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Leicestershire & Rutland RECORDER



Lizard Orchid
new for Leics - p. 4

Published on behalf of the
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Leicestershire
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Wildlife Trust

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Articles on wildlife recording including...

- Jellyfish
- Wild flowers
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- Garden Hedgehogs
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- Butterfly surveys

full contents on back cover

Leicestershire & Rutland Recorder

the journal for biological recording in our counties

For contents, see back cover.

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The County Recorders Network is an informal group of naturalists (County Recorders and Co-ordinators) dedicated to recording the wildlife of Leicestershire and Rutland.

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Submissions for the next edition should reach the editor by 8 February 2020. See [p. 47](#) for more information.

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Cover photo

Lizard Orchid *Himantoglossum hircinum*. Finding a new alien plant species in Leicestershire or Rutland is a frequent event (see [p. 28](#)) but the discovery of a native species is very unusual (full story on [p. 4](#)). Indeed, the Lizard Orchid is a *national* rarity and one of our most spectacular plants. A speaker at the Recorders Conference (see below) mischievously asked "who needs orchids?" - well, many people get hooked on this family of plants and will be delighted at this addition to our counties' flora. Photo: Steve Woodward.

Recorders Conference, Rothley Centre, 24 February 2019

This event was hosted by the Wildlife Trust. Attendance was about 140.

Presentations:

Uta Hamzaoui: New bryophyte finds in Leicestershire & Rutland

Rebecca Pitman: Rutland Water Mosquito Project

Louise Marsh: Botany for Beginners - getting started with wildflower identification

Helen O'Brien: Announcing City Nature Challenge in Leicester 2019

Peter Williams & Jim Graham: LROS recording and surveys update

Brian Eversham: Wildlife recording in changing times

Julie Attard: Improving connectivity and recording in the Charnwood Forest

Paul Palmer: Who's afraid of spiders?

Philip Warren: Leicestershire Museums' Natural Life Collections as a resource for recorders

Geoffrey Hall: BSBI Atlas 2020 update

Editorial

Steve Woodward

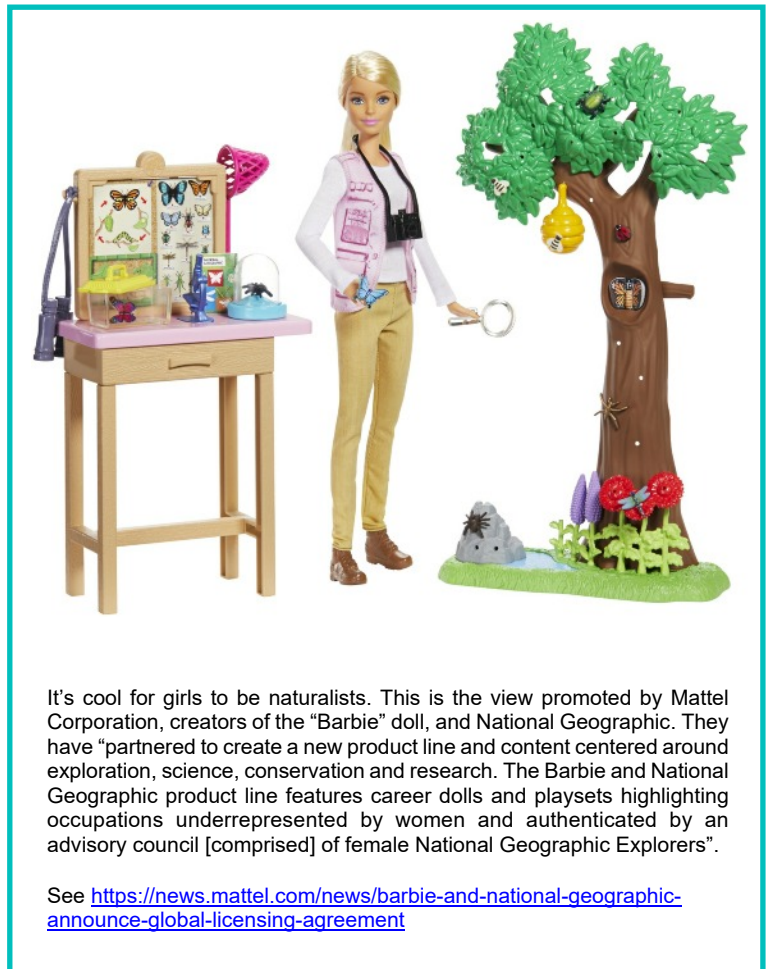
I would like to start by thanking Michael Jeeves, recently retired from the Leicestershire & Rutland Wildlife Trust, for supporting this journal. Previously published by Leicestershire County Council, the journal seemed doomed when the cash ran out and no-one was appointed to replace the previous editor, Gareth Price. In 2012, Michael persuaded the LRWT that a vibrant recording community was essential for keeping an eye on local wildlife and that the LRWT should support its journal and conference. As an Assistant Editor, Michael contributed to many articles, as well as writing several himself.

I was delighted to learn that Becky Pitman, Senior Reserves Officer (Projects) at Rutland Water NR (LRWT) had volunteered to take on the role of Assistant Editor, alongside Ray Morris. Perhaps I should explain the “behind the scenes” work that they do - it involves finding topics and authors, tracking down illustrations of suitable quality, filling in missing record details, checking grid references and place-names, fixing other minor errors and nudging the text towards “house style”. In short, trying to maintain accuracy, consistency and quality throughout the journal. I hope readers will agree with me that authors and Assistant Editors have co-operated well to produce informative, enjoyable and (hopefully) error-free articles of lasting value.

Once again, there has been no shortage of submissions. In addition to the regular topics, this edition reports on three butterfly surveys and a prediction (p. 40) that *one million* moth records will be submitted by the end of 2019! Leaf miners may have escaped the attention of novice naturalists, but Sue Timms’ account (p. 32) will open a few eyes. Leicestershire & Rutland readers might be surprised to see *Locusts* and *Jellyfish* in the contents list, but the evidence of their presence is clear enough (which cannot be said for the Puma stories that have appeared in the *Leicester Mercury* recently, e.g. 25 Apr 2019).

Many naturalists will have known Harry Ball, and will be saddened to learn of his death during the preparation of this edition. He was a prolific recorder (and talker!) with a particular interest in moths, who was always willing to help others. A moving tribute to Harry was presented at his funeral by Adrian Russell, which is reproduced on p. 34.

