

# Rea Valley Community Wildlife Group

Celebrating wildlife in Pontesbury, Minsterley, Stiperstones and  
the Hope Valley area



## Annual Report 2017-18



Stiperstones &  
Corndon Hill Country  
LANDSCAPE PARTNERSHIP SCHEME





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# 1 An introduction to the Stiperstones and Corndon Hill Country Landscape Partnership Scheme

The Stiperstones and Corndon Hill Country is a beautiful upland area that crosses the Welsh English border between the Shropshire Hills and Montgomeryshire. The *Stiperstones & Corndon Hill Country Landscape Partnership Scheme* (LPS) is a five year programme of work (ending in March 2018) to raise awareness of, enhance and celebrate local history and wildlife. Funded by the Heritage Lottery Fund, the Scheme brings together local people, groups, organisations and professionals from England and Wales, and covers an area bounded by the settlements of Churchstoke, Chirbury, Minsterley, Pontesbury, Bridges, Wentnor and Norbury. Further information on the LPS is available through the website:

<http://www.stiperstonesandcorndon.co.uk/>

The public consultation carried out during the development phase of the LPS highlighted the commitment of local people to wildlife conservation. Subsequently, in 2013, when the Scheme was launched, this gave rise to the development of two, new local Community Wildlife Groups - one group was formed in the Rea Brook catchment and the other in the Camlad river catchment (for information on the other CWGs in South Shropshire, please visit: <http://www.shropscwgs.org.uk/>).

Now in its final year, the Rea Valley Community Wildlife Group is seeking to continue to take action to conserve key species in the LPS area, beyond the lifespan of the scheme. Surveys, such as those of the iconic Curlew, are crucial to our understanding of population trends and provide baseline data which informs intervention attempts to reverse local declines. The data is now feeding-in to the national lowland picture.

Following the example of other CWGs in Shropshire, the Rea Valley group is given a voice in order to develop interest in other wildlife, and as with Curlews, these too have helped to establish the status of key wildlife species and their habitats. Projects, such as *Rescuing Rocks and Overgrown Relics* and *Wildflower Meadows and Verges*, continue to inform future management of sites, whereas nest box schemes and the involvement of Young Rangers and *Shropshire Wild Teams* ensures that the project engages local people - experts, enthusiasts and amateurs alike.

We are pleased to announce that the Rea Valley Group is in the process of becoming constituted, with the following candidates having stepped up for committee roles: Joe Penfold (Chair), Amber Bicheno (Secretary and website officer), Geoff Brown (Treasurer), Leo Smith (Bird Group Leader), Rob Rowe (Plant Group Leader), Gary Price (Committee Member). Should any other members of the group like to put themselves forward for the committee, please send a message to [reavalleycwg@gmail.com](mailto:reavalleycwg@gmail.com). The group will be seeking funding to continue with the surveys activities, and potentially practical habitat management. If any group member has an idea for an activity or event they would like to suggest for the group, please do not hesitate to get in touch.

Amber Bicheno, Rea Valley CWG Secretary



The 199km<sup>2</sup> Scheme area is bounded by the parallel ridges of the Long Mynd and the Stiperstones with the prominent Corndon Hill to the South West



Moth surveying at The Bog Mine site

## 2 Plant Group Report for 2017

From the initial meetings of the Stiperstones and Corndon Hill Country Landscape Partnership Scheme a number of people had expressed interest in forming a plant group.

In 2015 we decided to run the three CWG plant groups together and in 2016 and 2017 we continued to do this.

Of the twelve events two were in the RVCWG area. [Shown in blue]



### March 13<sup>th</sup> Ancient Tree Walk

*Ancient Tree Walk*

Visit to an area of old wood pasture near Rorrington to see, measure and record some of the old oak pollards. This is a remnant of an unusual habitat in this area. A great turnout of 25 people.

### April 13<sup>th</sup> Lichens training day

We were very lucky to get Bob Kemp again to give us a very clear and instructive introduction to this group. It took the form of a PowerPoint presentation followed by looking at lichens around the Bog area and then back to the Natural England offices for more tuition. 9 present

### April 28<sup>th</sup> Mosses and Liverworts

Our fourth well attended mosses meeting lead by Dan Wrench teaching the basics of mosses and liverworts [bryophytes]. After identifying and collecting specimens around the Bog we headed back to NE offices for lunch and spent time keying out the various specimens using lenses and microscopes. 10 present

### May 18<sup>th</sup> Mytton Dingle part of the Stiperstones NNR

Heathland, grassland, spring ephemerals and a chance to practise mosses and liverworts the most impressive find was some large specimens of Moonwort, an unusual fern of unimproved grassland. 6 present



*Hoary Cinquefoil*

### June 6<sup>th</sup> Todleth Hill

Second visit to a rich site for spring ephemerals. New species for this year were Hoary cinquefoil, Twayblade orchid and Adders tongue fern.

June 15<sup>th</sup> White Grit Meadows. Our third visit to these meadows due to popular demand. The first, a species rich hay meadow is particularly special for its abundance of Greater Burnet.



The second nearby SSSI site is a series of species rich meadows managed by grazing with an abundance of Dyers Greenweed. We also visited a new species rich hay meadow nearby with Southern marsh orchid. 12 present

### June 30<sup>th</sup> Cwnd Meadow

An evening visit to this flower-rich hay meadow which has been traditionally managed for many years. This was a joint outing with the Marches Meadow group and we were treated to a feast afterwards by our hosts! 9 present



*Petty Whin*

### June 17<sup>th</sup> Shelve Pool SSSI

Exploring the plants in and around the pool and in nearby species rich grassland. We re found the Petty Whin which had not been seen for some years. 8 present

### July 13<sup>th</sup> Brithdir SSSI

A whole day exploring and recording around the marsh and meadows of this species rich SSSI and surrounding fields. 12 new additional species were found. 10 present



*Moonwort*

### July 23<sup>rd</sup> Ritton Bog

Extremely species rich wet grassland and flushes. 9 present

### August 3<sup>rd</sup> Black Marsh

At the northern end of Stapeley Common is a large and varied area with some particularly good wet flushes, so particular attention was given to rushes and sedges. An unusual late flowering plant found there is the tiny Knotted Pearlwort. 4 present

### October 18<sup>th</sup> The Bog Fungi Foray

Our second Fungi Foray at the Bog led by Jo Weightman. We were also joined by other members of Shropshire fungi group. Considering how dry the weather had been it was very good good count with a total of 49 species recorded. Highlights were Herald of winter [*Hygrophorus hypothejus*] and Velvet bolete [*Suillus variegates*]

In the afternoon we looked at some meadows above the Bog including the Natural England SSSI and recorded 28 species including 8 waxcaps. Some rare and unusual species were recorded at both places. 11 present



## 2.1 Verge Surveys

Carrying on from 2015 we modified and simplified the verges survey form which should provide all the relevant data. Volunteers were again provided with these and a tetrad map [4 square kilometres]

The majority of the tetrads have now been surveyed. 20 people have taken part. We have surveyed approximately 170 kilometres of verges in the Upper Onny WG area, 130 km in the Rea valley WG area and 80 km in the Camlad valley WG area.

This information has now gone onto the Shropshire Council GIS database.

If we can find the remaining species rich verges we can feed this information to Shropshire and Powys Councils who, hopefully with the help of local Parish Councils (some of whom have already expressed interest) will manage these verges in a more sympathetic way.

From this has emerged in 2017 a practical verges project called '**Life on the Edge**'

This was instigated by Myndtown combined parishes and is centred around Norbury, Wentnor and Ratlinghope.

**We will continue looking for and surveying unimproved meadows in 2018 and working with the Marches Meadow Group.**

## 2.2 Recording for the Shropshire Wildlife Trust

In addition to the above outings the Shropshire Wildlife Trust arranged for the group to monitor several Wildlife Sites and potential Wildlife Sites.

All these sites were surveyed and

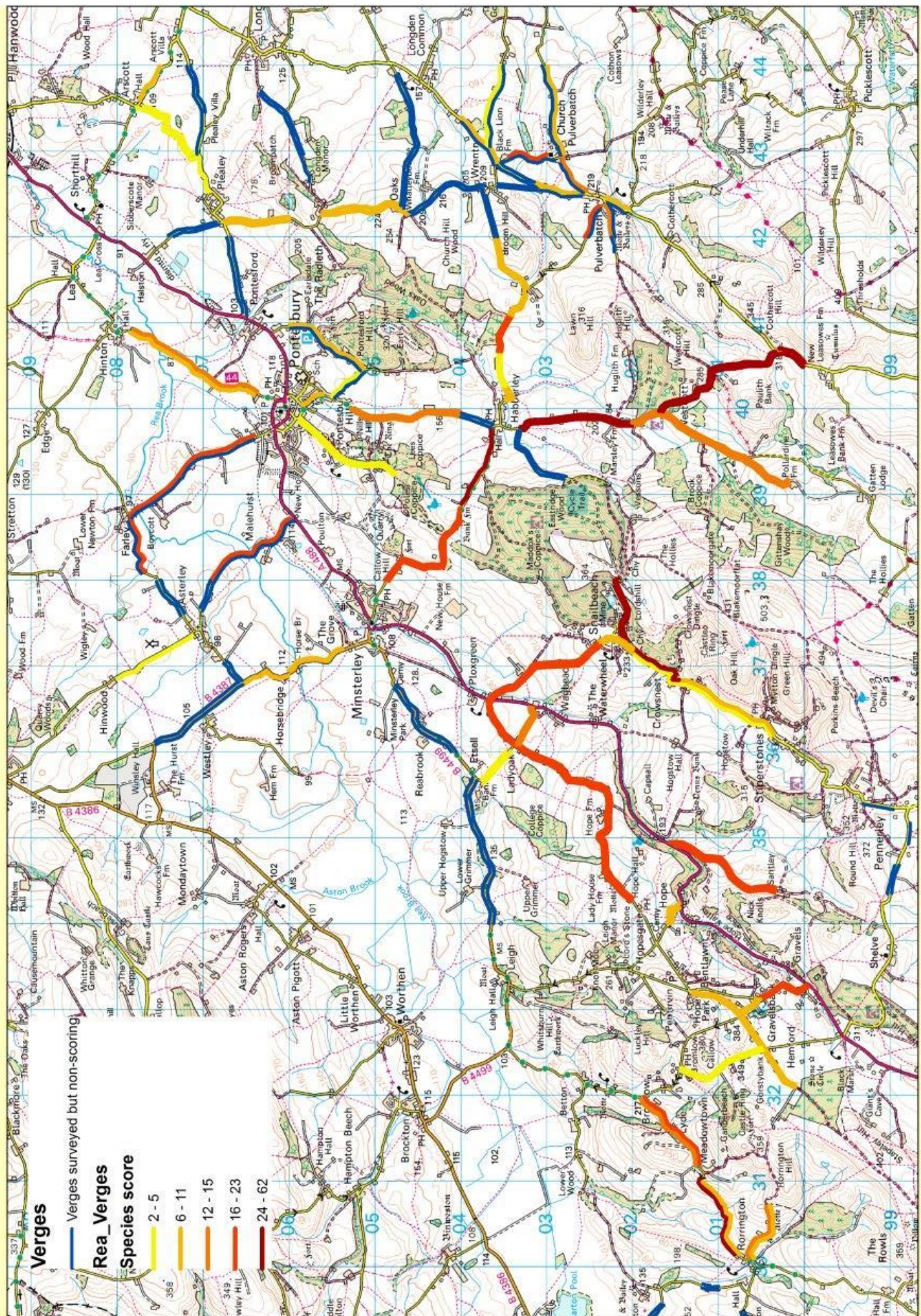
- The different habitats mapped (with reference to plant communities where possible)
- The condition of each habitat assessed
- A full plant list produced
- Other species of interest noted
- Photographic record made
- We visited wetland, grassland and woodland sites and mostly they were in good condition.

Many of the same people involved have also helped with for Caring for God's Acre surveys of churchyards and burial grounds in Church Pulverbatch and Habberley.

Many thanks to everybody that came on the outings and especially those who contributed as surveyors, tutors, owners and managers of the sites we visited.

Rob Rowe, January 2018







## 3 Curlew, Lapwing and Other Bird Surveys

### 3.1 Objectives

Bird Group members were asked to find out where Curlew and Lapwing occur in the breeding season, record behaviour indicative of breeding, and record other species, most of which are of nature conservation importance (i.e. they are Target Species for Natural England's Environmental Stewardship Higher Level Scheme, are on the *Red List* or *Amber List of Birds of Conservation Concern* because they have suffered large declines in the last 25 or 50 years, and are Target Species in the UK Biodiversity Action Plan).

In addition to Lapwing and Curlew, the target species were:-

- |                  |                           |                      |
|------------------|---------------------------|----------------------|
| • Kestrel        | • Cuckoo                  | • Spotted Flycatcher |
| • Red Kite       | • Dipper                  | • Tree Sparrow       |
| • Barn Owl       | • Swift (nest sites only) | • Linnet             |
| • Grey Partridge | • Yellow Wagtail          | • Bullfinch          |
| • Snipe          | • Dunnock                 | • Yellowhammer       |
| • Skylark        | • Wheatear                | • Reed Bunting       |
| • Meadow Pipit   | • Stonechat               |                      |

This was the fourth year in which a bird survey was carried out in this part of the Landscape Partnership Scheme (LPS) area. It complements surveys carried out by the Upper Onny Wildlife Group since 2004, and it is intended to repeat it annually, to monitor long-term population trends for key species, as well as establish the current population and distribution.

