

Biodiversity in Glasgow

Title

Biodiversity in Glasgow (BiG) Project

Description and Summary of Results

The project was set up in 2007 by BTO Scotland, in partnership with Butterfly Conservation Scotland (BCS), aiming to record the birds, butterflies and habitats of the green spaces in Glasgow City using trained local volunteers. The information was used to identify the habitat features of importance to the bird and butterfly communities in Glasgow. The output, therefore, not only informs the management for biodiversity in urban green spaces within Glasgow but within other Scottish cities as well.

112 and 102 sites were allocated to volunteers surveying for birds in 2007 and 2008 respectively, of which 13 sites were chosen by the volunteers in both years. Of these 79 and 67 sites were actually surveyed. Similarly a total of 108 and 90 sites were allocated to volunteers surveying butterflies in 2007 and 2008 respectively, of which 11 and 9 sites were chosen by volunteers. Of these 55 and 44 sites were actually surveyed. Wherever possible volunteers were encouraged to take on sites to survey both birds and butterflies.

The size of available green spaces ranged from 1.46 ha to 167.79 ha, but it was thought unrealistic for volunteers to cover sites greater than 80 ha. Therefore two of the sites were divided into two: Cathkin Braes Country Park (East and West), and Pollok Country Park (North and South). In addition Kelvingrove Park was also divided into two sections (East and West) at the request of the volunteers who thought the site was too big and too complex to be realistically covered by a single person.

Green spaces were also defined, with help from Glasgow City Council, according to type to one of the following: parks, cemeteries, public gardens, woodlands, and open spaces. The category of open space described the various combinations of a wide range of possible habitats which are not intensively managed including: wetland, raised bog, burns, woodlands, heathlands, pasture and open water.

Methods of Data Capture

Bird surveys: Volunteers were requested to walk a survey route in such a way that they covered the whole site to within 50m ensuring that they did not double count any birds (this could either be done walking in a zig-zag fashion or in parallel lines). Bird numbers were recorded and allocated to the habitat in which they were first seen.

The number of bird records was thought to be reasonably comprehensive as all areas within sites were covered to within 50m.

Butterfly Surveys: Volunteers were requested to walk at a slow, steady pace counting all butterflies seen within 2.5m either side of their transect line and 5m ahead. In addition to butterflies, day-flying moths were also recorded by some volunteers. Transects were ideally

carried out in good weather conditions (warm, bright, dry and windspeeds less than force 5 on the Beaufort scale) but this was not always possible.

Butterfly numbers were lower than anticipated. This was partly due to poor weather -- butterflies are more weather dependent -- and incomplete coverage of sites. Standard butterfly transect methodology was used.

Purpose of Data Capture

To raise awareness of the value of urban biodiversity at the local and national scale.

To survey and describe the bird and butterfly communities in the public green spaces of Glasgow by involving local volunteers.

To analyse how habitat type, size and structure affect breeding bird and butterfly communities in urban green spaces and gardens.

To provide habitat management recommendations to Glasgow City Council.

Geographic Coverage

The administrative region covered by Glasgow City Council.

Temporal Coverage

The spring and summer of 2007 and 2008.

Bird surveys: Volunteers were requested to carry out three visits: mid April to mid May, mid May to mid June and mid June to mid July in 2007 and 2008. Several sites also had visit information submitted outwith this required period (August-November). It was recommended that survey visits were carried out between dawn and 0900 BST but if this was not possible, observers were required to choose a time of day that was convenient and carry out future surveys at this fixed time.

Butterfly surveys: Volunteers were requested to carry out a minimum of four visits: mid May-mid June, mid-June to mid July, mid-July to mid-August and mid-August to mid-September in 2007 and 2008. Transects were carried out between 10:45 and 15:45 hours BST.

Other Interested parties

The project was run jointly by BTO with Butterfly Conservation (Scotland).

Financial support for the project came from Scottish Natural Heritage, the Scottish Government, Glasgow City Council and the Robertson Trust.

Organiser(s)

Dr Liz Humphreys (BTO), Richard Sutcliffe (Butterfly Conservation Scotland)

Current Staff Contact

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Publications

Newsletters were produced in Autumn 2007, Spring and Autumn 2008 and in Summer 2009.

These are available from:

http://www.bto.org/survey/special/glasgow_biodiversity/index.htm

A final report was submitted by the BTO to Scottish Natural Heritage in May 2009.

The project was noticed in *BTO News* numbers 274 and 285.

Available from NBN?

Yes.

The dataset includes all individual records as noted by observers. A total of 5921 bird records and 539 butterfly records are included.

Computer data -- location

BTO Windows Network central area.

Computer data -- outline contents

Contains the data (both as sent to NBN and more detail), electronic copies of newsletters and reports, training presentations and promotional material.

Computer Data -- description of contents

Data files: 8 Excel files of Bird and Habitat data and 2 Excel files of Butterfly and Habitat data for each year
Other directories contain: Training presentations -- the powerpoint presentations given at Training Days;
Copies of the 4 newsletters; Copy of Final report to SNH; Promotional material -- copies of leaflets, posters and various articles

Information held in BTO Archives

All paper is stored at BTO Scotland; all survey data came in originally on paper forms.

Notes on Access and Use

The public are granted full access to the dataset on NBN.

No maps or data are to be published without explicit permission from the British Trust for Ornithology and Butterfly Conservation.

Other information needed

Notes on Survey Design

Specific Issues for Analysis