

*Shropshire*

# Barn Owl

*Group*



2010

Providing nestboxes for barn owls and promoting the  
conservation of their habitat



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This report summarises the results and activities of the Shropshire Barn Owl Group (SBOG) for 2010. The SBOG is a voluntary group and has been working since 2002 to increase the breeding population of barn owls in Shropshire by providing nestboxes in areas of suitable habitat and working with farmers and other landowners to conserve their habitat.

### **What We Do**

- Conduct site surveys and promote the conservation of barn owls and their habitat with farmers, landowners, statutory authorities and conservation organisations
- Operate a nestbox scheme for barn owls in Shropshire to replenish natural nest sites lost to decay and development
- Monitor nestboxes and natural sites for occupation by breeding and roosting barn owls on an annual basis under licence from Natural England
- Maintain a database of breeding sites, nestbox occupation and breeding success
- Act as a lead partner in the Shropshire Biodiversity Action Plan for barn owls
- Give talks and practical demonstrations to groups and schools
- Provide advice and practical assistance to local authorities, developers and homeowners where planning applications affect barn owl nest sites.

### **SOME OF OUR ACHIEVEMENTS SO FAR**

**312 barn owl nestboxes installed in Shropshire**

**159 successful breeding attempts in nestboxes**

**467 young barn owls produced in nestboxes**

**209 young barn owls in natural sites**

**229 site surveys completed**

## Why Barn Owls Need Our Help

In 1932 there were 287 breeding pairs of barn owl in Shropshire. In 2002 the Shropshire Barn Owl Group estimated the population at 121 to 140 pairs - a loss of around 150 pairs. The national population has declined from 12000 pairs to 4000 pairs and the barn owl is amber-listed as a species of medium conservation concern in the UK. The barn owl is on the UK Biodiversity Steering Group Conservation Concern List and a target species in the Shropshire Biodiversity Action Plan. The steep decline has been attributed to:



- The loss of prey-rich rough grassland habitat on farmland
- A reduction in the availability of nest sites in old trees and barns
- Urbanisation, pesticides and road casualties

## The 2010 Breeding Season



### The Nestboxes

Thirty-three nestboxes supported breeding pairs of barn owl in 2010 and 17 were occupied by roosting birds at some point in the year. Table 1 includes both successful and unsuccessful breeding attempts. The occupancy rate of 18% for breeding barn owls was marginally above the average occupancy rate of 15% and the overall nestbox occupancy rate of 28% by both breeding and roosting barn owls was marginally below the average occupancy rate of 32%. The average yearly nestbox occupancy rate for the eight years 2002-2010 is 32% and is greater for tree nestboxes, 34%, than building nestboxes, 30%, and pole nestboxes, 26%.

**Table 1. Nestbox occupation by Barn Owls in 2010**

Total No. nestboxes monitored	Tree				Building				Pole				% of nestboxes occupied by breeding pairs	% of nestboxes occupied by breeding and roosting birds
	No. Boxes	Breeding	Roosting	%	No. boxes	Breeding	Roosting	%	No. boxes	Breeding	Roosting	%		
176	122	24	9	27	45	8	8	35	9	1	0	11	18	28



## Where they bred

The SBOG confirmed barn owls breeding in nestboxes monitored by the group at Allscott, Cantlop, Cound, Attingham, Cleobury Mortimer, Clive, Crudgington, Ellesmere (3 pairs), Hordley, Kynnersley, Longden Wood, Lyneal Lodge, Lyneal Wood, Marchamley (3), Mose, Northwood, Pickstock, Rednall, Spoonley (2), Tibberton, Welsh Frankton, Whittington, Whixall (4), Woolaston.

Breeding in natural nest sites monitored by the SBOG occurred at Calverhall, English Frankton and Tunstall

## Breeding success

Fifty-five barn owl chicks were produced in sites monitored by the SBOG in 2010. Table 2. 52 chicks were produced in the nestboxes and natural nest sites produced 3 chicks. The data is confined to those pairs successfully producing chicks.



**Table 2. Number of chicks produced according to type of nest site in 2010**

Figures in brackets refer to number of broods

Tree nestbox		Building nestbox		Pole nestbox		Tree cavity natural		Building natural		Other natural		Total No. chicks	Mean No. chicks
No. chicks	Mean	No. chicks	Mean	No. chicks	Mean	No. chicks	Mean	No. chicks	Mean	No. chicks	Mean		
33 (16)	2.1	17 (8)	2.1	2 (1)	2.0	3 (1)	3.0	0	0	0	0	55 (26)	2.1

Breeding began with the first egg produced on the 20<sup>th</sup> April (13<sup>th</sup> April in 2009) and clutches ranged from one to seven eggs. Broods ranged from 1 to 4 chicks, mean 2.1 and were notably smaller than in 2009 (2.6) and for all years combined of 2.9. Young were last recorded in a nest site on 4 November.



