

2012

Shropshire

Barn Owl

Group



Providing nestboxes for Barn Owls and
promoting the conservation of their habitat

£1

This report summarises the results and activities of the Shropshire Barn Owl Group (SBOG) for 2012. 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 Barn Owl Biodiversity Action Plan
- Give talks and practical demonstrations to groups and schools
- Provide advice and practical assistance to local authorities, developers and homeowners to mitigate disturbance to barn owls

SOME OF OUR ACHIEVEMENTS SO FAR

Over 300 nestboxes installed for barn owls in Shropshire



243 successful breeding attempts in nestboxes

741 young barn owls produced in nestboxes

226 young barn owls in natural sites

266 site surveys completed

The 2012 Breeding Season

The Nestboxes

Fifty-nine nestboxes supported breeding pairs of barn owl in 2012 and twenty-seven were occupied by roosting birds at some point in the year. Table 1 includes both successful and unsuccessful breeding attempts. The occupancy rate of 28% for breeding barn owls was significantly above the average occupancy rate for Shropshire of 22% and the highest to date since 2002. The nestbox occupancy rate for both breeding and roosting barn owls combined was 41% and was also significantly higher than the average occupancy rate of 32%. The average yearly nestbox occupancy rate is greater for tree nestboxes, 34%, than building nestboxes, 30%, and pole nestboxes, 30%.

Table 1. Nestbox occupation by Barn Owls in 2012

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	%		
207	140	45	18	45	60	11	7	30	7	3	2	71	28	41

Where they bred

The SBOG confirmed barn owls breeding in nestboxes and natural sites monitored by the group at Admaston, Attingham, Alkington, Allscott, Baschurch, Broseley, Catherton, Childs Ercall, Chipnall, Chirbury, Clive, Colehurst, Crickheath, Crudgington, Ellerdine Heath, Ellesmere (5 pairs), Gobowen, Kynnersley, Lyneal, Marchamley, Millen Heath, Morton, Mose, Oswestry, Pentre, Pickstock, Pikesend, Rednal, Sleaf, Spoonley, Stanton Lacey, Tunstall, Welsh Frankton, Weston Lullingfields, Whitchurch, Wollaston, Woore, and Yorton Heath.

Breeding success

Table 2. Number of chicks produced according to type of nest site in 2012

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		
130 (40)	3.2	31 (9)	3.4	11 (3)	3.6	5 (2)	2.5	0	0	0	0	177	3.2



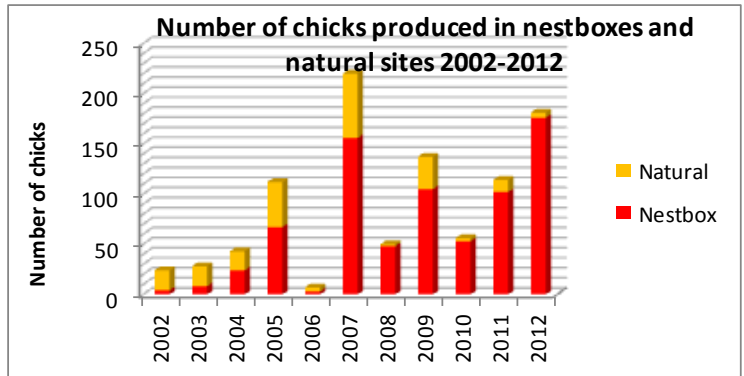
177 barn owl chicks were produced in sites monitored by SBOG in 2012. Table 2. Nestboxes produced 172 chicks and natural nest sites produced 5 chicks. The data is confined to those pairs successfully producing chicks. Laying began early, around 12th April and broods ranged from 2 to 6 chicks, mean 3.2, and was higher than the average brood size for all years combined of 3.0.

Eight pairs were double-brooded, usually on sites where we had two nestboxes closely sited to each other. It appeared that when the chicks reached ten weeks old or more the female laid a second clutch in the second nestbox while the male continued to provision the young in the original nestbox. Young barn owls were still present in one nestbox when monitored on 19th October.

A barn owl ringed as a nestling at Stoke-on-Tern on the 15th June 2007 was recovered dead 1904 days later and 6 km away at Cold Hatton on the 31st August 2012.

