by 78%, the largest increase noted at any site holding in excess of 10,000 birds. Several of the particularly high and low counts at many of these sites were a result of changes in numbers of Pink-footed or Greylag Geese. Very large numbers can occur at sites shortly after their arrival in Scotland and increased site counts are to be expected given the growth in the population. However, such numbers are normally short lived and these transitory birds are easily missed unless the site is watched almost continuously during the autumn.

Table 8. PRINCIPAL WATERFOWL SITES IN THE UK, 1990-91 TO 1994-95
based on WeBS Core Counts and surveys of Pink-footed, Greylag, Greenland White-fronted and Barnacle Geese only

Site name	5 Yr Mean Waterfowl	1994-95 Waterfowl	1994-95 Wildfowl	1994-95 Waders	IIP†	Species codes
Wash	343,381	286,719	73,213	213,506	13	PG,DB,SU,PT,OC,L,TT, CU,BA,RK,KN,DN,GV
Ribble Est.	266,702	301,621	137,576	164,045	15	BS,WS,PG,SU,WN,T.,PT, OC,L.,GV,BW,BA,KN,DN ,SS,RK
Morecambe Bay	224,726	229,843	37,992	191,851	11	PG,SU,PT,OC,GV,BA,RK, KN,DN,CU,TT
Humber Est.	166,752	242,209	21,499	220,710	9	DB,SU,L.,GV,GP,BA,RK, KN,SS
Thames Est.	152,696	163,600	33,065	130,535	11	DB,SU,GK,OC,RP,GV,TT, BA,RK,KN,DN
Solway Est.	133,382	158,766	49,724	109,042	11	WS,PG,BY,PT,SP,OC,CU, BA,RK,KN,DN
Dee (Eng/Wales) Est.	127,006	117,778	29,568	88,210	10	SU,T.,PT,OC,GV,CU,BW, RK,KN,DN
Lo. Neagh/Beg	104,967	91,602	78,924	12,678	5	BS,WS,PO,TU,GN
Mersey Est.	102,301	129,064	37,692	91,372	6	SU,WN,T.,PT,RK,DN
Stour Est.	91,190	53,999	10,857	43,142	4	GV,BW,RK,DN
Forth Est.	85,917	79,865	42,798	37,067	6	PG,SU,TT,BA,RK,KN
Severn Est.	85,308	100,667	24,152	76,515	6	BS,SU,GA,CU,RK,DN
North Norfolk Marshes	83,226	96,962	69,797	27,165	6	PG,DB,WN,PT,BA,KN
Somerset Levels	82,348	101,043	40,093	60,950	3	WN,T,L.
Blackwater Est.	74,980	78,832	24,377	54,455	6	DB,SU,GV,RK,DN,BW
Medway Est.	69,918	66,284	15,757	50,527	6	DB,SU,RP,GP,RK,DN
Swale Est.	67,985	85,743	32,251	53,492	8	SU,WN,PT,SV,GV,BW, RK,KN
Ouse Washes	63,478	71,784	52,927	18,857	7	BS,WS,WN,GA,PT,SV, BW
Strangford Lo.	57,195	61,205	19,164	42,041	3	PB,RK,KN
Chichester Hbr	54,309	60,370	14,837	45,533	6	DB,RP,GV,BW,BA,DN
Montrose Basin	53,953	59,465	45,211	14,254	3	PG,RK,KN
Langstone Hbr	47,335	46,230	9,708	36,522	3	DB,GV,DN
Inner Moray Fth	46,966	44,210	23,742	20,468	5	GJ,WN,RM,BA,RK
Lo. of Strathbeg	46,863	67,655	64,292	3,363	1	PG
Dupplin Lo.	44,849	62,000	62,000	-	1	PG
Lindisfarne	42,912	45,721	23,212	22,509	4	GJ,PB,WN,BA
Cromarty Fth	39,435	30,674	15,629	15,045	6	WS,PG,GJ,WN,BA,RK
Abberton Rsr	39,344	46,900	32,267	14,633	3	GA,T.,SV
Hamford Water	39,058	41,565	13,511	28,054	4	DB,RP,GV,BW
Breydon Water	38,795	52,741	8,246	44,495	2	BS,L.
Duddon Est.	38,629	47,351	10,692	36,659	3	PT,KN,RK
Lower Derwent Valley	38,612	49,054	33,648	15,406	2	WN,T.
Colne Est.	37,564	42,969	7,733	35,236	2	DB,RK
Lo. Foyle	36,275	33,534	14,541	18,993	4	WS,PB,WN,BA
Burry Inlet	34,101	38,124	6,176	31,948	2	PT,OC
Alt Est.	33,283	38,690	7,534	31,156	2	BA,KN
Lo. Leven	32,582	29,691	28,597	1,094	2	PG,SV
Dengie	31,826	33,335	3,050	30,285	3	BA,GV,KN
West Water Rsr	30,115	26,890	26,845	45	1	PG
Poole Hbr	28,052	28,745	10,273	18,472	2	SU,BW
Dornoch Fth	27,751	25,501	17,543	7,958	3	GJ,WN,BA
Arun Valley	27,708	37,737	12,071	25,666		
Martin Mere	27,552	39,509	38,432	1,077	4	BS,WS,PG,WN,PT
Crouch/Roach Est.	27,021	24,486	9,391	15,095	1	DB
Dinnet Lo.	25,067	33,119	33,119	-	1	GJ
Rutland Water	24,228	32,742	21,547	11,195	2	GA,SV
Carmarthen Bay	24,004	40,678	6,639	34,039		
Alde Complex	23,751	27,455	11,787	15,668	2	AV,RK
Exe Est.	23,634	24,154	7,060	17,094		
Orwell Est.	22,980	24,502	8,973	15,529	1	RK
Nene Washes	22,762	35,657	25,328	10,329	2	BS,PT
Inner Clyde	22,242	20,866	7,051	13,815	1	RK
Belfast Lo.	21,197	22,032	5,882	16,150	2	TT,RK
Tay Est.	20,361	13,492	6,549	6,943	1	BA

Site name	5 Yr Mean Waterfowl	1994-95 Waterfowl	1994-95 Wildfowl	1994-95 Waders	IIP†	Species codes
Ythan Est.	19,801	10,801	10,801	-	1	PG
Lo. Eye	19,781	14,264	14,264	-	3	WS,PG,GJ
Fleet/Wey	19,660	19,739	15,727	4,012	1	DB
Southampton Water	18,983	18,492	7,558	10,934	1	BW
Lo. of Skene	17,151	11,218	11,218	-	2	WS,GJ
Tees Est.	17,010	24,081	7,852	16,229		
Eden Est.	16,490	16,359	5,353	11,006	1	BA
Deben Est.	15,731	15,985	6,105	9,880		
Outer Ards	15,649	12,678	1,087	11,591	3	PB,RP,TT
Pagham Hbr	15,646	18,541	7,234	11,307	1	DB
Hule Moss	15,510	8,101	8,101	-	1	PG
Cleddau Est.	15,183	18,959	5,940	13,019		
Carsebreck/Rhynd Lo.	14,577	20,220	17,911	2,309	1	PG
NW Solent	14,377	14,642	4,848	9,794	1	DB
Wigtown Bay	14,130	17,193	8,443	8,750	1	PG
Tamar Complex	13,439	14,522	2,657	11,865		
Cameron Rsr	13,372	17,325	17,180	145	1	PG
Lo. of Harray	13,077	12,078	8,243	3,835	2	WS,GJ
Lavan Sands	11,944	12,211	2,444	9,767		
Portsmouth Hbr	11,577	10,888	3,781	7,107	1	DB
Taw/Torridge Est.	11,524	12,969	3,274	9,695		
Dyfi Est.	10,955	12,094	6,423	5,671		
Slains Lo.	10,932	6,094	6,094	-	1	PG
Blyth (Suffolk) Est.	10,591	14,044	2,895	11,149		
Beaulieu Est.	10,513	18,753	4,982	13,771		
Chew Valley Lake	10,176	8,090	7,076	1,014	1	SV
Irvine Est.	9,784	10,688	3,455	7,233		
Thanet Coast	9,749	12,681	2,740	9,941	1	TT
Camel Est.	9,028	11,924	1,010	10,914		
Rye Hbr/Pett Levels	8,936	11,916	2,801	9,115		
Dundrum Bay	8,798	7,328	967	6,361	1	PB
Lo. Fleet Complex	8,783	8,413	5,027	3,386	1	GJ
Castle Lo., Lochmaben	8,360	1,358	888	470	1	PG
Fala Flow	8,259	3,500	3,500	-	1	PG
Upper Lo. Erne	8,159	9,892	5,259	4,633	1	WS
Newtown Est.	8,126	9,034	5,475	3,559		
Drummond Pond	8,022	6,902	6,830	72	2	PG,GJ
Pegwell Bay	7,464	7,511	1,619	5,892		
Lo. Spynie	7,290	7,894	7,893	1	1	GJ
Lo. of Kinnordy	7,167	4,145	3,828	317	1	PG
Tyninghame Est.	7,097	7,569	3,216	4,353		
Avon Valley (Mid)	6,942	6,202	6,202	-	1	GA
Carlingford Lo.	6,652	5,750	2,301	3,449	1	PB
St Benet's Levels	6,471	6,906	1,228	5,678	1	BS
Lo. Indaal	6,040	6,182	3,564	2,618		
Lo. of Lintrathen	5,829	3,432	3,239	193	1	GJ
Hornsea Mere	5,737	4,704	4,704	-	1	GA
Foryd Bay	5,587	6,718	2,855	3,863		
Christchurch Hbr	5,573	(807)	(796)	(11)		
Haddo House Lo.	5,350	2,088	2,088	-	1	GJ
Hayle Est.	5,116	3,396	1,898	1,498		
Caithness Lo.	5,025	5,613	5,613	-	1	GJ
Inland Sea	4,972	4,223	967	3,256		
Lo. Ryan	4,725	5,404	2,100	3,304		
Fal Complex	4,556	3,421	1,604	1,817		
Cowgill Rsr	4,496	3,820	3,820	-	1	PG
Glenfarg Rsr	4,480	9,080	9,080	-	1	PG
Lo. Larne	4,376	4,063	2,134	1,929	1	PB
Lo. Tullybelton	4,340	1,800	1,800	-	1	PG
Gladhouse Rsr	4,312	6,082	6,059	23	1	PG
Bann Est.	4,208	4,251	703	3,548		
Swansea Bay	4,159	3,349	30	3,319		
Conwy Est.	4,032	4,941	1,315	3,626		
Wraysbury GP	4,010	6,171	6,171	(0)	1	GA
Kilconquhar Lo.	3,959	4,029	4,026	3	1	GJ
Clwyd Est.	3,935	5,358	1,603	3,755		
Kingsbridge Est.	3,920	3,966	2,163	1,803		
Traeth Bach	3,869	(3,857)	1,625	(2,232)		

