

Winter Gulls 1993

Title

Winter Gull Roosts 1993

Description and Summary of Results

Four previous surveys (1953, 1963, 1973 and 1983) suggested that numbers of wintering gulls increased between the 1950s and 1970s, and there is considerable evidence that breeding populations, particularly of Lesser Black-backed *Larus fuscus* and Herring Gulls *L. argentatus*, also rose during the 20th century until the 1970s. Since then, the growth in the UK breeding populations of Lesser Black-backed and Great Black-backed Gulls *L. marinus* had slowed, while the breeding populations of Black-headed *Chroicocephalus ridibundus*, Common *L. canus* and Herring Gulls had declined.

The increase in numbers in the 20th century is thought to have stemmed from a reduction in human persecution (hunting and egg-collecting for food) coupled with greater food availability. Gulls have been brought back into conflict with humans because of: the widespread use of rubbish tips and outfalls and consequent concern about the spread of disease; the hazards posed by gulls to aircraft; the possible effects of larger numbers on wetland and coastal habitats, and on other seabirds and waterbirds. All these have prompted efforts to disturb the birds from favoured sites or to reduce the size of their colonies.

It can be argued that there is a need to control gull numbers in certain areas, but it is also important to recognise their conservation status. The UK holds considerable proportions of the European populations of these species, most notably 70% of the breeding population of one race of Lesser Black-backed Gull, *L. f. graellsii*. Large numbers of gulls from Scandinavian and other west European breeding populations winter in the UK, particularly in eastern Britain, while British-breeding ones are more predominant in the west.

In the 1993 survey a total of 283 inland and 433 coastal sites were surveyed. The majority (97%) of the inland sites were wetlands -- only nine were on dry land. Of 269 inland sites in England counted in previous surveys, 137 (51%) were covered in 1993, and similarly 14 of 50 (28%) in Wales and 27 of 59 (46%) in Scotland, as were both the two in Northern Ireland, but none in the Isle of Man or Channel Islands. But, although the 1993 survey included only half the inland sites previously covered, it is likely that few large roosts were overlooked, as sites which had previously held large numbers of gulls had a high probability of being resurveyed.

The 1993 survey encompassed roosts on major estuaries, though it was less complete in its coverage of the open coast, particularly in Scotland -- no counts were received from coastal sites in the Borders or the Northern Isles, and only limited data from the Western Isles.

In total, just over 2.5 million gulls were counted in Great Britain during the 1993 survey: 1.2 million inland and 1.3 million on the coast, and comprised an estimated 1.7 million Black-headed, 400000 Common, 61000 Lesser Black-backed, 375000 Herring, 43000 Great Black-backed and about 2000 of other species (including Mediterranean *L. melanocephalus*, Ring-billed *L. delawarensis*, Yellow-legged *L. cachinnans*, Iceland *L. glaucoides* and Glaucous *L. hyperboreus* Gulls and Kittiwake *Rissa tridactyla*). A further 19000 were counted in

Northern Ireland, 3800 in the Isle of Man and 8500 in the Channel Islands. Using thresholds of 1% of the respective minimum British populations, 20-30 sites of potential national importance were identified for each species. This meant all five main species had increased at inland sites in England between 1953 and 1993, in particular Lesser Black-backed Gulls, and there were various regional differences.

Both the total number of gulls counted at inland sites in England and the number of sites surveyed have increased over the 40-year period, although rates have varied between species: Black-headed up by 244%, Common by 472%, Great Black-backed by 732% and Lesser Black-backed by 16402%. The numbers of Herring Gulls counted increased overall by 81%, though they declined greatly between 1973 and 1983. Again there were some specific differences between regions and sites.

Comparisons between the surveys must bear in mind that the coverage has varied: 1953 -- mainly inland roosts in England and parts of Scotland; 1963 (actually mostly done in December 1963 due to severe weather in January) -- again primarily of inland sites in England; 1973 included inland roosts in Wales; and 1983 was the first to cover the whole of Great Britain (and the Channel Islands, but not the Isle of Man), and was also the first attempt to cover the majority of coastal roosts.

Methods of Data Capture

The January 1993 Winter Gull Roost Survey followed the same methods used by all four previous surveys, but aimed for more complete coverage. Observers were asked to count or estimate the numbers of gulls coming in to roost between 21 and 31 January 1993, preferably 22 or 23 January.