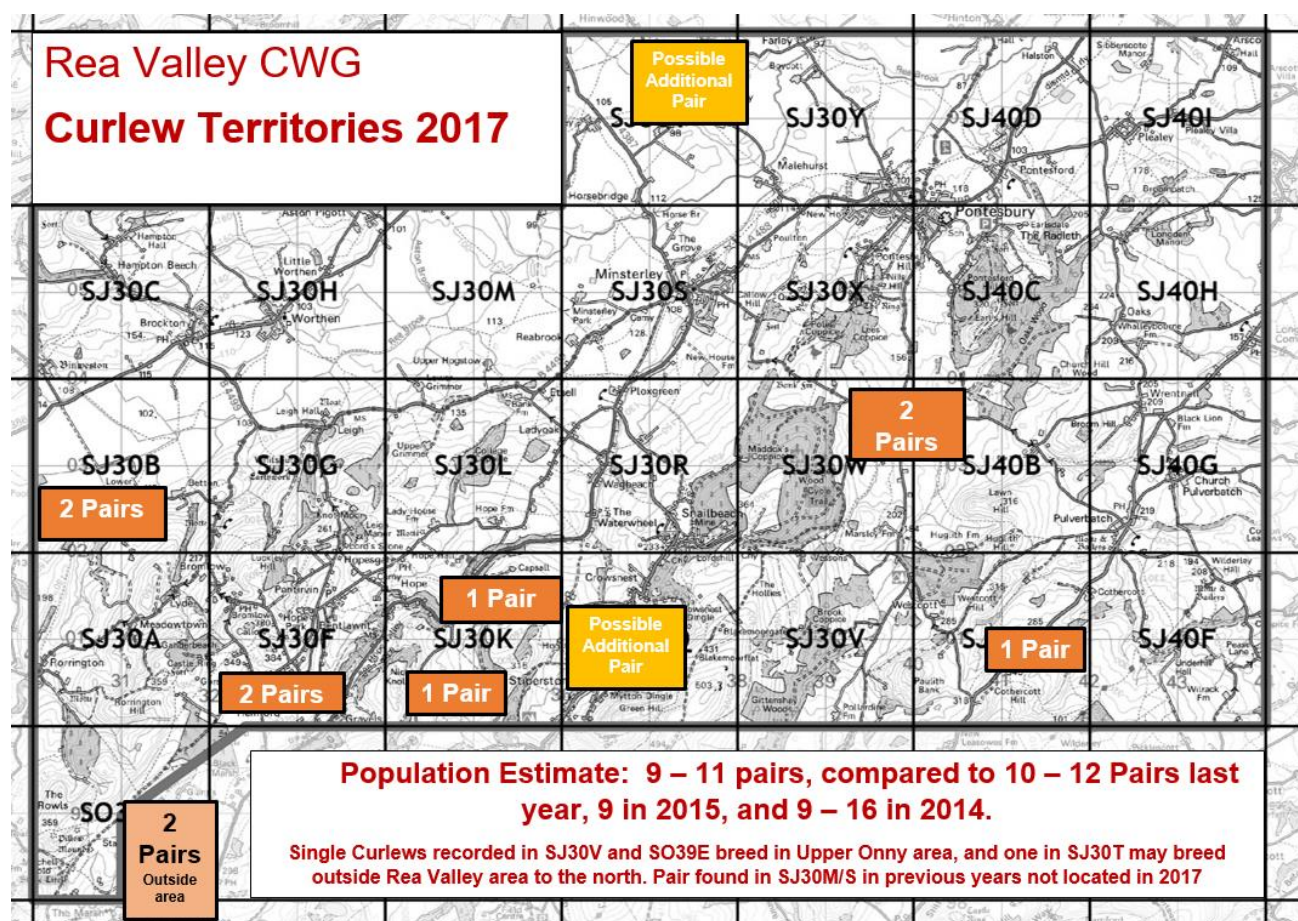
### 3.2 Methodology

The part of the LPS area covered by this Community Wildlife Group (RVCWG) has been divided up into 26 tetrads (2x2 kilometre squares, each made up of four of the one-kilometre squares shown on Ordnance Survey maps). A map showing these tetrads, and the reference code, is attached (Appendix 1 on page 16).

People who agreed to help were allocated a square / tetrad, and requested to survey it once during each of three specified two week periods, around 1<sup>st</sup> April, 1<sup>st</sup> May and mid-June.

- The first period follows the arrival of Lapwing and Curlew back on the breeding grounds. This is the best time to find breeding Lapwing (first egg date is usually around 1<sup>st</sup> April).
- The second period is the best time to find breeding Curlew (first egg date is usually around 30th April).
- The third period is timed to find any Curlews that have successfully hatched and still have chicks. It is also the best time to find the Other Target Species.

The methodology was identical to that used each year since 2014.



Participants were provided with detailed survey instructions, and a large scale map of the tetrad (the map filled an A4 sheet of paper) for each survey. A fieldwork training session was provided on Sunday 26 March for people that wanted it. Most had helped with previous surveys, and so felt that a feedback meeting to discuss the results of the first two surveys, and provide clarification where necessary, was not needed. A progress report with a Curlew map showing the results of the first two surveys was emailed out to participants on 11 May prior to the start of the third survey, and results for the year were presented to a public meeting on 8 November.

Survey work was carried out in all except six of the 26 tetrads, and members spent almost 180 hours on it. This still represents an excellent effort, but was not as good as in previous years.

### 3.3 Curlew

The map summarises the estimated number and distribution of Curlew territories in the area. The location of all Curlews found during the surveys, or reported on Casual Record maps, is shown on the map in Appendix 2 on page 17.

The methodology requires observations of a pair together, or a territorial display, or a single bird on two of the three surveys, to confirm a territory. However, Curlews often have large territories, and may be seen a kilometre or more from their nest site, so interpretation of the observations is sometimes difficult, unless singing birds are seen or heard concurrently. If that does not happen, the methodology requires the analysis

to produce the lowest population estimate consistent with the records, in this case 9 - 11 pairs, with possible additional pairs noted separately.

Two pairs were again found in SJ30B (near Binweston), and in SJ30W / SJ40B (around Habberley), compared with the estimated 1-2 pairs at each location in 2014, and the pair at Upper Cothecott, which was found in 2014 and 2016, but not 2015, was also relocated. However the pair found in SJ30H (near Worthen) in 2015 was not relocated, and the farmer again reported that Curlews came to feed there, but not breed

Two pairs again returned to SJ30F (Hemford) – the loss of a breeding pair since 2014. The number of territories in SJ30K and Q (Santley and Hogstow) is still unresolved. There was evidence for two, possibly three pairs in 2017, compared with no more than one pair in 2016 and an estimate of 2 – 3, possibly 4, pairs in 2014. None were found in any of the other three areas where there were “Possible Additional Pairs” in 2014. The single birds seen then in these three areas were therefore probably foraging away from their nest sites.

There is no evidence that any young Curlews fledged in the area.

Not surprisingly, it takes a few years to build up a complete picture of the Curlews in the area, but that has now largely been achieved. The survey in 2018 should help consolidate the picture.

Well over 100 Curlews have been colour-ringed at the Dolydd Hafren Montgomery Wildlife Trust Reserve on the River Severn near Welshpool since March 2015. Two were found breeding in the area, both near Hemford, in 2016, and that increased to six in 2017.

**From the observations and analysis, it is estimated that the Curlew population in the area in 2017 was 9 – 11 breeding pairs, compared to 10 – 12 pairs in 2016 and 9 pairs in 2015, at the bottom end of the estimate of 9 – 16 pairs in 2014.**

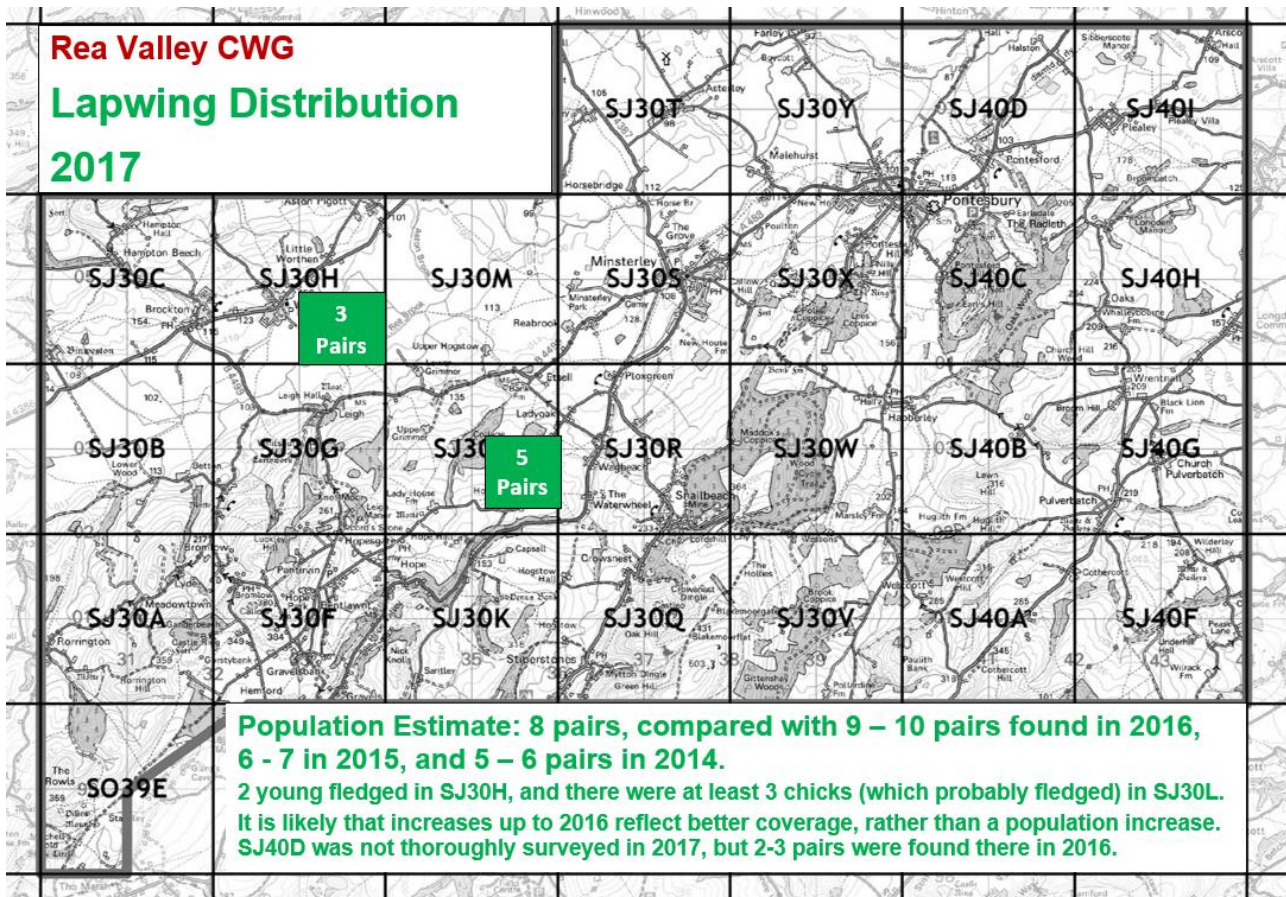
**The 2014 - 17 surveys were the start of regular annual monitoring to establish the number of pairs actually present, better knowledge of nesting and foraging areas, and the population trend. It will be repeated in future years.**

### 3.4 Lapwing

The map summarises the estimated number and distribution of Lapwings. It shows the cumulative results of all three Surveys.

Lapwings need short vegetation or bare ground to nest on, and those that nest on arable land have to move round to follow the farm crop rotation. Breeding sites in SJ30H and SJ30L were again occupied. No nest sites north of Minsterley were located, but this area was not thoroughly surveyed in 2017. Two young fledged in SJ30H, and three probably fledged in SJ30L. Again, a picture of breeding sites in the area is being built up, and the apparent increase in population, year on year up until 2016, is likely to be due to better coverage, rather than an increase in Lapwings. Similarly, the apparent decline in 2017 was probably due to reduced coverage.





From the observations and analysis, it is estimated that the Lapwing population in the area in 2017 is 8 breeding pairs, compared with 9 – 10 pairs in 2016, 6 – 7 pairs in 2015 and 5 – 6 in 2014.

#### ***Anecdotal Evidence for the Decline of Lapwing and Curlew***

Members of the Bird Group who live in the area, and other local residents, say that Lapwings and Curlews are less common now than they used to be. Some members talked to local farmers in the course of their surveys, and they too said that Lapwings and Curlews are less common now than they used to be. Lapwings have apparently declined much more than Curlews.

#### ***Other Target Species***

The other Target Species recorded during the surveys are summarised in Table 1 below.

Note that members were asked to record individual birds, not pairs (so at some locations both the birds in the pair were recorded, and in the final survey some recently fledged juveniles may have been recorded as well).

The summary table shows the maximum count for each species on any one survey in each tetrad. This may under-record some species, but the alternative – adding all the counts together – would lead to considerable double or triple counting of some individual birds.



**Table 1. Other Target Species - Summary**

Tetrad	Maximum Number of Each Species Recorded (Individual Birds)												
	Lapwing	Curlew	Kestrel	Red Kite	Skylark	Meadow Pipit	Cuckoo	Dunnoch	Wheat -ear	Stone-chat	Linnet	Bullfinch	Yellow-hammer
SJ30 A	(Square not surveyed)												
SJ30 B		2											
SJ30 C	(Square not surveyed)												
SJ30 F		5		1									
SJ30 G				1	6								
SJ30 H	6				4								
SJ30 K		2						1			3	1	
SJ30 L	10												
SJ30 M	(No target species recorded)												
SJ30 Q		2	1	2	9	36		2	1	5	2	2	
SJ30 R								1				2	
SJ30 S					2			2					
SJ30 T					2			1					1
SJ30 V	(No target species recorded)												
SJ30 W		3											
SJ30 X	(No target species recorded)												
SJ30 Y				2									1
SJ40 A		2	1	2	15		1						
SJ40 B		1		1									
SJ40 C	(Square not surveyed)												
SJ40 D	(No target species recorded)												
SJ40 F	(Square not surveyed)												
SJ40 G	(No target species recorded)												
SJ40 H	(Square not surveyed)												
SJ40 I	(Square not surveyed)												
SO39 E		2		1	4		1						
<b>Totals</b>	<b>16</b>	<b>19</b>	<b>2</b>	<b>10</b>	<b>42</b>	<b>36</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>2</b>

As expected in a survey of this type, the expertise of members, and the time they had available to undertake the surveys, varied considerably. The survey squares also vary considerably, in accessibility and terrain. The “detectability” of the birds themselves also varies considerably, according to prevailing weather conditions, time of day, stage in the breeding cycle, and the normal behaviour of each species. Thus the survey results will give an indication of the species present, and perhaps their habitat preferences, but only a very small proportion will have been recorded.

Only counts of Skylark on and around Cothecott Hill, and Meadow Pipit on The Stiperstones, were notable, and only Curlew, Red Kite and Skylark were recorded in more than one-quarter of the squares. The recording effort on the Other Target Species was considerably less than in previous years.

Cuckoo became a *Red List* species in the *Birds of Conservation Concern 3: 2009*. It was recorded in two tetrads, compared to one in 2016 and two in 2015.

Red Kites were seen in six tetrads, one more than last year, reflecting the spread of this species. One nest was found, the first since 2012. Given the rapid spread and population increase (over 30 pairs in Shropshire now – the first successful breeding for 130 years occurred as recently as 2006), it is likely that breeding will become a regular occurrence in the near future.

Of the Target Species, Barn Owl, Grey Partridge, Snipe, Dipper, Swift (nest sites), Tree Sparrow and Reed Bunting were not recorded on any survey.

### ***Barn Owl Project***

The Group initiated a Barn Owl project. Nest boxes are only worth putting up in areas of good foraging habitat (rank vegetation a few inches high, where the favoured prey, voles, can be found) so a poster asking people to report sightings has been widely distributed in the area.

Reports of a nest with fledged young near Worthen, and sightings near Plealey, were received in 2017.

No reports were received in 2016. Previously, three reports have been received (near Pontesbury, Plealey and Hemford, not enough to identify potential sites for nest boxes yet.

Reports of sightings are still wanted, please.

### ***Nest Box Scheme***

A nest box scheme for woodland birds, particularly Pied Flycatcher, in the Stiperstones valleys has been developed. A report of a successful third year is given on page 23.