Site name	5 Yr Mean Waterfowl	1994-95 Waterfowl	1994-95 Wildfowl	1994-95 Waders	IIP†	Species codes
Irt/Mite/Esk Est.	3,751	(256)	(256)	-		
Crombie Lo.	3,453	-	-	-	1	PG
Lower Bogrotten	3,294	5,180	5,180	-	1	GJ
Stranraer Lo.	3,274	3,065	3,065	0	2	GJ,NW
Adur Est.	3,245	4,132	209	3,923		
Guernsey Coast	3,125	2,790	191	2,599	1	TT
Monikie Rsr	3,302	3,953	3,854	99	1	PG
Lo. Gruinart	3,081	3,932	1,182	2,750		
R. Spey: Boat of Balliefirth	3,043	-	-	-	1	GJ
Holburn Moss	2,935	4,303	4,301	2	1	GJ
Brading Hbr	2,894	2,481	1,000	1,481		
Lo. Lomond	2,893	1,360	1,360	-	1	NW
Hightae Lo.	2,853	(708)	(408)	300	1	PG
Lake of Menteith	2,790	(1,321)	1,259	(62)	1	PG
Hoselaw Lo.	2,732	4,549	4,549	0	1	GJ
Lo. Ken	2,710	2,043	1,750	293	1	NW
Auchencairn Bay	2,686	2,982	504	2,478		
Cefni Est.	2,679	2,396	1,100	1,296		
Luce Bay	2,671	2,414	332	2,082		
Cuckmere Est.	2,658	3,966	1,380	2,586		
Red Wharf Bay	2,622	2,314	490	1,824		
Lo. Mullion	2,342	3,000	3,000	-	1	PG
Dysynni Est.	2,324	2,375	950	1,425		
Killough Hbr	2,290	2,639	362	2,277	1	PB
Tweed Est.	2,231	2,373	1,444	929		
Braint Est.	2,215	3,017	1,397	1,620		
Lo. Insh & Spey Marshes	2,206	2,118	1,660	458	1	WS
Carlhurlie Rsr	2,191	1,936	1,927	9	1	GJ
Mawddach Est.	2,084	1,658	812	846		
Yar Est.	2,051	2,175	1,487	688		
Hunterston Est.	2,045	2,290	1,383	907		
Rough Firth	2,012	2,465	521	1,944		
Bute Lochs	1,984	2,370	2,370	-	1	GJ
Corby Lo.	1,773	-	-	-	1	GJ
Dee (Scotland) Est.	1,746	1,564	967	597		
Loch Ussie	1,635	1,409	1,409	-	1	GJ
Fedderate Rsr	1,600	-	-	-	1	GJ
Lo. Garten & Mallachie	1,554	2,032	2,032	0	1	GJ
Coquet Est.	1,554	1,738	304	1,434		
Medina Est.	1,492	1,246	371	875		
Gunton Park Lakes	1,441	-	-	-	1	GA
Ballo Rsr	1,422	663	663	-	1	GJ
Axe Est.	1,421	2,270	360	1,910		
Lossie Est.	1,420	1,279	994	285		
Blyth (N'berland) Est.	1,396	1,318	197	1,121		
Kirkcudbright Bay	1,386	1,668	743	925		
Plym Est.	1,258	2,953	96	2,857		
Teifi Est.	1,254	1,171	694	477		
Newhaven Est.	1,246	1,290	12	1,278		
Otter Est.	1,236	1,499	1,377	122		
Ogmore Est.	1,190	275	275	-		
Rhunahaorine	1,087	1,361	1,361	-	1	NW
Machrihanish	1,082	932	932	-	1	NW
Alnmouth*	(998)	175	175	(663)		
Nyfer Est.	904	454	86	368		
Danna/Keills	894	(381)	(381)	-	2	NW,BY
Lo. Gilp	880	886	280	606		
Dulas Bay	817	803	76	727		
Yealm Est.	760	585	461	124		
Deveron Est.	755	606	126	480		
Avon Est.	738	645	444	201		
Wootton Est.	732	530	223	307		
Fleet Bay	669	384	184	200		
Erme Est.	663	655	510	145		
Artro Est.	599	715	380	335		
Afan Est.	592	902	152	750		
Gannel Est.	541	387	170	217		
Don Est.	531	522	194	328		

Site name	5 Yr Mean Waterfowl	1994-95 Waterfowl	1994-95 Wildfowl	1994-95 Waders	IIP†	Species codes
Black Cart Water	448	(21)	(21)	(0)	1	WS
Spey Est.	385	-	-	-		
Teign Est.	369	380	147	233		
Appin/Erriska/Benderloch	271	336	336	-	1	NW
R. Foyle: Grange	262	-	-	-	1	WS
Fowey Est.	256	315	158	157		
Helford Est.	206	149	82	67		
Tyne Est.	204	204	19	185		
Dart Est.	181	283	283	(0)		
Looe Est.	170	186	110	76		
Islay					2	NW,BY
SW Lancashire					1	PG
Tiree					2	NW,BY
Colonsay					1	BY
Orkney					1	GJ,BY
Tay/Isla Valley					1	GJ
Walland Marsh					1	BS
Coll					2	NW,BY

Note that no count data are presented for the last eight sites in Table 8. These are areas important for geese or swans, but for which WeBS data is not regularly received. Data for any important WeBS sites within these areas, e.g. Lochs Gruinart and Indaal on the island of Islay, are presented separately in Table 8.

- *indicates that no count is available*
() *indicates that no complete count was obtained during 1994-95 and that the count presented here is incomplete*
† *Internationally Important Populations*
NB *Not every species covered by WeBS has a corresponding qualifying threshold for international importance (see Appendix 1). Hence these species do not feature in this table*

* *see footnote to Appendix 2*

Species codes

AV	Avocet
BA	Bar-tailed Godwit
BS	Bewick's Swan
BW	Black-tailed Godwit
BY	Barnacle Goose
CA	Cormorant
CG	Canada Goose
CO	Coot
CU	Curlew
DB	Dark-bellied Brent Goose
DN	Dunlin
E.	Eider
EW	European White-fronted Goose
GA	Gadwall
GD	Goosander
GG	Great Crested Grebe
GJ	Greylag Goose
GN	Goldeneye
GP	Golden Plover
GV	Grey Plover
KN	Knot
L.	Lapwing
LG	Little Grebe
LN	Long-tailed Duck
LP	Little Ringed Plover
MA	Mallard
MS	Mute Swan
NW	Greenland White-fronted Goose
OC	Oystercatcher
PB	Light-bellied Brent Goose
PG	Pink-footed Goose
PO	Pochard
PT	Pintail
RK	Redshank
RM	Red-breasted Merganser
RP	Ringed Plover
SP	Scaup
SS	Sanderling
SU	Shelduck
SV	Shoveler
T.	Teal
TT	Turnstone
TU	Tufted Duck
WM	Whimbrel
WN	Wigeon
WS	Whooper Swan

WeBS Low Tide Counts

INTRODUCTION

WeBS Low Tide Counts aim to assess, monitor and regularly update information on the relative importance of intertidal feeding areas of UK estuaries for wintering waterfowl. They provide information on the numbers of waterfowl feeding on individual sections of intertidal habitat within estuaries. Co-ordinated counts of feeding and roosting waterfowl are made each month between November and February on pre-established subdivisions of the intertidal mudflats in the period two hours either side of low tide. These counts are thus complementary to the long-established Core Counts, which provide an estimate of overall population sizes for each estuary. Low Tide Counts provide crucial information needed to assess the potential effects on waterfowl populations of a variety of human activities which reduce the extent or value of intertidal habitats. Proposals for recreational and tidal power barrages, marinas and housing schemes comprise more than half of the present land claim proposals in Britain. Land claim has been widespread, cumulative and piecemeal and has affected 88% of British estuaries (Davidson & Evans 1986, Davidson *et al.* 1991, pg 358). The data provided by the scheme will greatly contribute to the conservation of waterfowl through the network of Special Protection Areas (SPAs), other site designations and whole estuary conservation plans. In addition, Low Tide Counts enhance our knowledge on the low water distribution of waterfowl and provide data that highlight regional variation in phenology and habitat use.

DATA INTERPRETATION AND PRESENTATION

In 1994-95, Belfast Lough, Blackwater, Burry Inlet, Colne, Duddon, Orwell, Pegwell Bay, Southampton Water, Strangford Lough, Taw/Torridge and Traeth Lafan were covered. Data for all except Traeth Lafan are included here, covering the period November to February inclusive. Densities are used, rather than numbers, because of the methodological differences between the Low Tide Counts and the Core Counts. The Core Counts provide accurate counts of whole estuary populations and should generally be used in any assessment of the national and international importance of a site. Low Tide Counts, on the other hand, provide a 'snapshot' of feeding distribution at low tide during the winter and are designed to give an indication of the relative importance of each mudflat to each species present within individual estuaries in the winter period. As with the Core Counts, the results are presented in summary form, the primary aim being to provide feedback to WeBS counters and others.

Table 9 shows the mean and maximum density for occupied mudflats and the percentage of the total intertidal area occupied for the 19 most numerous species present on estuaries covered during the 1994-95 winter. Overall mean densities for the site were calculated by summing the mean number of birds present on each occupied mudflat and dividing the sum by the total area of occupied mudflats. The values given for maximum density are the maximum densities recorded for each species on any individual mudflat.

ESTUARY ACCOUNTS

Estuary accounts have not been included in this report for the reasons given in the preface. However, in future issues, accounts describing the results of the Low Tide Counts on each of the estuaries covered in that particular winter will again be included. These will include a list of internationally and nationally important species present, based on Core Counts, and a description of the estuary, followed by an outline of the key results. In addition to a master map of count areas, distribution maps will be given for each internationally important species present showing the mean density recorded on each mudflat. Where there are more than three internationally important species, maps for the two most abundant species will be shown. Where no internationally important species are present, two examples of nationally important species will be used or, if no nationally important species are present, the two most numerous species will be used.

SPECIES	Belfast Lough			Blackwater			Burry Inlet			Colne			Duddon		
	mean density	max density	% area occ.	mean density	max density	% area occ.	mean density	max density	% area occ.	mean density	max density	% area occ.	mean density	max density	% area occ.
Brent Goose	0.2	0.2	6.9	2.1	12.8	91.8	0.3	0.8	32.7	1.7	18.6	85.0	0	0	0
Shelduck	2.8	16.2	30.1	1.0	4.8	95.7	0.1	0.2	98.6	1.8	8.5	91.0	0.4	3.3	56.8
Wigeon	0.5	3.8	25.2	0.9	6.3	79.2	0.2	0.3	66.5	0.9	5.5	76.1	0.4	0.9	28.9
Teal	0.5	10.0	41.4	0.7	3.0	63.2	+	+	11.1	0.5	0.5	12.1	+	+	2.4
Mallard	1.9	16.5	47.8	0.2	0.8	67.8	+	+	38.0	0.1	0.8	89.1	0.2	1.4	52.8
Pintail	0	0	0	0.1	0.4	32.8	0.1	0.1	18.2	0	0	0	1.8	13.7	12.5
Oystercatcher	11.7	66.0	98.5	0.4	7.2	86.8	0.9	2.2	68.1	0.7	3.5	76.3	0.8	15.0	79.7
Ringed Plover	0.2	0.2	42.6	0.1	0.5	53.8	0	0	0	+	+	47.1	0.1	0.3	21.7
Golden Plover	+	+	9.8	2.5	8.9	57.5	1.9	1.9	17.9	2.1	21.4	67.4	0.6	0.6	4.8
Grey Plover	0	0	0	1.1	6.4	91.8	+	0.2	94.1	0.7	3.9	82.6	0.1	0.2	22.4
Lapwing	8.7	68.5	44.6	3.6	21.1	89.4	1.0	3.1	63.5	12.3	118.2	90.6	0.5	1.4	30.9
Knot	1.2	6.0	49.5	2.0	11.9	27.4	0.5	0.6	47.6	0.1	0.2	1.7	0.8	1.5	12.9
Sanderling	0	0	0	0.1	0.2	2.1	0	0	0	0.2	0.2	10.0	+	1.0	17.7
Dunlin	4.9	40.0	75.0	11.0	42.9	96.5	1.4	2.4	76.4	9.8	83.8	95.1	3.0	19.9	36.9
Black-t. Godwit	1.3	9.7	60.3	0.1	0.6	49.4	0	0	0	0.1	0.9	64.4	0	0	0
Bar-t. Godwit	0.2	0.7	73.5	0.1	1.1	51.2	+	0.1	47.6	0	0	0	+	0.3	12.8
Curlew	1.2	6.4	95.8	0.4	1.7	93.5	0.1	0.3	98.6	0.6	5.6	95.1	0.4	9.9	85.5
Redshank	3.8	24.9	95.8	1.0	2.9	98.2	+	+	58.7	1.9	13.2	95.1	0.5	4.1	57.4
Turnstone	0.5	6.5	81.4	0.2	0.9	59.1	0	0	0	0.2	0.3	17.4	0	0.1	15.2

