

# European Garden Bird Survey

## Title

European Garden Bird Survey

## Description and Summary of Results

In the UK gardens are an important bird habitat, and birds come in to gardens to feed on a variety of supplementary foods that are provided by householders. However it is not just the UK. Responses to a letter circulated to a number of Europeans revealed that the habit is also popular in some continental European countries, eg The Netherlands and Belgium, but in southern Europe, where the winter climate is relatively mild, few foods are bought for wild birds and garden feeding is uncommon, although not unknown.

Various studies in northwest continental Europe had shown that the provision of artificial food may enhance autumn recruitment, overwinter survival, breeding numbers, and breeding date in populations of various small passerines. Furthermore, the effects of severe winter weather seemed least marked in those species that make most use of artificial food. However, little was known about the frequency of occurrence or abundance of birds in continental European gardens, or about the importance of such gardens for birds. Hence a survey was organised for the winter and spring of 1988/89, in which the data were gathered by volunteers throughout western Europe. The survey did not include the UK, where established BTO surveys of garden birds had already produced considerable information (and continue to do so). The volunteers were primarily BTO members and friends of members so, although the gardens included may not have been truly representative of European gardens, they were probably fairly representative of the gardens of people interested in birds.

Most recording areas were on the edge of towns (suburban) and many of them were in the immediate vicinity of farmland and woodland. Over 40% of all gardens were considered to be 'good gardens', that is gardens with trees (conifers or deciduous), grass and some shrubs. Recording areas were largest in southern Europe and smallest in Ireland, and generally highest (altitude) in France and Switzerland and lowest in the Low Countries.

In total, 176 species were seen by the end of the survey, which extended to 9558 garden-weeks, with an average of 21.2 species in each garden. 46 species were recorded from 10% or more of all gardens, and the total number of species which occurred in the 12 most frequently recorded in any one region was 30, indicating that there are substantial differences between regions in their garden avifaunas. Overall, the Great Tit *Parus major* was the most frequently recorded species, with Blackbird *Turdus merula* a close second and Blue Tit *Cyanistes caeruleus*, House Sparrow *Passer domesticus*, Chaffinch *Fringilla coelebs*, Greenfinch *Carduelis chloris*, Robin *Erithacus rubecula* and Magpie *Pica pica* not far behind. Overall differences in the mean number of species recorded between regions were small, with most in the Low Countries and fewest in southern Europe, although there seemed to be a greater diversity of gardens in the latter. Overall, garden size had the greatest effect on the number of species recorded, there was no overall effect of altitude, and urban gardens were consistently poorer than the others although the degree to which they were

poor varied between regions, as did the degree of difference between suburban and rural gardens.

### **Methods of Data Capture**

The survey was carried out by 440 volunteers from 14 European countries (list below), although for analysis these were grouped into six geographical regions. Recording was carried out weekly for 30 weeks. Each week, participants watched a defined area, adjacent to their houses, on a number of occasions, preferably at the same time of day. Not all areas were strictly gardens: they included various open areas adjacent to houses, such as parks, orchards and meadows. For each recording week, participants noted the maximum number (peak count) of individuals of each species seen at any one time in the week (as in the BTO's Garden Bird Feeding Survey). Participants also recorded whether or not they had provided food for the birds.

Some information about their 'gardens' was asked for. This included: area – for analysis classed as small (< 500 m<sup>2</sup>), medium (500-1000 m<sup>2</sup>), or large (> 1000 m<sup>2</sup>); altitude – classed as low (<50 m asl), or high (> 50 m asl); trees present – coniferous, deciduous, both or neither; commonest habitat type in the surrounding area – other gardens (town centre), other gardens (edge of town), farmland, woodland, wetland, other. Winter was arbitrarily defined as 30 October to 4 March, and spring as 5 March to 20 May.

### **Purpose of Data Capture**

The primary aim of the survey was to determine which species were most frequently and abundantly recorded in gardens in different parts of Europe. A further aim was to determine how patterns of occurrence and abundance varied between seasons and between different garden types.

### **Geographic Coverage**

14 countries of western Europe (Finland, Norway, Sweden, Denmark, (West) Germany, Austria, Spain, Italy, Portugal, France, Switzerland, Belgium, The Netherlands and the Republic of Ireland). It did not include the UK, where established BTO surveys of garden birds had already produced considerable information.

### **Temporal Coverage**

Observations were asked for weekly between 23 October 1988 and 20 May 1989 although due to low participation the first week (23-29 October) was ignored for analyses.

### **Other Interested parties**

The BTO organised and ran the survey and used contacts supplied in some cases by individuals or organisations in the other countries participating. Funding came from the Waltham Centre for Pet Nutrition.

## **Organiser(s)**

Patrick Thompson

## **Current Staff Contact**

archives@bto.org or gbw@bto.org

## **Publications**

The main report of the survey is:

Thompson, P.S., Greenwood, J.J.D. & Greenaway, K. 1993. Birds in European gardens in the winter and spring of 1988-1989. *Bird Study* 40: 120-134.

This followed a more detailed report to the sponsors:

Thompson, P.S & Greenwood, J.J.D. 1991. Birds in European gardens in the winter and spring of 1988-1989. *BTO Research Report* 53: 1-102.

The survey was noticed in *BTO News* numbers 158 and 166.

## **Available from NBN?**

No.

## **Computer data -- location**

BTO Windows network central area.

## **Computer data -- outline contents**

The bird data and habitat data and associated programs are stored.

## **Computer data -- description of contents**

### **Data Files and programs:**

data88-89 first; data88-89 second refer to the two parts of the winter. Format is:

cols 1-3 species number; 4-6 week1 (or 16) data (number of birds seen); 7-9 week2 (or 17) data; ....; 46-48 week15 (or 30) data; 50-51 country number; 52-54 garden number. (Week1=23-29 Oct ... week30=14-20 May.)

habitat data. Format is:

cols 1-2 country number; 3-5 garden number;

(all of the rest except area and altitude are 0 (absence) or 1 (presence) or 9 (no data))

col 7 (Patio/Windowbox), 9 (garden with few trees or shrubs), 11 (garden with many trees and shrubs), 13

(other open area near house), 15 (other) for type of area;

cols 17-21 area (sq m); cols 23-26 altitude (to nearest 100m);

col 28 (other gardens - town centre), 30 (other gardens - edge of town), 32 (Farmland), 34 (Woodland), 36

(Wetland), 38 (other) for the commonest habitat type in recording area;

col 40 (conifer trees), 42 (Deciduous trees), 44 (grass or lawn), 46 (hedge or shrubs), 48 (vegetables), 50 (soft fruits) presence or not in recording area.

Feedingdata.txt notes whether or not food was provided. Format is:

cols 1-2 country number, cols 3-5 garden number; cols 7-36 0, 1 or 9 for No, Yes, Not Recording for each of the 30 weeks.

egbs1 and egbs2 are SAS programs to read first and second parts of bird data; egbshab is a SAS program reading habitat data; egbspilot refers to pilot survey; species list: lists species and their numbers

### **Information held in BTO Archives**

3 Transfer Cases contain all data from the survey and Pilot Survey.

### **Notes on Access and Use**

### **Other information**

### **Notes on Survey Design**

### **Specific Issues for Analysis**