

Winter Gull Roost Survey 2003/04 - 2005/06

Title

Winter Gull Roost Survey 2003/04-2005/06
(became known as WinGS)

Description and Summary of Results

A survey to count wintering gulls in the UK has been run each decade since 1953. The 2003/04-2005/06 survey was the sixth such national winter gull roost survey. Previous ones only covered and targeted known roosts and were in January 1953, 1963 (actually most counts done in December due to severe weather in January), 1973, 1983 and 1993. The first three of these surveys covered inland sites nominally in Britain but in practice the 1953 and 1963 surveys only covered sites in England and that in 1973 only sites in England and Wales. In 1983 all of the UK was covered and some coastal sites were included, and in 1993 this was repeated.

The 2003/04-2005/06 survey differed in being spread over three winters rather than just one, but was planned to be the most comprehensive to date and to attempt at least to sample all areas to enable, using modern statistical techniques, a more complete picture of the total wintering populations to be obtained.

Using information from past surveys and county bird reports, the survey targetted birds at all known, important, large roosts inland and on the coast in the first winter, and used a sampling approach in subsequent winters to estimate numbers away from these 'key sites' (not done on previous surveys). Five main species were counted: Black-headed *Chroiocephalus ridibundus*, Common *Larus canus*, Herring *L. argentatus*, Lesser Black-backed *L. fuscus* and Great Black-backed *L. marinus*. All counts for all parts of the survey were conducted in mid-winter (January), when winter populations are thought to be at their peak, and also so that the counts could be compared to the previous surveys.

Data from the survey as a whole were used to provide new population estimates for the UK, Great Britain and its constituent countries, and to produce 1% thresholds for identifying sites of national importance for the five main species. Data from key sites were also used to inform on population change across the surveys. Patterns of change varied by species and region. All species showed increases in numbers over the period 1953 to 2004. In most regions, Black-headed Gull numbers have declined since peaks between 1973 and 1993 and Common Gulls have also declined recently in some regions. Lesser Black-backed Gull numbers have increased dramatically since 1953, whereas numbers of Herring Gull showed large declines between 1963 and 1983. Finally Great Black-backed Gull numbers have increased in the west and the Midlands, but recently declined in eastern regions.

Methods of Data Capture

For January 2004, 484 key roost sites were identified for survey (counting). The sites chosen had all been counted in one or more of the previous surveys or had been noted in bird reports as holding more than 1000 roosting gulls. Key sites not covered in January 2004 were targeted in the subsequent winters.

For January 2005 and January 2006 701 tetrads (2-km squares) and 933 stretches of coast were randomly selected from different strata for survey.

Counts at all sites were carried out at dusk with birds normally counted as they came into their roosts. Larger sites were usually surveyed by a team of people posted suitably around the site, usually one person covering each major flight line. Birds were identified to species where possible but if not then divided into 'small' (Black-headed and Common) and 'large' (Herring, Lesser Black-backed and Greater Black-backed) or if that was not possible then 'unidentified' was allowed. In addition a few records of rarer gulls were recorded.

Purpose of Data Capture

The stated intention was to count gulls at their night-time roosts with the aim of providing the data needed to estimate species' national populations (in the UK, Great Britain and constituent countries).

Geographic Coverage

All known larger roosts in the UK were identified and 387 of the 484 potential 'main' sites were counted. A stratified sample of randomly selected inland tetrads and of coastal stretches was also counted.

Temporal Coverage

The winters of 2003/2004 to 2005/2006. Surveys were actually conducted in January of each of these. See Methods of Data Capture for specifics of which type of survey in each winter.

Other Interested parties

The majority of the actual fieldwork was carried out by volunteers, with BTO fieldworkers filling in gaps in coverage as necessary.

English Nature (now Natural England), Countryside Council for Wales (now Natural Resources Wales), Scottish Natural Heritage, Environment and Heritage Service (Northern Ireland) (now the Northern Ireland Environment Agency), Joint Nature Conservation Committee and Northumbrian Water Ltd together funded the BTO to organize the survey and undertake subsequent analyses, reporting and paper-writing.