SPECIES	Orwell			Pegwell Bay			Southampton Water			Strangford Lough			Taw/Torridge		
	mean density	max density	% area occ.	mean density	max density	% area occ.	mean density	max density	% area occ.	mean density	max density	% area occ.	mean density	max density	% area occ.
Brent Goose	0.8	2.0	76.0	+	+	89.6	0.8	3.0	68.9	0.4	9.2	88.6	0.3	1.7	55.0
Shelduck	1.2	9.1	98.7	0.3	0.4	66.9	0.2	0.7	59.8	0.3	2.6	78.8	0.2	0.5	85.2
Wigeon	2.7	12.5	85.4	0.2	0.5	66.9	1.3	8.6	54.4	0.2	5.0	34.5	1.0	5.1	76.1
Teal	2.0	3.3	28.3	0	0	66.9	0.5	1.7	47.5	0.4	2.1	23.1	1.0	5.1	33.2
Mallard	0.7	5.4	90.0	0.3	0.4	100.0	0.1	3.1	51.9	0.2	2.1	22.5	0.4	2.1	80.6
Pintail	0.3	0.6	67.4	0	0	0	0	0	0	0.1	0.4	6.9	0.1	0.2	27.5
Oystercatcher	1.0	3.0	81.8	2.2	8.2	100.0	0.7	3.3	95.0	0.8	14.9	97.6	0.9	3.8	100.0
Ringed Plover	0.4	1.0	44.4	0.2	1.6	100.0	0.2	0.7	57.9	0.1	0.7	31.2	0.2	1.2	51.0
Golden Plover	0	0	0	1.5	1.5	45.7	0.9	0.9	7.5	2.5	15.9	35.0	6.5	52.4	30.6
Grey Plover	0.5	1.4	77.1	0.5	0.6	100.0	0.1	0.3	78.2	0.1	0.3	43.8	0.1	0.6	76.0
Lapwing	3.8	22.0	87.4	11.5	11.5	45.9	1.6	17.5	35.7	0.8	23.8	66.7	5.5	40.1	78.3
Knot	0.3	0.7	41.3	0.4	5.9	100.0	0.3	0.3	6.6	1.7	15.8	32.3	0	0	0
Sanderling	0	0	0	0.1	1.4	100.0	0	0	0	0	+	1.5	0	0	0
Dunlin	12.3	40.1	79.1	3.2	4.9	91.8	3.1	15.9	93.8	1.2	12.3	73.4	1.6	11.6	58.3
Black-t. Godwit	0.4	1.4	68.5	0	0	0	+	+	33.9	+	0.1	9.9	0	0	0
Bar-t. Godwit	0	0	0	0.1	0.2	97.8	+	+	8.6	0.1	1.4	48.1	0.6	0.3	4.3
Curlew	1.0	3.6	79.1	0.4	1.0	100.0	0.2	4.0	89.9	0.2	2.9	95.3	0.6	2.0	99.2
Redshank	2.7	46.4	81.8	0.3	1.0	91.8	0.4	8.3	78.8	0.3	3.6	96.7	0.3	13.8	83.7
Turnstone	0.2	0.5	77.8	7.3	7.3	2.2	0.2	1.3	68.2	0.1	2.5	29.5	+	0.1	26.6

Table 9. Density (birds ha^{-1}) on occupied mudflats and percentage area occupied for each of the 19 most numerous species present on the estuaries covered during the 1994-95 winter. + indicates densities of less than 0.1 birds ha^{-1}.

WATERFOWL COUNTS IN THE REPUBLIC OF IRELAND

The Irish Wetland Bird Survey (I-WeBS) was launched in November 1994 as a joint partnership between the IWC Birdwatch Ireland, the Office of Public Works and The Wildfowl & Wetlands Trust. Similar to and compatible with WeBS, the main aim is to monitor waterfowl in the Republic of Ireland. The I-WeBS National Organiser, based at IWC, is responsible for the day-to-day organisation of the scheme. The first counts were undertaken in the winter of 1994-95, concentrating effort especially in January. Counts from January have been provided by I-WeBS and are presented in Table 10. Full results and further details are given the first report of the I-WeBS scheme (Delany 1996).

By comparison with the results presented in the previous WeBS report (Cranswick *et al.* 1995), the first year of I-WeBS has already seen an enormous improvement in coverage. Together, the I-WeBS and WeBS data represent the most comprehensive counts of waterfowl in Ireland and Britain to date. As I-WeBS grows, with the aim to make counts during all winter months, a fuller understanding of waterfowl using this geographic unit will be possible.

Table 10. TOTAL NUMBERS OF WATERFOWL RECORDED BY I-WeBS IN THE REPUBLIC OF IRELAND, JANUARY 1995.

No. of sites covered	*245*
No. of sub-sites covered	*528*
Red-throated Diver	122
Black-throated Diver	4
Great Northern Diver	317
Little Grebe	443
Great Crested Grebe	854
Slavonian Grebe	13
Black-necked Grebe	4
Cormorant	2,039
Grey Heron	499
Little Egret	8
Mute Swan	4,147
Bewick's Swan	406
Whooper Swan	4,235
Whooper/Bewick's Swan	122
Pink-footed Goose	23
Greenland White-fronted Goose	11,446
Greylag Goose	3,239
Canada Goose	84
Barnacle Goose	1,487
Light-bellied Brent Goose	13,648
Feral/hybrid Goose	64
Shelduck	8,717
Wigeon	58,496
American Wigeon	3
Gadwall	128
Teal	23,263
Mallard	12,088
Pintail	1,223
Shoveler	1,888
Pochard	5,306
Ring-necked Duck	2
Ferruginous Duck	1
Tufted Duck	6,064
Scaup	2,419
Eider	19
Long-tailed Duck	40
Common Scoter	6,985
Surf Scoter	1
Velvet Scoter	2
Goldeneye	2,047
Smew	4
Red-breasted Merganser	861
Goosander	2
Ruddy Duck	10
Hybrid Aythya	1
Water Rail	22
Moorhen	513
Coot	6,789
TOTAL WILDFOWL & ALLIES	**180,098**
Oystercatcher	20,069
Ringed Plover	3,330
Golden Plover	100,237
Grey Plover	7,225
Lapwing	173,139
Knot	11,884
Sanderling	1,828
Curlew Sandpiper	1
Purple Sandpiper	157
Dunlin	93,515
Jack Snipe	4
Snipe	1,599
Woodcock	11
Black-tailed Godwit	6,876
Bar-tailed Godwit	6,187
Whimbrel	2
Curlew	33,885
Spotted Redshank	6
Redshank	14,141
Greenshank	320
Green Sandpiper	10
Common Sandpiper	2
Turnstone	2,640
TOTAL WADERS	**477,068**
Laughing Gull	1
Little Gull	5
Black-headed Gull	46,046
Ring-billed Gull	3
Common Gull	6,678
Lesser Black-backed Gull	5,617
Herring Gull	6,712
Iceland Gull	2
Glaucous Gull	5
Great Black-backed Gull	2,233
Ross's Gull	1
Kittiwake	70
TOTAL GULLS	**67,373**
TOTAL	**724,552**

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GLOSSARY

The terms listed below are generally restricted to those that have been adopted specifically for use within WeBS or more widely for monitoring.

Autumn
For waders, autumn comprises July to October inclusive. Due to differences in seasonality between species (see *Monthly Fluctuations*), a strict definition of autumn is not used for wildfowl.

British Trust for Ornithology (BTO)
The BTO is a well respected organisation, combining the skills of professional scientists and volunteer birdwatchers to carry out research on birds in all habitats and throughout the year. Data collected by the various surveys form the basis of extensive and unique databases which enable the BTO to objectively advise conservation bodies, government agencies, planners and scientists on a diverse range of issues involving birds.

Complex site
A *WeBS site* that consists of two or more *sectors*.

Core Counts
The basic WeBS counts that monitor all wetlands throughout the UK once per month on priority dates. Used to determine population estimates and trends and identify important sites.

Local Organiser
Person responsible for co-ordinating counters and counts at a local level, normally a county or large estuary, and the usual point of contact with WeBS partner HQs.

Incomplete counts
When presenting counts of an individual species, a large proportion of the number of birds was suspected to have been missed, e.g. due to part coverage of the site or poor counting conditions, or when presenting the total number of birds of all species on the site, a significant proportion of the total number was missed.

I-WeBS
An independent but complementary scheme operating in the Republic of Ireland to monitor non-breeding waterfowl, organised by the IWC Birdwatch Ireland, the National Parks and Wildlife Service (Ireland) and The Wildfowl & Wetlands Trust.

Joint Nature Conservation Committee (JNCC)
JNCC is the statutory body constituted by the Environmental Protection Act 1990 to be responsible for research and advice on nature conservation at both UK and international levels. The committee is established by English Nature, Scottish Natural Heritage and the Countryside Council for Wales, together with independent members and representatives from the Countryside Commission and Northern Ireland, and is supported by specialist staff.

Low Tide Counts (LTC)
WeBS counts made at low tide to assess the relative importance of different parts of individual estuaries as feeding areas for intertidal waterfowl.

Royal Society for the Protection of Birds (RSPB)
The RSPB is the charity that takes action for wild birds and the environment in the UK. The RSPB is the national BirdLife partner in the UK.

Spring
For waders, spring comprises April to June inclusive. Due to differences in seasonality between species (see *Monthly Fluctuations*), a strict definition of spring is not used for wildfowl.

Waterfowl
WeBS follows the definition adopted by Wetlands International. This includes a large number of families, those occurring in the UK being divers, grebes, cormorants, herons, storks, ibises and spoonbills, wildfowl, cranes, rails, waders and gulls and terns. Note that, due to differences in coverage, not all families may be included in the 'waterfowl totals' given in this report, although the species excluded and the reasons for this will be given in each case.

WeBS count sector
The unit of division of large *sites* into areas which can be counted by one person in a reasonable time period. They are often demarcated by geographic features to facilitate recognition of the boundary by counters. The finest level at which data are recorded.

WeBS count site
A biologically meaningful area that represents a discrete area used by waterfowl such that birds regularly move within but only occasionally between sites. The highest level at which count data are stored.

WeBS count sub-site
A grouping of *sectors* within a *site* to facilitate co-ordination. In most cases, sub-sites also relate to biologically meaningful units for describing waterfowl distribution.

WeBS count unit
The area/boundary within which a count is made. The generic term for *sites*, *sub-sites* and *sectors*.