Nine nests failed at the incubation stage either due to desertion by the adults or predation and one clutch was dispatched to the Centre of Ecology and Hydrology for analysis. This, together with the low productivity of successful nests and the occupation of several sites by non-breeding pairs suggest that barn owls struggled to maintain breeding activity and to feed their young in 2010 or deferred breeding altogether. Breeding data of barn owls in Shropshire tend to show peaks and troughs from year to year and a two or three yearly cycle is beginning to emerge. Clearly, breeding activity for 2010 was low and may be partly attributable to the low levels of rainfall at the beginning of the year which resulted in poor grass growth. Grass was notably brown across Shropshire in January and February due to the lack of water and this most probably impacted the field vole population at a time when barn owls would normally be attempting to feed well and attain breeding condition.

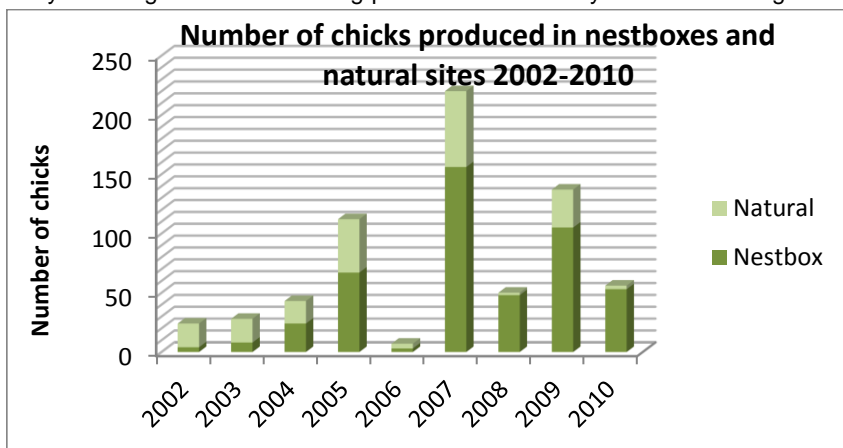
### Breeding summary 2002-2010

676 barn owl chicks have been produced in nest sites monitored by SBOG since 2002, 467 in nestboxes and 209 in natural sites. Both nestboxes and natural sites have produced an average of 2.9 chicks. Internal nest sites, including both nestboxes and natural sites in buildings, have produced an average of 3.1 chicks in the last nine years and do appear to be marginally more productive than external sites, both tree nestboxes and natural cavities, which have produced 2.8 chicks. The mean number of chicks produced per brood in Shropshire for the nine years 2002-2010 is 2.9. Studies elsewhere suggest that a long-term average productivity of about 3.2 young per pair is required to maintain viable populations.



Nestboxes are increasingly producing a greater proportion of chicks compared to natural sites as the number of nestboxes increase and pairs become firmly established at nestbox sites.

A cycle of high and low breeding production between years is becoming evident in the



barn owl population in Shropshire and is probably correlated with increases and subsequent declines in the barn owls main prey item, the field vole. On this basis it would appear that 2011 will show a marked increase in the number of chicks produced in comparison to 2010. It is also interesting to note that the exceptional increase in breeding activity in 2007 followed an unusually low level of productivity in 2006 and indicates how quickly the barn owl population can recover from poor breeding seasons when conditions are favourable.

### **The Whixall Barn Owl Project – A Success Story**

Apart from developing our own nestbox scheme, SBOG is often called on to work in partnership with others to develop nestbox programmes. One such project began in 2007 when the Parish Environmental Action Project, funded by Shropshire County Council Countryside Service, invited us to install barn owl nestboxes in the parish of Whixall and provide guidance on the best locations for the nestboxes.



SBOG helped install 11 nestboxes for the project in 2007. At that time we had no records of barn owls breeding within the targeted area but in the first year of monitoring in 2008 two boxes were occupied by breeding pairs and one was used for roosting. In 2009 one nestbox was used for breeding purposes and another for roosting. By 2010, twenty-eight nestboxes were in place and the number of nestboxes occupied by breeding pairs of barn owl had risen to four with a total of 13 young barn owls produced in the three years.

This exemplifies just how effective the careful sighting of nestboxes can be in designated areas of good barn owl habitat and how much can be achieved when resources are pooled and we are able to work in cooperation with other bodies.



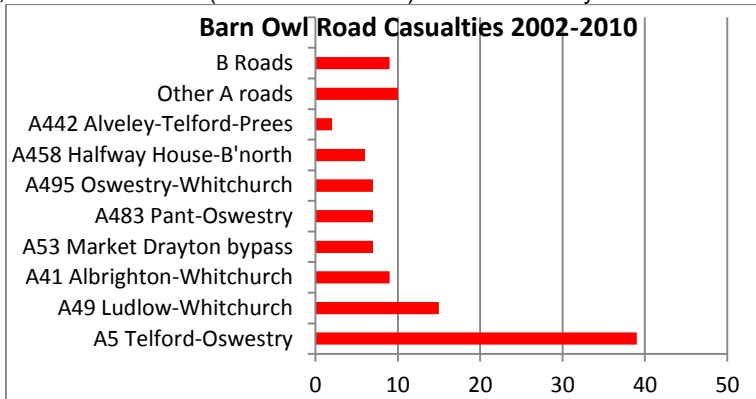
### **Ringling barn owls**

38 barn owl chicks were ringed by SBOG in 2010 under license from the British Trust for Ornithology. Ringing recoveries will allow us to ascertain their age and how far they have dispersed from their natal site. As well as ringing the chicks, wing length and head measurements are taken and all birds are weighed.

