
Shropshire
Barn Owl
Group
2009
£1

This report summarises the results and activities of the Shropshire Barn Owl Group (SBOG) for 2009. 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 enhance 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 schools and other groups
- Provide advice and practical assistance to local authorities, developers and homeowners where planning applications affect barn owl nest sites.

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

Photos: Paul King (p.6) Mike Wooton (barn owl p.7), BOT (field vole p.7). Other photos Glenn Bishton & John Lightfoot.

Breeding Season 2009

The Nestbox Scheme

290 nestboxes were available at the start of the 2009 breeding season. 41 supported breeding pairs of barn owl and 18 were occupied by roosting birds at some point in the year. Table 1 includes both successful and unsuccessful breeding attempts. The occupancy rate of 23% by breeding barn owls in 2009 was above the average occupancy rate of 14% and the overall nestbox occupancy rate of 34% by both breeding and roosting barn owls was marginally below the average occupancy rate of 33%.

The average yearly nestbox occupancy rate for the seven years 2002-2009 is 33% and is greater for tree nestboxes, 35%, than building nestboxes, 30%, and pole nestboxes, 28%.

Table 1. Nestbox occupation by Barn Owls 2002-2009
Shropshire Barn Owl Group

Year	Total No. nestboxes monitored	Tree				Building				Pole				%. of nestboxes occupied by breeding pairs	% of all nestbox types occupied B and R birds
		No. Boxes	Breeding	Roosting	%	No. boxes	Breeding	Roosting	%	No. boxes	Breeding	Roosting	%		
2002	13	6	1	0	16	7	0	3	42	0	0	0	0	7	30
2003	48	22	1	6	31	26	2	4	23	0	0	0	0	6	27
2004	97	51	4	14	27	41	4	5	21	5	0	4	80	8	31
2005	135	76	13	18	40	48	9	10	39	11	0	3	27	16	39
2006	160	85	2	22	28	63	0	20	31	12	1	2	25	1	29
2007	187	101	25	14	38	74	15	10	33	12	2	1	25	27	35
2008	185	105	21	22	40	74	6	7	17	6	1	1	33	15	31
2009	**171**	**121**	**28**	**12**	**24**	**40**	**12**	**6**	**45**	**10**	**1**	**0**	**10**	**23**	**34**
Total	996	567	95	108	35	373	48	65	30	56	5	11	28	14	33

Breeding success

The SBOG confirmed barn owls breeding in nestboxes monitored by the group at Allscott, Aston Eyre, Attingham, Bagley, Bishops Castle, Bryn Shop, Childs Ercall, Clive, Chipnall, Colehurst, Crudgington, Ellesmere, Kynnersley, Longden Wood, Lyneal, Marchamley, Oldfields, Peaton, Pickstock, Rhosygadfa, Soundley, Spoonley, Sutton, Tunstall, Welsh Frankton, Whitchurch, and Whixall

Breeding in natural nest sites monitored by the SBOG occurred at Adderley, Aston on Clun, Berrington, Betton, Corfton, Eaton upon Tern, Edgton, Ellerdine, Ellesmere, English Frankton, Great Oxenbold, Hanwood, Haughton, Moreton Say, Pikesend, Pipegate, Purlogue, Treflach, Wappenshall, Weston Lullingfileds

Table 2 summarises the breeding success of barn owls in 2009 in nestboxes and natural sites in Shropshire. The data is confined to those pairs successfully producing chicks. The total number of chicks produced in all sites monitored by the SBOG was 137. 105 chicks were produced in the nestboxes and natural nest sites produced 32 chicks.

Breeding began with the first egg produced around the 13th April 2009 (12th April in 2008) and clutches ranged from one to five eggs. Broods ranged from 1 to 5 chicks, mean 2.6. Young were last recorded in a nest site on 17th September 2009 and the latest fledging date was estimated to be in early October.

621 barn owl chicks have been produced in nest sites monitored by SBOG since 2002, 415 in nestboxes and 206 in natural sites. Nestboxes have produced an average of 3.0 chicks per nest site and natural nest sites 2.9.