While visiting the Hope Entomological Collections at Oxford, I spotted a stack of storage boxes bearing the name D. Goddard - a name that will be familiar to Leicestershire entomologists. Darren Mann at Oxford Museum of Natural History explained that Goddard’s insect specimens had recently been deposited there, including many from Leicestershire. Darren put me in touch with



It’s cool for girls to be naturalists. This is the view promoted by Mattel Corporation, creators of the “Barbie” doll, and National Geographic. They have “partnered to create a new product line and content centered around exploration, science, conservation and research. The Barbie and National Geographic product line features career dolls and playsets highlighting occupations underrepresented by women and authenticated by an advisory council [comprised] of female National Geographic Explorers”.

See <https://news.mattel.com/news/barbie-and-national-geographic-announce-global-licensing-agreement>

his widow Ann, who kindly agreed to send me the biography that appears on p. 12.

In the editorial of *LRR 14* I mentioned an obscurely-named course offered by the Field Studies Council: *Soil Mesofauna*. I attended the four-day course last April, at Preston Montford Field Centre. The title means animals living in the soil of “medium” size - visible to the naked eye but “able to fit through a 2 mm hole”. I hasten to add we did not try to squeeze the poor creatures through a hole! The introductory session covered soil ecology in general, but the course focused on the identification of two groups, Mites (Acari) and Springtails (Collembola). Needless to say, both groups demand some concentrated study down the microscope. As well as learning much about soil mesofauna, I returned from the course with some identified and verified soil mites (see p. 42).

Alan Cann has also learned about Springtail identification, thanks to the FSC, and I am pleased to report that he has taken up the challenge of Springtail Co-ordinator for VC55, (contact details in *Recorders’ Roundup* on p. 44). I hope to see an introduction to this group in a future edition of *LRR*.

Another change in *Recorders’ Roundup* is that Andrew Heaton is retiring as County Recorder for Amphibians and Reptiles, to be replaced by Ben Devine, of LRWT. Andrew’s knowledge and experience is distilled in a *Review* (p. 25). He continues as Recorder for Fish.



A springtail *Monobella grassei*. Photo: Alan Cann.

Newcomers who need help with abbreviations, such as LRWT and LRR, should turn to the list on p. 42.

Lizard Orchid - First record for Leicestershire and Rutland

Dave Gray



Fig. 1. The Lizard orchid in flower is unmistakable. The lower lip of each flower is elongated, like a lizard's tail. It is a grassland plant, most at home on limey soils. Photo: Dave Gray.

Over the last 15 years I have been looking at and recording orchids in VC55. Finding a first record for the county is all but a dream for most orchid enthusiasts in VC55.

As usual June is a good month to look for orchids at local sites. Checking out Cloud Wood Nature Reserve (LRWT) late morning on 12 June 2018, I found a good number of orchid species around the wood. These included Greater Butterfly-orchid *Platanthera chlorantha*, Bee Orchid *Ophrys apifera*, Southern Marsh-orchid *Dactylorhiza praetermissa* and a single Pyramidal Orchid *Anacamptis pyramidalis*.

Happy with what I had found at Cloud Wood, I decided to check a roadside verge not far from the wood via information from a fellow "orchid hunter" Brian Hodgson the previous day. He had found some Bee Orchids and a Greater Butterfly-orchid at this site. Parking safely off the road I started to check the roadside verges at SK4222 for the orchids. Walking just 50 metres from the car, I suddenly stopped in my tracks and had to do a double take as I realised that I was looking at a Lizard Orchid *Himantoglossum hircinum*! (Fig. 1).

To put this into context, I knew it was a very rare plant of Leicestershire and Rutland and was maybe the only second recorded sighting of this plant in the county? Just to confirm the sighting I phoned another friend (Sean Cole) about it and he said that it's probably a first record for the county as the only previous record (in Horwood & Gainsborough, 1933) was actually recorded just over the border in to Lincolnshire (Messenger, 1971). The national distribution is shown in Fig. 2.

Realising that this now might be a first record for the county, I took a few more photos of the orchid. I then sent a photo to Sean who then put the news out on social media (Twitter and Facebook). Within a couple of minutes my Twitter feed and Facebook account went crazy and didn't realise how many people wanted to see the Lizard Orchid! Over the next few days I heard from friends that the plant had been twitched from people from all over the Midlands and further field (who had contacted me via social media). I was also told people had even queued up to photo the orchid over the weekend following my discovery!

The orchid flowered until the end of July and thankfully it wasn't mowed over due to its location. At the time of writing, it appears that the plant will hopefully flower again in 2019 as a strong rosette has been noted on the roadside verge. So in conclusion, if you are looking for unusual plants it might be worth just checking your local roadside verge or even a nearby roundabout!

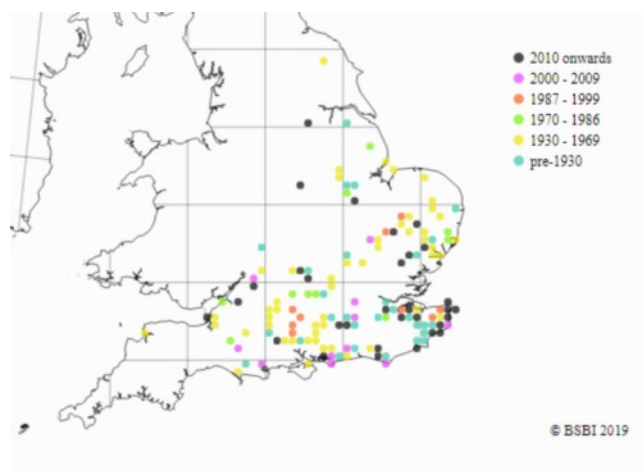


Fig. 2. The Lizard Orchid is rare in England but absent from Scotland, Wales and Ireland. The Leicestershire record is the lonely black spot in the Midlands. In the 1930s the range of this orchid expanded dramatically from its base in Kent, but most populations subsequently died out (yellow spots). Within the expanded range, however, odd plants do turn up in new places and may survive for up to 20 years (Carey, 1999). The Lizard Orchid has special legal protection, being listed in Schedule 8 of the Wildlife and Countryside Act 1981. - Ed.

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A White letter year



Matthew Billings

2018 will be remembered for the very dry and hot period that began in late spring and lasted throughout the summer. While this resulted in ideal conditions for the spring/summer flight period of our butterflies, the continued lack of water meant that many caterpillar foodplants were less than vigorous and, as voracious herbivores, larval development was somewhat affected. There were, however, a range of different outcomes for various species. Some single-brooded species performed poorly, whilst one had an unusual second brood and the later generations of some multi-brooded butterflies appeared to be rather delayed. Of course, we will not discover the true effects of the extended dryness until the following year.

One species that definitely did have a good year was the White-letter Hairstreak, *Satyrium w-album*. Although this butterfly can be hard to spot, as the adults spend most of their

time in the canopy from late June through to July, the fine summer weather produced a bumper season. This sustained window of opportunity gave me the chance to visit as many suitable elm trees as I could discover locally.