Wetland Advisory Service (WAS)
The environmental consultancy wing of The Wildfowl & Wetlands Trust.

The Wildfowl & Wetlands Trust (WWT)
Founded by Sir Peter Scott in 1946, WWT is the only wildlife conservation charity specialising in wetlands and the wildlife they support. It has pioneered the bringing together of people and wildlife for the benefit of both and seeks to raise awareness of the value of wetlands, the threats they face and the actions needed to save them. To this end, WWT has eight centres throughout the UK and is dedicated to saving wetlands for wildlife and people.

Winter
For waders, winter comprises November to March inclusive. Due to differences in seasonality between species (see *Monthly Fluctuations*), a strict definition of winter is not used for wildfowl.

Winter (five-year) peak mean
Calculated by averaging the peak count in each season for a particular species at an individual site (i.e. the right hand column of figures in the table in each species account). Normally calculated using the most recent five years' data, this figure is compared with the respective *1% thresholds* to determine if the site qualifies as nationally or internationally important.

1% criterion
The Ramsar Convention has established site selection criteria. One such criterion (currently numbered Criterion 3c) indicates that a site is identified as being of international importance if it holds 1% or more of a population of waterfowl A change in the 1% criterion would be if the selection threshold changes to, say, 2% of a population (the 2% criterion) or 0.5% of a population (0.5% criterion). The term thus relates to the proportion (1%) that is used as a criterion for internationally important site selection.

1% threshold
This logically derives from the *1% criterion* and relates to the number of birds that are used as the nominal 1% of the population for the purposes of site selection. Thus, an international population of 75,215 Shelduck has a derived 1% threshold (adopting rounding conventions) of 750.

Appendix 1. INTERNATIONAL AND NATIONAL IMPORTANCE

Site designations

Criteria for assessing the international importance of wetlands have been agreed by the Contracting Parties to the Ramsar Convention on Wetlands of International Importance (Ramsar Convention Bureau 1988). Under one criterion, a wetland is considered internationally important if it regularly holds at least 1% of the individuals in a population of one species or subspecies of waterfowl, while any site regularly holding a total of 20,000 or more waterfowl also qualifies. Britain and Ireland's wildfowl belong to the north-west European population (Pirot *et al.* 1989), and the waders to the east Atlantic flyway population (Smit & Piersma 1989). A wetland in Britain is considered nationally important if it regularly holds 1% or more of the estimated British population of one species or subspecies of waterfowl, and in Northern Ireland important in an all-Ireland context if it holds 1% or more of the estimated all-Ireland population (see Table 11).

Between 1 January 1995 and 1 May 1996, a further 20 Ramsar sites and 28 SPAs were designated by the UK, many sites receiving dual designations. A number of particularly significant estuaries and other key waterfowl sites are included in these totals, including many large and complex sites, such as the Mersey and Severn Estuaries. Other notable sites include many of the East Anglian estuaries as well as important goose sites in Scotland such as Coll, Loch of Strathbeg, Westwater, Montrose Basin, Castle Loch and the Rhinns of Islay. This significantly increased rate of progress in designations is to be welcomed. We look forward to continuing progress by government on site designations in 1996, with a view to completing the SPA and Ramsar site networks in the UK by the year 2004.

Ramsar designation only
Mai Po and Inner Deep Bay (Hong Kong), Dersingham Bog (Norfolk), Wicken Fen (Cambridgeshire),Woodwalton Fen (Cambridgeshire).

SPA classification only
Mousa (Shetland), Foula (Shetland), Elenydd Mallaen (Powys/Dyfed), Castlemartin Coast (Dyfed), Ashdown Forest (East Sussex), Cape Wrath (Sutherland), Ramna Stacks and Gruney (Shetland), Papa Westray (Orkney), Sumburgh Head (Shetland), East Caithness Cliffs (Highlands), South Pennines (Phase 1) (West Yorkshire/Derbyshiye/Staffordshire), Lough Neagh and Lough Beg (Antrim/Londonderry/Tyrone/Armagh/Down and designated as a Ramsar site in 1976).

SPA and Ramsar designation
Montrose Basin (Tayside), Ribble and Alt Estuaries (Phase 2) (Lancashire/Merseyside), Portsmouth Harbour (Hampshire), River Crouch Marshes (Mid-Essex Coast Phase 3) (Essex), Coll (Strathclyde), Blackwater Estuary (Mid-Essex Coast Phase 4) (Essex), Severn Estuary (Avon/Gloucestershire/Gwent/Somerset/South Glamorgan), Teesmouth and Cleveland Coast (Cleveland), Loch of Strathbeg (Banff & Buchan/Grampian), Westwater (Tweeddale/Borders), Rhinns of Islay (Islay), Mersey Estuary (Cheshire/Merseyside), Deben Estuary (Suffolk), Greenlaw Moor (Bewickshire/Borders), Castle Loch, Lochmaben (Dumfries and Galloway), Breydon Water (Norfolk).

By 1 April 1996, a total of 100 Ramsar sites and 127 SPAs had been designated in the UK, with a further three UK Ramsar sites in Dependent Territories.

(R) = Ramsar site only; (S) = SPA only; the remainder have dual designation.

Abberton Reservoir
Abernethy Forest (S)
Ailsa Craig (S)
Alt Estuary
Ashdown Forest (S)
Benfleet & Southend
Blackwater Estuary (mid-Essex Coast Phase 4)
Bowland Fells (S)
Breydon Water
Bridgend Flats
Bridgwater Bay (R)
Broadland
Bure Marshes (R)
Burry Inlet
Cairngorm Lochs (R)
Cameron Reservoir
Cape Wrath (S)
Castle Loch, Lochmaben
Castlemark Coast (S)
Chesil Beach/Fleet
Chew Valley Lake (S)
Chichester/Langstone Harbours
Chippenham Fen (R)
Claish Moss (R)
Coll
Colne Estuary (Mid-Essex Coast Phase 2)
Copinsay (S)
Coquet Island (S)
Cors Caron (R)
Cors Fochno/Dyfi (R)
Crymlyn Bog (R)
Deben Estuary
Dee Estuary
Dengie (Mid-Essex Coast Phase 1)
Dersingham Bog (R)
Derwent Ings
East Caithness Cliffs (S)
Eilean na Muice Duibhe (Duich Moss)
Elenydd Mallaen (S)
Esthwaite Water (R)
Exe Estuary
Fair Isle (S)
Fala Flow
Farne Islands (S)
Fetlar (S)
Feur Lochain
Flamborough Head & Bempton Cliffs (S)
Flannan Isles (S)
Forth Islands (S)
Foula (S)
Fowlsheugh (S)
Gibraltar Point/The Wash (Phase 2)
Glac-na-Criche
Gladhouse Reservoir
Glannau Aberdaron (S)
Glannau Ynys Gybi (S)
Glen Tanar (S)
Grassholm (S)
Great Yarmouth North Denes (S)
Greenlaw Moor
Gruinart Flats
Hamford Water
Handa Island (S)
Hermaness & Saxa Vord (S)
Hickling Broad/Horsey Mere (R)
Holburn Lake and Moss
Hornsea Mere (S)
Hoselaw Loch
Humber Flats & Marshes
Irtinghead Mires (R)
Laggan Peninsula (S)
Leighton Moss
Lindisfarne
Llyn Idwal (R)
Llyn Tegid (R)
Loch An Duin (R)
Loch Eye
Loch Ken/Dee Marshes
Loch Leven (R)
Loch Lomond (R)
Loch of Lintrathen
Loch of Kinnordy
Loch of Skene
Loch of Strathbeg
Loch Maree
Loch Spynie
Loch Vaa (S)
Lochs Druidibeg/a'Machair/Stillgary
Lough Neagh and Lough Beg (R)
Lower Derwent Valley
Malham Tarn (R)
Martin Mere
Marwick Head (S)
Medway Estuary and Marshes
Mersey Estuary
Midland Meres and Mosses (R)
Mingulay & Berneray (S)
Minsmere/Walberswick
Monach Isles (S)
Montrose Basin

Moor House (S)
Mousa (S)
Nene Washes
North Norfolk Coast
Old Hall Marshes
Orfordness/Havergate (S)
Ouse Washes
Pagham Harbour
Papa Westray (S)
Porton Down (S)
Portsmouth Harbour
Priest Island (S)
Ramna Stacks and Gruney (S)
Rannoch Moor (R)
Redgrave and South Lopham Fens (R)
Rhins of Islay
Rhum (S)
Ribble Estuary (part) (S)
Ribble and Alt Estuaries (Phase 2)
River Crouch Marshes (Mid-Essex Coast Phase 3)
Rockcliffe Marshes
Rostherne Mere (R)
Roydon Common (R)
Rutland Water
Salisbury Plain (S)
Severn Estuary
Sheep Island (S)
Shiant Isles (S)
Silver Flowe (R)
Skokholm and Skomer Islands (S)
South Penines (Phase 1) (S)
South Tayside Goose Roosts
St Kilda (S)
Stodmarsh
Stour and Orwell
Sule Skerry & Sule Stack (S)
Sumburgh Head (S)
Swan Island (S)
Teesmouth and Cleveland Coast
Thanet Coast & Sandwich Bay
The New Forest
The Wash
The Swale
Thursley, Hankley and Frensham (S)
Thursley & Ockley Bogs (R)
(the above two sites overlap)
Traeth Lafan (S)
Treshnish Isles (S)
Upper Solway
Upper Severn Estuary
Walmore Common
West Water
Wicken Fen (R)
Woodwalton Fen (R)
Ynys Feurig (S)

1% levels for national and international importance

A wetland is considered important in a national or all-Ireland context if it regularly holds at least 1% of one species, sub-species or population of waterfowl in Great Britain or the island of Ireland respectively. Similarly, a wetland is of international importance if it supports 1% or more of the international population. Many wildfowl wintering in Britain and Ireland form part of the North-West European population, whilst many waders form part of populations that may range over much of the East Atlantic. Table 11 lists the numbers of each species that represent 1% of the British, all-Ireland and international waterfowl populations where known. Thus, any site regularly supporting at least this number of birds potentially qualifies for designation under national legislation or international Directives or Conventions. The international population for each species and sub-species is also specified in the table. However, it should be noted that, where 1% of the national population is less than 50 birds, 50 is normally used as a minimum qualifying threshold for the designation of sites of national importance. 1% thresholds have not been derived for introduced since, for these species, protected sites (e.g. SSSIs) would not be identified on the basis of numbers for these birds. Sources of qualifying levels represent the most up-to-date figures following recent reviews: for British wildfowl see Kirby (1995); for British waders see Cayford & Waters (1996); for all-Ireland importance for divers see Danielsen *et al.* (1993) and for other waterfowl see Whilde (in prep.) cited in Way *et al.* (1993). Following a recent workshop in Denmark on international populations, international criteria follow Smit & Piersma (1989) or Rose & Scott (1994). It was agreed at a recent meeting of the Ramsar Convention in Brisbane that population estimates will be reviewed by Wetlands International every three years and 1% thresholds revised every nine years (Rose & Stroud 1994).

