The Shropshire Barn Owl Group (SBOG) formed in 2002 with the specific aim of providing nestboxes for barn owls and promoting the conservation of their habitat. At that time the precise number of barn owls in Shropshire was unknown. In order to measure the effectiveness of the provision of nestboxes over time and to assist their targeting, a contemporary baseline breeding population figure was considered essential. We therefore set about analysing all random Shropshire Ornithological Society (SOS) records from the period 1993 to 2002 and SBOG records for 2002, put dots on maps and came up with an estimated breeding population of 121 to 137 pairs. Seventy years earlier, in 1932, the Baker survey had estimated there were 287 pairs while the Shropshire Breeding Bird Atlas estimated 140 pairs in 1994. This clearly suggested a severe and continuous population decline of over 50%, despite the fact that Shropshire remained a predominantly rural county.

Surveys and nestboxes

Prompted by a strong desire to do something to help this enigmatic bird, SBOG began making contact with farmers and other landowners through articles in farming magazines or contacting them direct. Articles tended to produce a surge of requests from farmers but all sites where visited and surveyed. Many sites were found to support habitat of little value to barn owls but our spirits would be lifted when we found sites with permanent, tussocky fields or grassy field margins created under the various agri-environment schemes. Not unexpectedly, many of these sites had no natural cavities for barn owl nest sites but, fortunately, barn owls take readily to nestboxes which meant with a few practical resources and a little planning we could make a difference. So began an intensive programme of nestbox installation.

We use modified tea chests in internal sites and rectangular or 'A' shaped nestboxes on isolated trees or on a pole where there are no trees available. We have come to prefer the flat roof roofed rectangular boxes, which, unlike the 'A' shaped nestboxes, provide a safe platform on which young owls can settle and exercise prior to fledging. Initially, we followed convention and installed at least two tree nestboxes in close proximity, perhaps less than a few hundred metres apart, to provide both nesting and alternative roosting sites but found that though one box might be occupied by a breeding pair, the second often remained empty. This indicated that the birds already had a suitable substitute roosting site in the area and over the years we have found several examples of barn owls roosting elsewhere in dense coniferous trees without the need for cavities. We now tend to install just one box on a good isolated tree bang in the middle of ideal barn owl grassland habitat, being prepared to install a second nestbox if necessary. This is more cost effective in terms of both materials and time spent installing and monitoring the boxes.

Barn owls nested in this tree box at Allscott Sugar Factory in 2006 after an absence of 20 years on the site (Photo: Glenn Bishton)

We envisage that new nestboxes installed in sites were barn owls have not been recorded in recent years or where the habitat has only recently been improved will take time to be used by barn owls, perhaps two years or more. However, a pole box succeeded in attracting a roosting barn owl within 28 days and tree nestboxes have been occupied by roosting barn owls within 2 months. The rule is be patient but be prepared for the unexpected. We usually invite the landowner to make a donation to the cost of the nestbox and fortunately many do so. As a voluntary group dependant on raised funds, this is most welcome and allows us to be proactive in targeting other sites across the county. However, we must sing the praise of The William Dean Trust, which sponsored us from an early stage and which gave us the encouragement and support that was so desperately needed.

A summary of barn owl breeding results 2002-2006

The table below summarises breeding success for nestboxes and natural nest sites monitored by SBOG for the five years 2002 to 2006. All nestboxes and natural sites are monitored every year. 106 chicks have been produced in SBOG nestboxes and 108 in natural sites, with an average of. 3.08 chicks per pair. Productivity is marginally highest in natural building sites at 3.25 chicks per pair and lowest in natural tree sites at 2.87 but the relatively small amount of data from building nest sites should presently be treated with caution. Nestboxes have produced an average of 3.02 chicks per nest site with productivity marginally highest in tree nestboxes.

Table 4. Number of chicks produced according to nest site
2002-2006
Shropshire Barn Owl Group

Figures in parentheses refer to number of broods

Year	Building nestbox		Tree nestbox		Pole nestbox		Building natural		Tree cavity Natural		Total No. chicks	Mean No. chicks
	No. chicks	Mean	No. chicks	Mean	No. chicks	Mean	No. Chicks	Mean	No. chicks	Mean		
2002	0 (0)	0	4 (1)	4.0	N/A	N/A	0 (0)	0	20 (6)	3.3	24 (7)	3.4
2003	6 (2)	3.0	2 (1)	2.0	N/A	N/A	2 (1)	2.0	18 (8)	2.2	28 (12)	2.3
2004	12 (4)	3.0	12 (4)	3.0	0	0	5 (1)	5.0	14 (5)	2.8	43 (14)	3.0
2005	27 (8)	3.3	40 (12)	3.3	0	0	6 (2)	3.0	39 (12)	3.2	112 (34)	3.2
2006	0	0	0	0	3 (1)	3	0	0	4 (2)	2.0	7 (3)	2.3
Total nest sites	14		18		3		4		33		70	
Total chicks	45		58		3		13		95		214	
Mean No. chicks	3.21		3.22		3.00		3.25		2.87		3.05	