### ***Lapwing and Curlew in the LPS area***

As a result of the declines observed in their area, and in the hope of reversing them, the Upper Onny Wildlife Group (UOWG) actively supported the bid for funding for the LPS, and proposed the development of Community Wildlife Groups across the whole area. The Rea Valley CWG, and the Camlad Valley CWG, have been formed as a result of LPS support and promotion. Both groups have been carrying out bird surveys since 2014. The total number of Lapwing and Curlew found by the three CWGs in the LPS area in 2017 is shown in Table 2.

**Table 2. Lapwing and Curlew in the LPS area 2017**

**(Estimated Number of Breeding Pairs)**

<b>CWG Area</b>	<b>Lapwing</b>	<b>Curlew</b>
<b>Upper Onny</b>	<b>9</b>	<b>28 - 30</b>
<b>Rea Valley</b>	<b>8</b>	<b>9 - 11</b>
<b>Camlad (England)</b>	<b>0</b>	<b>4 - 5</b>
<b>Camlad (Wales)</b>	<b>5 - 6</b>	<b>2 - 3</b>
<b>Total</b>	<b>22 - 23</b>	<b>44 - 48</b>
<b>NB The apparent discrepancy is due to one pair in the Camlad being right on the border, and therefore counted as possibly in either England or Wales</b>		

The Upper Onny Wildlife Group has been doing this work since 2004. In those 14 years,

- Lapwing, after an initial decline from the number found in 2004 (19 pairs), recovered after intensive conservation work, but a subsequent decline returned the population in 2014 to the same number as 2004, with a further fall to 13 – 15 pairs in 2015, 14 pairs in 2016 and only 9 in 2017
- Curlew has shown a steady decline from an estimated 38 pairs in 2004 to only 28 – 30 in a slightly larger area now – a loss of 29%, almost one-third, in only 14 years.

### Links with the LPS Curlew Nest Monitoring Project

UOWG also proposed the establishment of a Ground-nesting Bird Recovery Project within the LPS programme. 97% of the people who responded to the public consultation on the bid supported action to reverse the decline in the Curlew population.

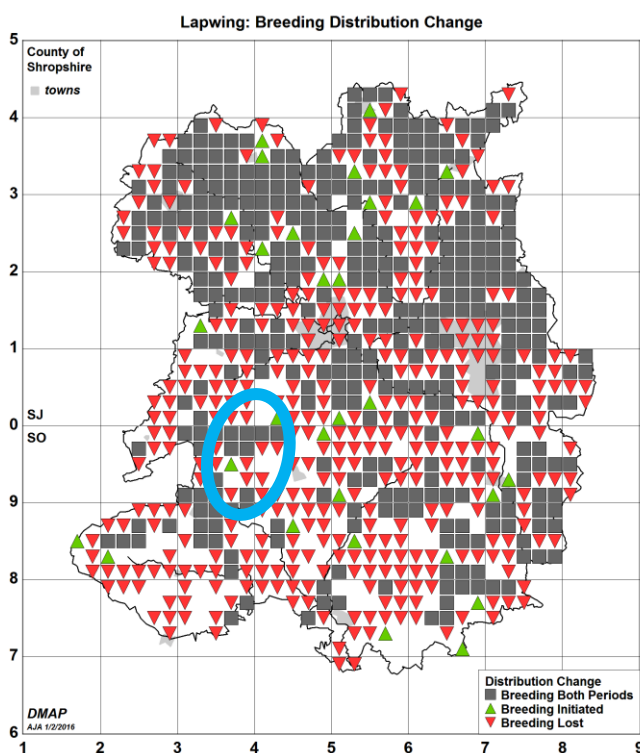
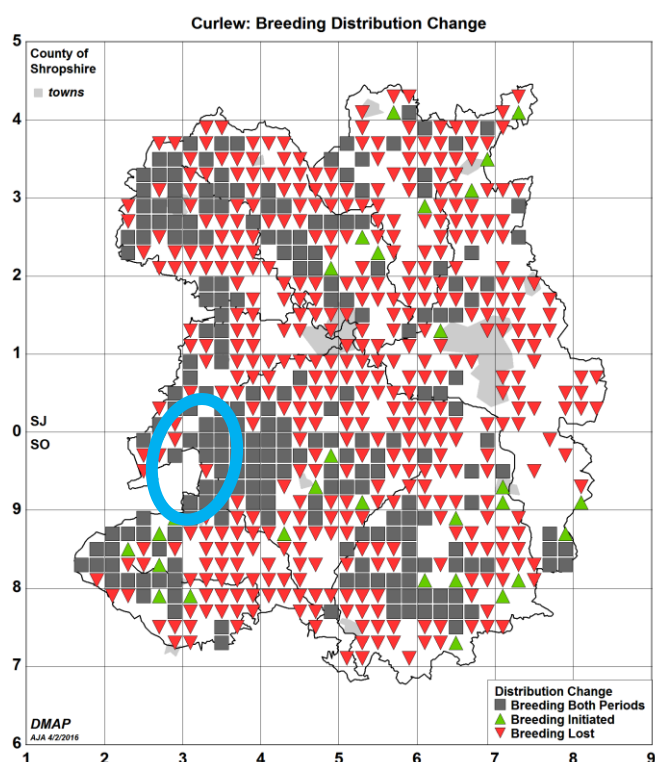
In 2015 and 2016, the LPS Project has monitored over 30 curlew nests to discover the reason that Curlew are failing to breed successfully. Over that time only 3 nests managed to get beyond egg stage each year. During the 2016 season the three nests that successfully hatched chicks were surrounded by protective electric fencing. No chicks or eggs survived from the nests monitored and the major cause of failure was predation. Foxes were found to be the main predator. As a result, nests were protected using an electric fence in 2017. The results are described in more detail in the next section of this Report.

Observations of Curlews by the Rea Valley Bird Group were passed on immediately to the nest finder, to help the effective targeting of his work. Five of the nests found and monitored in 2017 were in the Rea Valley area.

### Decline of Lapwing and Curlew

Lapwing and Curlew are in decline, nationally, and in the LPS area and elsewhere in Shropshire. Objective evidence for this comes from Bird Atlas work. The distribution maps showing the results of the recent 2008-13 survey in the tetrads in the LPS area can be compared with the same area on the maps shown in *An Atlas of the Breeding Birds of Shropshire*, based on six years fieldwork 1985-90, and published in 1992. Both sets of maps have been compiled on the same basis, with similar amounts of fieldwork effort, so the decline is undoubtedly real.

The maps show tetrads where each species was found in both Atlas surveys (grey squares) and tetrads where it was found in the earlier period, but not the more recent period (red downward triangles). Surveys including counts complement these maps. The county Lapwing population has fallen from about 3000 pairs in 1990 to only about 800 now. The Curlew population has fallen from about 700 pairs in 1990 to about 160 pairs now (a 77% decline for both species). The approximate location of the LPS area is shown by the blue oval. It will be seen that the LPS area is the county stronghold for Curlew.



Other evidence for the decline of Lapwing and Curlew can be found on the website of the British Trust for Ornithology [www.bto.org](http://www.bto.org)

The LPS area holds about one-quarter of the Shropshire Curlew population. Action to reverse the declines must start by improving the breeding success of the remaining pairs, so conservation action in the LPS area is vital.

Such action is also being taken nationally. Both species have been designated as UK Biodiversity Priority Species by the Government, as part of its commitment to international biodiversity targets, precisely because of the rapid decline, and both species are now on the *Red List of Birds of Conservation Concern 4*, published in December 2015.

Both species nest on farmland, and the Environmental Stewardship Higher Level Scheme (part of the system of payments to farmers through the Common Agricultural Policy of the European Union) included rewards for farmers for sensitive management of habitat on their farms, and providing other environmental benefits. Farmers applying to join had to take into account the habitat requirements of a number of birds, including Lapwing and Curlew, if they breed on or near the farm, or use land there for feeding. HLS included specific prescriptions, and payments, for Lapwing and Curlew habitat, if the farmer wanted to take them up. Many farms in the LPS area will benefit from HLS agreements for 10 years from the date of signing, the last in 2014.

The data provided by the Upper Onny Wildlife Group, on the location and habitat of these priority species, helped Natural England (the Government Agency responsible both for achieving the Biodiversity targets, and administering the Environmental Stewardship Scheme) to target its limited resources more effectively to achieve this objective.

HLS has now ended, and has been replaced by Countryside Stewardship, a new environmental land management scheme with similar objectives and targeting. New applications were invited during 2016.

### ***Use of CWG Survey Results***

Most importantly, the results are made available to Natural England. They show the importance of particular areas for these species, which will hopefully encourage farmers to manage their land more sensitively, and provide Natural England with objective evidence to judge individual farm applications to join Countryside Stewardship, the new environmental land management scheme, enabling them to target the use of their limited resources more effectively. A letter was sent to Natural England in 2016 supporting an application for Countryside Stewardship from one farm in the area, based on the Group's survey results.

The results also reinforce and supplement the results from other Community Wildlife Groups operating in the Shropshire Hills, which together now cover well over 500 square kilometres, around two-thirds of the Shropshire Hills AONB. These results help inform the AONB Management Plan, which has recently been revised to cover the five years 2014 – 19.

Previously, records at tetrad level were supplied to Shropshire Ornithological Society for incorporation into the Shropshire Bird Atlas. The Atlas project completed six years fieldwork 2008-13, and the results will be published in a new county Avifauna, *The Birds of Shropshire*, around the end of 2017.

Coupled with the results of other surveys, the results may also contribute to the identification of potential new County Wildlife Sites. These sites are monitored by Shropshire Wildlife Trust, which encourages the landowners to manage them so they retain their value for wildlife.

## **Recommendations**

***Natural England is recommended to encourage farmers with breeding Lapwing or Curlew on or near their land, to join Countryside Stewardship, utilising the appropriate options to maintain and enhance the habitat for these priority species***

## **Acknowledgements**

Most importantly, thanks to the Group members who undertook the survey work:-

Richard Allen, Amber Bicheno, Julian Bromhead, Geoff Brown, Hil Brunner, Richard Halahan, Ray Harper, Kevin Heede, Alison & Paul Holmes, Patrick Howse, Jerry Hughes, Tony Legg, Gary Price, Janet Radford, Siobhan Reedy, Luke Walker, Helen Watson, David Wilson, Anne Yeeles, and Simon Brown and the Shropshire Wild Team volunteers.

Thanks also to:-

- Matt Cotterill of Natural England, who provided the survey maps.
- Joe Penfold, LPS Community Officer, who organised all the Bird Group meetings and distributed information to members.
- Amber Bicheno, for co-ordinating the Barn Owl project.

## **Summary 2017**

*This report summarises a reasonably successful fourth year for the Bird Group. Members showed a high level of commitment in carrying out the surveys.*

*All except six of the 26 tetrads were surveyed, and we now have a better understanding of the population and distribution of Lapwing and Curlew, and the status of the Other Target Species. A Barn Owl project continued.*

*The populations in the Rea Valley area are estimated at 8 pairs of Lapwing, and 9 - 11 pairs of Curlew. However, establishing accurate estimates and population trends is made difficult by the turnover of observers from year to year, and the absence of surveys in some squares each year.*

*The locations of breeding pairs of Curlews were passed on quickly to the nest-finder working for the LPS Curlew Recovery Project.*

*The monitoring results are valuable information for the conservation of these birds. Further survey work in future years will add to this baseline, and establish population trends in the area.*

### ***Plans for 2018***

The Bird Group intends to repeat the Bird Survey next year. New participants are needed, so we hope to recruit new members.

The Barn Owl and Woodland Bird nest box schemes will continue, and consideration will be given to developing other activities, similar to those operated by other Community Wildlife Groups, if there is sufficient support. The possibilities will be considered at Bird Group meetings in the course of the year.

Everyone interested in birds is welcome at all meetings and events. A Programme will be published after the Annual Public Meeting. Details can also be found and downloaded from the joint website for all the Community Wildlife Groups in the Shropshire Hills, [www.ShropsCWGs.org.uk](http://www.ShropsCWGs.org.uk), and the Landscape Partnership Scheme Website [www.stiperstonesandcorndon.co.uk](http://www.stiperstonesandcorndon.co.uk).