Table 11. 1% THRESHOLDS FOR NATIONAL AND INTERNATIONAL IMPORTANCE

	Great Britain	all-Ireland	International	Population
Red-throated Diver	50	10 *	750	Europe/Greenland
Black-throated Diver	7 *	1 *	1,200	Europe/W Siberia
Great Northern Diver	30 *	?	50	Europe
Little Grebe	30 *	?	?	W Palaearctic
Great Crested Grebe	100	30 *	?	NW Europe
Red-necked Grebe	1 *	?	330	NW Europe
Slavonian Grebe	4 *	?	50	NW Europe
Black-necked Grebe	1 *	?	1,000	W Palaearctic
Cormorant	130	?	1,200	NW Europe
Little Egret	?	?	800	W Mediterranean
Grey Heron	?	?	4,500	Europe/N Africa
Mute Swan	260	55	1,800	NW Europe
Bewick's Swan	70	25 *	170	Europe (wintering)
Whooper Swan	55	100	170	Iceland
Bean Goose	4 *	+ *	800	W Tundra
Pink-footed Goose: Iceland/Greenland	1,900	+ *	1,900	Iceland/Greenland
European White-fronted Goose	60	+ *	4,500	NW Europe
Greenland White-fronted Goose	140	140	260	Greenland
Greylag Goose: Iceland	1,000	40 *	1,000	Iceland
Hebrides/N Scotland	50	n/a	50	Scotland
Barnacle Goose: Greenland	270	75	320	Greenland
Svalbard	120	+ *	120	Svalbard
Dark-bellied Brent Goose	1,000	+ *	2,500	Siberia
Light-bellied Brent Goose: Canada/Greenland	+ *	200	200	Canada/Greenland
Svalbard	25 *	+ *	40	Svalbard
Shelduck	750	70	2,500	NW Europe
Wigeon	2,800	1,250	7,500	NW Europe

	Great Britain	all-Ireland	International	Population
Gadwall	80	+ *	250	NW Europe
Teal	1,400	650	4,000	NW Europe
Mallard	5,000	500	20,000 **	NW Europe
Pintail	280	60	700	NW Europe
Garganey	+ *	+ *	20,000 **	W Africa (wintering)
Shoveler	100	65	400	NW Europe
Red-crested Pochard	+ *	+ *	200	SW/Central Europe
Pochard	440	400	3,500	NW Europe
Tufted Duck	600	400	7,500	NW Europe
Scaup	110	30 *	3,100	NW Europe
Eider	750	20 *	20,000 **	Europe
Long-tailed Duck	230	+ *	20,000 **	Iceland/Greenland
Common Scoter	350	40 *	8,000	NW Europe
Velvet Scoter	30 *	+ *	2,500	NW Europe
Goldeneye	170	110	3,000	NW Europe
Smew	2 *	+ *	150	NW Europe
Red-breasted Merganser	100	20 *	1,000	NW Europe
Goosander	90	+ *	1,500	NW Europe
Coot	1,100	250	15,000	NW Europe
Oystercatcher	3,600	500	9,000	Europe/W Africa (wintering)
Avocet	10 *	+ *	700	Europe/NW Africa (breeding)
Little Ringed Plover	?	?	?	Europe/W Africa
Ringed Plover	290	125	500	Europe/NW Africa (wintering)
passage	300			
Golden Plover	2,500	2,000	18,000	NW Europe (breeding)
Grey Plover	430	40 *	1,500	E Atlantic
Lapwing	20,000 **	2,500	20,000 **	Europe/W Africa
Knot *C. c. islandica*	2,900	375	3,500	W Europe/Canada
C. c. canutus			5,000	W Africa/W Siberia
Sanderling	230	35 *	1,000	E Atlantic
passage	300			
Little Stint	?	?	2,100	W Africa/Europe
Curlew Sandpiper	?	?	4,500	W Africa/SW Europe (wintering)
Purple Sandpiper	210	10 *	500	E Atlantic
Dunlin *C. a. arctica*			150	Greenland (breeding)
C. a. schinzii (Icelandic)			8,000	Iceland/Greenland (breeding)
C. a. schinzii (temperate)			200	UK/Ireland/Baltic
C. a. alpina	5,300	1,250	14,000	Europe (breeding)
passage	2,000			
Ruff	7 *	+ *	10,000	W Africa (wintering)
Jack Snipe	?	250	?	Europe/W Africa (wintering)
Snipe	?	?	10,000	Europe/W Africa (breeding)
Woodcock	?	?	20,000 **	Africa/Europe
Black-tailed Godwit	70	90	700	Iceland (breeding)
Bar-tailed Godwit	530	175	1,000	W Europe (wintering)
Whimbrel	+ *	+ *	6,500	Europe/W Africa (wintering)
passage	50			
Curlew	1,200	875	3,500	Europe/NW Africa
Spotted Redshank	+ *	+ *	1,500	Europe/W Africa
Redshank *T. t. totanus*	1,100	245	1,500	Europe/W Africa (wintering)
T. t. robusta	1,100		1,500	NW Europe (wintering)
passage	1,200			
Greenshank	+ *	9 *	3,000	Europe/W Africa
Green Sandpiper	?	?	?	Europe (breeding)
Common Sandpiper	?	?	?	Europe (breeding)
Turnstone	640	225	700	Europe (wintering)
Little Gull	?	?	750	Cent/E Europe (breeding)
Black-headed Gull	?	?	20,000 **	NW Europe
Common Gull	?	?	16,000	NW Europe
Lesser Black-backed Gull	?	?	4,500	W Europe
Herring Gull	?	?	13,000	W Europe/Iceland
Great Black-backed Gull	?	?	4,800	W Atlantic
Kittiwake	?	?	20,000 **	E Atlantic
Sandwich Tern	?	?	1,500	W Europe/W Africa
Common Tern	?	?	6,000	N/E Europe
Little Tern	?	?	340	E Atlantic
Black Tern	?	?	2,000	Europe/Asia

? *Population size not accurately known*

\+ *Population too small for meaningful figure to be obtained*

* *Where 1% of the British or all-Ireland wintering population is less than 50 birds, 50 is normally used as a minimum qualifying level for national or all-Ireland importance respectively*

** *A site regularly holding more than 20,000 waterfowl qualifies as internationally important by virtue of absolute numbers*

Appendix 2. LOCATIONS OF WeBS COUNT SITES

The location of all counts sites or areas mentioned in this report are given here. Sites are listed alphabetically for the UK and Northern Ireland separately, with the 1 km square OS grid reference for the centre of the site, and the county or district. Note that this is not an exhaustive list of WeBS sites counted in 1994-95, simply those mentioned by name in this report. Figure 2 shows the location of many of the more important sites for waterfowl.

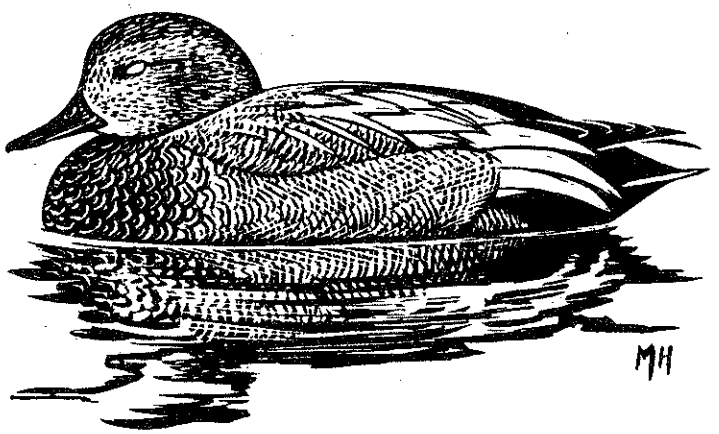
UNITED KINGDOM

Site	1 km square	County
Abberton Reservoir	NT4581	Essex
Adur Estuary	TQ2006	West Sussex
Afan Estuary	SS7488	West Glamorgan
Alaw Reservoir	SH3968	Gwynedd
Alde Complex	TM4257	Suffolk
Alnmouth*	NU2510	Northumberland
Alt Estuary	SD2903	Merseyside
Appin/Eriska/Benderloch	NM9043	Strathclyde
Artro Estuary	SH5727	Gwynedd
Attenborough Gravel Pits	SK5234	Nottinghamshire
Auchencairn Bay	NX8252	Dumfries & Galloway
Avon Estuary	SX6745	Devon
Axe Estuary	SY2590	Devon
Ballo Reservoir	NO2205	Fife
Bann Estuary	C7935	Londonderry
Baston/Langtoft Gravel Pits	TF1212	Lincolnshire
Beaulieu Estuary	SZ4298	Hampshire
Belfast Lough	J4083	Down
Belvide Reservoir	SJ8610	Staffordshire
Berney Marshes	TG4605	Norfolk
Black Cart Water	NS4767	Borders
Blackwater Estuary	TL9307	Essex
Blagdon Lake	ST5150	Avon
Blithfield Reservoir	SK0524	Staffordshire
Blyth Estuary (Northumberland)	NZ3082	Northumberland
Blyth Estuary (Suffolk)	TM4675	Suffolk
Brading Harbour	SZ6388	Isle of Wight
Braint Estuary	SH4463	Gwynedd
Breydon Water	TG4907	Norfolk
Burry Inlet	SS5096	West Glamorgan, Dyfed
Bute Lochs	NS0761	Strathclyde
Caithness Lochs	ND1859	Highland
Camel Estuary	SW9474	Cornwall
Cameron Reservoir	NO4711	Fife
Carlhurlie Reservoir	NO3904	Fife
Carlingford Lough	J2013	Down
Carmarthen Bay	SN2501	Dyfed
Carron Valley Reservoir	NS6884	Central
Carsebreck/Rhynd Lochs	NN8609	Tayside
Castle, Semple & Barr Lochs	NS3558	Strathclyde
Castle Loch, Lochmaben	NY0881	Dumfries & Galloway
Cefni Estuary	SH4067	Anglesey
Cheshunt Gravel Pits	TL3602	Hertfordshire
Chew Valley Lake	ST5659	Avon
Chichester Harbour	SU7700	West Sussex
Christchurch Harbour	SZ1792	Dorset
Clandeboye Lake	J4879	Down
Cleddau Estuary	SN0005	Dyfed
Clwyd Estuary	SJ0079	Clwyd
Coll	NM2055	Strathclyde
Colne Estuary	TM0614	Essex
Colonsay/Oronsay	NR3896	Strathclyde
Colwyn Bay	SH9079	Clwyd
Conwy Estuary	SH7877	Gwynedd
Coquet Estuary	NU2706	Gwynedd
Corby Loch	NJ9214	Grampian
Cotswold Water Park East	SU1999	Gloucestershire, Oxfordshire
Cotswold Water Park West	SU0595	Gloucestershire, Wiltshire
Cowgill Reservoirs	NT0327	Strathclyde
Cromarty Firth	NH7771	Highland
Crombie Loch	NO5240	Tayside
Crouch/Roach Estuary	TQ8496	Essex
Cuckmere Estuary	TV5197	East Sussex
Danna/Keills Peninsula	NR7383	Strathclyde
Dart Estuary	SX8258	Devon
Deben Estuary	TM2942	Suffolk
Dee Estuary (England/Wales)	SJ2675	Merseyside, Cheshire, Clwyd
Dee Estuary (Scotland)	NJ9505	Grampian
Deeping St James Gravel Pits	TF1808	Lincolnshire
Dengie Flats	TM0300	Essex
Deveron Estuary	NJ6964	Grampian
Dinnet Lochs	NJ4800	Grampian
Don Estuary	NJ9509	Grampian
Dorchester Gravel Pits	SU5795	Oxfordshire
Dornoch Firth	NH7384	Highland
Draycote Water	SP4469	Warwickshire
Drummond Pond	NN8518	Tayside
Duddon Estuary	SD2081	Cumbria
Dulas Bay	Sh4888	Gwynedd
Dundrum Bay	J4235	Down
Dungeness Gravel Pits	TR0619	Kent
Dupplin Loch	NO0320	Tayside
Durham Coast	NZ4349	Durham
Dyfi Estuary	SN6394	Dyfed
Dysynni Estuary	SH5702	Gwynedd
Eden Estuary	NO4719	Fife
Ellesmere Group	SJ4035	Shropshire
Erme Estuary	SX6249	Devon
Exe Estuary	SX9883	Devon
Eyebrook Reservoir	SP8595	Leicestershire
Fairburn Ings	SE4627	North Yorkshire
Fal Complex	SW8541	Cornwall
Fala Flow	NT4258	Lothian
Fedderate Reservoir	NJ8652	Grampian
Fen Drayton Gravel Pits	TL3470	Cambridgeshire
Fiddlers Ferry Lagoons	SJ5585	Cheshire
Fleet Bay	NX5652	Dumfries & Galloway
Fleet/Wey	SY6976	Dorset
Forth Estuary	NT2080	Lothians, Central, Fife
Foryd Bay	SH4559	Gwynedd
Fowey Estuary	SX1254	Cornwall
Gadloch	NS6471	Borders
Gannel Estuary	SW8060	Cornwall
Gladhouse Reservoir	NT2953	Lothian
Glenfarg Reservoir	NO1011	Tayside
Grafham Water	TL1568	Cambridgeshire
Guernsey Shore	WV27	Channel Islands
Gunton Park Lakes	TG2234	Norfolk
Haddo House Lochs	NJ8734	Grampain
Hamford Water	TM2225	Essex
Hanningfeild Reservoir	TQ7398	Essex
Hay-a-Park Gravel Pits	SE3658	North Yorkshire
Hayle Estuary	SW5537	Cornwall
Helford Estuary	SW7526	Cornwall
Hickling Broad	TG4121	Norfolk
Hightae Loch	NY0880	Dumfries & Galloway
Hirsel Lake	NT8240	Borders
Holburn Moss	NU0536	Northumberland
Hornsea Mere	TA1947	Humberside
Hoselaw Loch	NT8031	Borders
Hule Moss	NT7149	Borders