I began my summer Hairstreak odyssey at the Gynsills (Glenfield), my most reliable site, in mid-June, but actually found my first White-letter of the year elsewhere on the 23rd. Once I had determined that the season was underway, I widened my search to other possible locations. These mainly consisted of roadside elms and local parks which I had noted on my travels. My efforts were well rewarded this year, because I was not restricted by cloud and rain and could visit a location on almost any day due to the benign weather.

Although I made no sightings at my recent secondary site in Birstall, (presumably due to a re-infection of Dutch elm disease), I was more than compensated by finding this species at no fewer than 14 new localities in and around Leicester. A truly staggering return on my investment! See Table 1.

Being an arboreal butterfly and difficult to observe, sightings of White-letter Hairstreak can be restricted just as much by recorder activity as by the rarity of a species. This is borne out by the results of my increased surveying this year, aided of course by the outstanding conditions. The distribution map (Fig. 1) shows the spread of my records in 2018.

The summer heat-wave also gave rise to some atypical behaviour. On two separate occasions I had the unusual delight of watching a White-letter Hairstreak at close quarters actually walking along the ground. These below knee-height encounters were no doubt linked to the extreme weather conditions, because I also found a grounded Purple Hairstreak in the same glade at Swithland Wood whilst I was observing the target species.

| Site (Grid ref) | Date | Qty | Comments |
|------------------------------|----------|--------|---|
| Huncote embankment (SP5197) | 23 Jun | 6 | Perimeter path, Ash, Oak, Elm |
| | 11-Jul | 1 | On the ground |
| Gynsills (SK5407) | 24-Jun | 2 | Single Elm |
| | 13 Jul | 3 | Single Elm |
| | 15 Jul | 2 | Single Elm |
| Brascote Pits (SK4402) | 25 Jun | 3 | Roadside Ash & Elm |
| Desford (SK4803) | 25 Jun | 5 | Three roadside Elm |
| Kirby Muxloe (SK5204) | 25 Jun | 1 | Roadside Ash & Elm |
| Desford Lane (SK5004) | 27 Jun | 3 | Roadside Elm |
| Rally Park (SK5705) | 29 Jun | 3 | Stand of Elm |
| | 01 Jul | 2 | Stand of Elm |
| Cropston Reservoir (SK5411) | 02 Jul | 2 | Roadside Horse-chestnut, Sycamore & Elm |
| Gorse Hill (SK5508) | 02 Jul | 1 | Diseased Elm |
| Cosby (SP5495) | 04 Jul | 1 | Roadside Elm (cut back) |
| Leire Cutting (SP5289) | 04 Jul | 2 | On Ash (Elm present) |
| | (SP5189) | 04 Jul | 1 |
| Braunstone Park (SK5503) | 11 Jul | 3 | Diseased and resistant Elm |
| Keeper's Lodge Park (SK5607) | 13 Jul | 2 | Roadside Ash, Oak & Elm |
| Swithland Wood (SK5312) | 15 Jul | 1 | On the ground |

Table 1. Sites visited in 2018 and details of White-letter Hairstreak sightings.

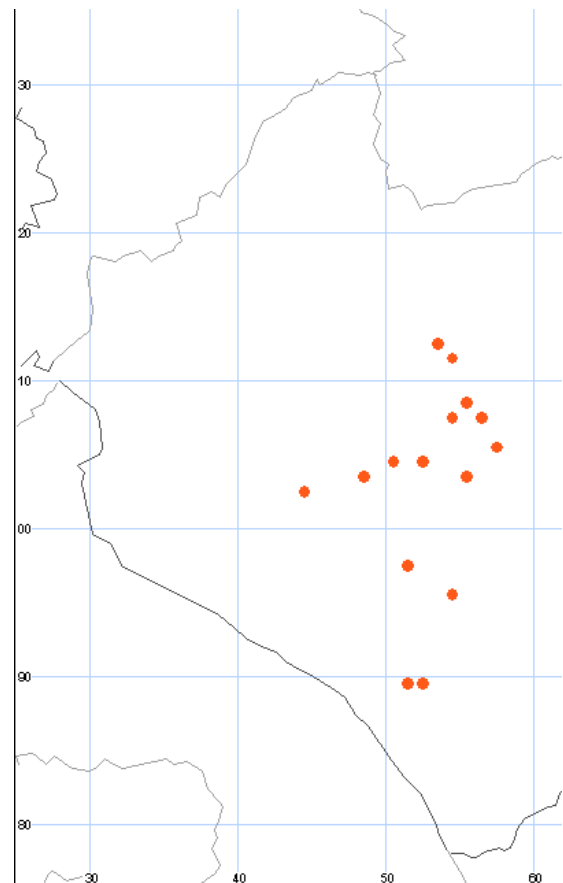


Fig. 1. Distribution of White-letter Hairstreaks in west Leicestershire from the author's fieldwork in 2018.

Title photo: Steve Woodward.



What exactly is Vice-county 55?

Steve Woodward

Joint County Recorder,
Vascular Plants



Vice-county or *VC55* appears many times in this journal, a term that may puzzle newcomers to biological recording. Surely our law-abiding recorders are not involved in *vice*? Roughly speaking, it means Leicestershire and Rutland combined, a convenient and familiar area to which our local wildlife records “belong”. There are 111 other vice-counties in Britain, as well as 40 in Ireland.

There are several reasons why biological recording has traditionally been based on counties:

1. When naturalists first started to record the distribution of our wildlife in the eighteenth century, maps were scarce and there was no system of grid references, yet everyone knew what county they were in. Counties seemed the natural units to adopt.
2. Natural history societies that organised recording projects tended to operate (and still do) within county boundaries.
3. Local governments who established museums, and more recently records centres and planning departments, were concerned almost exclusively with the wildlife within their own boundaries.