Breeding summary 2002-2012

967 barn owl chicks have been produced in nest sites monitored by SBOG since 2002, 741 in nestboxes and 226 in natural sites. Interestingly, the occupancy rate for tree nestboxes (see above) is higher than internal nestboxes, perhaps because they are easier



to find, but they are marginally less productive. Perhaps environmental factors such as increased exposure to reduced temperatures or increased predation have a greater impact on tree external nestboxes. Internal nest sites, including both nestboxes and natural sites in buildings, have produced an average of 3.1 chicks in the last eleven years and do appear to be marginally more productive than external sites, both tree nestboxes and natural cavities, which have produced 2.9 chicks. The mean number of chicks produced per successful brood in Shropshire for the eleven years 2002-2012 is 3.0. Studies elsewhere suggest that a long-term average productivity of about 3.2 young per pair is required to maintain viable populations, so 2012's average of 3.2 chicks was precisely on target!

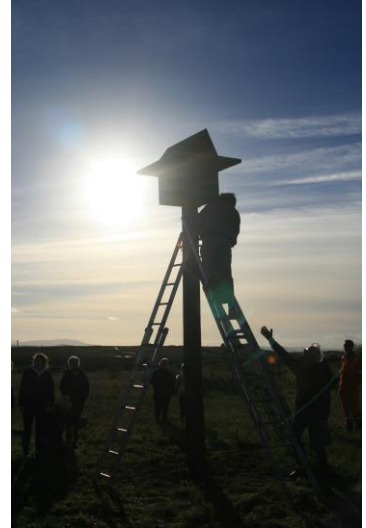


As the number of nestboxes increase and pairs become firmly established at nestbox sites they are increasingly producing a greater proportion of chicks compared to natural sites. A two-year cycle in breeding productivity, probably correlated with fluctuations in the field vole population, is also increasingly evident.

How many barn owls are there in Shropshire?

This is a question the Shropshire Barn Owl Group is often asked. Another is 'how are they doing'? Conscious of the fact that these were the sort of questions that would be asked when we set up the group in 2002 one of our first tasks was to scrutinise the existing barn owl records and to come up with an estimate of breeding pairs - which was 121 to 140 pairs, a loss of 150 pairs since the first estimate in 1935 and roughly the same as in the 1992 Shropshire 'Atlas'. So, eleven years and over 300 nestboxes later how are barn owls faring?

Since 2002 our nestboxes have produced 741 barn owl chicks, natural nest sites 226. Nestboxes have been installed on trees or in internal sites on farms and other land that supports suitable barn owl hunting habitat – permanent, rough, tussocky grassland. Our policy of siting nestboxes only in areas of good barn owl hunting habitat has established new breeding pairs in hitherto unoccupied sites. This is a gradual and long-term process and the occupation of new nestboxes is often tentative. Our records show that the shortest time lapse for occupation of a nestbox by a breeding pair of barn owl is eight months. The average lapse time is 17 months. Nestboxes installed in 'Hot' sites, that is with barn owls known to be present in adjacent 1km grid squares, are occupied in 13 months on average compared to 25 months for 'Cold' sites (no known barn owls in adjacent grid squares). Roosting barn owls can be enticed to use nestboxes quicker than breeding pairs: for example, 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.



2012 was a peak year for breeding barn owls in Shropshire and the second highest in terms of chick productivity since we began in 2002. Laying began early, around 12th April, and, interestingly, eight pairs were double-brooded, usually on sites where we had two nestboxes closely sited to each other.

The two-year cycle in breeding productivity is fascinating but why the peaks and troughs in alternate years? We assume it is prey related, probably in synchronisation with the barn owls main prey in Shropshire – the field vole. And we know the main prey item is field vole because we have identified 1458 separate prey items from 522 pellets collected from 69 different sites. But why does the field vole population increase and decrease so markedly and what

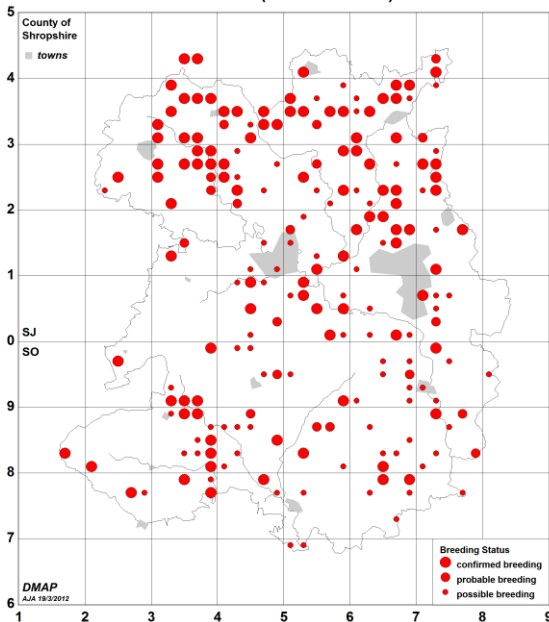


mechanisms control the barn owls response to this change in prey availability? A nice study surely for some research student.