Productivity is highest in pole nestboxes at 3.4 chicks but the sample is small and the data should presently be treated with caution. However, pole nestboxes are specifically installed directly within optimal barn owl habitat, where the absence of suitable trees has prevented barn owls from occupying the site, and this may promote higher productivity in this type of nestbox.

Internal nest sites, including both nestboxes and natural sites in buildings, have produced a mean of 3.2 chicks in the last eight 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 brood in Shropshire for the eight years 2002-2009 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. SBOG's policy of targeting nestboxes at farms enrolled in agri-environment schemes with extensive areas of grassy margins and siting networks of new nestboxes near to existing pairs to allow for occupation by dispersing young is intended to assist the creation of viable populations of barn owl.

John Lightfoot holds a BTO ringing license and 72 barn owl chicks were ringed in 2009. Ringing recoveries will allow us to ascertain their age and how far they have dispersed from their natal site. One chick ringed at Ellesmere in July 2009 was recorded in Warwickshire 90 days later having travelled a distance of 122km.

Table 2. Number of chicks produced according to type of nest site 2002-2009

Figures in brackets refer to number of broods

Year	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		
2002	4 (1)	4.0	0 (0)	0	0	0	20 (6)	3.3	0 (0)	0	0	0	24 (7)	3.4
2003	2 (1)	2.0	6 (2)	3.0	0	0	18 (8)	2.2	2 (1)	2.0	0	0	28 (12)	2.3
2004	12 (4)	3.0	12 (4)	3.0	0	0	14 (5)	2.8	5 (1)	5.0	0	0	43 (14)	3.0
2005	40 (12)	3.3	27 (8)	3.3	0	0	39 (12)	3.2	6 (2)	3.0	0	0	112 (34)	3.2
2006	0	0	0	0	3 (1)	3	4 (2)	2.0	0	0	0	0	7 (3)	2.3
2007	92 (26)	3.5	56 (15)	3.7	8 (2)	4.0	44 (12)	3.6	17 (4)	4.2	3 (1)	3.0	220 (60)	3.6
2008	34 (16)	2.1	11 (4)	2.7	3 (1)	3.0	2 (1)	2.0	0	0	0	0	50 (22)	2.2
2009	**65 (24)**	**2.7**	**37 (12)**	**3.0**	**3 (1)**	**3.0**	**24 (11)**	**2.1**	**5 (3)**	**1.6**	**3 (1)**	**3.0**	**137 (52)**	**2.6**
Total Broods	84		45		5		57		11		2		204	
Total chicks	249		149		17		165		35		6		621	
Mean No. chicks	2.9		3.3		3.4		2.8		3.1		3.0		3.0	

Two chicks which fell from their nest site at Eaton upon Tern in August were taken to Cuan House animal centre at Much Wenlock where they spent seven weeks recovering from their ordeal and reaching maturity and the required weight. They then spent a couple of weeks in a farm building where they were fed by SBOG on dead chicks passed through a hatch each evening, consuming 179 prey items in total. The barn owls were eventually released back into the wild on the 27th September, hopefully to breed in the future.

Raising Barn Owls – Our Story
By Samantha Webb

During September 2009 a sick barn owl was retrieved by one of the dogs on our farm. We contacted John Lightfoot who assessed the bird, which was female and underweight. We informed John that there was a chance she may have owlets as a nesting pair we had definitely had had a clutch. He agreed to come and check and tag them the next day. We brought the owl home via a local vet who suggested giving her glucose water via syringe during the night and see what happened. She was still alive, but very subdued the next morning so we took her to Cuan House Wildlife Rescue. She had a sore in her mouth and Megan suspected an infection, so arranged to visit their vet. Unfortunately, the owl died shortly after I left her. The vet examined her anyway to rule out any infection and found a large oesophageal tumour.

John discovered that we had three live females (pictured left) aged between 43 and 48 days. One had a discharging eye, was checked out at Cuan House and was given the all clear the same day. As the owlets were taking whole prey, John advised supplementing their diet. Under John's guidance, I delivered nightly food parcels of day old chicks and set up a feeding station within "dad's" flight path. After several days, he had grasped the concept and was clearing everything up. John checked on the owlets' progress the following week and was satisfied that things were progressing well. The oldest owlet fledged by Saturday 3rd October, whilst her sisters took until mid October. I have heard them in the vicinity over the winter months.