The problem with true counties is that politicians mess about with their boundaries (notably in 1974). This makes life very difficult for anyone trying to keep track of which species occur in what county. A Victorian pioneer of plant distribution studies was H. C. Watson who, in his publication of 1852, divided up the British Isles into areas called vice-counties. The boundaries were based on the true counties at that time. Watson subdivided some of the larger counties (such as

Table 1: Where the boundary of VC55 diverges from the combined outline of Leicestershire & Rutland.

| Map note | Explanation |
|----------|--|
| 1 | A wedge of land north of Six Hills is politically in Leicestershire but in VC56 (Nottinghamshire). |
| 2 | Part of the Belvoir Estate is politically in Leicestershire but in VC53 (South Lincolnshire). |
| 3 | At Stamford, parts of Rutland are in VC53 (South Lincolnshire) and parts of Lincolnshire are in VC55. |
| 4 | Little Bowden and the southern half of Market Harborough are politically in Leicestershire but in VC32 (Northamptonshire). |
| 5 | Netherseal and Overseal parishes are now politically in Derbyshire, but within VC55. |
| 6 | Woodville is politically in Derbyshire but mostly within VC55. |
| 7 | Part of South Wood, near Staunton Harold, is politically in Nottinghamshire but within VC55. |

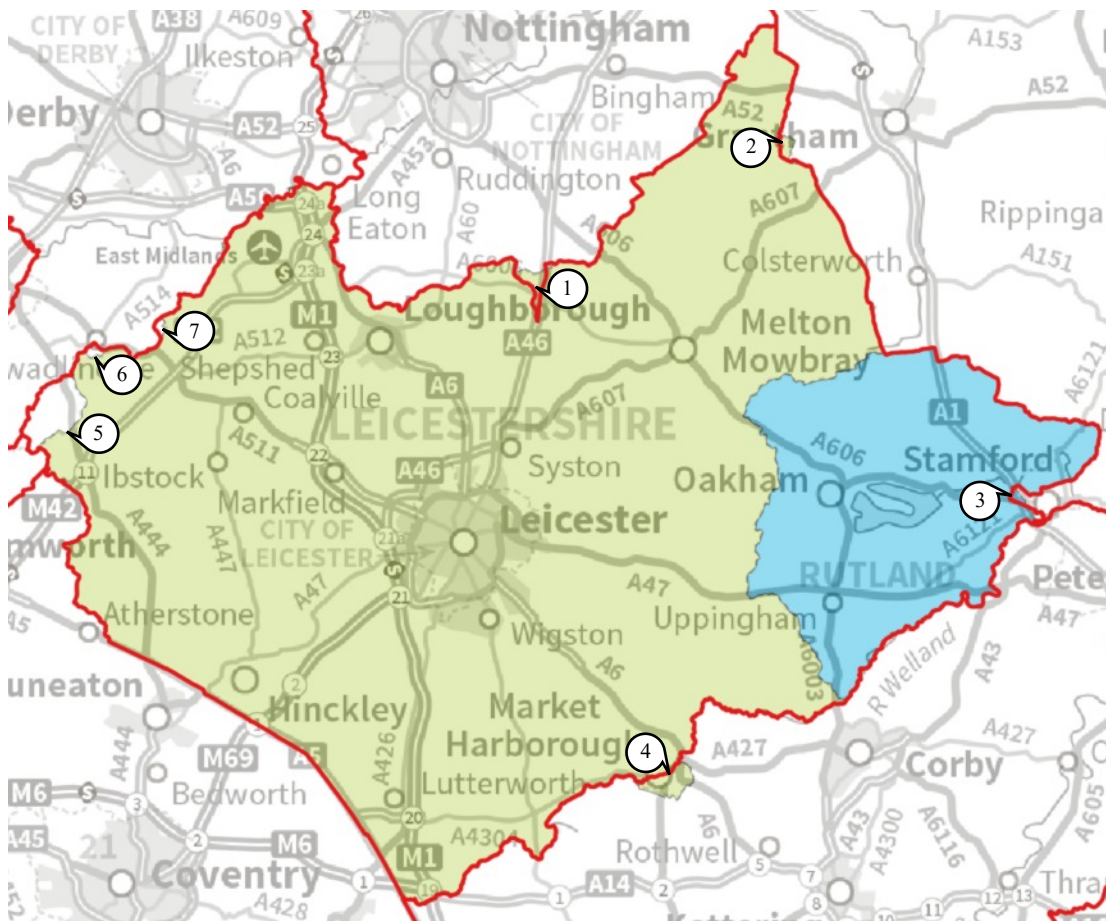


Fig. 1. Vice-county (VC) 55 is bounded by the red line. The counties of Leicestershire & Rutland are shaded green and blue, respectively. The numbers show where the VC deviates from the combined counties: refer to Table 1. Details are best viewed on <https://www.cucaera.co.uk>. VC outline from the NBN. Contains OS data © Crown copyright and database right (2019).

Yorkshire) or combined smaller ones (Rutland was merged with Leicestershire) so that vice-counties were roughly similar in area. Being defined in this way, Watsonian vice-counties are fixed – their boundaries will never change. They were adopted by the botanists of the time, then later by the zoologists. They are still used today: the organisation of the Botanical Society of Britain and Ireland (BSBI), for example, is based on vice-counties. Each vice-county has a reference number and a name. VC55 is properly called *Leicestershire with Rutland*, although this is often abbreviated to *Leicestershire* or *Leics* (no doubt irritating the more sensitive folk in Rutland).

The boundary of VC55 closely follows the current boundary of Leicestershire (including Leicester, of course) and Rutland combined, according to the Ordnance Survey in 2018. The best place to view VC boundaries is the web site <https://www.cucaera.co.uk>, where they can be overlain on detailed OS maps (that can be printed).

Comparing the true county and vice-county boundaries reveals seven significant deviations, see Fig. 1 and Table 1.

There are further, minor deviations (not visible on Fig. 1). Recorders working along the Soar, Trent, Welland and Avon should be aware that these rivers have meandered a little since 1852, so careful map-reading is called for – the VC boundary does not move with the river! (p. 18 Fig. 6). Likewise, where the VC boundary seems to follow a road (notably the A5), closer scrutiny shows that it may be offset by up to 100 metres – plenty of space for an interesting plant or animal to occur! My advice is to take into the field a 1:25,000 OS map with the VC boundary marked with a highlighter pen. The BSBI provides a grid reference lookup tool that identifies the vice-county: at <http://bsbidb.org.uk/gridref.php>.

Being combined into one vice-county does not preclude Rutland or Leicestershire from having their own species lists. Lists are, after all, easy to merge but difficult to split. For my own recording I follow the tradition of recording Rutland and Leicestershire separately. Sometimes VC55a and VC55b are used to refer to the Leicestershire and Rutland parts of the VC, separated by the political boundary shown on the modern map (being unchanged from 1852, as far as I know).

Most national recording projects are vice-county-based and it is helpful to include a VC column in any set of records, so that they can be directed to the right person or centre. Be aware, however, that the *Flora of Leicestershire* (Primavesi and Evans, 1988), adopted the political boundary rather than VC55a (being supported by the Museums Service). Leicestershire & Rutland Environmental Records Centre (LRERC), can in fact accept records from the bits of Derbyshire, Nottinghamshire and Lincolnshire within VC55, mentioned in Table 1.