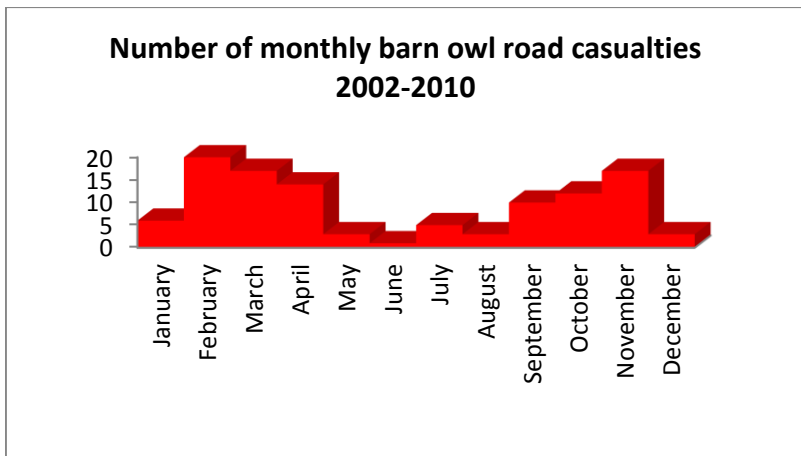


## Barn Owl Road Casualties

Thirteen road casualties were recorded from roads in Shropshire in 2010. 91% of casualties occur on 'A' roads with relatively few birds found dead on 'B' roads. The A5 is the most serious threat to barn owls, especially the dual-carriageway section through Shrewsbury, with 39 casualties (35 % of all deaths) in the last nine years.



67% of the road victims relate to the winter period October to March (see graph below). The rise in the number of casualties in autumn correlates with the dispersal of juveniles from the natal site. Casualties taper off a little in early winter but increase again in February and March, a period when adults are known to extend their hunting range and consequently increase the opportunity for collisions with vehicles. A decline in casualties in spring and summer correlates with breeding activity when adult barn owls are more sedentary and feeding largely within one kilometre of their nest site. SBOG's policy is not to install nestboxes within one kilometre of major roads in order to minimise the risk of barn owls coming into contact with vehicles.





## THANK YOU

Much of the conservation work undertaken by the Shropshire Barn Owl Group is accomplished in partnership with a variety of organisations and we wish to express our thanks to the following for their support during the year: Shropshire Ornithological Society, Shropshire County Council, Ironbridge Power Station (Eon Power), The Environment Agency, Upper Onny Wildlife Group, Cuan House. Thank you also to the many farmers and landowners across Shropshire who provide invaluable support and allow us to install nestboxes on their land (for reasons of site confidentiality we cannot disclose who or where they are). For financial support this year we are most grateful to the William Dean Trust, Shropshire Wildlife Trust's Clive Tate Memorial Fund and the Muller Community Trust of Muller Dairy (UK) Ltd. A special thank you to Paul and Elaine Griffiths for help with the Muller award. Sue Edwards, Trevor & Clare Linford and Merion Morris kindly made donations to SBOG.

Several 'silent' helpers have provided invaluable support during the year, either willingly or by default! They are Kevin Heede (Environment Agency), Leo Smith, Richard Camp, Jill Barrow, John Harding, Alan Russon, Victoria Fennell and Sally Pittam. We are grateful to Kingsley Press for printing the report and to SWT for meeting the printing costs. Active members of SBOG in 2010 were John Lightfoot, Wendy Lightfoot and Glenn Bishton.

## How you can help

- **Contact us if you would like to encourage barn owls to breed. Barn owls require large fields of permanent, ungrazed tussocky grassland or extensive grassy margins where the grass is maintained to a height of 20-40cm. This provides barn owls with a high density of small mammal prey**
- **Contact us to arrange a site survey if you have created grassy margins or headlands under DEFRA's Entry Level or Higher Level Stewardships scheme**
- **SBOG can construct, install and monitor nestboxes for a nominal cost of £70**
- **Retain large, old trees to provide nest and roost sites**
- **Retain old barns and stock shelters, or where they are to be developed, consider incorporating a loft space for breeding barn owls**
- **Let us know when natural nest sites are threatened by development or decay so that we can work with you to protect the barn owls.**
- **Report sightings of barn owls during the breeding season March to August**

**If you feel that the work that we do is worthwhile and would like to support our efforts please consider making a donation to the Shropshire Barn Owl Group. For more information visit our website [www.shropshirebarnowlgroup.org.uk](http://www.shropshirebarnowlgroup.org.uk)**

### Contacts

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*The barn owl is on Schedule 1 of the Wildlife and Countryside Act 1981 under which it is an offence to take, injure or kill any wild barn owl, or take or destroy an egg or damage a nest whilst it is in use*