Site	1 km square	County
Humber Estuary	TA2020	Humberside, Lincolnshire
Hunterston Estuary	NS1848	Strathclyde
Inland Sea	SH2779	Gwynedd
Inner Clyde Estuary	NS3576	Strathclyde
Inner Moray Firth	NH6752	Highland
Irt/Mite/Esk Estuary	SD0796	Cumbria
Irvine Estuary	NS3038	Strathclyde
Islay	NR3560	Strathclyde
Jersey Shore	WV6249	Channel Islands
Kilconquhar Loch	NO4801	Fife
Killough Harbour	J5437	Down
King George V Reservoir	TQ3796	Greater London
Kingsbridge Estuary	SX7411	Devon
Kingsbury WP & Coton Pools	SP2096	Warwickshire
Kirkudbright Bay	NX6849	Dumfries & Galloway
Lackford Gravel Pits	TL7971	Suffolk
Lake of Menteith	NN5700	Central
Langstone Harbour	SU6902	Hampshire
Larne Lough	D4200	Antrim
Lavan Sands	SH6474	Gwynedd
Lindisfarne	NU1041	Northumberland
Little Paxton Gravel Pits	TL1963	Cambridgeshire
Llandegfedd Reservoir	ST3298	Gwent
Loch Druidibeg	NF7937	Western Isles
Loch Eye	NH8379	Highland
Loch Fleet Complex	NH7896	Highland
Loch Garten	NH9718	Highland
Loch Gilp	NR8686	Strathclyde
Loch Gruinart	NR2971	Strathclyde
Loch Indaal	NR3261	Strathclyde
Loch Insh & Spey Marshes	NH8304	Highland
Loch Ken	NX6870	Dumfries & Galloway
Loch Leven	NO1401	Tayside
Loch Lomond: Endrick Mouth	NS4388	Strathclyde
Loch Mahaick	NN7006	Central
Loch Mullion	NN9833	Tayside
Loch na Cille	NR6980	Strathclyde
Loch of Boardhouse	HY2725	Orkney
Loch of Harray	HY2915	Orkney
Loch of Kinnordy	NO3655	Tayside
Loch of Lintrathen	NO2754	Tayside
Loch of the Lowes	NO0443	Perthshire
Loch of Skene	NJ7807	Grampian
Loch of Spiggie	HU3716	Shetland
Loch Quien	NS0659	Strathclyde
Loch of Stenness	NY2812	Orkney
Loch of Strathbeg	NK0758	Grampian
Loch Ryan	NX0565	Dumfries & Galloway
Loch Spynie	HU3716	Shetland
Loch Tullybelton	NO0034	Tayside
Loch Ussie	NH5057	Highland
Loch Watten	ND2256	Highland
Looe Estuary	SX2553	Cornwall
Lossie Estuary	NJ2470	Grampian
Lough Foyle	C6025	Londonderry
Loughs Neagh & Beg	J0575	Down, Antrim, Londonderry, Tyrone, Armagh
Lower Bogrotten	NJ4861	Grampian
Lower Windrush Valley	SP4004	Oxfordshire
Lower Derwent Valley	SE6938	Humberside
Luce Bay	NX1855	Dumfries & Galloway
Machrihanish	NR6522	Strathclyde
Martin Mere	SD4105	Lancashire
Mawddach Estuary	SH6416	Gwynedd
Medina Estuary	SZ5093	Isle of Wight
Medway Estuary	TQ8471	Kent
Mersey Estuary	SJ4578	Cheshire
Mid Avon Valley	SU1510	Hampshire
Middle Yare Marshes	TG3504	Norfolk
Minsmere	TM4666	Suffolk
Monikie Reservoir	NO5038	Tayside
Montrose Basin	NO6958	Tayside
Morecambe Bay	SD4070	Lancashire, Cumbria
Nene Washes	TF3300	Cambridgeshire
Nevern Estuary	SN0539	Dyfed
Newhaven Estuary	TQ4400	East Sussex
Newtown Estuary	SZ4291	Isle of Wight
North West Solent	SZ3395	Hampshire
North Norfolk Marshes	TF8546	Norfolk
Ogmore Estuary	SS8675	Mid Glamorgan
Orkney	HY4010	Orkney
Orwell Estuary	TM2238	Suffolk
Otter Estuary	SY0872	Cornwall
Ouse Washes	TL5394	Cambridgeshire
Outer Ards	J6663	Down
Pagham Harbour	SZ8796	West Sussex
Pegwell Bay	TR3563	Kent
Pitsford Reservoir	SP7669	Northamptonshire
Plym Estuary	SX5055	Devon
Poole Harbour	SY9988	Dorset
Portsmouth Harbour	SU6204	Hampshire
Pulborough & Amberley Levels	TQ0416	West Sussex
Queen Mary Reservoir	TQ0769	Surrey
Red Wharf Bay	SH4893	Gwynedd
Rhunahaorine	NR7049	Argyll
Ribble Estuary	SD3825	Lancashire
R. Spey: Boat of Balliefirth	NH9922	Highland
R. Tweed: Kelso - Coldstream	NT7737	Borders
River Foyle: Grange	C3606	Tyrone
Rostherne Mere	SJ7484	Cheshire
Rough Firth	NX8453	Dumfries & Galloway
Rutland Water	SK9207	Leicestershire
Rye Harbour/Pett Level	TQ9418	East Sussex
Seven Oaks Wildfowl Reserve	TQ5256	Kent
Severn Estuary	ST5058	Gloucestershire, Avon, Somerset, Gwent, Mid Glamorgan, South Glamorgan
Slains Lochs	NK0230	Grampian
Snettisham	TF6535	Norfolk
Solway Estuary	NY1060	Cumbria
Somerset Levels	ST4040	Somerset
South West Lancashire	SD4015	Lancashire
Southampton Water	SU4507	Hampshire
Spey Estuary	NJ3465	Grampian
St Benets Levels	TG3815	Norfolk
Staines Reservoir	TQ0575	Surrey
Stour Estuary	TM1732	Essex, Suffolk
Strangford Lough	J5560	Down
Stranraer Lochs	NX1161	Dumfries & Galloway
Stratfield Saye	SU7061	Hampshire
Swale Estuary	TQ9765	Kent
Swansea Bay	SS6391	West Glamorgan
Swithland Reservoir	SK5513	Leicestershire
Tamar Complex	SX4363	Devon, Cornwall
Taw/Torridge Estuary	SS4733	Devon
Tay Estuary	NO3225	Fife, Tayside
Tay/Isla Valley	NO1438	Tayside
Tees Estuary	NZ5528	Cleveland
Teifi Estuary	SN1647	Dyfed
Teign Estuary	SX9272	Devon
Thames Estuary	TQ7880	Essex, Greater London
Thanet Coast	TR2669	Kent
Theale Gravel Pits	SU6570	Berkshire
Thorpe Water Park	TQ0268	Surrey
Tiree	NL9741	Strathclyde
Tophill Low Reservoirs	TA0748	Humberside

Site	1 km square	County	Site	1 km square	County
Traeth Bach	SH5736	Gwynedd	West Water Reservoir	NT1252	Borders
Tweed Estuary	NT9853	Northumberland	Wigtown Bay	NX4456	Dumfries & Galloway
Tyne Estuary	NZ3768	Tyne & Wear			
Tyninghame Estuary	NT6379	Lothian	Windermere	SD3995	Cumbria
Upper Lough Erne	H3231	Fermanagh	Woolston Eyes	SJ6588	Cheshire
Walland Marsh	TQ9824	Kent	Wootton Estuary	SZ5592	Isle of Wight
Walmore Common	SO7425	Gloucestershire	Wraysbury Gravel Pits	TQ0073	Berkshire
Wash	TF5540	Lincolnshire, Norfolk	Yar Estuary	SZ3588	Isle of Wight
			Yealm Estuary	SX5450	Devon
Wath & Broomhill Ings	SE4102	South Yorkshire	Ythan Estuary	NK0026	Grampian

* *The site Almouth comprises the Aln Estuary and the adjacent area of non-estuarine open coast, South Alnmouth. Previous Wildfowl and Wader Counts presented data for South Alnmouth only*



Appendix 3. TOTAL NUMBERS OF WATERFOWL RECORDED BY WeBS IN ENGLAND DURING 1994-95.

