

Herons 1985

Title

Grey Heron Survey 1985

Description and Summary of Results

The Grey Heron *Ardea cinerea* is one of the largest and most widespread bird species in the UK and is a predator at the top of the freshwater food chain. As such it is excellent indicator of environmental health in the countryside. Nesting is typically in colonies in traditional sites, many of which have been occupied by a heronry for many decades. The presence of a heronry is often the basis of designating a site as a protected area.

The Heronries Census grew from what was intended to be a one-off, complete survey in 1928, but is now the longest-running breeding-season monitoring scheme for any bird in the world. The aim is to collect annual nest counts from as many heron colonies as possible in the United Kingdom. Coverage has been variable but for many years well over half the estimated population has been included in each year's count.

To complement the annual census there were attempts at full coverage in 1954 and 1964 and, partly because of potential worries if large numbers were to be killed at fish farms (a major growth industry at the time) it was decided to do so again in 1985, and especially to concentrate in Scotland where the fish farm industry was growing the fastest. These periodic attempts at a complete count served to boost coverage for the ongoing Heronries Census, and the results are fully integrated within this.

Overall there was better coverage in 1985 than in any previous survey. It also produced the highest estimate yet for the total number of "apparently occupied nests". Rather over 5000 nests were counted in England and Wales and rather over 1600 in Scotland. From these the total estimated for England and Wales was around 6000 and for Scotland almost 3800. The latter figure was calculated from a combination of knowing that a further 128 colonies which had been recorded since 1976 were not counted in 1985 and that some work at a sample of colonies suggested that volunteer workers only estimated 68% of the total obtained from some intensive work at those colonies.

Examination of colony size suggested the smaller colonies had been getting larger and the larger colonies had been getting smaller over the recent years although still the most common colony size was one nest. There was only one colony in England with over 100 nests in 1985 (in Kent) whereas there had been five in 1977. No colonies of more than 50 nests have been recorded in Scotland since the 1940s.

Methods of Data Capture

The methods used closely followed those used in the annual Heronries census. Volunteer observers made a count of 'apparently occupied nests'. The ideal time for this is considered to be the second half of April when most active nests are likely to have an adult present either incubating or defending the nest. Some colonies were only visited once but others were visited several times through the season in which case the maximum estimate in the year was used for the dataset.

A major problem with census work on heronries is that it is impossible to know what proportion of colonies have been discovered. Intensive studies in three areas in Scotland (Dumfries & Galloway, Tayside and the Outer Hebrides) showed that herons frequently change their nesting sites, so that the number of nests in a particular colony sometimes changed dramatically from year to year, occasionally leading to extinction.

Purpose of Data Capture

To obtain an up to date estimate for the total number of Grey Herons breeding in the UK as a complement to the annual sample census.

Geographic Coverage

All of Great Britain and Northern Ireland with a particular push made in parts of Scotland.

Temporal Coverage

The breeding season of 1985. Up to three visits were requested with a stated priority for one in the latter half of April.

Other Interested parties

The survey was organised and run by the BTO as one of the periodic attempts to gain more complete coverage than was possible from the annual sample census.

Organiser(s)

Chris Reynolds organised the survey of 1985 in England, Wales and Northern Ireland (he was already the organiser of the annual census), and Mick Marquiss organised the survey for Scotland. Mike Moser acted as co-ordinator from the BTO staff.

Current Staff Contact

heronries@bto.org

Publications

A summary and preliminary report on the whole survey was presented in *BTO News* number 143 and this promised a full report in *Bird Study* in due course. However this latter, or indeed anything further for England and Wales (and Northern Ireland) never materialised.

A major report on the Scottish part of the survey appeared as:

Marquiss, M. 1989. Grey Heron *Ardea cinerea* breeding in Scotland: numbers, distribution and census techniques. *Bird Study* 36: 181-191.

A preliminary announcement of the overall census was in *BTO News* number 134.

Available from NBN?

No.

Computer data -- location

The definitive data are held on the BTO network Unix system as part of the overall heronries dataset.

Computer data -- outline contents

Files contain the counts from each year at each site which was counted, habitat data from each site and its immediate surrounds and their name and geographical location.

Computer data -- description of contents

The three most important files and their contents are:

yrdata -- the counts (of apparently occupied nests) from each year at each colony.

cols 1-6 site number; cols 8-11 year; cols 13-15 the count (from primary source: -6 occupied, no count; -7 definitely not yet started; -8 extinct; -9 no information); col 17 accuracy (+ =minimum, ? =a guess,) inferred from another year, - =maximum); col 19 primary data source (c=heronries card; p=punchcards; r=bird report; l=letter/note; n=Nest Record Scheme; o=other/unknown ; cols 21-26 source codes (cprlno as for col 19, where relevant); cols 28-57 Notes.

habdata -- the habitat in which the colony occurs.

cols 1-6 site number; cols 8-9 habitat code (Crick system); cols 11-79 Description.

colonies -- geographic location of colonies.

cols 1-6 site number; cols 8-11 county code (GBxx) using BTO standard codes; cols 13-20 2-letter and 6-figure grid reference; cols 22-117 name of site.

Other directories contain some older versions of the data and the programs used to check and analyse the data.

Information held in BTO Archives

Data cards from this survey have been incorporated within the overall set of annual cards. All data cards and associated correspondence from the start (1928) to 2006 were scanned with material sorted by year.

Notes on Access and Use

Other information

Notes on Survey Design

Specific Issues for Analysis