So, can we answer the question 'how are barn owls doing in Shropshire'? Quite well according to the above statistics and the signs within the farmed landscape are encouraging. When we started out, farms enrolled in agri-environment schemes and offering the required permanent rough grassland for barn owls as part of their farm conservation plans were few and far between. In recent 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 adverse climatic conditions or unforeseen environmental problems detrimental to barn owls, we are optimistic that the breeding population in Shropshire can recover. And of course, money must remain available from the EC pot, which is not currently assured, for agri-environment schemes



Barn Owl (SBOG & Atlas)



2013 year is going to be an interesting and exciting one for barn owl conservation in Shropshire. After six years of intensive fieldwork the Shropshire Ornithological Society will be publishing its Atlas of breeding and wintering birds. The map shows the breeding distribution of the barn owl in Shropshire so far between 2007 and 2011. SBOG has provided extensive data on the distribution of breeding pairs of barn owl in Shropshire and their breeding productivity and in combination with contributions from atlas fieldworkers we will arguably have in 2013 the most definitive account of the status of the barn owl in Shropshire yet.

Little Owl conservation in Shropshire

SBOG assists the conservation of the little owl in Shropshire, both indirectly and directly. Indirectly, because little owls occasionally occupy barn owl nestboxes for breeding purposes and directly because we have purposefully installed a number of little owl nestboxes at a few sites. Using a design devised by Bob Sheppard and available on the Barn Owl Trust website at www.barnowltrust.org.uk the nestbox replicates a tree cavity which is one of the favoured natural breeding sites of little owl. Two little owl nestboxes installed by SBOG at Stanwardine in October 2011 were occupied by breeding pairs less than a year later in May 2012, one pair raising four young, the other clutch of eggs predated.

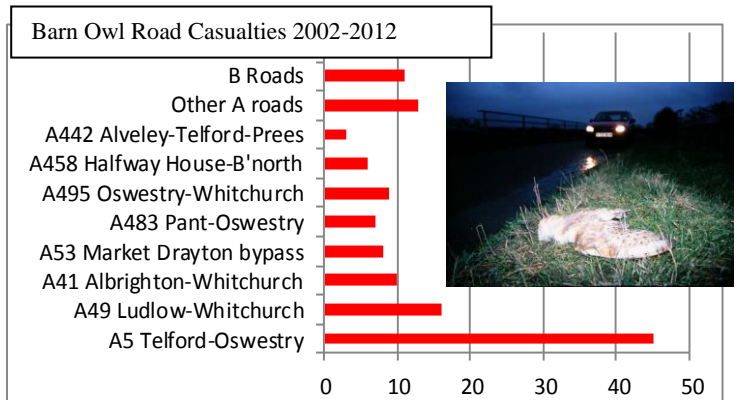


Introduced into Britain in Kent in 1874 and then in Northamptonshire in 1888 the little owl soon spread north and by 1925 was recorded in Scotland. Pesticides played a part in their subsequent decline in the 1960's which has continued rapidly in recent years. Estimates put the UK population at around 7000 pairs and the 1992 Shropshire Atlas estimated 600-1800 pairs. The new atlas is likely to indicate a much reduced population. Now naturalised in the UK we have a responsibility to promote the conservation of the little owl in Shropshire and installing a few nestboxes here and there is one way we can help this enigmatic owl.

Barn Owl Road Casualties

Thirteen road casualties were recorded from roads in Shropshire in 2012. 91% of casualties occur on 'A' roads with relatively few casualties

on 'B' roads. The A5 is the most serious threat to barn owls, especially the dual-carriageway section through Shrewsbury, accounting for 45 casualties and 34% of all deaths in the last ten years. 66% of the road victims relate to the winter period October to March, coinciding with juvenile dispersal and adults extending their hunting ranges. 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 County Council, The Environment Agency, Shropshire Wildlife Trust and volunteers. 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 and to supporters who very kindly gave donations – we are truly grateful for your support and hope that you can see within this report some of the direct results of that support.

Several 'silent' helpers have provided invaluable support during the year, either willingly or by default! They are Paul Shearer, Lesley Vandyke, Jill Barrow, Richard Camp, Alan Russon. Jill Barrow kindly allowed us use of her barn owl photos on the cover and page 2. We are grateful to Kingsley Press for printing the report. Active members of SBOG in 2012 were John Lightfoot, Wendy Lightfoot, Glenn Bishton, Lauren Fennell, Annette 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 to us or the Shropshire Ornithological Society**

If you would like to see more barn owls in Shropshire why not support our work and consider making a donation to the Shropshire Barn Owl Group. For more information visit

www.shropshirebarnowlgroup.org.uk

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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