Being privileged enough to have assisted in the survival of such magnificent birds has inspired me to learn more about them and has extinguished my fear of all things feathered! I would like to express my most sincere thanks to John for his invaluable advice and support and to Megan, Fran and all at Cuan House for their help in ensuring their survival.

Sisters at Fledging

Barn Owl Road Casualties

Three road casualties were recorded in the months of February and March of 2009, well down on the 23 recorded in 2008. This is probably linked to the relatively low number of young produced in 2008 and consequently fewer young birds dispersing from their natal site.

92% 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. 70% of the road victims relate to the winter period October to March. This period correlates with the dispersal of juveniles from the natal site and adults extending their hunting range in winter.

Shropshire Barn Owl Road Casualties 2002-2009															
Road	Male	Female	Month												Total
			J	F	M	A	M	J	J	A	S	O	N	D	
A5 Telford–Shrewsbury-Oswestry	7	4	1	6	5	3	1			2	1	2	8	3	32
A49 Ludlow-Shrewsbury-Whitchurch		1	1	3	4		1				3	2			14
A53 Market Drayton Bypass	1			1	1	1					3	1			7
A483 Pant–Oswestry	3	1		3	2				1				1		7
A41 Albrighton-Whitchurch		2	1	1	2			1				2	1		8
A458 Halfway House-Bridgnorth		1		1		1						2	2		6
A495 Oswestry-Whitchurch		3		1			1		1				2		5
A442 Alveley-Telford-Prees				1	1										2
Other A roads	1	1		3	2						3	1	1		10
B roads						4			1	1		1			7
Total	12	13	3	20	17	9	3	1	3	3	10	11	15	3	98

The diet of the Barn Owl in Shropshire

The barn owl is an avid hunter of small mammals. Prompted by the lack of specific data and the need to inform habitat management recommendations the Shropshire Barn Owl Group has been analysing samples of barn owl pellets collected from nest sites and roosting sites across Shropshire since 2002. We have identified 1458 separate prey items from 522 pellets collected from 69 different sites.

The analysis clearly shows that the main prey item of the barn owl in the county is the field vole, comprising 71% of the prey items. Secondary prey includes wood mouse (12%), common shrew (9%) and bank vole (5%). Other prey accounting for one per cent or less of the items taken include pygmy shrew, house mouse, brown rat, mole and birds.

Field voles require permanent, rough tussocky grassland, which is largely unmanaged and undisturbed. Grassland of this nature on farmland is now often confined to field margins -arable headlands, hedgerows, fence lines, banks, ditches and riverbanks - and the conservation of these habitats is paramount if the breeding status of the barn owl in Shropshire is to be improved. We intend to obtain and analyse additional samples to increase the validity of the results and hope to publish the findings in due course.

We are grateful to the Shropshire Wildlife Trust's Leighton Fund for their support in this study.

Memorial Nestboxes

SBOG is able to install sponsored nestboxes in memory of a loved one. A plaque is placed on the nestbox and a signed certificate presented. The sponsor is then kept informed of any developments and occupancy of the nestbox. A nestbox kindly sponsored by Sue Edwards in memory of her late husband, Mike, was installed on the 17th October 2008 and held three chicks on the 30th June 2009.

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: Shropshire Ornithological Society, Shropshire Wildlife Trust, Shropshire County Council, Allscott Sugar Factory, Ironbridge Power Station (Eon Power), Harper Adams University College, Severn Trent, The Environment Agency, Cuan House. A special thank you also to the many farmers and landowners across Shropshire who have allowed us to install nestboxes on their land, the William Dean Trust and the Shropshire Wildlife Trust's Clive Tate Memorial Fund.

Several 'silent' helpers have provided invaluable support and records during the year, either willingly or by default! They are Julian Langford, Simon Hughes, Kevin Heede (Environment Agency), Leo Smith, Richard Camp, Jill Barrow, John Harding, Alan Russon, Sally Pittam and Alison Littlehales. We are very grateful to Kingsley Press for the quality printing of the report. Active members of SBOG in 2009 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 £60
- 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.
- Report sightings of barn owls during the breeding season March to August
- Report locations of dead barn owls

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

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The barn owl is on Schedule I 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