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Molluscs in 2018

David Nicholls

County Co-ordinator: Molluscs

In August 2018 I was invited to visit the Gypsy Lane SSSI site (SK619071) by Leicester City Council, a site that is not generally open to the public. It turned out to be a hotspot for molluscs, almost certainly the best in Leicester. During a few hours exploration I identified 19 species including a few VC55 rarities. One of these, *Ceriuella virgata* **Striped Snail** (23 Aug), is not uncommon nationally but its preference for calcareous sites limits its distribution in Leicestershire. There are only two previous records for this species in the city both by Adrian Rundle in 1989 - 25 Sep Gilroes Cemetery (SK559064; LRERC ref S20-2210) and 30 Sep Ethel Road (SK623036; LRERC ref S20-2214) – whilst he found the snail at many other sites in VC55. Another species of calcareous sites that was found at Gypsy Lane was the tiny *Vallonia excentrica* **Eccentric Grass Snail** (16 Jun). This has not been recorded anywhere in VC55 since 1989, again by Adrian Rundle, apparently near Great Casterton (23 Sep; TF01F).

Another interesting find was *Arion owenii* **Tawny Soil Slug**, which I discovered at Thurnby Lodge Nature Area (31 Aug, SK639048) – a first for VC55 and confirmed by national coordinator for the terrestrial molluscs, Ben Rowson. There were good numbers of these in what turned out to be a typical habitat for the species – light woodland near a stream. As with many “rare” molluscs, it is hard to know if it really is uncommon or just under-recorded. Most naturalists will know the feeling of discovering a species for the first time and then finding it everywhere thereafter once you know what to look for. This happened to me with *Arion intermedius* **Hedgehog Slug** (Fig. 1) which I identified at Charley Woods (24 Mar, SK4715). The slug is so named because it contracts the tubercles on its back into spiky points. However, being very small it can easily be missed or ignored as a juvenile of the commoner *Arion* species which are tricky to identify.

The Hedgehog Slug is mainly a woodland species that appears to like resting under small woody debris that other molluscs shun. So if you see a small branch, the kind of size that a dog might easily pick up, then have a closer look. A hand-lens helps to make out the prickles.



Fig. 1. *Arion intermedius* Hedgehog Slug showing “prickles”.

As with most invertebrates, winter is generally an unrewarding season to find many molluscs. However, one species in particular that is most commonly found at this time is *Vitrina pellucida* **Pellucid Glass Snail**. This is a small species of around 5 mm sometimes referred to as a semi-slug as it cannot retract the whole of its body into the shell. Several were found active amongst the fallen rocks and logs of the old quarry next to Groby Pool (22 Dec; SK5208).

Do look out for molluscs on your outings as more records are desperately needed. I am very happy to help identify specimens or on photographs.

Digitisation of Leics and Rutland Flora Cards

Steve Woodward & Helen Ikin

The *Flora of Rutland* (Messenger, 1971) and *Flora of Leicestershire* (1988) were compiled before computers were in widespread use by amateur recorders, so each project relied on a card index to accumulate the data collected during fieldwork and research (Fig. 1). Both card indexes are preserved at the Collections Resources Centre (CRC), Barrow upon Soar. Most of the information in them was extracted and published, of course, but the cards are still a valuable archive as they preserve unpublished details and they demonstrate how the projects were conducted.



Fig. 1. The Rutland card index occupies nearly half of the top drawer, the Leics index fills three drawers at the bottom. Card formats are different but the information is basically the same.

One of our objectives for the final fieldwork year of Atlas 2020 is to try to re-find elusive species. Do they survive where they were previously found? The card indexes should tell us where to look, as six-figure grid references were entered for uncommon species (Fig. 2). We are aware that some Leicestershire cards were destroyed in a fire when they were housed at Ratcliffe College.

As far as we know the cards have never been completely scanned, nor the records digitised. We understand that the published dot maps were digitised, but that would have recovered only the tetrad distribution (along with the mapping errors). Given that the Floras were published, the effort of digitising all the cards may not be justified. Constraining the task to just the Rare and Scarce plants, however, is feasible and is under way by volunteers Helen Ikin and Steve Woodward. Rare and Scarce plants are those nominated in the *Rare Plant Register* (Jeeves, 2011). The *Register* is presented in alphabetical order, whereas the indexes are in systematic order according to Dandy (1958). Or, rather, they

should be – we discovered that the Rutland cards had some duplicates inserted out of sequence, so our first job was to restore Dandy order.

For each of the 310 Rare or Scarce plants in the *Register*, we looked up the Dandy sequence number, pulled out the relevant cards and photographed them with a compact camera (taking them to a scanner would have been much slower). We then inserted the 1,351 photos into a pdf file, in alphabetic order, merging Leicestershire with Rutland (as the scope of Atlas 2020 is VC55). This phase is complete. Next, we intend to type the details from the photos into a database and hand over the results to the County Recorder, Geoffrey Hall, to help plan a campaign to re-find the plants. The results will also be lodged with CRC and LRERC.

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New Fungus Records in 2018

Tom Hering
County Recorder: Fungi

If a new bird species were to be recorded for Leicestershire, it would almost certainly mean that the bird in question had flown across the county boundary using its own wings. Not so with toadstools and their allies; a 'new record' probably just represents a species that has been present for many years, but up to now has failed to fruit in a place where it gets noticed. In the autumn of 2018, following a very hot, dry summer, the forays held by the Leicestershire Fungi Study Group yielded only a 'fair-to middling' number of records, but they included several new county records, some of which are nationally regarded as rarities. I will briefly explain how one can determine whether a species is rare nationally. The British Mycological Society maintains a database, called Fungal Records Database of Britain and Ireland (FRDBI, www.frdbi.info/), into which are fed nearly all the fungal records made anywhere in Britain and Ireland today, as well as a comprehensive collection of records from earlier times. The score of records for a species gives a fair indication of its abundance in the country. For instance, a very common species, *Stereum hirsutum* Hairy Curtain Crust, has a high score of some 16,000, reflecting also the fact that it is instantly recognisable in the field. Of course, a species that requires critical study for its recognition will, even if it is very common, have a lower score. For toadstools and their allies, a score of less than 100 certainly means it is a bit of a rarity, and in