Leo Smith

January 2018

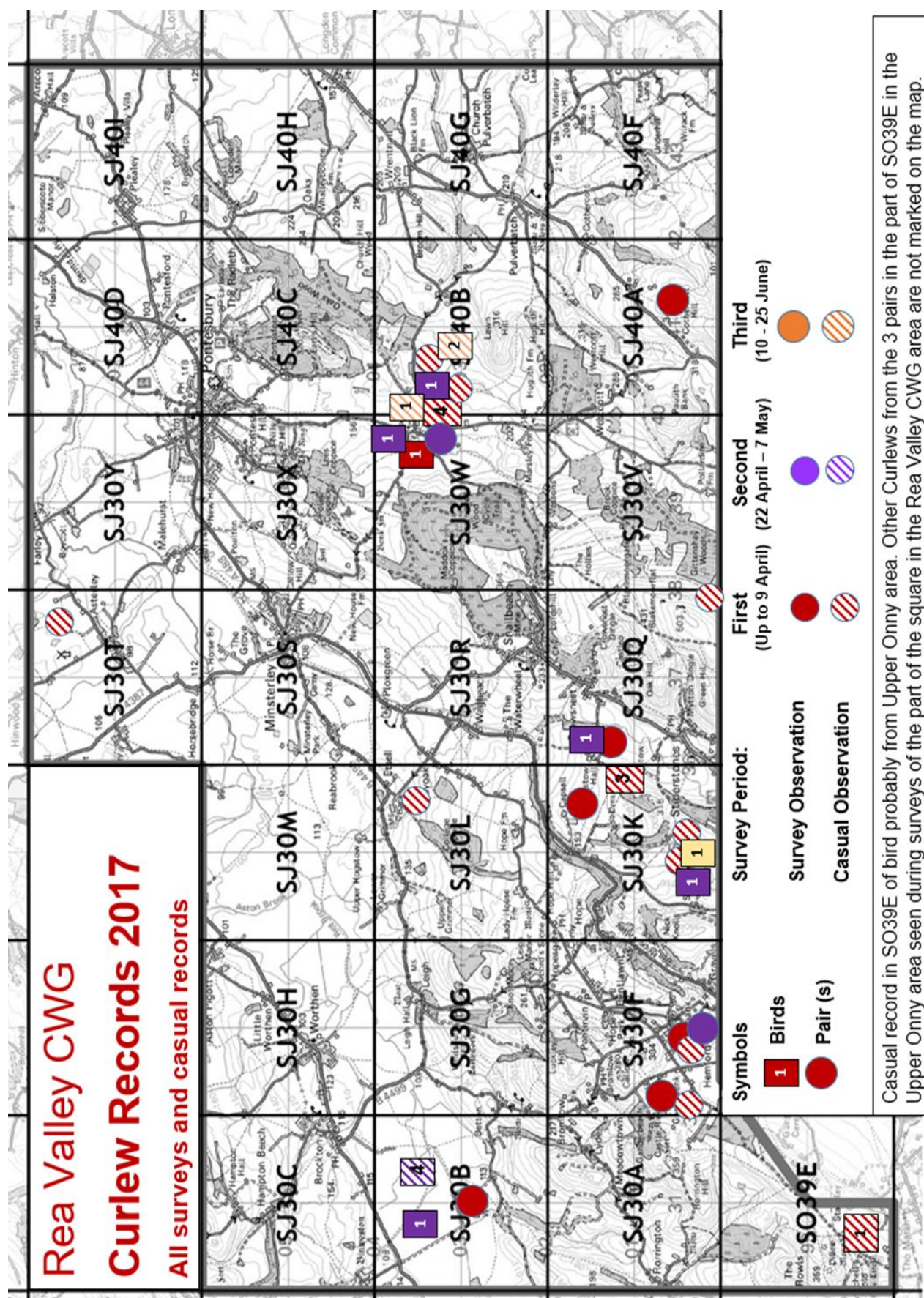


Appendix 1. Map of Survey Area, showing Square Boundaries and Tetrad Codes





# Appendix 2. All Curlew Records Received 2017



## Appendix 3. Detailed Bird Survey Results 2017

### First Period (25 March - 9 April)

Tetrad	L / CU	LPS	Surveyor(s)	Time Spent		Number of Each Species Recorded (Individual Birds)												
				Hrs	Mins	Lapwing	Curlew	Kestrel	Red Kite	Skylark	Meadow Pipit	Cuckoo	Duncock	Wheatear	Stonechat	Linnet	Bullfinch	Yellowhammer
SJ30 A			(Square not surveyed)															
SJ30 B	YES	??	Anne Yeeles	1	45		2											
SJ30 C	YES	No	(Square not surveyed)															
SJ30 F	YES		Richard Allen	2	30		4											
SJ30 F	YES		(Training Session)				5		1									
SJ30 G		No	Jerry Hughes	4	0				1	6								
SJ30 H	YES	??	Jerry Hughes	1	0		4			2								
			Simon Brown	3	0		6											
SJ30 K	YES		David Wilson	2	30		2											
SJ30 L	YES		Tony Legg	2	50		10											
SJ30 M			Tony Legg	2	50	(No target species recorded)												
SJ30 Q	YES		Julian Bromhead	3	0			1		9	34		2		5			
SJ30 Q	YES		Patrick Howse	6	30		2		2				2				2	
SJ30 R	YES		Kevin Heede	2	0	(No target species recorded)												
SJ30 S			Richard Halahan	3	25	(No target species recorded)												
SJ30 T	YES		Geoff Brown	2	20	(No target species recorded)												
SJ30 V			Amber Bicheno and Gary Price	1	0	(No target species recorded)												
SJ30 W	YES		Amber Bicheno and Gary Price	1	30		1											
SJ30 X	YES		Alison and Paul Holmes	2	20	(No target species recorded)												
SJ30 Y			Ray Harper	5	30				2									
SJ40 A	YES		Janet Radford & Luke Walker	4	0		2	1	2	15								
SJ40 B			Siobhan Reedy	3	0													
SJ40 C	YES		(Square not surveyed)															
SJ40 D	YES		(Simon Brown) Shrops Wild Team	5	0	(No target species recorded)												
SJ40 F	YES		(Square not surveyed)															
SJ40 G			Hil Brunner & Helen Watson	5	0	(No target species recorded)												
SJ40 H			(Square not surveyed)															
SJ40 I	YES		(Square not surveyed)															
SO39 E	YES		Richard Allen	2	0		2		1	4								
<b>Totals (26 Tetrads)</b>				<b>67</b>	<b>0</b>	<b>20</b>	<b>20</b>	<b>2</b>	<b>9</b>	<b>36</b>	<b>34</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>2</b>	<b>0</b>

### Second Period (22 April - 7 May)

Tetrad	L / CU	LPS	Surveyor(s)	Time Spent		Number of Each Species Recorded (Individual Birds)												
				Hrs	Mins	Lapwing	Curlew	Kestrel	Red Kite	Skylark	Meadow Pipit	Cuckoo	Duncock	Wheatear	Stonechat	Linnet	Bullfinch	Yellowhammer
SJ30 A			(Square not surveyed)															
SJ30 B	YES	??	Anne Yeeles	2	0		1											
SJ30 C	YES	No	(Square not surveyed)															
SJ30 F	YES		Richard Allen	2	30		2		1									
SJ30 F	YES		(Training Session)															
SJ30 G		No	Jerry Hughes	1	30	(No target species recorded)												
SJ30 H	YES	??	Jerry Hughes	1	30		5			4								
			Simon Brown	2	30			1									1	
SJ30 K	YES		David Wilson	2	30													
SJ30 L	YES		Tony Legg	2	35		6											
SJ30 M			Tony Legg	2	50	(No target species recorded)												
SJ30 Q	YES		Julian Bromhead	3	15					7	36		2		1	2		
			Patrick Howse	2	0								2				2	
SJ30 R	YES		Kevin Heede	2	30								1				2	
SJ30 S			Richard Halahan	2	45					2			2					
SJ30 T	YES		Geoff Brown	2	30					2			1					1
SJ30 V			Amber Bicheno and Gary Price	1	0	(No target species recorded)												
SJ30 W	YES		Amber Bicheno and Gary Price	2	30		3											
SJ30 X	YES		Alison and Paul Holmes	1	10	(No target species recorded)												
SJ30 Y			Ray Harper	4	0													1
SJ40 A	YES		Janet Radford & Luke Walker	2	45					4		1						
SJ40 B			Siobhan Reedy	3	0		1		1									
SJ40 C	YES		(Square not surveyed)															
SJ40 D	YES		(Simon Brown) Shrops Wild Team	3	0	(No target species recorded)												
SJ40 F	YES		(Square not surveyed)															
SJ40 G			Hil Brunner & Helen Watson	3	0	(No target species recorded)												
SJ40 H			(Square not surveyed)															
SJ40 I	YES		(Square not surveyed)															
SO39 E	YES		Richard Allen	2	15	(No target species recorded)												
<b>Totals (26 Tetrads)</b>				<b>51</b>	<b>5</b>	<b>11</b>	<b>8</b>	<b>0</b>	<b>2</b>	<b>19</b>	<b>36</b>	<b>1</b>	<b>8</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>

### Third Period (10-25 June)

Tetrad	L / CU	LPS	Surveyor(s)	Time Spent		Number of Each Species Recorded (Individual Birds)												
				Hrs	Mins	Lapwing	Curlew	Kestrel	Red Kite	Skylark	Meadow Pipit	Cuckoo	Duncock	Wheatear	Stonechat	Linnet	Bullfinch	Yellowhammer
SJ30 A			(Square not surveyed)															
SJ30 B	YES	??	Anne Yeeles	1	0	(No target species recorded)												
SJ30 C	YES	No	(Square not surveyed)															
SJ30 F	YES		Richard Allen	2	30		1											
SJ30 F	YES		(Training Session)															
SJ30 G		No	Jerry Hughes			(Square not surveyed)												
SJ30 H	YES	??	Jerry Hughes	1	0	(No target species recorded)												
SJ30 H	YES	??	Simon Brown	1	30		2											
SJ30 K	YES		David Wilson	2	30		1						1			3	1	
SJ30 L	YES		Tony Legg															
SJ30 M			Tony Legg															
SJ30 Q	YES		Julian Bromhead	3	0			1		1	26				1	1	1	
			Patrick Howse	3	30			1	2				2					
SJ30 R	YES		Kevin Heede	2	0	(No target species recorded)												
SJ30 S			Richard Halahan	3	0	(No target species recorded)												
SJ30 T	YES		Geoff Brown	2	20	(No target species recorded)												
SJ30 V			Gary Price	1	0	(No target species recorded)												
SJ30 W	YES		Gary Price	1	30	(No target species recorded)												
SJ30 X	YES		Alison and Paul Holmes	1	45	(No target species recorded)												
SJ30 Y			Ray Harper	4	0	(No target species recorded)												
SJ40 A	YES		Janet Radford & Luke Walker	2	40					2								
SJ40 B			Siobhan Reedy	3	0	(No target species recorded)												
SJ40 C	YES		(Square not surveyed)															
SJ40 D	YES		(Simon Brown) Shrops Wild Team	3	0	(No target species recorded)												
SJ40 F	YES		(Square not surveyed)															
SJ40 G			Hil Brunner & Helen Watson	2	30	(No target species recorded)												
SJ40 H			(Square not surveyed)															
SJ40 I	YES		(Square not surveyed)															
SO39 E	YES		Richard Allen	2	15							1						
<b>Totals (26 Tetrads)</b>				<b>44</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>26</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>0</b>

# Curlew Country

Working to help the recovery of the Eurasian Curlew.

[www.curlewcountry.org](http://www.curlewcountry.org)

**Curlew Country would like to thank all the Community Wildlife Group bird surveyors for their ongoing work to identify changes in adult curlew population numbers and for their support for the Curlew Country Project**

## 4 Curlew Country Project Report 2017

### 4.1 Nest Monitoring

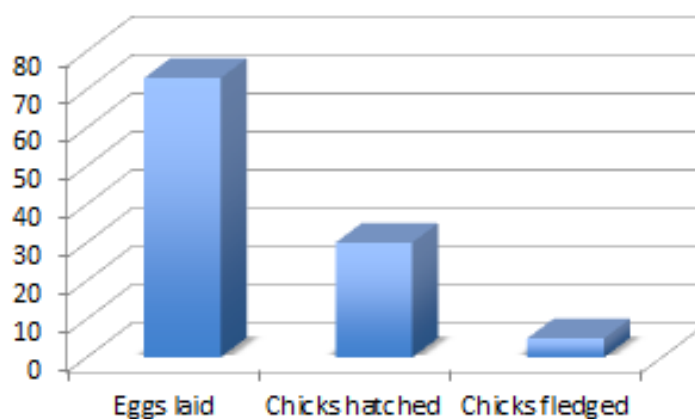
2017 has been an exciting year for the Curlew country Project. Following two years of close nest monitoring with cameras and data loggers, in which no chicks fledged in the LPS area, this year we have seen evidence of successful fledglings.

In order to maintain a stable population, the productivity of Curlew still needs to be increased, ideally to 2 – 3 times its current level. This small change is still a big step forward, and suggests that intervention methods are starting to work.



Photo courtesy of AV Cross

**Shropshire Curlew Breeding Success 2017**



This season we fenced as many nests as possible, to provide some protection from mammalian predators. This resulted in 30 chicks hatching successfully. Unfortunately due to the chicks need to feed, they leave the nest and protected area after just a few days. This leaves them vulnerable once again to predators, as well as to farming operations. Lethal fox control was trialed over



approximately three blocks of land. It was used more intensively and away from the trial blocks, to protect the final remaining chicks, when all others had been lost.

Nest Success	
Total eggs laid	73
Total eggs hatched	30
Chicks fledged	(min) 1 – (max) 3 *

\*5 additional chicks fledged from eggs incubated under licence

#### 4.2 Licence to Incubate Eggs:

2017 saw Curlew Country gaining a licence to incubate eggs for the first time, with the intention of placing them back in the nest at the point of hatch. Some of the chicks however were left without nests to return them too, as they had been predated. This resulted in 5 chicks being reared independently and successfully released and observed.

#### 4.3 Colour Ringing Continues:

Over 100 Curlew have now been colour ringed by ornithologist Tony Cross with Curlew Country support. The project is getting increasing information back from over wintering sites, helping to increase our knowledge of the movements. If you see a colour ringed Curlew, please send details to [avcross@btinternet.com](mailto:avcross@btinternet.com)



*Colour Ringed Curlew, photo courtesy of AV Cross*

#### 4.4 Farm Business Analysis:

This work continues and our findings and feedback are already being provided to policy makers. Curlew Country is working with a farming partners, a farm business advisor and Natural England to discover the true costs of supporting breeding curlew on different types of farm. It is hard to fit the existing agri-environment schemes to the needs of curlew on the ground, despite great efforts in this respect from our local stewardship officer. Analysing the farming loss in detail will help to understand what is really needed by farmers to support these birds.

#### 4.5 Curlew Cam:

Our first live nest camera was a great success, attracting both national and international attention. As well as gripping audiences, it provided insight into the nesting habits of these secretive birds. Clips can be seen our website, [www.curlewcountry.org](http://www.curlewcountry.org)

#### 4.6 Work with Farmers:

The inaugural farmers' group meeting has been held and plans for steering the future of the project are starting. Curlew Country now has the support of around 60 local farmers and landowners in the area, without which the project wouldn't have been able to achieve the successes of the past year.

#### 4.7 Arts Projects:

A Case For Curlew has been taking place over the spring and summer months, engaging families and children on the plight of curlew. The farming reminiscences project is ongoing, collecting memories of curlew within the local landscape.

#### 4.8 Training and Visitors:

Curlew Country has had numerous visitors to the project area wanting to find out more about how nest monitoring works, or gaining some hands on training on how to locate nests themselves. These visitors have included the Wildfowl and Wetland Trust, the Southern curlew Forum and the British Trust for Ornithology. Curlew Country remains busy with requests for advice and training from other Curlew Projects from Scotland to Cornwall and Norfolk and from wider afield in Europe.



*Chicks hatched from a protected nest, photo courtesy of Amber Bicheno*

#### 4.9 National and International Collaboration:

The project has received interest and encouragement from National partners, and Amanda Perkins and Tony Cross, ornithologist were invited to make a presentation at the International Wader Study Conference in Prague. Most major active projects, including Curlew Country, are now at a stage where the focus has turned to how we can help chicks in both the short term and long term.

#### 4.10 Curlew Observation Film and Appeal:

In collaboration with the British Trust for Ornithology, Curlew Country have been producing an observation training film. This is intended to help other curlew recovery project by providing footage of and explaining key curlew behaviours. Alongside this, Curlew Country have also put together a short appeal film in order to raise funds for the future of the project. The appeal film can be seen at [www.curlewcountry.org/curlewappeal](http://www.curlewcountry.org/curlewappeal)

Our thanks go to Ben Osborne for his tireless work and dedication to assisting Curlew Country through his filming work.

#### 4.11 Presentation Day:

Another successful Curlew Country presentation day was held in November. This year the event was held at Norbury Village Hall. Visitors, including local and national partners came to hear about the project from different perspectives. Amanda Perkins gave an overview of the project. Tony Cross gave a presentation on the Curlew Country nest monitoring work. One of the Curlew Country farming partners spoke about their involvement with the project and his excitement at fledging a chick from a nest he helped to protect this year. Mike Smart, ex-Ramsar ornithologist from the Curlew Forum gave an overview of lowland curlew and Dr. Geoff Hilton, Head of Conservation Science at the Wildfowl and Wetlands Trust, gave a talk on rearing wader chicks ('headstarting'), to save species threatened by extinction. The discussion was followed by an in depth debate on the



future of curlew. Mark Isherwood, Assembly Member and Curlew Species Champion for Wales who attended subsequently asked for further information so that he could raise the matter of Curlew Conservation in the Welsh Parliament.