106 chicks have been produced in our nestboxes since 2002 (Photo: John Lightfoot)

2005 was an exceptional year for us with many nestboxes occupied by breeding pairs for the first time. At one site, Allscott Sugar factory, barn owls bred for the first time in over twenty years in a nestbox installed by SBOG. 20 successful breeding pairs of barn owl in 2005 exceeded the previous three years of 12 pairs combined. Similarly 110 chicks produced in all sites with 67 in nestboxes exceeded the previous three year combined total of 95 chicks for all sites and 35 for nestboxes. 2006 clearly proved to be the opposite but was not unexpected, with few breeding pairs, mainly attributable to the cyclical crash in the field vole population. We like to believe that our policy of targeting nestboxes at farms enrolled in agri-environment schemes with extensive areas of grassy headlands and, where feasible, siting networks of new nestboxes near to existing pairs to allow for occupation by dispersing young is proving to be effective and assisting the creation of viable populations of barn owl.

An example: The Weald Moors Project

Just how effective this policy can be is exemplified by one of our projects on the Weald Moors. The Weald Moors comprises an area of mixed farmland covering 50 square kilometres immediately north of Telford. Historically marshland, much of the land has been continuously drained by drainage ditches since at least 1576. However, the water table remains near the surface and barn owls are able to hunt along the grassy ditch banks and patches of marsh. Several farms are enrolled in agri-environment schemes with grassy margins and low density grazing providing extensive areas of good barn owl habitat.

Barn owls on The Weald Moors have increased from one known pair in 2002 to nine pairs

In 2002, only one pair of barn owl was known to breed and, clearly, the lack of suitable nest sites was inhibiting the population. Initially funded by the Environment Agency on a few farms the nestbox scheme was widened to other farms on the Weald Moors by the dissemination of information and asking for permission to install nestboxes. By 2005, with 29 nestboxes in place, there were nine breeding pairs, eight of them in nestboxes, producing 39 chicks since 2002.

One of the sites that saw barn owls breeding in a nestbox for the first time was on land managed by Harper Adams University College Farm (HAUC Farm). A tea chest installed in a farm building in 2004 produced three chicks the following year while another farm now has three breeding pairs, one in a natural tree site but two others in nestboxes provided by the group.

Four years on, is it working?

So, 141 site surveys and 212 nestboxes later are there any signs of an increase in the barn owl population? Our current database of 181 possible to confirmed breeding pairs compared to a possible maximum of 137 in 2002 would suggest that there is. Though this figure should for the moment be treated with a little caution, SBOG continually identifies hitherto unknown barn owl sites and with a steady flow of high quality records coming in from the Shropshire Ornithological Society our database continues to expand and be more reliable. Particularly encouraging are the 33 successful breeding attempts and 106 chicks in SBOG nestboxes since 2002. These are birds that probably would not have arisen without some intervention to create nesting cavities and must constitute a positive recruitment to the barn owl breeding population.

Installing one of 212 nestboxes erected since 2002 (Photo: Mike Wooton)

On a resource level, we have worked doggedly to build up funds and are especially grateful to the William Dean trust for their support. This allows us to respond quickly to requests from landowners for nestboxes and to proactively target sites that we think support good barn owl habitat. Though still a small group we have a network of helpers informing us of any developments on their patch and ringers providing valuable information on barn owl movements. Each year we produce an annual report summarising the results of our nestbox scheme and other activities which we distribute to all our site owners and supporters. Complimenting the survey and nestbox work, we have built up good relations with statutory authorities which enables us to comment on planning

applications where they affect barn owls, we give talks and guided walks which spread the conservation message, maintain records on road casualties to inform relevant bodies such as the Highways Agency.

We have also provided assistance to other bodies setting up nestbox schemes including the Forestry Commission, Severn Trent Water and the Upper Onny Wildlife Group. All providing nestboxes coverage in parts of Shropshire that we had not yet had the opportunity to reach.

On a habitat level the signs are also encouraging. When we started out in 2002 farms enrolled in agri-environment schemes and offering the required rough grassland for barn owls as part of their farm conservation plans were few and far between. In the last few years we have noticed a definite surge in grassy margins, either wide arable margins several metres in width or more recently, one metre wide margins following the lines of hedgerows. As they mature and attract field voles, and so long as we continue to provide nestboxes and there are no sudden unforeseen environment problems detrimental to barn owls, we are optimistic that the breeding population in Shropshire will continue to recover.

Glenn Bishton & John Lightfoot

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