| Scientific Name | 154-13 | Family | 34 | English Name | |
|--------------------------------|------------|--|------------------|---|--|
| <i>Chenopodium hybridum</i> L. | | CHENOPODIACEAE | | Sowbane | |
| Therapsid Species No. | 86796 | Harwood & Gainsborough Page Reference | 454 | See reverse of this card for distribution | |
| Date | Tetrad No. | Frequency and Distribution Notes | Name of Observer | | |
| 23.4.65 | 89/U 6697 | Flourished at corner of Onage Street, Uppingham. | JHC | | |
| | 89/U 6796 | Also in Market Garden (Fitchards) | KGM | | |
| 7.8.65 | 90/O 9698 | Lugthorpe, potato patch. | KGM | 8.50, 8.51 | |
| 8.65 | 0002 | St. Casterton: Rubbish Dump. | JHC | | |
| 8.65 | 88/11 | Ryhall: Allotments. | JHC | | |
| 8.65 | 0096 | Little Casterton: Rubbish Dump. | JHC | | |
| 8.65 | 8055 | Clipscombe Old Quarry | JRW | | |
| 8.59 | 9902 | St. Casterton | JHC | | |
| 8.65 | 7683 | Shadleswell Hollows. Amble wood | JRW | | |
| 8.65 | 90/77 | " Dumped sack at roadside. | JHC | | |
| 6.8.66 | 6032 | Luffenham. Roadside near garden gate | JRW | | |
| 9.67 | 20993 | Scotson. Allotments, weed | KGM | | |
| 1914 | | Whitcher | | | |

Fig. 2. Individual records of *Chenopodium hybridum* ("Sowbane", also called Maple-leaved Goosefoot) in Rutland, Dandy No. 154.13. The first entry in the second column 89/U 6697 is interpreted as grid reference SP866997.

Leicestershire we have had five such finds in 2018. In the accounts below, the figure beside each name is its FRDBI score, as of January 2019.

Fig. 1 shows *Trametes suaveolens* (77) found at Tugby Wood. The brackets are fairly soft-fleshed and smell of aniseed. The same odour also occurs in another of our interesting finds, *Gloeophyllum odoratum* (14), found at Grace Dieu Wood. It is strange that this same smell is to be found in members of the genera *Clitocybe* and *Lentinellus*, as all these different fungi are not thought to be closely related. *G. odoratum* occurs on decaying conifer trunks, and its only other English records so far are close at hand, in Nottinghamshire and Lincolnshire.

Anyone seriously studying the genus *Russula* will carry with them into the field a crystal of Green Vitriol (Ferrous Sulphate). This has the property of evoking colour reactions when rubbed on the stem. Most species react with some shade of pink, but there are some with a green reaction. We found one of these at White Moors Wood, Shenton, and it turned out to be, not *R. xerampelina*, which was fairly well known to us, but *R. clavipes* (16), which was a new county record. And this happened in a season which was generally poor for other *Russula* species. White Moors also produced a Myxomycete which may well be a rarity, but this record awaits confirmation.

At our last foray at Grace Dieu Wood, we met two more species new to us. Richard Iliffe found *Mycena meliigena* (52), one of the very small species that grows on the bark of living trees, without apparently harming the tree. The other find was the little brown-spored toadstool illustrated in Fig. 2. This puzzled us completely, until we realised that many of the accompanying trees were Southern Beech *Nothofagus obliqua*, an alien tree that hails from South America. It was then identified as *Descolea antarctica* (2), a mycorrhizal companion of this tree. This was an exciting find, as the only previous British records were made in Shetland and in an arboretum in Sussex – both with introduced Southern Beech.

Looking at the list above, one can appreciate one of the problems of recording fungi. With some other kinds of wildlife, a few years of surveying may be enough to produce a 'complete county list'. But with the fungi, we have been keeping records for nearly 40 years, and more species just keep turning up!



Fig. 1. *Trametes suaveolens* at Tugby Wood.



Fig. 2. *Descolea antarctica*, found with Southern Beech at Grace Dieu Wood.

Nineteenth century locusts

Ray Morris

While trawling old entomological journals for VC55 insect records, I read an interesting article on locusts appearing in Yorkshire (Roebuck, 1877). Despite its title it was a comprehensive account of the occurrence of these large orthopterans in Britain in the period 1842 to 1876 and buried amongst all the Yorkshire records were references to locusts in our part of England. It seems that during the review period the majority of the insects seen were the Migratory Locust *Locusta migratoria* with, occasionally, a second species *Acridium peregrinum*. Evidently, our local records were restricted to the former species. Although not particularly interested in the Orthoptera I endeavoured to dig out the records referred to by Roebuck all of which occurred between 1846 and 1857.

Locusts were first noted "near Leicester" in 1846 when John Plant, a noted local entomologist (Plant, 1846), reported that a Mr Robert Warner found "a pair in a barley field near the Old Abbey". Additionally, Plant commented that "I have received from several correspondents accounts of the capture of locusts, one by a lady at Skeffington, and others from various villages in Leicestershire". He pontificated that "the summer

heat has developed the species in great abundance". Towards the end of August 1846 the insect was reported from Preston, near Uppingham in Rutland, by William Turner (Turner, 1846). In 1857 several locusts were taken in different parts of VC55 including Wymeswold, Little Glen and Smeeton Westerby (Norman, 1857).

No doubt further literature searching and the archives of those interested in Orthoptera will turn up more records which would then allow a more comprehensive account of these insects in this part of Britain.

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Atlas 2020: Recording progress in 2018

Geoffrey Hall
County Recorder: Vascular Plants

After three years of intensive botanising and data entry, it was time to think about where to record in the remaining two field seasons. Early in 2018, Steve Woodward, Russell Parry and I decided that our strategy in 2018 would be to try to complete the minimum coverage required for Atlas 2020, i.e. five well-recorded tetrads (2 x 2 km squares) per hectad (10 x 10 km square), where well-recorded means 75% of all plants ever found have been re-found since 2000. An analysis of last year's records revealed that 48 more tetrads needed to become well-recorded to reach the target, so there was a lot to do. Some tetrads were allocated to volunteer botanical recorders, and a four-day meeting based at Rutland Water was organised to try and increase recording in Rutland and north-east Leicestershire (see p. 17). Other recorders searched for species in non-target tetrads to improve coverage and we arranged seven local group meetings, concentrating on areas of open access land, which would cease to be available in 2018. We were fortunate to be able to visit the species-rich grassland at the British Gypsum Plant at Barrow upon Soar (Fig. 1), which was organised by Rupert Simms.

So, how did we do? By Jan 2019 we had completed 31 of the 48 tetrads, leaving 17 to do in 2019 (Fig. 2, Table 1). Most of these hectads are in the east and north-east of VC55, so we will need to do a lot of travelling in 2019, the last recording season for Atlas work. It is proving difficult to attain 75% coverage in many tetrads in Rutland, despite intensive recording effort. There are two reasons for this apparently low coverage in Rutland. First, records for Rutland in the BSBI database are derived mostly from Guy Messenger's *Flora of Rutland* (1971) and date from the period 1940-1969, i.e., they were made in the period before agricultural intensification, much land drainage and urbanisation, so the plants have gone. Second, Guy had a permit to record along railway lines, so he had access to habitats denied to modern-day recorders. Much species-rich grassland, that was a feature of railway embankments, has vanished in the last 40 years, having scrubbed over and become thin strips of woodland.