#### 4.12 The Future of Curlew Country

##### 4.13 New Partnership:

Curlew Country will continue its vital lowland curlew recovery work. When the Stiperstones and Corndon LPS ends in March 2018, the project will be hosted by the Game and Wildlife Conservation Trust (GWCT). This is the role that has hitherto been fulfilled by the Shropshire Council through the AONB. GWCT have been one of Curlew Country's national partners for some time, providing support and advice covering a range of work conducted by the project.

Over the past 3 years, the project has become the leading low ground curlew recovery project, operating outside of upland and moorland areas of the UK. Each year funds have been raised from local and national partners to carry out this important research and active recovery work. The support of GWCT as a national partner is helping towards fundraising and placing it on a more secure footing for the future. With help from Natural England and other donors some funds have already been secured and will go towards the 2018 nesting season.

##### 4.14 2018 Nesting Season:

Planning has begun for the 2018 nesting season, as well as continued nest monitoring and intervention, the project work will include:

- A new training opportunity for volunteers wanting to commit to the project over the breeding season.
- Habitat management trials.
- Development of the farmer steering group.
- Using GPS tags to discover more about breeding bird behaviour.
- Trialling a business idea linked to curlew habitat..

##### 4.15 Acknowledgements:

The project would like to thank all of the organisations and volunteers who have supported the first three (LPS) years of the project.

Curlew Country are very grateful to the funders who have supported the first 3 years of the project. They are: Heritage Lottery Fund (2015, 2016, 2017), Natural Resources Wales (2015, 2016, 2017), The Jean Jackson Conservation Trust (2015, 2016, 2017), Natural England (2017), Stiperstones NNR (2015), National Trust (2015), Powys County Council (2015, 2016, 2017), Wader Quest (2017), British Trust for Ornithology (2017), Shropshire Hills AONB Conservation Fund (2015), Rappa Fencing (2017), RSPB – loan of specialist equipment (2015, 2016), Shropshire Ornithological Society (2015, 2016), Upper Onny Wildlife Group (2016), Mere Singers (2016)

Amanda Perkins, LPS Countryside Officer, January 2018

## 5 Resting Hill Nest Box Scheme Report

### 5.1 Introduction

Resting Hill Wood is located on the slopes of the Stiperstones National Nature Reserve above Snailbeach village. It is an actively managed coppiced oak woodland, with some sections that are much more open than others.

The scheme is aimed at providing nesting opportunities in the wood for Pied Flycatcher *Ficedula hypoleuca* and Redstart *Phoenicurus phoenicurus*, two species of migratory bird that usually relies on cavities to nest in. Pied Flycatchers are on the British Red List of Birds of Conservation Concern, whilst Redstarts are on the Amber list. Loss of habitats with suitable mature trees is one of the main causes of decline for these two species.

The boxes also provide homes for other native species, such as Blue Tit *Cyanistes caeruleus*, Great Tit *Parus major*, Coal Tit *Periparus ater*, Marsh Tit *Poecile palustris*, or Nuthatch *Sitta europaea*. Since the schemes inception in 2015, 10 more boxes have been added to the site bringing the total up to 64.

These boxes were erected and monitored in accordance with the British Trust for Ornithology (BTO) Nest Record Scheme methodology. Data was submitted to the BTO as part of the scheme to contribute towards their long term population trends.



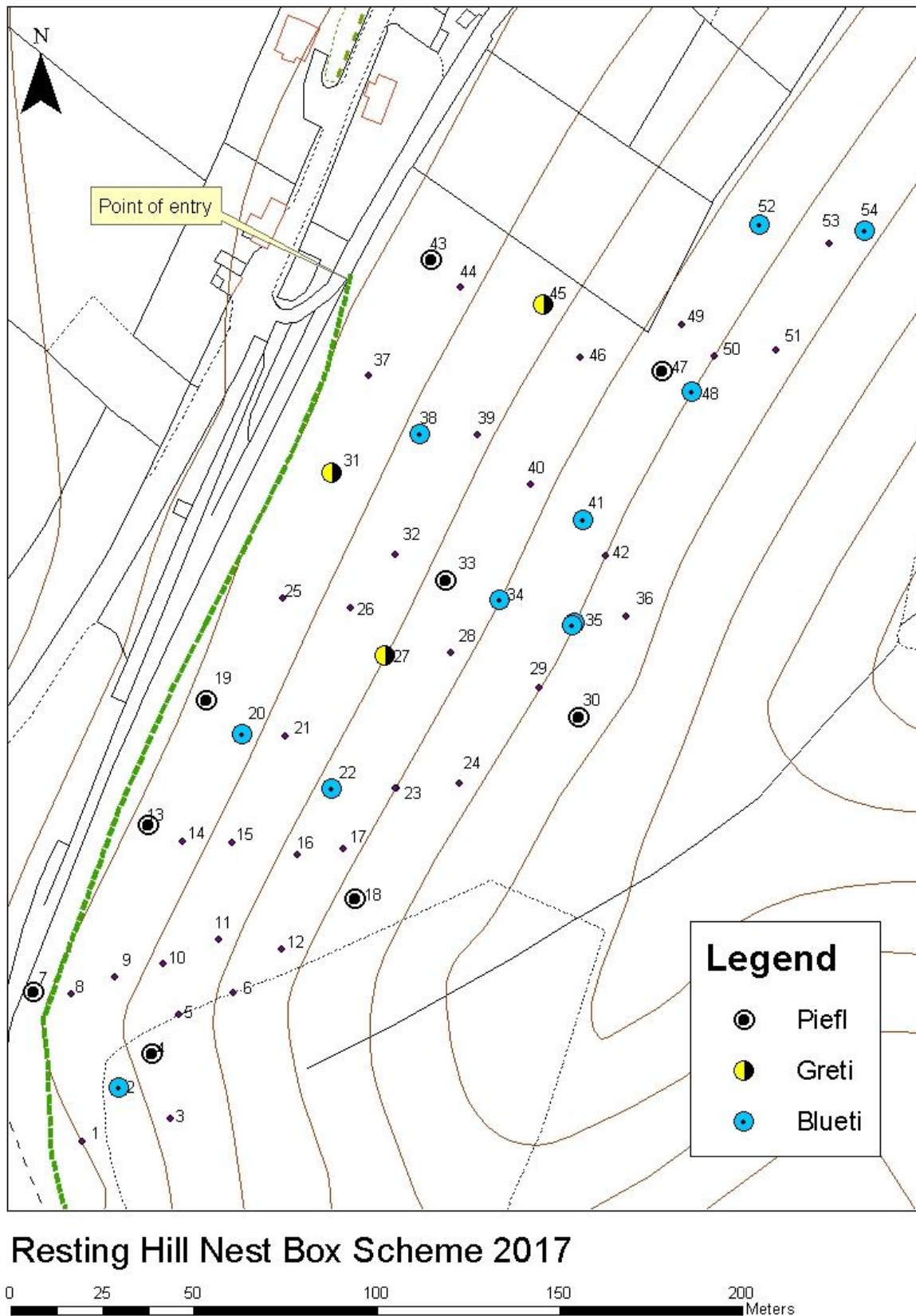


Figure 1. Distribution of nesting attempts by each species

## 5.2 Summary Headlines

- Box uptake down by 5% (3 fewer boxes used) from 2016
- Pied Flycatcher numbers down by 2 nests
- Blue Tit numbers down by 1 nest
- Great Tit numbers up by 1 nest
- Overall success rate for Pied Flycatcher up by 11%
- Blue Tit success rate up by 29%
- Great Tit success up by 17%
- Nesting period earlier than 2016 for both Blue Tit and Pied Flycatcher.

## 5.3 Results

Species are referred to by their BTO 5-letter codes as follows: PIEFL – Pied Flycatcher; BLUTI – Blue Tit; GRETI – Great Tit

### Box Uptake

Figure 2 shows the number of boxes used for a nesting attempt this season by the three species present. Blue Tits used the greatest number of boxes, with 10 nests, followed by Pied Flycatchers with 8 and Great Tits with 3. These numbers are slightly lower than the 2016 nesting period, but still higher than the first year the boxes were installed. Great Tit were the only exception, as they had one more nest than in 2016.

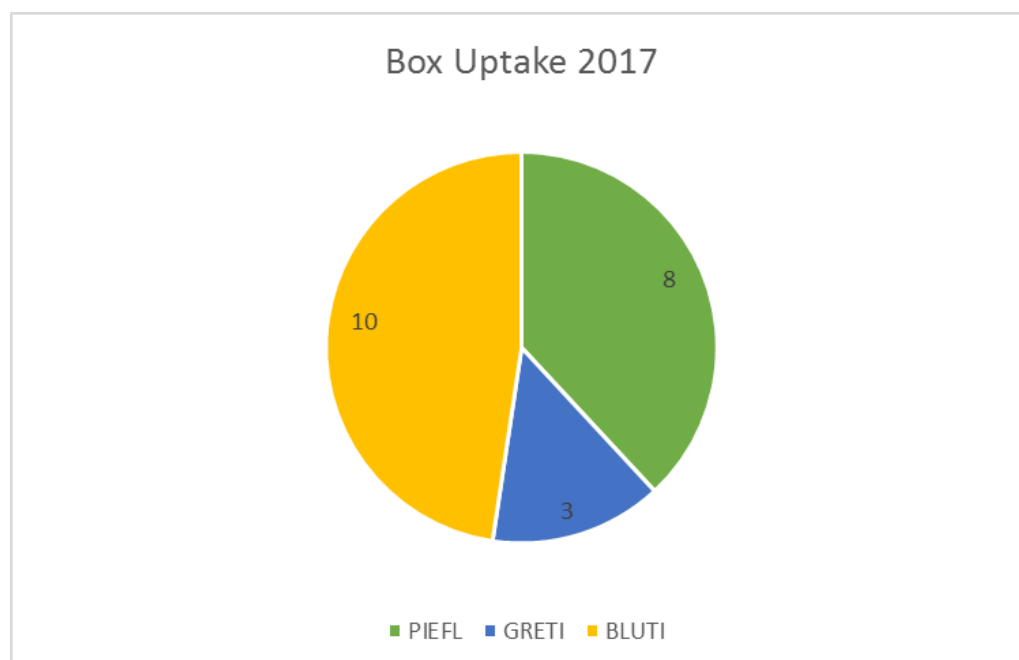


Figure 2 Nest box uptake by each species in 2017

**Table 1. Nest box uptake in 2017**

Box uptake	Number of boxes	Proportion of all boxes	Proportion of occupied boxes	Change since 2016
Total Boxes	54			
Total occupied	21	39%		-6%
Occupied by BLUTI	10	19%	48%	-1%
Occupied by PIEFL	8	15%	38%	-5%
Occupied by GRETI	3	6%	14%	+2%

Table 1 shows the proportion of boxes used by each species, and the change since 2016. Although the proportion of boxes has dropped slightly, it has only done so by a small percentage. This may simply be due to slight population fluctuations, rather than a cause for concern.

### Nest Success Rates

**Table 1. Nest success rates 2017**

Species	BLUTI	change from 2016	PIEFL	change from 2016	GRETI	change from 2016
Total broods	10	-1	8	-2	3	1
Total successful	10	1	8	-1	3	1
Success rate <sup>1</sup>	100%	8%	100%	10%	100%	0
Complete successes	6	4	5	2	2	2
Complete success rate	60%		63%		67%	
Total eggs laid	88	-9	59	-12	21	7
Average clutch size	8.6	0	7.25	0.15	7	0
Total eggs hatched	81	-3	57	0	18	7
Total young fledged	79	21	50	-2	18	8
Overall success rate <sup>2</sup>	90%	29%	85%	12%	86%	15%

<sup>1</sup> Successful broods were those that fledged at least one chick

<sup>2</sup> Overall success rate was the proportion of eggs laid that resulted in fledged young

### Blue Tit Productivity

Although there were slightly fewer nests from Blue Tits this season, the overall success rate of those nests has increased by nearly 30%. All of the nesting attempts resulted in at least one fledged young, with 60% of the nests having a complete success rate. This means that despite having fewer nests and eggs laid the number of fledged young has actually increased from 2016. The average clutch size remained the same, although there appeared to be quite a variation in clutch sizes.

The numbers of our main target species have decreased slightly this year, down by two nests. This is not a huge drop however and there were reports from some of the volunteers of nesting Pied Flycatchers in their gardens. This could show a positive expansion of the local population into the wider Snailbeach area. There was also one nest that looked to be a definite PIEFL, however no eggs were ever laid. The reason for its lack of use is unclear, but it may be a male built the nest without successfully finding a partner.

With an overall success rate of 84% this has to be considered a success for this important species, and it will be interesting to see how the 2018 pans out for our favourite chequered bird.

Great Tits nested for the first time on the site in 2016, and we were pleased to see them again in 2017. Up by one nest, we had a total of 3 broods, all of which successfully fledged some young. Their overall success rate increased by 15% this season, and hopefully they will continue their success next year.

**Table 2. Timing of 1st egg dates for BLUTI and PIEFL from 2015-2017**

[illegible]

Both species have some outlier dates outside of the pronounced clusters of dates in which the majority of 1<sup>st</sup> eggs are laid. These could represent possible replacement clutches, after a failed first attempt.

Figure 1 shows all 54 boxes on the main Resting Hill site (the 10 newest boxes are not included), and the distribution of the nesting attempts by each species across the site. There seems to be a preference for the boxes at the denser end of the site as opposed to the more open end. There are also some boxes that have been used year on year, such as box 19 which has been repeatedly used by Pied Flycatchers, and box 27 which has been used for the past 2 years by Great Tits. Whether this relates to a favourable positioning of these particular boxes, or is just a coincidence may become clear when future data is collected.



## 5.4 Ringing



Figure 3. Left, adult female; right, adult male

This year experienced ringer, Andy Spencer, joined us again to ring the broods and adults at Resting Hill. We arranged for him to visit on a Wednesday evening in early June to coincide with the most flycatcher chicks at a suitable age.

**Table 3. Results from ringing session**

Box no.	No. young ringed	Age of young	Adults ringed	Retrap	Comments
4	0	-	female	no	Too young to ring
13	7	9 days old	male & female	Yes	female ringed as adult, male as chick
18	8	8 days old	male	No	
19	7	9 days old	male & female	No	
30	7	8 days old	male & female	Yes	male retrap from Upper bridges as chick, female ringed as adult
33	1	8 days old	none		
43	fledged	-	-		
47	8	8 days old	no		

The ringing session was fairly successful, with only two broods missing out on being ringed, one as it had already fledged and the other as the chicks were too small to take a ring. Andy also managed to successfully capture eight adults, four of which were re-traps. The information gained from catching and ringing adults helps to increase our understanding about adult survival rates, and which sites adults return too.

Excitingly for us, one of the adults caught as a re-trap was ringed by adult as a chick on another local sight, Upper Bridges. Hopefully in the future we will see more birds from our own site returning to breed, and maybe even here of young from Resting Hill returning to nearby sites.

## 5.5 Nest Box Cameras

After the ringing session we decided to trial placing two trail cameras on two of the remaining Pied Flycatcher nests. We hoped to catch some footage of the chicks fledging to share with the volunteers and anyone else that might be interested. Unfortunately both cameras seemed to miss the moment of fledging at the nests they were trained on.