Organiser(s)

John Calladine acted as survey organizer for the first winter, with Alex Banks taking over in 2004/05 and 2005/06. The project was managed by Niall Burton.

Current Staff Contact

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Publications

The main report of the survey has been published as:

Banks, A.N., Burton, N.H.K., Calladine, J.R. & Austin, G.E. 2007. *Winter gulls in the UK: population estimates from the 2003/04-2005/06 Winter Gull Roost Survey*. BTO Research Report No. 456. BTO, Thetford.

A first paper looking at population change has also been published:

Banks, A.N., Burton, N.H.K., Calladine, J.R. & Austin, G.E. 2009. Indexing winter gull numbers in Great Britain using data from the 1953 to 2004 Winter Gull Roost Surveys. *Bird Study* 56: 103-119.

Fuller details of the methods and the results of trials of these are in:

Austin, G.E., Armitage, M.J.S., Burton, N.H.K., Fuller, R.A., Holloway, S.J., Musgrove, A.J., Rehfish, M.M. & Willis, S.G. 2003. 2002-03 Pilot Winter Gull Roost Survey (including preliminary details of 2003-04 full winter gull roost survey). *BTO Research Report* 325: 1-41.

A comprehensive review of the previous surveys in preparation for this 2003-2007 one is: Burton, N.H.K., Musgrove, A.J., Rehfish, 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 246, 255, 261, 269 and 290, and in *British Birds* 96: 401 following the above paper.

Available from NBN?

No.

Computer data -- location

BTO Windows network central area.

Computer data -- outline contents

The main roost sites counted in January 2004 are in an Excel file with details of numbers seen and notes of any prevailing conditions.

Computer data -- description of contents

Main data file contains:

A -- Site code (1 to 20009); B -- Unique_ID (divides sites up as necessary); C -- Site name; D -- county (as GBXX); E -- Site letter (the subdivisions); F -- Grid ref (2-letter + 6-figure if possible -- many are blank but few of these contain actual counts of gulls); G -- counted (C=counted, N=Not Counted, Z=Not Covered but assumed to be zero as unsuitable habitat); H -- Form Type (Yellow = an Inland Key Site, Blue = a Coastal Key Site, Green = a Sample Inland Site (tetrad), Pink = a Sample Coastal Stretch, White = other data received. Key sites were targeted in the first year, sample sites in the latter two, but in practice data were received for all form types in each year.); I -- day; J -- month; K -- year; L -- Date (day/mth/year); M -- Main count (True or False); N -- Start time (GMT); O -- End time (GMT); P -- Black-headed Gull count; Q -- Common Gull count; R -- unidentified "small" gull count; S -- Lesser Black-backed Gull count; T -- Herring Gull count; U -- Great Black-backed Gull count; V -- unidentified "large" gull count; W -- unidentified gull count; X -- Mediterranean Gull count; Y -- Little Gull count; Z -- Ring-billed Gull count; AA -- Yellow-legged Gull count; AB -- Iceland Gull count; AC -- Glaucous Gull count; AD -- Kittiwake count; AE -- Caspian Gull count; AF -- Hybrid gull count; AG Total (all the above added together); AH -- State of tide; AI -- No gull tick (confirms none seen); AJ -- Ice cover; AK -- Observers; AL -- Address; AM -- E-mail; AN -- Local co-ordinator; AO -- Gulls low due to weather; AP -- Gulls low due to distance ; AQ -- Comments; AR -- Comments on weather; AS -- Comments on distance

Information held in BTO Archives

2 Archive Boxes containing data and other papers.

Notes on Access and Use

Other information needed

Notes on Survey Design

Following the review paper in *British Birds* (96: 376-401) a more comprehensive survey than previous ones was organised. The counts at major roosts were essentially the same as previously but the decision to sample tetrads and coastal stretches randomly selected from specified strata was new and led to a more comprehensive picture of overall numbers.

Specific Issues for Analysis