To try to help minimise potential errors in counting gulls at roosts, some guidelines were provided for observers: 1) counts of birds flying into roosts are typically more accurate than counts of birds already settled, particularly if birds roost on choppy water; 2) at large roosts, it is necessary to have several observers stationed around the site to cover birds arriving on different flight lines; 3) difficulties of identification affect the accuracy of counts of individual species, and it was accepted that it was sometimes necessary to estimate the total numbers of each species from the proportions of each in part of a roost or on a flight line. Where even this was not possible, observers provided information on the numbers of unidentified 'small' gulls (Black-headed and Common) and 'large' gulls (Lesser Black-backed, Herring and Great Black-backed) counted, in addition to any counts of individuals identified to species; 4) it was thought not to be a major problem for most sites but counts may also underestimate the overall numbers using a roost if many birds arrive after dark.

Purpose of Data Capture

To estimate the total numbers of five main wintering gull species by counting them as they went in to roost. The figures could then be compared to those from previous surveys in 1953, 1963, 1973 and 1983.

Geographic Coverage

All of the UK although in practice coverage was rather more limited in Scotland and Northern Ireland. For this survey both inland and coastal sites were covered.

Temporal Coverage

Counts were to be carried out between 21 and 31 January 1993 with a stated preference for 22 or 23 January.

Other Interested parties

The survey was run entirely by the BTO. English Nature (now Natural England) provided funding for the analysis and the comparison with previous datasets.

Organiser(s)

Anna Sutcliffe and Ray Waters. (Note that Anna Bowes noted for 1983 survey is the same person.)

Current Staff Contact

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Publications

A specific report on the survey was not published but a comprehensive review of it, and all the previous surveys is:

Burton, N.H.K., Musgrove, A.J., Rehfisch, M.M., Sutcliffe, A. & Waters, R. 2003. Numbers of wintering gulls in the United Kingdom, Channel Islands and Isle of Man: a review of the 1993 and previous Winter Gull Roost Surveys. *British Birds* 96: 376-401.

The survey was noticed in *BTO News* numbers 177, 182, and 190.

Available from NBN?

No.

Computer data -- location

BTO Windows network, central area.

Computer data -- outline contents

One file containing all the data (counts) from all the sites which were surveyed, together with very brief details of the sites.

Computer data -- description of contents

The one data file (a csv file) contains all the data as input from the cards. It is in a directory with the datafiles from the other decadal surveys.

The 1993 data file contains:

sitename -- this is often the same name as in the 2004-06 survey; gridref; easting -- only used for a few offshore sites; northing -- as for easting; habitat1 -- INLAND, COASTAL, OFFSHORE; habitat2 -- GP= Gravel Pit, RES= Reservoir, LAK= Lake, EST= Estuary, FLW= Floodwater, HAR= Harbour, ISL= Island, OC= Open Coast, RIV= River, DL= Miscellaneous?, PLA= Platform (offshore), CW= Colliery Lagoon (only one), CP= Clay Pit, SP= Sugar Factory, SW= Sewage Works (only one); county -- most as GBXX, but also PLATF YORK; supsite -- "supersite" ie amalgamation of adjacent ones where appropriate; BH -- Black-headed Gull count; CM -- Common Gull; small -- unidentified small ie BH or CM; HG -- Herring Gull; LB -- Lesser Black-backed Gull; GB -- Great Black-backed Gull; large -- unidentified large ie HG or LB or GB; unknown -- unidentified gull; others -- rare species; alltotal -- the total of each species added together

Information held in BTO Archives

1 Archive Box containing the data cards as submitted (stored with data cards etc from the 1983 survey). All have been scanned.

Notes on Access and Use

Other information needed

Notes on Survey Design

Specific Issues for Analysis

It should be noted that the counts provide only *minimum* population estimates. This is because some roosts may have been missed, and because the size of some roosts may have been underestimated (especially if some birds arrived after dark). No attempt has been made to extrapolate these minimum estimates to take account of these two factors. The minimum population estimates for Great Britain (England, Scotland and Wales, but excluding the Isle of Man and Channel Islands) were used to calculate thresholds -- rounded 1% levels of the estimates (following Wetlands International recommendations) -- so that sites in Great Britain of potential national importance for each species could be identified and listed. Sites in Northern Ireland are considered nationally important if they hold 1% or more of the estimated all-Ireland population of a bird species. Counts from neighbouring inland sites were only combined if they had been in previous surveys. Counts of parts of estuaries were combined, however, so that estuaries were treated as single sites. No such estimates or thresholds were calculated for the UK as a whole owing to more limited coverage outwith Great Britain.