One camera may have been at too low a sensitivity, as it only gathered a very few shots. However these did give us some insight, and something to ponder in the short video clips. There was a clip that showed a Jay sitting atop the box, seemingly interested in what was inside. This made us wonder if perhaps the chicks in this box were predated after all, however in the next clip a chick can clearly be seen poking it's head out of the hole calling for its parents.

These clips we found quite insightful, and highlights some of the dangers the young chicks face. Even in the relative safety of a nest box, there are predators ready to exploit their vulnerable position.



Figure 4. Trailcam footage of jay, left, and young, right.

The second camera caught a vast number of clips, with some lovely views of the adult birds bringing food into the box to feed their young. Unfortunately the timing of the box set up was not quite right, so due to either the memory card becoming full or the batteries running out this also didn't get the moment of fledging from the young.

Hopefully next year we will be able to time placing the cameras correctly, and get another chance to get some footage of the young leaving the box.

## 5.6 Other Activities



Figure 5. Building bird boxes at the Beach Party, July 2017

One of the main objectives for this year was to recruit more volunteers to assist with the monitoring of the site, and to enable the project to continue in the future. To this end an article was written for a local newsletter, the Snailbeach and District News, talking a bit about the project and giving people details to get involved. Posts were also put up on the Stiperstones and Corndon LPS facebook page with information and details of how to get involved.

Before the season started we organised an event up at the Natural England office at Rigmoroak to build ten new boxes designed specifically for redstarts. The boxes were made from untreated cedar, and were

bigger with a square hole in the top corner of the box. These were then put up in the side of the woodland that continues round into Crow's Nest Dingle.

From these activities we successfully gained two more volunteers, who kindly helped us this season and hopefully will do for seasons to come. Most of the volunteer group live locally, with many living just below Resting Hill itself, meaning they have an interest in seeing the continuation of the monitoring of the boxes.

A training session was organised prior to the first visit for any new recruits or those wishing to refresh their memory of the process. This included a site visit and early check of the boxes so that they could get a feel for what we would be doing throughout the rest of the sessions. We were sure to emphasise that the terrain could be difficult to navigate, but for those who wished they could opt to check the lower boxes whilst others could check the higher more difficult boxes.

Another engagement activity that we have organised this year was a tent at the Beach Party in Snailbeach. During the day we were making bird boxes with members of the public, in particular families with children that wanted to have a go. We cut all the timber ready and had enough pieces to make 25 boxes, which we managed to build all of successfully. The activity remained busy throughout the day, with good feedback from all who took part. We hope that the result of this work will be that other people, especially the younger generation, become interested in monitoring.



**Figure 6. Still from trailcam set up on box 4**

We also had a display about the nest box scheme so far, and were able to point out the wood to anyone interested as the location was in the village itself. A couple of weeks prior to the Beach Party we had set up a trail camera at one of the pied flycatcher occupied boxes, to catch footage of the birds going in and out. This we played at the fair for people to watch and become engaged with their local birds.

### **5.7 Future Work and Maintenance**

We will be carrying out a maintenance and repair session in the winter of 2017, in order to carry out any necessary works. This will include re-writing numbers, replacing wire, and if needed replacing whole boxes. It is possible that we will consider re-siting some of the newly placed boxes closer to the edge of the wood, following consultation with Natural England. We will also clear out any remaining nests or material left in the boxes ready for the 2018 season.

In 2018 we have arranged to organise two more school visits with Jenni Tibbetts for Stiperstones School students to the site. They were not carried out this season due to too many other commitments and it was deemed by Jenni that as they had visited for the previous two years a gap before the next trip would be best.

### **5.8 Acknowledgements**

With thanks to:

Natural England and Stiperstones and The Stiperstones and Corndon Hill County LPS for their continued support in the scheme.

Volunteers who helped to gather data (without which the scheme would not be possible!); Chris, Malcom, Jerry, Julian, Dorcas, Ray, Leslie, Joe and Claire. Jonathan Groom for his continued guidance and support with this project. Bird ringer Andy Spencer. Brittany and George for help checking statistics.

Amber Bicheno and Gary Price, November, 2017

## 6 Dormouse Group Report

### 6.1 Introduction

The Hazel or Common Dormouse *Muscardinus avellanarius* is Britain's only native dormouse and is a priority species in the UK's Biodiversity Action Plan, as well as being protected under the Wildlife and Countryside Act 1981. The People's Trust for Endangered Species (PTES) set up the National Dormouse Monitoring Programme (NDMP) to assess the status of dormice throughout the country, and the pattern from monitored populations shows a general decline.

Distributed mainly in the South of the country their populations are still localised and patchy. Shropshire's dormouse populations are the most northerly in the country apart from an isolated population in Cumbria, and those that have been re-introduced. Within Shropshire, recent records suggest that dormice are only present in the South of the county. The Shropshire Dormouse Group have been monitoring the population of dormice on four Shropshire Wildlife Trust sites since 2016, and submitting data to the NDMP.

All the monitored sites, with the exception of Harton Hollow, are within the Survey area of the Rea Brook Community Wildlife Group's boundaries set up in 2013 by the Stiperstones and Corndon Hill Country Landscape Partnership Scheme (LPS). The LPS, who commissioned this report, is a five year programme of work (started in 2013) funded by the Heritage Lottery Fund. The LPS aims are to raise awareness of, enhance and celebrate local history and wildlife.

In 2017, evidence of breeding dormice was found at all four monitored sites. This included juveniles or pregnant females being found, an excellent result of the group's ongoing survey efforts.

### 6.2 Ecology

The Hazel Dormouse is a very distinctive but seldom seen mammal, with orange-brown fur, large black eyes and nocturnal habits. A generalist feeder, the dormouse will eat flowers, pollen and nectar in spring and summer, fruits, berries and nuts in the autumn, and insects when there is a lack of these vegetarian food sources. Dormice are strongly associated with semi-natural ancient woodland, but can be found in many other types of woodland. They are also found in hedgerows, particularly when juveniles disperse in autumn.



Figure 7: Hazel Dormouse being handled by license holder.

The animal hibernates through winter and usually has one litter of young in the summer. Breeding nests made by dormice are as distinctive as the mammal itself, made usually from fresh green leaves taken straight from the tree and honeysuckle bark torn into strips, and woven into a compact ball. These nests can be found in tree holes, bramble or thick ivy, and dormice readily take to nest boxes.



### 6.3 Survey methodology

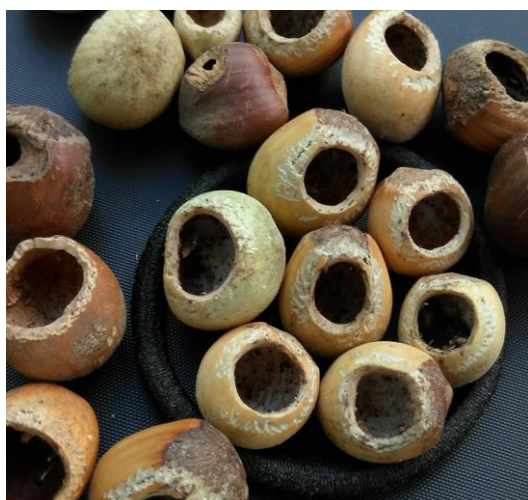


Figure 8: Dormouse nibbled nuts

Sites in Shropshire have been chosen because of previous records on sites, either from a previous nest box scheme or from casual reports of people finding nests or dormice. Habitat is first assessed for its suitability in terms of provision of food for dormice, and then a nut hunt is carried out. Different small mammals open hazelnuts in different ways, and so the marks left can be used to determine the species and therefore potentially prove presence of dormice. As seen in Figure 2, there is a scalloped edge with scuff marks on the outside. If dormouse presence can be proven, or if the site is very close to a known dormouse population with good arboreal connectivity, the site can be included in the National Dormouse Monitoring Programme.

The Programme requires at least 50 dormouse boxes to be placed on a suitable woodland site. These must then be checked by licence holders at least twice a year between April and November and the 15<sup>th</sup> and 25<sup>th</sup> of the month. Biometric data is to be taken to assess the state of the population and survival rates of breeding adults and hibernating young. In order to get this data nest boxes are taken off the tree and placed in a large bag. The box is then carefully opened to minimise the likelihood of escape and the nests are checked for the presence of dormice. If any dormice are present, each one is removed and processed separately. This includes recording its age class, gender, breeding status and its current active state. The dormouse is then placed back within the nest as quickly as possible to keep disturbance to a minimum. Data from each site is then fed in to the NDMP and is added to the national database held by the PTES.



Figure 9 Dormouse boxes built by volunteers destined for Poles Coppice

### 6.4 Shropshire NDMP sites

#### Brook Vessons

Brook Vessons nature reserve includes a section of wet woodland to the east and scrubby habitat to the west, which lies at a lower altitude than and leads up to the Hollies nature reserve. The woodland consists predominantly of relic hazel coppice, rowan and holly. Dormice have been recorded on or near the site since 1997. Nestboxes were erected but regular monitoring did not continue. New nestboxes were put up and the scheme added to the National Dormouse Monitoring Programme in winter 2016/2017. The site has been monitored according to the NDMP since 2017.



## Earl's Hill

The important features for dormice at Earl's Hill are the ash woodland on the eastern slope and the hazel coppice woodland to the south. There are some defunct sections of hedgerow linked to the woodland, some sections of which are dominated by hazel coppice. Dormice have been recorded on site since 1982, although records have been few and far between. The site has been monitored according to the NDMP since 2016.

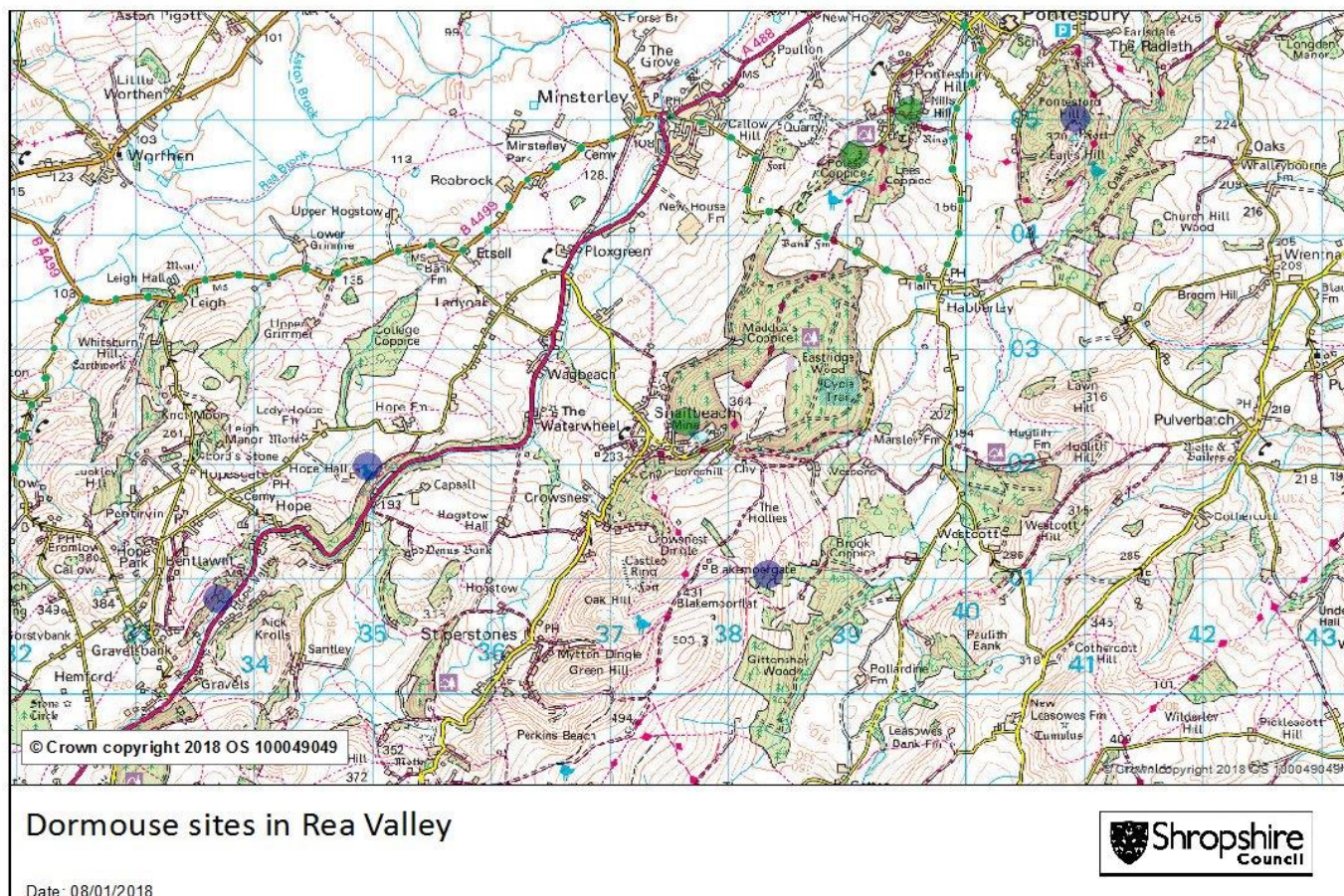


Figure 10: Map showing Locations (Blue) and proposed locations (Green) of Dormouse site in the Rea Valley Area

## Harton Hollow

Harton Hollow is a small section of woodland set within the larger woodland landscape of Wenlock Edge. It is characterised by hazel coppice set under oak and ash, and some conifers. There is a recently improved hedge line on the south eastern side of the reserve. Dormice were recorded on site since 1988 and have not been recorded frequently since however no survey program was in place. The site has been monitored according to the National Dormouse Monitoring Programme since 2016.

## Hope Valley

Hope Valley nature reserve is a long, narrow stretch of woodland amongst a series of hazel and oak coppice woodlands and is a steep, south-easterly facing wood. Previously an ancient sessile oak woodland site, it was planted with conifers in the 1960's and is currently being returned to native broadleaved woodland in stages. It now comprises of oak and beech, with a hazel, elder and bramble dominated western edge. Dormice have been recorded in the woodland since 1986 and have been recorded fairly regularly since. The site has been monitored according to the NDMP regularly since 2016.

## Future sites

Four more sites have been scoped for the potential of adding further data to the scheme. Nut hunts have been carried out on these sites and confirmed dormouse presence. These sites include three previously industrial sites now managed for heritage, owned by Shropshire Council, and an ancient oak coppice managed by the Shropshire Wildlife Trust.

## 6.5 Results

2017 proved to be a successful year for Shropshire's dormice. Not only were there similar numbers of dormice found at Harton Hollow and Hope Valley as had been found during the previous year's monitoring, but two newly set up sites at Earl's Hill and Brook Vessons turned up dormice in boxes too. At each of the four sites, either juveniles or pregnant females were found, demonstrating that dormice bred on all sites this year.

Furthermore, almost all dormice found in the final checks of the year were of healthy enough weights to be able to survive hibernation; indeed one dormouse weighed a whopping 34.5g, which is incredible considered the heaviest dormouse recorded in the country was around 40g.

