

BIG Ideas

The BIG project (Biodiversity in Glasgow) was set up as a collaboration between BTO Scotland and Butterfly Conservation Scotland in order to carry out the largest survey ever of the birds, butterflies and their associated habitats within the green spaces of the city. Liz Humphreys, Dan Chamberlain and Paul Kirkland describe the results.

With all the outstanding scenery and wildlife found in Scotland, encouraging people to look for birds and butterflies in the urban landscape of Glasgow might not seem the most obvious choice! Although some of the BIG volunteers were highly experienced, many people who took part in the project had never carried out a survey before. Free training in species identification and survey techniques was therefore offered to all participants and the uptake was very impressive with 108 and 88 people being trained for birds and butterflies respectively. Volunteers had often previously felt that they lacked the skills or the confidence to get involved, so training really was key to the success of the project.

GREEN GLASGOW

Green spaces which were included in the project were mostly owned by Glasgow City Council and, wherever possible, were chosen by volunteers themselves. Over 20% of Glasgow is made up of green space, including 74 parks and 95 Sites of Importance for Nature Conservation (SINCs), so there was no shortage of available sites. Some participants did voice initial misgivings about sites that were allocated to them, if their first choice was not available. As the year progressed, however, those initially uninviting green spaces were transformed. Volunteers on numerous occasions described their joy in getting to know a site intimately, as birds became more apparent through singing and displaying, butterflies appearing and the vegetation flourishing. Many first-time surveyors also reported taking great satisfaction in developing their identification skills, really reinforcing the message that the only way to learn is to get out there and practise!

BUTTERFLIES SURPRISE

Over 2007 and 2008, a total of 91 species of bird was recorded in the city of Glasgow. As expected, many birds were relatively widespread species but what was surprising was the number of high conservation value. In total, there were 15 UKBAP species recorded along with 47 species of Birds of Conservation Concern (see table). In terms of butterflies, 17 species of butterflies were recorded by volunteers, despite the relatively wet and cold



conditions (butterfly records were notably lower throughout the whole of the UK in 2008). Exciting records for butterflies included Comma, which was thought to be the first record for the city. The good numbers of Ringlets indicate the rapid rate of colonisation of Glasgow by this particular species, which was first reported in the city in 2005.

GUIDING THE FUTURE

Analyses were then carried out to look at the habitat associations of birds and butterflies, the main aim being to provide management recommendations in order to promote biodiversity. The presence of water bodies (*eg* ponds, lakes and rivers) along with wetland and marsh areas were important factors in determining bird species richness in Glasgow's green spaces. Wild areas (*eg* patches of unmown, rank grass and wild/weedy habitats) were also important. It is probable that these particular habitats hold important numbers of invertebrates and/or seed-bearing plants, particularly outside the breeding season. For butterflies, the presence of unmown rank grass was shown to be the key factor in determining whether butterflies are likely to be recorded at a site. The overall size of the green space was the most influential factor in determining species richness for birds, however. Perhaps it may be possible to increase the size of green spaces in

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▲ The BIG project recorded what is thought to be the first ever occurrence of Comma in Glasgow – a species that has been gradually expanding northwards.

◀ Bullfinch was just one of the 47 bird species of conservation concern that were recorded in green spaces in Glasgow during the BIG project. 15 of these species are also Biodiversity Action Plan (BAP) species, showing just how valuable green spaces within the urban environment are for birds.

existing towns and cities by landscaping adjacent disused land which would have otherwise been redeveloped. More flexibility might be found, however, when planning new towns, since there may be scope to incorporate larger green spaces as part of the design.

The results of the BIG project could help guide management work carried out by local councils in urban areas. Glasgow City Council has already led the way with the introduction of water bodies at many sites (including a national award-winning project at a former boating pond) and innovative schemes to reduce mowing frequency of grassed areas. The BIG project has successfully demonstrated the value of such management schemes to urban biodiversity, much of which is underpinned by the hard graft of locally based volunteers. If lessons from the BIG project are applied to other cities and towns, then we have shown how we can all help contribute to promoting and conserving biodiversity in the UK.

ACKNOWLEDGEMENTS

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In the red...

Birds of Conservation Concern (BOCC) recorded during BIG project. (UK Biodiversity Action Plan UKBAP; Local Biodiversity Action Plan LBAP).

SPECIES	UKBAP	LBAP	BOCC
Pink-footed Goose			Amber List ●
Greylag Goose			Amber List ●
Gadwall			Amber List ●
Mallard			Amber List ●
Pintail			Amber List ●
Pochard			Amber List ●
Tufted Duck			Amber List ●
Grey Partridge			Red List ●
Little Grebe			Amber List ●
Kestrel			Amber List ●
Oystercatcher			Amber List ●
Ringed Plover			Amber List ●
Lapwing	UKBAP		Red List ●
Curlew	UKBAP		Amber List ●
Common Sandpiper			Amber List ●
Black-headed Gull			Amber List ●
Common Gull			Amber List ●
Lesser Black-backed Gull			Amber List ●
Herring Gull	UKBAP		Red List ●
Stock Dove			Amber List ●
Cuckoo	UKBAP		Red List ●
Swift			Amber List ●
Kingfisher			Amber List ●
Skylark	UKBAP	LBAP	Red list ●
Meadow Pipit			Amber List ●
Grey Wagtail			Amber List ●
Sand Martin			Amber List ●
Swallow			Amber List ●
House Martin			Amber List ●
Dunnock			Amber List ●
Whinchat			Amber List ●
Wheatear			Amber List ●
Song Thrush	UKBAP		Red list ●
Mistle Thrush			Amber List ●
Grasshopper Warbler			Red List ●
Whitethroat			Amber List ●
Wood Warbler			Red List ●
Willow Warbler			Amber List ●
Spotted Flycatcher	UKBAP		Red List ●
Starling	UKBAP		Red list ●
House Sparrow	UKBAP		Red List ●
Tree Sparrow	UKBAP		Red List ●
Linnet	UKBAP		Red List ●
Lesser Redpoll	UKBAP		Red List ●
Bullfinch	UKBAP		Amber List ●
Yellowhammer	UKBAP		Red List ●
Reed Bunting	UKBAP	LBAP	Amber List ●