On a more positive note, overall coverage has improved tremendously (Fig. 3, opposite). There are no longer any tetrads wholly in VC55 with less than 20% coverage, although a few small tetrad fragments on the border remain to be recorded.

In 2019, we will aim to complete the minimum requirement, and spend some time searching for scarce species. Some more SSSIs need to be re-surveyed, but obtaining access is proving difficult because Natural England are now charging for details about land ownership. Nevertheless, we have increased coverage immensely in the last four years and are well on the way towards achieving the goal.



Fig. 1. Botanising in hi-vis jackets and hard hats at British Gypsum, Barrow upon Soar. Photo: Steve Woodward

Readers (particularly those in Rutland) who are willing to help with the final "push" are encouraged to contact me. If a particular site or tetrad appeals, then please let me know so that duplication of effort can be avoided. There are still common, "easy" species to re-find in many tetrads, so it is not necessary to be familiar with rarities to make a valuable contribution.

The BSBI are already thinking about what to do after the Atlas work, and have consulted the Recorders to get opinions, but nothing has been decided yet. One option was "a two year break in recording", one which I found it easy to vote for.

Reference

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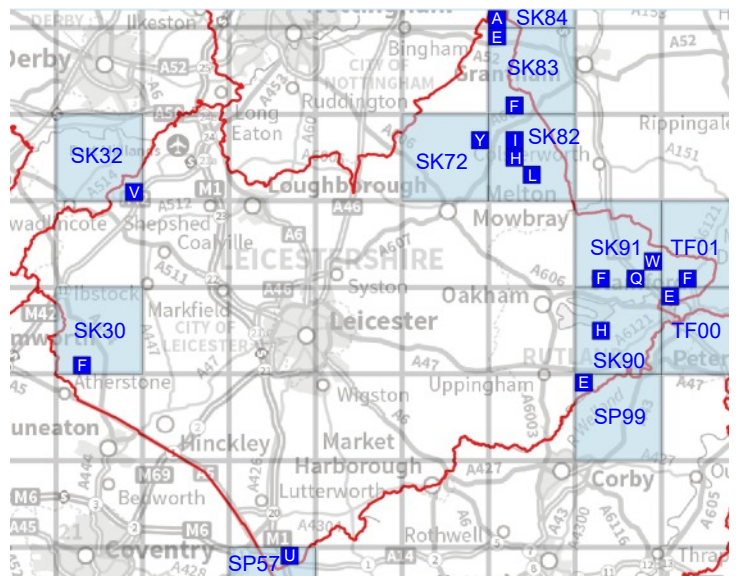


Fig. 2. Location of hectads (light blue) with insufficient coverage. The dark blue squares are the "priority" tetrads which will complete the hectad - if adequate coverage can be achieved - see Table 1. Contains OS data © Crown copyright and database right (2019).

Table 1 (right). Tetrad references, locations and the current coverage, i.e. the number of species with post-1999 records as a percentage of all species ever recorded. Adequate means 75%. So if SK30F can be raised from 72% to 75% (about 12 extra species) then the whole of hectad SK30 will be considered well-recorded for Atlas 2020.

| Tetrad | Location | Coverage % Jan 2019 |
|--------|----------------|------------------------|
| SK30F | Sheepy Magna | 72 |
| SK32V | Ropershill | 63 |
| SK72Y | Goadby Marwood | 73 |
| SK82H | Stonesby | 73 |
| SK82L | Bescaby Oaks | 71 |
| SK82L | Coston | 71 |
| SK83E | Bottesford | 51 |
| SK83F | Knipton | 63 |
| SK84A | Normanton | 27 |
| SK90H | Edith Weston | 71 |
| SK91F | Exton | 68 |
| SK91Q | Bloody Oaks | 63 |
| SK91W | Pickworth | 64 |
| SP57U | Swinford | 72 |
| SP99E | Seaton | 70 |
| TF00E | Casterton | 58 |
| TF01F | Ryhall | 71 |