## Earls Hill

During 2016 there were no recorded dormice or nests using the boxes on the site. In 2017 however the boxes on site were used late in the year, and were used for breeding.

Table 1: Earls Hill Results for 2017

Date	Number of dormice found			Number of dormouse nests found without dormice present
	Adult	Juvenile	Eyes open	
25/04/17	0	0	0	0
17/06/17	0	0	0	0
24/08/17	0	0	0	0
14/10/17	0	2	2	1
19/11/17	0	2	0	2

## Brook Vessons

As Brook Vessons was only set up in April 2017 there is no data for 2016, however there is a full seasons worth of data for 2017. During the final check a nest made entirely of bracken but with the structure of a dormouse nest was found. As dormice will use a variety of materials but none were present, it is inconclusive as to whether this was a dormouse or not. This is shown in Figure 5.



Figure 11: Potential Dormouse nest made from bracken

Table 2: Brook Vessons results 2017

Date	Number of dormice found			Number of dormouse nests found without dormice present
	Adult	Juvenile	Eyes open	
18/06/17	0	0	0	0
21/08/17	0	0	0	0
22/10/17	2	1	0	2
26/11/17	0	0	0	1+

## Harton Hollow

Data from 2016 showed that the population seemed to be at very low density towards the North end of the site.

Table 3: Harton Hollow results 2016

Date	Number of dormice found			Number of dormouse nests found without dormice present
	Adult	Juvenile	Eyes open	
22/06/16	1	0	0	1
23/07/16	2	0	0	0
21/08/16	0	0	0	1
25/09/16	0	0	0	1
21/10/16	0	0	0	1

2017's survey showed the dormice were more evenly dispersing after coppicing work on site opened up a more central area. Additionally one pregnant female was found, unfortunately she was reluctant to be handled and bit a trainee. This is only the second time in the project that someone has been bitten by a dormouse.

Table 4: Harton Hollow results 2017

Date	Number of dormice found			Number of dormouse nests found without dormice present
	Adult	Juvenile	Eyes open	
15/04/17	0	0	0	0
21/05/17	0	0	0	0
24/06/17	0	0	0	0
19/08/17	2	0	0	2
15/10/17	0	0	0	3
18/11/17	0	0	0	2

### Hope Valley

Hope was our most productive site in 2016, and proved to be the only one where the boxes were used by breeding dormice.

Table 5: Hope Valley results 2016

Date	Number of dormice found			Number of dormouse nests found without dormice present
	Adult	Juvenile	Eyes open	
15/05/16	0	0	0	1
15/06/16	3	0	0	1
16/07/16	3	0	0	2
15/08/16	1	0	0	2
18/09/16	0?	1+	0	4/5
24/10/16	3	7	4	2

2017 again proved that Hope's population was our most productive, interestingly many of the nests were located around the wayleaves for the power lines running through the site. This may be because of the continued management by power companies compared to the rest of the sites comparative lower levels of management.



Table 6: Hope Valley results 2017

Date	Number of dormice found				Number of dormouse nests found without dormice present
	Adult	Juvenile	Eyes open	Eyes closed	
23/04/17	0	0	0	0	0
20/05/17	0	0	0	0	1
25/06/17	5	0	0	0	0
16/07/17	3	0	0	0	1
19/08/17	4	1	0	0	2
30/09/17	1	0	0	5	6
20/10/17	5	8	0	0	2
25/11/17	0+ (1 escapee, likely adult)	1	0	0	6

## 6.6 Licensing

Dormice are an endangered species and thus are protected by law. Not only are they, their resting places and their nests protected from intentional and reckless disturbance or damage under the Wildlife and Countryside Act 1981 (as amended) and the Conservation (Natural Habitats &c.) Regulations 1994 (as amended), but they are a European Protected Species. Therefore, to carry out monitoring of dormice as part of the NDMP a person must have a survey or research license to disturb them, be an accredited agent on someone's license, or only attend nest box checks with someone who is licensed. To receive a licence an application must be sent to Natural England, with evidence showing competencies of handling and suitable knowledge. Currently Shropshire Dormouse Group has one licence holder and four actively training for a licence with a small group of interested volunteers working under supervision to monitor the sites.

The People's Trust for Endangered Species work to cease the decline of endangered species, and even increase their populations. The Hazel Dormouse is one species that the PTES focus on in particular. The organisation set up the National Dormouse Monitoring Programme in order to monitor the general national trend of dormouse populations across the country. They support and encourage dormouse monitoring by providing online and paper resources, physical training opportunities, nest boxes at reduced rates for sites to be registered under the NDMP, a forum for monitors to discuss experiences, and a National Dormouse Officer to pull all this together. To see the resources available, and to find more information about training for a license to survey dormice, please visit the PTES website [www.ptes.org](http://www.ptes.org).





In the winter of 2017 a two day course was held in the LPS area with the intention of raising awareness of dormice and providing anyone interested in getting a licence with more background knowledge of the species. This was hosted by the LPS and lead by Ian White of the PTES. This included background on the species, the woodland management that can preserve a population, and what steps have been taken to reduce the decline.

## 6.7 Habitat Management and Nestbox Installation



*Figure 12: Brook Vessons is a Wildlife trust site including wet flushes and medium aged coppiced Hazel*

The Hazel Dormouse is mostly a woodland edge species, as higher amounts of sunlight at the woodland edge promotes woody growth, great for nesting in and providing arboreal links, and food growth, which provides the species with a plentiful food supply throughout its waking months. Therefore, creating coppice coups, scallops, glades and widening rides provides more woodland edge habitat for dormice to use. Coppicing itself provides a variety of food sources as it promotes ground flora and understory growth, and coppice stools provide a good source of food. It is important to note however that coppice coups should be neither too large, nor too close together, in order to maintain arboreal links through the woodland, without causing habitat fragmentation on a level which may be disruptive to dormice.

A woodland with a diverse structure of ground flora, understory, and some large trees, is of great benefit to dormice. It is therefore useful to dormice to fell large trees occasionally, in order to open up the woodland floor. Climbers such as ivy, honeysuckle and bramble are particularly beneficial to dormice, providing nesting habitat as well as habitat links that are sheltered from predators.

Understory trees such as holly that weave themselves up large trees provide the same purpose. Understory trees that coppice well, or naturally spread with multi-stems such as elder and hawthorn, provide excellent arboreal links as well as plentiful food. Some larger tree species such as oak, ash and sycamore support a large invertebrate population, which is essential for dormouse survival through summer months.

Hedgerows are important for enabling juveniles dispersing in autumn to populate nearby habitat, and can also provide nesting and foraging habitat in a small or otherwise less than suitable woodland. Hedgerows that are very diverse, laid appropriately and only trimmed in sections each year rather than being flailed or cut all at once provide the most suitable habitat.

Other management work which is beneficial to dormice includes managing invasive plant species, protecting regrowth from overgrazing, retaining deadwood within a woodland in piles or in dead hedges, and promoting areas of dense bramble growth.

Completed and proposed habitat management work of benefit to dormice throughout the survey areas is described below, as are new nest box installations.

## **Brook Vessons**

Shropshire Wildlife Trust work party volunteers planted a new hedgerow on the boundary between the woodland of the nature reserve, and the adjacent farmland. Trees were also planted densely in a buffer strip that stretches from Brook Vessons woodland, along the bottom of the Hollies nature reserve and up to Eastridge Woods, where dormice are speculated to be present. These activities will provide dispersal and foraging routes for dormice in the future, with appropriate management, and will improve habitat connectivity.

Further work of benefit to dormice on this site would include felling/coppicing of some of the larger trees in the western edge of the woodland, and planting up with hazel, to increase arboreal connectivity and woodland edge habitat in this area.

## **Earl's Hill**

Key volunteer groups involved with the management of Earl's and Pontesford Hill are the Friends of Pontesford Hill, and Shropshire Wildlife Trust work party groups. The majority of habitat management work carried out has been to clear vegetation from an important scree slope and a significantly diverse wet meadow, however dormice have been very much considered throughout this work. Some bramble along woodland edges has been retained, as well as a plan in place to encourage coppice along the edges of the scree slope. Additionally, a hedge has been planted which connects the Earl's and Pontesford Hill woodland to a large block of woodland nearby.

Further work proposed for the future includes felling of large trees around woodland edge to increase edge habitat and promote bramble growth, and creating some coppice coups within the southern section of woodland.

## **Harton Hollow**

The Wrekin Forest Volunteers have carried out coppicing in the central section of the wood and supplemented the existing structure with additional hazel planting. This is likely to create lighter patches in the woodland and allow for more fruiting bramble and hazel to provide a food source in autumn for breeding dormice. Brash was piled up between the footpath and the woodland, to provide dead hedge habitat and to discourage site users from accessing the newly coppiced area and causing disturbance. The group have also laid and planted up a very defunct hedgerow along the boundary between the woodland and adjacent farmland. With appropriate management, this will create more foraging and nesting habitat, as well as linking to a hedgerow across the farmland, to provide a dispersal route.

Further work that would be of benefit to dormice in this woodland would be to monitor the regrowth of the coppice coup and fence off from deer if required, to continue planting and laying the remaining section of the hedgerow, and to establish a sensitive long term coppicing regime for the site with removal of some standards.

## Hope Valley



Figure 13: Child holding dormouse

Due to its location on the edge of the A488 and incredibly steep slopes, as well as lack of funding, Shropshire Wildlife Trust has struggled to get large scale conifer removal started on the south east of the site, which would benefit dormice by promoting a mixed age broadleaved woodland. Lack of coppicing/felling of standards within the broadleaved section is leading to a reduced shrub layer and fewer fruiting trees and bushes on the site. However because of a power line running through the site there is a strip of wayleaves that are currently providing a more structured habitat for the population.

Hope Valley would benefit from work to create scallops along the footpaths and glades within the woodland whilst maintaining arboreal links. It would also benefit from work on the very defunct hedgerow, including laying and planting up, with appropriate management to maintain it. The site would also benefit from conifer removal.

## Nil's Hill Quarry

During the LPS project, some small areas were coppiced, which will promote future nesting and foraging habitat for dormice. The LPS purchased materials for 50 nest boxes which will be installed on this site in order to collect dormouse data and input this into the NDMP.

## The Oakage

The Young Rangers, set up by the LPS, helped to make 25 dormouse nest boxes and also installed them at the Oakage, a long strip of woodland close to Hope Valley. In the future, a further 25 boxes purchased by Shropshire Mammal Group will be added in order to register this site and begin submitting data from it to the NDMP.

## Poles Coppice

During the LPS project a dormouse survey was carried out on Poles Coppice, this provided evidence that there was dormice on site. After a presence was proved the LPS began coppicing work on the even aged oak stand, this was then supplemented with a variety of fruiting trees planted in the cleared sections including a large amount of hazel. 50 boxes have been built by volunteers supported by the LPS and are proposed to be put up in the new plantation areas. As there are no large enough trees remaining, the project has suggest putting boxes on posts until the growth is enough to move them on to the trees.

## 6.8 The future of Shropshire Dormouse Group

Looking forward, in 2018 there will be 8 sites registered and regularly monitored by the Shropshire Dormouse Group. As well as collecting data about Shropshire's dormice to help inform management of the site and national dormouse trends, a key aim of this year's monitoring will be to continue training up more people for their licenses so that in the future, even more sites across Shropshire can be monitored. This will enable further input into the national scheme, as well as help to identify locations in Shropshire in which dormice are not present. It would be interesting in the future to conduct a study into why dormice are not in certain areas of Shropshire, and thus perhaps provide basis for future habitat improvement projects and perhaps a re-introduction.

In the meantime, nut hunt surveys will be carried out on sites across Shropshire as Shropshire Mammal Group events in order to identify further locations where dormice are present. In addition, the PTES have recently produced a document discussing the use of footprint tunnels as a survey method for dormice, and it is possible that the Group will build some of these and trial this method in some locations. This is particularly useful as someone using this method does not have to be licensed and no disturbance is caused to dormice.

Volunteers are always needed for nest box and nut hunt surveys. To get involved, please contact Shropshire Dormouse Group on [shropshiredormouse@gmail.com](mailto:shropshiredormouse@gmail.com). Volunteers must be a member of the Shropshire Mammal Group in order to be covered by insurance; visit the SMG website to become a member. Priority for places on nest box surveys will be given to those training to be licensed to handle dormice.

Additionally, dormouse nest boxes are always needed in order to set up new sites, or to replace old boxes on current sites. Those interested in building nest boxes for dormouse sites should contact the Group at the above email for specifications.



*Figure 14: Shropshire dormouse group installing boxes in Brook Vessons*



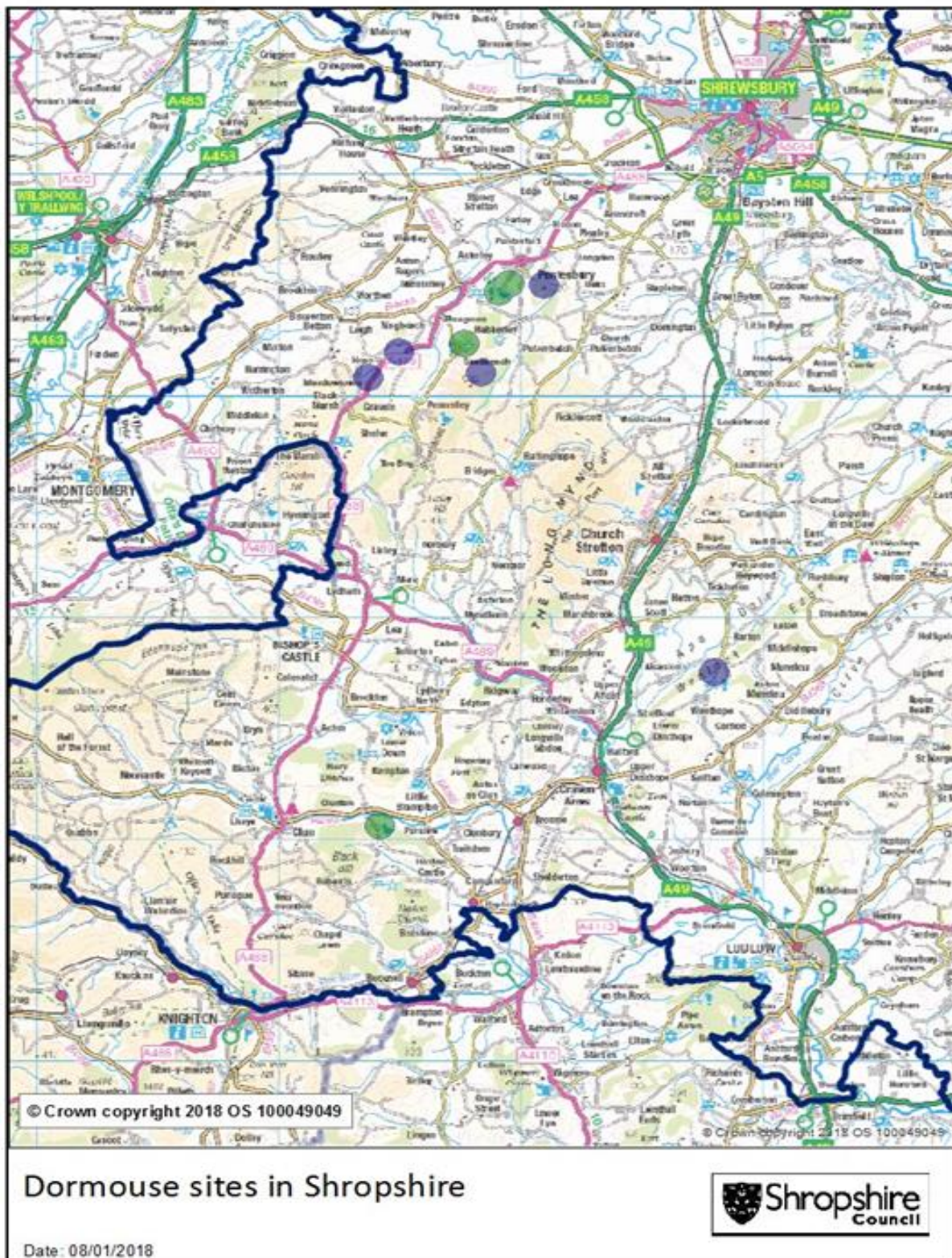


Figure 15: Map showing Locations (Blue) and proposed locations (Green) of Dormouse site in Shropshire



## 6.9 Further reading

For those interested in learning more about dormice, dormouse surveys and appropriate habitat management, please see the following resources:

BRIGHT, P., MORRIS, P. & MITCHELL-JONES, T. (2006) *The dormouse conservation handbook*. English Nature.

