

Summary

The importance of wetlands in Ireland during the winter for arctic and boreal-nesting migratory waterbirds was recognised through surveys carried out between 1971 and 1975 and later between 1984 and 1987. These surveys highlighted the need for ongoing monitoring in Ireland. The Irish Wetland Bird Survey (I-WeBS) and Wetland Bird Survey (WeBS) were initiated in the Republic of Ireland and Northern Ireland respectively during the mid-1990s. This book aims to assess changes in the abundance and distribution of waterbirds and the status of their wetlands since the earlier surveys, and also during the course of I-WeBS and WeBS.

I-WeBS is a joint project of BirdWatch Ireland, the National Parks and Wildlife Service and the Wildfowl and Wetlands Trust (UK). WeBS is a joint project of the British Trust for Ornithology, the Wildfowl and Wetlands Trust, the Royal Society for the Protection of Birds (RSPB) and the Joint Nature Conservation Committee (JNCC).

The core count methodology used in both these schemes is compatible with existing schemes in Britain and Europe. Coordinated monthly counts of waterbirds (divers, grebes, Cormorant, herons and egrets, swans, geese, ducks, rails, waders, gulls, terns and Kingfisher) are carried out mostly between September and March inclusive. The dates chosen for counting are pre-determined to maximise synchronisation, and are selected to optimise tidal conditions for counters covering coastal sites. Organisation of the respective schemes is the responsibility of the I-WeBS National Organiser and the WeBS Secretariat, while coordination of the counts at a local level is significantly facilitated by a network of Regional Organisers. The major contributors to I-WeBS and WeBS are skilled volunteer observers and staff from the respective stakeholders (principally National Parks & Wildlife Service and BirdWatch Ireland in the Republic and Environmental Heritage and Service and the RSPB in Northern Ireland).

In total, 25,147 counts were made at 785 sites in Ireland over seven seasons between 1994/95 and 2000/01. This included 690 sites in the Republic and 95 in Northern Ireland. Coverage remained relatively consistent throughout, and was typically highest in January each season.

Overall, 20 and 43 species occurred in internationally or nationally important numbers respectively at one or more sites. A total of 59 internationally important and 96 nationally important sites was identified, the majority of which, by a very slight margin (52%), are inland. A total of 16 sites regularly supported in excess of 20,000 waterbirds (Ramsar criterion), and all of these also supported internationally important numbers of at least one species. The top 10 most important sites have remained consistent since the former survey during the mid-1980s, with the exception of Dungarvan Harbour, which has since been replaced by Lough Corrib. Loughs Neagh and Beg remain the most important wetland complex. Further, five new sites were identified during the core count period, and a further nine that were promoted from nationally important status during the earlier survey. In contrast, three sites were demoted to nationally important status since the earlier survey. The list of nationally important sites includes an additional 41 sites that were not recognised as internationally or nationally important during the former survey.

Accounts of 44 wildfowl, 26 wader and 10 gull species are presented. Trend analyses carried out on 12 wader and 17 species were based on data for the 1994/95 to 2000/01 period. Overall, there was a marginal decline in wildfowl and wader numbers combined. This was the product of increasing wildfowl and declining wader numbers. Cormorant *Phalacrocorax carbo* showed the highest rate of annual increase (5%), while Pintail *Anas acuta* showed the highest rate of decline (6%). There were other notable increases (between 2 and 4% annually) in Mute Swan *Cygnus olor*, Oystercatcher *Haematopus ostralegus*, Black-tailed Godwit *Limosa limosa*, Redshank *Tringa totanus* and Greenshank *Tringa nebularia*, and declines (between 2 and 5% annually) in Little Grebe *Tachybaptus ruficollis*, Wigeon *Anas penelope*, Shoveler *Anas clypeata*, Red-breasted Merganser *Mergus serrator*, Coot *Fulica atra*, Ringed Plover *Charadrius hiaticula*, Grey Plover *Pluvialis squatarola*, Knot *Calidris canutus*, Dunlin *Calidris alpina* and Turnstone *Arenaria interpres*. The remaining 11 species remained stable during that time period.

Industrial development has occurred on many coastal wetland sites, and has formed a basis for significant growth and expansion of many towns and cities. Many wetland sites continue to come under increasing threat to such development. However, many new forms of both aquatic and terrestrial-based activities have appeared in recent times. Further, there has been a considerable increase in aquaculture. Development of sewage treatment works is ongoing at many sites and is required to keep pace with population growth. Most of these activities affect the distribution of waterbird communities.

While all these factors are to some degree managed, one new factor, which is less easily controlled, has arisen since former wetland surveys. Already, the effects of climate change are beginning to show. The expansion in range of Little Egret into southern Ireland and Britain, and the short-stopping of Bewick's Swan and many species, particularly those migrating from breeding areas to the northeast, further along their respective flyways indicate a warming climate. Breeding Greenland White-fronted Geese *Anser albifrons flavirostris* face increased competition with Canada Geese *Branta canadensis*, the latter whose range expansion into west Greenland has possibly been mediated by a milder conditions. Ireland and Britain have served as a sink for many waterbird species following cold weather periods, particularly from continental Europe. More extreme conditions have forced some species, including those from Britain and Ireland further south into France and Iberia. With continued global warming, and its predicted effects on climate, the frequency of these weather events will decline. Cold weather movements may no longer occur, and numbers of several species wintering in Ireland and Britain may appear to decline. However, it is also likely that other species with more southerly wintering distributions may expand their ranges northwards into Ireland and Britain. Continued warming will alter the migration routes of many waterbird species, and it is likely that the distribution of many species present in Ireland will change considerably over the next 10 years.