Wildfowl at all sites	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Number of units counted	*1,108*	*1,430*	*1,481*	*1,521*	*1,576*	*1,500*	*1,465*
Red-throated Diver	36	123	88	92	205	235	140
Black-throated Diver	0	1	3	4	16	5	2
Great Northern Diver	1	1	3	11	22	18	6
Unidentifed diver	0	0	0	1	0	0	0
Little Grebe	2,320	2780	2869	2,537	2,309	1,932	1,824
Great Crested Grebe	6,668	7859	7975	6,075	7,143	6,609	6,723
Red-necked Grebe	2	14	12	9	28	15	14
Slavonian Grebe	0	6	43	48	90	145	39
Black-necked Grebe	13	22	34	25	44	36	29
Cormorant	9,243	10136	10620	9,238	9,894	9,337	8,501
Mute Swan	10,473	11,104	12,823	12,244	11,286	10,117	9,188
Black Swan	10	10	7	10	9	6	8
Trumpeter Swan	0	2	0	0	0	0	0
Bewick's Swan	3	11	2,047	5,048	7,192	4,250	59
Whooper Swan	7	50	1,613	1,825	§2,269	2,098	1,351
Unidentified yellow-billed swan	0	0	0	278	0	0	0
Swan Goose	1	26	28	28	32	8	9
Bean Goose	1	2	8	193	9	44	12
Pink-footed Goose	23	+29,918	+44,910	63,420	30,016	18,257	14,883
White-fronted Goose	0	0	5	15	43	107	0
European Whitefront	2	6	379	703	3,612	3,784	7
Greenland Whitefront	0	0	1	151	5	0	0
Lesser White-fronted Goose	1	1	0	2	3	1	2
Greylag Goose†	11,646	14,482	16,043	14,437	14,005	12,209	8,184
Bar-headed Goose	13	22	25	13	14	16	15
Snow Goose	43	61	52	59	26	92	30
Ross's Goose	2	1	1	1	0	1	0
Emperor Goose	0	0	0	0	0	1	0
Canada Goose	28,407	33,576	34,733	32,035	33,577	25,224	19,891
Barnacle Goose	100	185	3,379	553	9,314	2,993	171
Brent Goose††	1	1	0	8	1	0	6
Dark-bellied Brent	88	15,637	85,638	103,058	+91,051	+79,720	49,229
Light-bellied Brent	218	1,335	2,150	1,639	383	160	9
Red-breasted Goose	0	0	1	0	1	0	0
Egyptian Goose	220	109	44	52	62	81	76
Feral/hybrid Goose	29	55	67	67	56	53	58
Ruddy Shelduck	20	10	10	7	2	4	7
Cape Shelduck	0	0	1	0	0	0	0
Shelduck	14,706	34,537	57,654	55,965	55,881	53,648	44,315
Muscovy Duck	57	127	126	120	106	82	14
Wood Duck	2	6	3	6	5	3	5
Mandarin	183	73	113	61	170	94	85
Wigeon	10,884	101,258	270,877	320,046	276,759	196,621	93,351
American Wigeon	0	0	0	0	0	1	0
Chiloe Wigeon	0	0	0	1	2	0	0
Falcated Duck	0	0	0	0	0	0	0
Gadwall	6,072	7,656	9,826	10,584	8,234	6,055	4,102
Teal	36,227	60,210	91,330	101,896	110,362	74,392	50,548
Mallard	89,785	105,856	115,827	114,483	99,422	66,129	40,916
Pintail	2,677	10,177	15,619	17,289	16,618	12,080	2,270
Bahama Pintail	0	0	0	0	1	1	0
Garganey	15	9	4	1	0	0	7
Blue-winged Teal	0	0	1	0	0	0	0
Shoveler	5,908	7,462	8,811	8,057	6,743	7,337	5,836
Ringed Teal	0	0	0	0	0	1	0
Red-crested Pochard	62	90	83	59	70	91	48
Pochard	8,288	15,242	28,954	28,968	33,366	34,387	7,446
Ring-necked Duck	0	0	1	3	0	0	1
Ferruginous Duck	0	0	2	1	1	0	0
Tufted Duck	23,980	28,859	39,039	40,055	39,519	33,530	28,015
Scaup	19	42	85	371	1,339	454	289
Eider	4,284	8,388	8,550	5,790	4,321	5,579	5,575
Long-tailed Duck	0	2	25	122	85	94	126
Common Scoter	309	219	804	6,071	3,700	4,805	1,748
Velvet Scoter	2	0	23	37	102	19	1
Goldeneye	20	293	3,856	5,335	6,823	7,197	6,019
Hooded Merganser	0	0	0	0	0	0	0
Smew	0	1	8	42	80	93	28

	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Red-breasted Merganser	798	839	1,803	2,011	2,052	2,000	2,031
Goosander	325	361	634	1,278	1,731	1,444	1,247
Ruddy Duck	1,463	2,147	2,259	2,518	2,882	2,444	1,721
Feral/hybrid Mallard type	46	100	93	153	163	110	129
Hybrid Aythya	0	1	0	1	2	0	1
Water Rail	51	110	242	191	201	180	155
Spotted Crake	0	1	0	0	0	0	0
Moorhen	6,663	9,343	8,492	8,353	9,396	8,438	7,158
Coot	76,124	85,343	90,440	86,335	80,969	49,376	35,861
TOTAL WILDFOWL†††	**358,541**	**606,298**	**981,196**	**1,070,089**	**983,824**	**744,243**	**459,521**

Waders at estuarine/coastal sites	Nov	Dec	Jan	Feb	Mar
Number of sites counted	*93*	*90*	*91*	*90*	*85*
Oystercatcher	143,269	135,361	138,224	132,044	87,366
Black-winged Stilt	1	0	1	1	1
Avocet	2,707	1,985	2,386	2,683	1,573
Little Ringed Plover	0	0	0	0	2
Ringed Plover	8,113	7,763	5,042	5,759	3,649
Kentish Plover	0	1	1	1	0
Dotterel	0	1	1	0	0
Golden Plover	116,277	85,110	80,078	87,582	19,044
Grey Plover	46,545	46,960	34,995	43,880	51,979
Lapwing	299,612	252,188	262,932	228,052	12,395
Knot	214,881	228,053	168,509	197,435	142,619
Sanderling	7,796	5,522	4,786	4,634	7,083
Little Stint	14	3	1	3	3
Curlew Sandpiper	1	0	0	0	0
Purple Sandpiper	624	829	826	883	594
Dunlin	403,168	465,217	333,529	375,487	184,136
Ruff	152	57	147	234	136
Jack Snipe	34	22	26	9	12
Snipe	2,616	2,093	2,248	1,932	1,417
Woodcock	22	1	0	5	3
Black-tailed Godwit	8,904	9,570	9,950	8,191	12,874
Bar-tailed Godwit	22,120	24,458	24,233	35,674	8,220
Whimbrel	18	4	5	4	85
Curlew	55,841	51,235	55,796	59,244	47,451
Spotted Redshank	62	72	68	45	41
Redshank	61,640	55,411	48,032	61,522	50,802
Greenshank	163	117	99	110	143
Green Sandpiper	40	53	26	30	28
Wood Sandpiper	2	0	0	0	0
Common Sandpiper	17	22	21	15	19
Turnstone	11,355	10,006	7,137	9,806	9,162
Grey Phalarope	0	1	2	0	0
TOTAL WADERS	**1,405,994**	**1,382,115**	**1,179,101**	**1,255,265**	**640,837**

\+ *Counts include data from the following goose censuses: national census of Pink-footed and Greylag Geese in October and November; January and February census of Dark-bellied Brent Geese. See* Surveys and Projects *for more details.*

§ *Total from the Icelandic Whooper Swan Census. WeBS counts alone recorded 1,954 birds.*

† *Comprises mainly feral birds, and small numbers of the Icelandic breeding population.*

†† *Indicates Brent Geese which were not identified to subspecies.*

††† *Total wildfowl represents numbers of all divers, grebes, Cormorant, swans, geese, ducks and rails.*

Footnote: Where a WeBS site crosses a country boundary (e.g. The Severn Estuary), only waterfowl within the English part of the site are included in the above table.

Appendix 4. TOTAL NUMBERS OF WATERFOWL RECORDED BY WeBS IN SCOTLAND DURING 1994-95.

Wildfowl at all sites	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Number of units counted	*373*	*504*	*477*	*493*	*566*	*572*	*556*
Red-throated Diver	12	210	197	210	178	220	122
Black-throated Diver	2	34	10	34	34	18	30
Great Northern Diver	1	16	8	27	11	9	12
White-billed Diver	0	1	0	0	0	0	0
Unidentifed diver	0	0	0	0	1	0	8
Little Grebe	461	496	284	246	164	146	200
Great Crested Grebe	735	451	585	303	195	381	420
Red-necked Grebe	36	13	49	92	14	18	5
Slavonian Grebe	8	74	89	126	65	106	66
Black-necked Grebe	4	1	3	0	3	1	3
Cormorant	1,662	2,307	2,239	2,855	3,001	2,754	1,687
Mute Swan	2,290	3,007	2,769	2,770	2,724	2,506	2,046
Black Swan	2	4	2	0	0	0	0
Bewick's Swan	0	0	24	8	14	10	0
Whooper Swan	10	223	960	1,835	§2,602	1,007	1,053
Bean Goose	1	1	35	0	3	0	0
Pink-footed Goose	1,003	+230,568	+138,404	61,072	25,150	23,206	33,465
European Whitefront	0	0	1	0	3	14	0
Greenland Whitefront	0	290	+19,101	514	107	574	+16,480
Greylag Goose†	1,651	+39,124	+82,718	28,456	17,406	12,404	8,876
Snow Goose	2	2	3	2	4	12	12
Emperor Goose	0	0	1	1	0	1	1
Canada Goose	656	366	307	456	351	330	254
Barnacle Goose	32	11,914	6,339	9,113	5,965	4,717	12,139
Dark-bellied Brent	0	4	0	0	12	1	0
Light-bellied Brent	35	33	20	10	5	12	12
Red-breasted Goose	0	0	0	1	0	0	0
Feral/hybrid Goose	1	1	1	1	1	9	26
Ruddy Shelduck	0	0	0	2	0	0	0
Shelduck	6,304	3,163	4,574	5,068	5,330	5,303	3,745
Muscovy Duck	0	1	1	1	1	0	0
Mandarin	1	0	0	0	2	0	0
Wigeon	4,481	49,750	36,529	59,063	49,499	34,843	13,409
American Wigeon	0	0	1	0	0	0	0
Gadwall	370	360	237	74	46	50	83
Teal	4,733	11,825	9,489	14,302	12,736	8,544	4,312
Mallard	19,189	26,196	21,719	27,768	30,077	20,976	10,130
Pintail	263	2,830	2,617	1,631	3,465	1,043	96
Garganey	1	0	0	0	0	0	0
Blue-winged Teal	0	0	0	1	0	0	0
Shoveler	627	968	595	365	116	65	114
Red-crested Pochard	1	0	0	0	1	0	0
Pochard	944	4,228	7,722	5,784	5,544	3,261	1,619
Ring-necked Duck	0	0	0	0	1	1	1
Tufted Duck	8,021	9,558	10,606	8,054	8,357	6,960	6,327
Scaup	276	1,162	1,558	1,770	2,101	2,091	1,307
Eider	17,146	15,091	14,584	11,893	9,897	13,231	12,414
King Eider	2	1	0	0	0	0	1
Long-tailed Duck	0	162	1,009	2,473	1,517	1,588	1,161
Common Scoter	788	1,799	2,863	10,059	3,105	3,168	3,296
Surf Scoter	0	0	1	7	4	4	4
Velvet Scoter	72	129	456	639	425	352	312
Goldeneye	145	1,064	4,049	7,644	8,164	8,526	5,837
Smew	0	0	6	2	4	8	4
Red-breasted Merganser	795	2,664	1,591	2,981	2,399	2,543	1,490
Goosander	715	1,056	755	972	728	1,157	382
Ruddy Duck	132	142	104	60	5	3	22
Feral/hybrid Mallard type	0	1	0	0	2	0	0
Hybrid Aythya	0	0	0	0	0	2	5
Water Rail	9	22	11	12	9	6	18
Moorhen	594	891	708	640	554	519	522
Coot	5,976	6,939	7,820	6,349	5,962	4,168	3,106
TOTAL WILDFOWL‡‡	**80,189**	**429,142**	**383,754**	**275,746**	**208,064**	**166,868**	**146,634**