FOREST RESEARCH. (2007) *Guidance on managing woodlands with dormice in England*. Forestry Commission & Natural England.

JUSKAITIS, R. & BUCHNER, S. (2013) *The Hazel Dormouse: Muscardinus avellanarius*. Wolf, Verlagskg.

PEOPLE'S TRUST FOR ENDANGERED SPECIES. (2017) *National Dormouse Monitoring Programme (NDMP): Survey guidelines and recording forms*. People's Trust for Endangered Species.

WEMBRIDGE, D., AL-FULAIJ, N. & LANGTON, S. (2016) *The State of Britain's Dormice, 2016*. People's Trust for Endangered Species.

WHITE, I. & HURT, L. (no date) *Managing Small Woodlands for Dormice: a guide for owners and managers*. People's Trust for Endangered Species.

### Special Thanks To:

Shropshire Wildlife Trust for allowing us on their sites,

Shropshire Mammal Group for their continued support and publicity and their volunteers,

Stiperstones and Corndon Landscape Partnership Scheme for support setting up new sites, analysis, management, and training opportunities,

Young Rangers of Shropshire for their box building and installation of the Oakage

Friends of Pontesford Hill,

Volunteers; Amber, Lucinda, Penny, Geoff, Katy, Steph, Anne,

Swaran for box building and repair,

Ian White of the PTES for training,

Nicola Stone for allowing us on her license,

Brittany and George for technical support



Sam Devine-Turner and Gary Price, January, 2018

## 7 Rescuing Rocks and Overgrown Relics Moth Events



### 7.1 Aims

This report presents the results of work commissioned by the Stiperstones & Corndon Hill Country Landscape Partnership as part of the *Rescuing Rocks & Overgrown Relics* project. This will re-create and restore specific BAP habitat on six ex-quarry and mining sites within the Landscape Partnership Scheme area which are now regionally and nationally important for wildlife.

The aim was to undertake a series of seven introductory moth recording workshops during the summer of 2017 at two of the six sites covered by the project. This follows on from a similar series of workshops in 2015 and 2016 (Green, 2015 & 2016).

In 2017, six of the workshops were held at Nills Hill Quarry between 26 May 2017 and 9 September 2017 with an additional session on 13 October 2017. One workshop was held at The Bog on 23 June 2017.

### 7.2 Definitions

The species names, code numbers and systematic order used in this report conform to the usage in *Checklist of the Lepidoptera of the British Isles* (Agassiz, Beavan & Heckford, 2013) and Fauna Europaea ([www.faunaeur.org](http://www.faunaeur.org), accessed on 27 September 2014).

Scarcity and threat categories for Lepidoptera derive from the UK Biodiversity Action Plan (UK Biodiversity Group, 1995, 1999a & 1999b, Biodiversity Reporting & Information Group, 2007), the UK Red Data Book (Shirt, 1987) or published reviews (Parsons, 1984, 1993 & 1995). Waring (unpublished) is used for macro moths and Davis (2013) for micro moths. Regional status derives from the *Butterfly Conservation regional action plan for the west Midlands* (Joy & Williams, 2008). Information on moths in Shropshire comes from *A natural history of the moths of Shropshire* (Riley, 1991) and *The smaller moths of Shropshire: Their status, distribution and ecology* (Blunt, 2014).

Names of plants conform to *New Flora of the British Isles* (2nd edition) (Stace, 1997).

### 7.3 Methods

The workshops took place as follows:

Site	Date
Nills Hill Quarry	26/05/2017
Nills Hill Quarry	09/06/2017
The Bog	23/06/2017
Nills Hill Quarry	30/06/2017
Nills Hill Quarry	14/07/2017
Nills Hill Quarry	04/08/2017
Nills Hill Quarry	09/09/2017
Nills Hill Quarry	13/10/2017

A range of moth recording techniques were demonstrated and guidance given on identification and sources of equipment. All events were carried out in conditions favourable for moth recording. The dates of the workshops were chosen to maximise the possibility of recording a wide variety of summer and early-autumn species.

### 7.4 Results

#### Nills Hill Quarry

634 moth records were obtained during the 2017 sessions and a total of 360 species of moth were recorded. 205 of these species are new records for the site.

This brings the total number of moth species currently known from Nills Hill Quarry to 406.

The species totals for the individual workshops appear below: -

Date	Species	New site records
26/05/2017	112	44
09/06/2017	80	24
30/06/2017	138	51
14/07/2017	139	35
04/08/2017	71	15
09/09/2017	31	7
13/10/2017	51	29
<b>Total</b>	<b>360</b>	<b>205</b>

The very high number of species recorded on 6 May, 9th June and 14th July 2017 are absolutely exceptional and reflect the great richness of this site for moths.

All moth records gathered during the workshops at Nills Hill Quarry in 2017 appear in Appendix 1.

A full list of species recorded in 2017 appears in Appendix 2.

A full list of all 406 moth species now recorded at Nills Hill Quarry appears in Appendix 3.

The moths recorded at Nills Hill Quarry in 2017 include one Nationally Notable species and a number of other moths that are of significance in a local context. These species are listed and briefly discussed below.

## The Bog

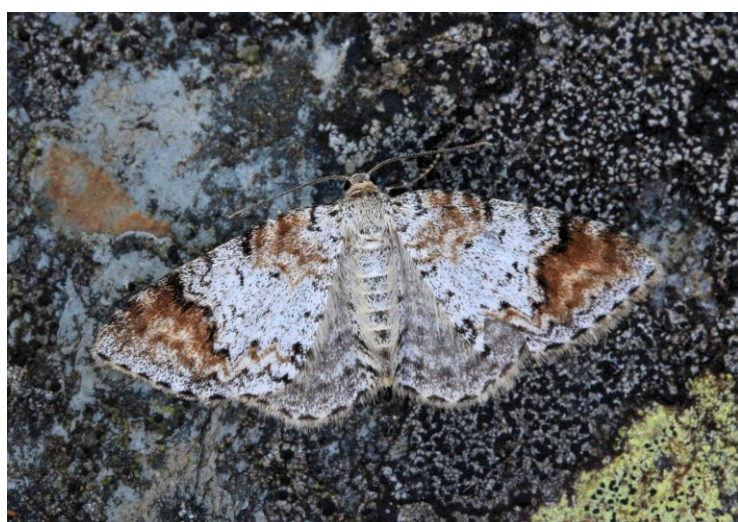
79 species were recorded at The Bog on 23 June 2017

All moth records gathered during the workshop at The Bog in 2017 appear in Appendix 4.

All records from both sites have also been supplied to the project in electronic format as a Microsoft Excel spreadsheet. Records have also been supplied to the County Moth Recorders for Shropshire for incorporation into local and national datasets.

## 7.5 Noteworthy Species Recorded

### Nationally Notable Species



**Blomer's Rivulet** *Discoloxia blomeri* - A Nationally Notable Geometrid moth associated with wych elm. Recorded at Nills Hill Quarry on 9 June 2017.

### **Blomer's Rivulet** *Discoloxia blomeri* (Curtis, 1832)

**National Status:** Nationally Notable B

One recorded at Nills Hill Quarry on 9 June 2017. This is the second record for the site. Previously, one was recorded here on 5 August 2016.

The Blomer's Rivulet is associated with deciduous woodland habitats where the larvae feed on the leaves of wych elm *Ulmus glabra*.

The moth occurs sporadically throughout England and Wales but has declined dramatically in many areas due to Dutch Elm Disease.



## Other Species of Note

### Clouded Magpie *Abraxas sylvata* (Scopoli, 1763)



Clouded Magpie *Abraxas sylvata* - A local and greatly declining Geometrid moth associated with wych elm and English elm. Recorded at Nills Hill Quarry on 30 June 2017.

**National Status:** Local

One recorded at Nills Hill Quarry on 30 June 2017.

The Clouded Magpie inhabits woodland, parks and similar habitats. The foodplants are wych elm *Ulmus glabra* and English elm *U. procera*.

The Clouded Magpie is widespread but thinly distributed throughout much of England, Wales, southern Scotland, it also occurs in Ireland. It is considered to have declined greatly following the appearance of Dutch elm disease. Riley, 1991, noted a major decline in Shropshire.

### Lobster Moth *Stauropus fagi* (Linnaeus, 1758)

**National Status:** Local

Seven recorded at Nills Hill Quarry on 26 May 2017 and three on 9 June 2017. Five were previously recorded at Nills Hill Quarry on 12 June 2015

The larvae of the Lobster Moth live on the leaves of various deciduous trees including beech *Fagus sylvatica*, birches *Betula* spp. and oaks *Quercus* spp.

The Lobster Moth is well distributed and sometimes frequent in southern, south-west and south-east England, and in Wales. It is more local in East Anglia and the southern half of the Midlands which, until very



recently, represented the northern limit of the species' range. The moth was not known at all in Shropshire until the early 2000s but has now colonised and appears to be expanding northwards through the county. The continuing records from Nills Hill Quarry suggest that the moth is now almost certainly resident here.

**Lobster Moth** *Stauropus fagi* - A local southern species currently expanding its range northwards. Continuing records from Nills Hill Quarry suggest that this recent Shropshire colonist is now resident here.



## **Black Arches *Lymantria monacha* (Linnaeus, 1758)**

**National Status:** Local

Eight on 14 July 2017 and 13 on 4 August 2017

The Black Arches is a local species associated with mature deciduous woodland. The larvae feed mainly on oaks *Quercus* spp. but also a range of other trees.

This is a species formerly restricted to southern England. The moth was first recorded in Shropshire, in the Wyre Forest, in 1984 but not found again until the 1990s. Like the Lobster Moth, it is expanding northwards through the county and now appears to be established in the Stiperstones. The count of 13 on 4 August is exceptionally high for Shropshire and strongly suggests that the species is resident at Nills Hill Quarry.

## **7.6 Project Publicity**

Presentations covering the results of the 2015 and 2016 moth workshops, "*Marvellous Moths of The Mines & Quarries*", were given to the annual meetings of the Camlad and Rea Valley Community Wildlife Groups on 1 and 2 March 2017.

On 24th June 2017, living moths from the previous night's workshop were shown to the public as part of the Stiperstones & Corndon Hill Country Landscape Partnership Scheme Hay Meadow Festival at The Bog.

## **7.7 Conclusions**

Once again, the results of the workshops have greatly exceeded expectations. The species diversity and the number of scarce and specialist species recorded is outstanding. Nills Hill Quarry is clearly a very rich site for moths.

As in 2015 and 2016, the level of attendance at the workshops and the enthusiasm of the participants were also most encouraging. The workshops have continued to attract new attendees as the events progressed and it has been particularly pleasing to see the level of expertise amongst participants rise. The more regular participants are now recording moths themselves, operating their own light traps and are able to use field guides to give confident and accurate identifications of sometimes difficult species.

## **7.8 Acknowledgements**

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## 7.9 References

- Agassiz, D.J.L., Beavan, S.D. & Heckford, R.J., 2013. *Checklist of the Lepidoptera of the British Isles*. Royal Entomological Society, St Albans
- Blunt, G., 2014. *The smaller moths of Shropshire: Their status, distribution and ecology*. Field Studies Council, Telford.
- Davis, A.M., 2012. *A Review of the Status of Microlepidoptera in Britain*. Butterfly Conservation, Wareham. Butterfly Conservation Report No. S12-02.
- Green, D.G., 2015. *Rescuing Rocks & Overgrown Relics Moth Events 2015*. Stiperstones & Corndon Hill Country Landscape Partnership
- Green, D.G., 2016. *Rescuing Rocks & Overgrown Relics Moth Events 2016*. Stiperstones & Corndon Hill Country Landscape Partnership
- Joy, J. & Williams, M., 2008. *Butterfly Conservation regional action plan for the west Midlands (Butterfly Conservation Report S08-09)*. Butterfly Conservation, Lulworth.
- Parsons, M.S., 1984. *A provisional review of the status of the British Microlepidoptera*. Nature Conservancy Council, Peterborough. CST Report, No 536. (Invertebrate Site Register Report, No 53). Nature Conservancy Council, Peterborough
- Parsons, M.S., 1993. *A review of the scarce and threatened pyralid moths of Great Britain*. Joint Nature Conservancy Council, Peterborough
- Parsons, M.S., 1995. *A review of the scarce and threatened Ethmiine, Stathmopodine and Gelechiid moths of Great Britain*. Joint Nature Conservancy Council, Peterborough
- Riley, A.M., 1991. *A natural history of the moths of Shropshire*. Swan Hill Press, Shrewsbury.
- Shirt, D.B. (ed.), 1987. *British Red Data Books: 2. Insects*. Nature Conservancy Council, Peterborough.
- Stace, C.A., 1997. *New Flora of the British Isles*. Cambridge University Press, Cambridge.
- UK Biodiversity Group, 1995. *Biodiversity: The UK Steering Group Report - Volume II: Action Plans*. HMSO, London.
- UK Biodiversity Group, 1999. *UK Biodiversity Group Tranche 2 Action Plans. Volume IV - invertebrates*. English Nature, Peterborough.
- UK Biodiversity Group, 1999. *UK Biodiversity Group Tranche 2 Action Plans. Volume VI – terrestrial and freshwater species and habitats*. English Nature, Peterborough.
- Waring, P., (unpublished). *A Review of the Nationally Scarce and Threatened Macro-moths of Great Britain*. Joint Nature Conservation Council, Peterborough.

David Green, December, 2017