Waders at estuarine/coastal sites	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Number of sites counted	*54*	*63*	*65*	*63*	*65*
Oystercatcher	51,306	50,510	61,105	54,120	25,756
Ringed Plover	1,960	1,722	1,632	1,763	834
Golden Plover	12,848	8,915	6,077	6,676	1,736
Grey Plover	1,707	1,460	2,097	2,672	1,513
Lapwing	12,966	16,314	12,625	10,120	1,699
Knot	4,700	14,897	22,775	18,558	5,843
Sanderling	192	170	217	199	126
Purple Sandpiper	110	396	322	365	290
Dunlin	23,729	38,397	40,886	34,528	6,865
Ruff	1	4	2	3	4
Jack Snipe	3	2	3	1	2
Snipe	261	435	260	217	264
Woodcock	0	3	0	1	0
Black-tailed Godwit	93	126	146	146	109
Bar-tailed Godwit	1,981	3,889	7,776	7,982	1,097
Whimbrel	3	0	0	0	1
Curlew	9,380	11,150	13,911	16,268	9,244
Spotted Redshank	1	1	0	0	0
Redshank	13,213	21,403	13,548	14,779	9,448
Greenshank	42	55	40	33	29
Green Sandpiper	0	0	0	1	0
Wood Sandpiper	1	0	0	0	0
Common Sandpiper	0	2	0	0	0
Turnstone	2,316	3,579	3,466	3,359	2,563
TOTAL WADERS	**136,813**	**173,430**	**186,888**	**171,791**	**67,423**

\+ *Counts include data from the following goose censuses: national census of Pink-footed and Greylag Geese in October and November; international censuses of Greenland White-fronted Geese in November/December and March/April.* See Surveys and Projects *for more details.*

§ *Total from the Icelandic Whooper Swan Census. WeBS counts alone recorded 1,271 birds.*

† *Comprises mainly birds from the Icelandic breeding population, with up to 2,340 feral birds (Delany 1992)*

†† *Total wildfowl represents numbers of all divers, grebes, Cormorant, swans, geese, ducks and rails*

Footnote: Where a WeBS site crosses a country boundary (e.g. The Solway Estuary), only waterfowl within the Scottish part of the site are included in the above table.

Appendix 5. TOTAL NUMBERS OF WATERFOWL RECORDED BY WeBS IN WALES DURING 1994-95.

	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Wildfowl at all sites							
Number of units counted	*145*	*152*	*160*	*160*	*177*	*178*	*156*
Red-throated Diver	0	31	3	3	3	1	30
Black-throated Diver	0	0	0	0	1	1	0
Great Northern Diver	0	0	5	0	1	4	0
Little Grebe	120	227	237	212	208	159	101
Great Crested Grebe	97	145	182	92	84	127	129
Red-necked Grebe	0	0	1	1	1	0	0
Slavonian Grebe	0	2	1	0	3	3	0
Black-necked Grebe	0	0	0	0	5	0	0
Cormorant	1,216	924	906	593	493	477	482
Mute Swan	462	398	334	299	261	206	206
Black Swan	2	2	3	2	2	2	1
Bewick's Swan	0	0	1	4	0	0	0
Whooper Swan	0	0	41	35	§109	24	29
Pink-footed Goose	0	0	0	0	3	1	0
White-fronted Goose	0	0	0	0	1	0	0
Greenland Whitefront	0	84	150	130	133	105	160
Greylag Goose	131	318	444	143	457	396	251
Canada Goose	667	1,061	1,259	1,188	1,223	896	542
Barnacle Goose	9	10	13	20	20	15	3
Dark-bellied Brent	0	62	622	640	692	836	147
Light-bellied Brent	0	3	14	74	30	47	39
Feral/hybrid Goose	1	1	6	2	3	3	0
Ruddy Shelduck	0	0	0	1	0	1	0
Shelduck	735	1,683	2,417	4,725	4,736	4,438	3,622
Muscovy Duck	4	0	0	0	0	0	0
Mandarin	0	0	0	1	1	4	0
Wigeon	587	7,587	13,758	12,408	13,731	5,245	357
Chiloe Wigeon	1	0	0	0	0	0	0
Gadwall	41	8	43	40	49	27	21
Teal	1,492	2,033	5,655	5,056	6,203	4,196	2,043
Mallard	6,268	7,204	6,654	5,651	6,199	3,390	1,534
Pintail	44	249	633	1,491	1,953	336	37
Shoveler	81	102	356	483	592	461	164
Red-crested Pochard	0	0	0	0	0	0	0
Pochard	114	337	925	1,104	1,079	1,000	132
Tufted Duck	1,149	453	1,211	1,315	1,274	1,020	689
Scaup	0	17	29	3	90	84	1
Eider	6	40	2	0	0	37	30
Long-tailed Duck	0	2	4	0	1	0	1
Common Scoter	69	206	144	392	596	520	66
Velvet Scoter	0	0	0	1	1	0	0
Goldeneye	4	8	203	308	815	416	280
Smew	0	0	6	2	3	3	1
Red-breasted Merganser	166	311	330	165	226	166	225
Goosander	24	23	36	39	29	41	51
Ruddy Duck	123	115	122	125	80	120	61
Feral/hybrid Mallard type	34	66	23	42	45	54	39
Water Rail	3	4	20	11	7	12	9
Moorhen	263	284	263	297	316	293	242
Coot	2,503	2,274	2,555	2,133	2,063	1,673	984
TOTAL WILDFOWL†	**16,416**	**26,274**	**39,611**	**39,231**	**43,822**	**26,840**	**12,709**

Waders at estuarine/coastal sites	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Number of sites counted	*28*	*27*	*31*	*30*	*28*
Oystercatcher	35,616	43,578	34,852	31,289	18,075
Avocet	0	0	2	0	0
Little Ringed Plover	0	0	0	0	1
Ringed Plover	873	689	569	603	132
Golden Plover	6,566	8,884	10,368	9,425	645
Grey Plover	499	297	915	545	97
Lapwing	7,709	23,533	37,551	17,192	305
Knot	2,657	3,753	2,537	1,164	62
Sanderling	1,648	1,182	566	431	150
Purple Sandpiper	0	4	5	9	5
Terek Sandpiper	1	0	0	0	0
Dunlin	14,847	30,643	30,766	29,132	3,435
Ruff	2	2	1	0	2
Jack Snipe	3	7	3	3	1
Snipe	273	492	239	366	179
Woodcock	1	0	0	0	0
Black-tailed Godwit	1,458	286	98	76	69
Bar-tailed Godwit	125	339	179	230	155
Whimbrel	0	1	0	0	2
Curlew	10,231	9,795	13,877	11,430	4,812
Spotted Redshank	9	4	12	5	1
Redshank	5,967	6,308	5,737	7,259	4,204
Greenshank	41	48	29	31	18
Green Sandpiper	7	2	4	3	2
Common Sandpiper	3	1	1	1	1
Turnstone	1,095	705	531	977	537
TOTAL WADERS	**89,631**	**130,553**	**138,842**	**110,171**	**32,890**

§ *Total from the Icelandic Whooper Swan Census. WeBS counts alone recorded 40 birds.*

† *Total wildfowl represents numbers of all divers, grebes, Cormorant, swans, geese, ducks and rails.*

Footnote: Where a WeBS site crosses a country boundary (e.g. The Severn Estuary), only waterfowl within the Welsh part of the site are included in the above table.

Appendix 6. TOTAL NUMBERS OF WATERFOWL RECORDED BY WeBS IN THE ISLE OF MAN DURING 1994-95.

Wildfowl at all sites	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Number of units counted	2	2	2	2	2	2	2
Cormorant	7	5	3	5	7	1	0
Mute Swan	0	0	0	0	0	2	6
Whooper Swan	0	0	0	0	§36	0	0
Light-bellied Brent	0	0	0	0	0	0	2
Shelduck	0	2	5	22	29	67	89
Wigeon	12	179	128	336	385	251	34
Teal	60	76	75	138	144	239	45
Mallard	121	105	127	233	325	110	49
Goldeneye	0	0	1	9	1	6	0
Red-breasted Merganser	0	0	1	0	0	0	0
TOTAL WILDFOWL†	**200**	**367**	**340**	**743**	**927**	**676**	**225**

Waders at estuarine/coastal sites	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**
Number of sites counted	2	2	2	2	2
Oystercatcher	179	240	172	266	212
Ringed Plover	14	0	0	13	18
Golden Plover	250	0	30	120	14
Grey Plover	3	0	0	0	0
Lapwing	262	12	44	2	13
Dunlin	42	0	0	0	6
Snipe	4	0	0	0	0
Bar-tailed Godwit	6	1	1	2	0
Curlew	542	411	644	772	101
Redshank	42	55	19	27	30
Turnstone	23	16	14	61	20
TOTAL WADERS	**1,367**	**735**	**924**	**1,263**	**414**

§ *Total from the Icelandic Whooper Swan Census. No birds were recorded by WeBS counts*

† *Total wildfowl represents numbers of all divers, grebes, Cormorant, swans, geese, ducks and rails*

Appendix 7. TOTAL NUMBERS OF WATERFOWL RECORDED BY WeBS IN THE CHANNEL ISLANDS DURING 1994-95.

	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Wildfowl at all sites							
Number of units counted	*6*	*15*	*14*	*30*	*30*	*29*	*14*
Little Grebe	0	3	3	4	4	2	0
Great Crested Grebe	0	0	0	0	1	1	0
Slavonian Grebe	0	0	0	0	1	2	0
Cormorant	3	11	15	27	11	5	7
Mute Swan	0	2	2	3	2	2	0
Dark-bellied Brent	0	0	32	3	189	54	98
Shelduck	0	0	0	0	0	0	0
Wigeon	0	0	0	9	8	2	0
Gadwall	0	0	0	2	4	4	3
Teal	0	14	65	104	108	153	50
Mallard	19	249	435	387	265	185	83
Pintail	0	0	0	0	0	1	0
Shoveler	0	4	7	42	31	6	10
Pochard	0	0	4	0	2	4	4
Tufted Duck	0	42	65	57	54	26	14
Red-breasted Merganser	0	0	0	0	2	0	0
Goosander	0	0	0	0	0	1	0
Ruddy Duck	0	0	0	1	1	1	0
Water Rail	0	24	39	51	59	49	24
Moorhen	2	109	128	157	169	160	113
Coot	2	38	202	43	50	55	1
TOTAL WILDFOWL†	**26**	**496**	**997**	**890**	**961**	**713**	**407**
Waders at estuaries/coastal sites							
Number of sites counted			*1*	*2*	*2*	*2*	*1*
Oystercatcher			976	1,539	2,664	2,289	418
Ringed Plover			141	225	64	261	2
Golden Plover			29	53	1	0	0
Grey Plover			103	698	647	644	132
Lapwing			0	4	0	2	0
Sanderling			29	262	233	244	1
Purple Sandpiper			6	11	27	12	18
Dunlin			152	1,779	1,294	2,516	1
Snipe			0	0	0	18	6
Bar-tailed Godwit			0	120	183	146	0
Curlew			149	324	420	295	37
Spotted Redshank			0	1	0	0	0
Redshank			44	258	317	260	10
Greenshank			0	3	0	8	0
Turnstone			601	758	905	736	533
TOTAL WADERS			**2,230**	**6,035**	**6,755**	**7,431**	**1,158**

† *Total wildfowl represents numbers of all divers, grebes, Cormorant, swans, geese, ducks and rails*