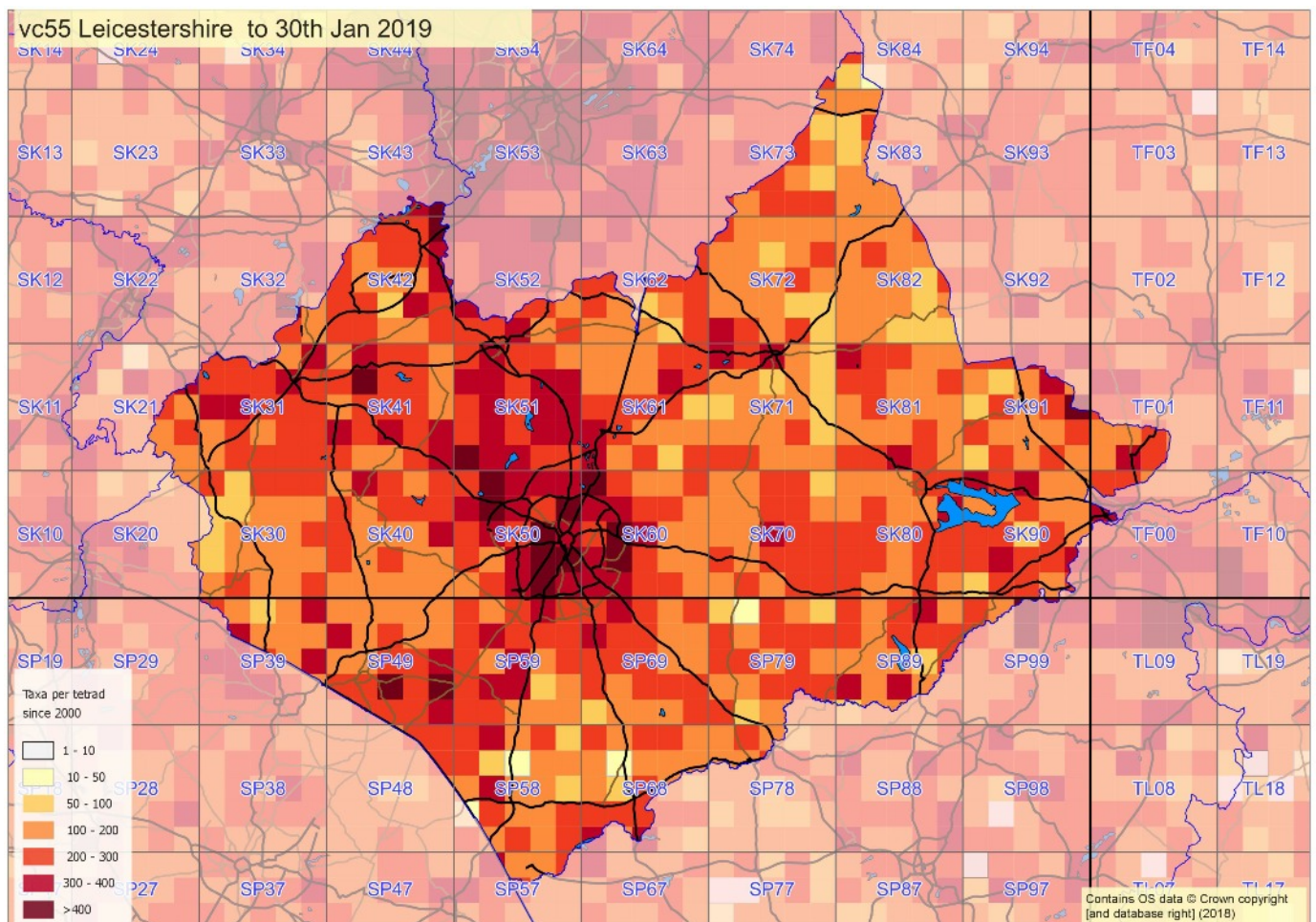
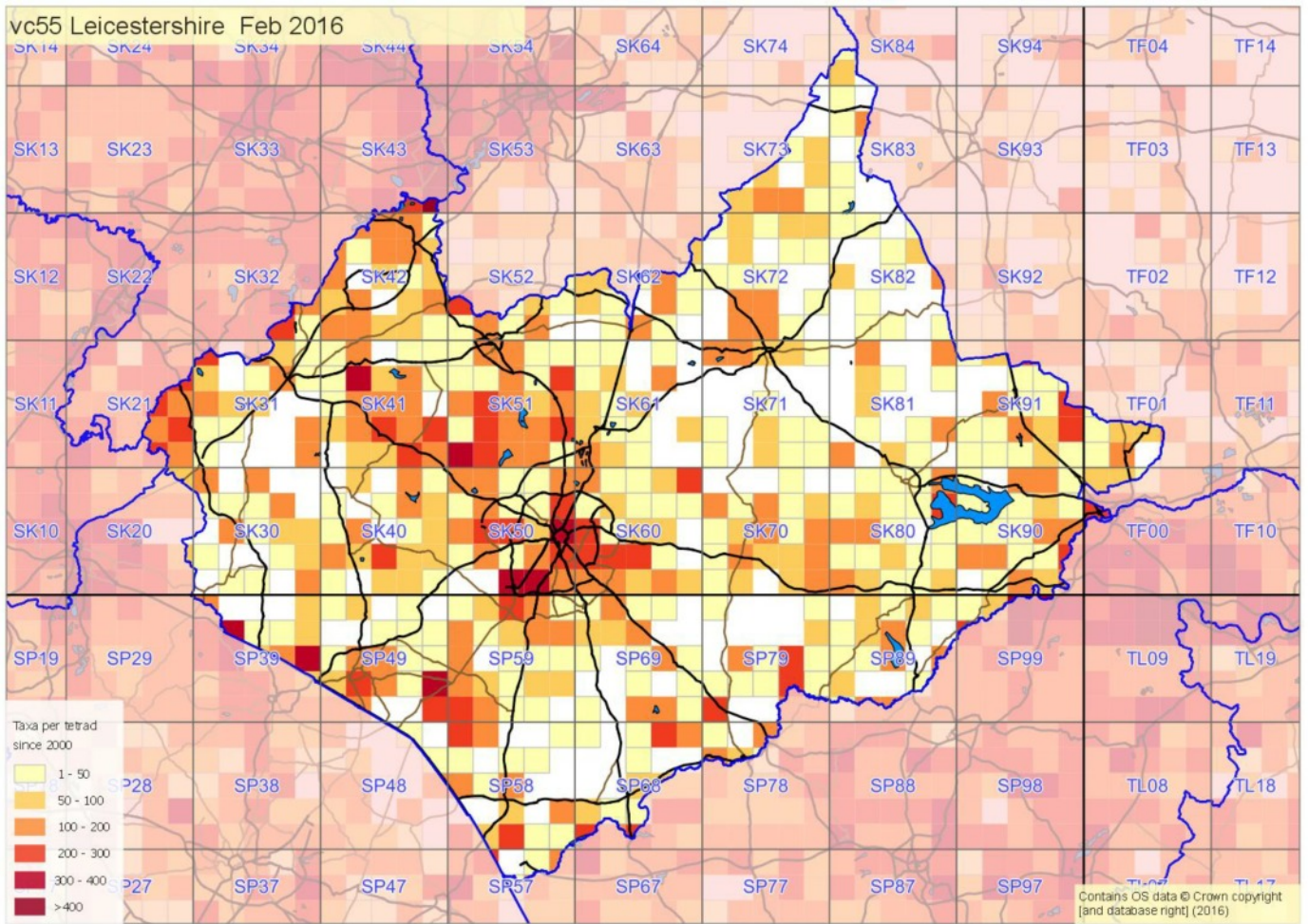


Fig. 3. Number of taxa recorded per tetrad since 2000: in Feb 2016 (above) and Jan 2019 (below). Maps prepared by Andy Amphlett/BSBI.



Ann Goddard

Since retiring, I have finally had the time to sort through many of my late husband's papers and collection boxes. It has been both a poignant journey and a pleasure to read through the many letters and reports he left behind.

Don was captivated by natural history from a very young age. His mother would often tell the story of how she would check his pockets for worms and woodlice when he was a toddler. After a trip through the washing machine, followed by the mangle, this was not a pretty sight! All through his childhood he had a succession of pets but was always happier with insects – particularly beetles. Having found a beetle which he could not identify he took it to the local museum (Leicester) and met the then Curator of Biology Ian Evans who fostered this interest.

Whilst a pupil at Gateway Grammar School in Leicester, this early fascination, coupled with a sense of adventure, led him to join an ecology expedition to the Faroe Islands in 1966 with the City of Leicester Youth Service. He went on to study Biological Sciences at Leicester University (1967 – 1970) and continued an interest in expeditions – joining an Arctic Norway Expedition in 1969, being deputy leader of a 1970 Monach Islands Expedition and acting as entomologist on an expedition to Eastern Turkey in 1970 (grant aided by the British Museum).

He was then appointed to the British Antarctic Survey which led to the award of PhD in 1976. Based on Signy Island he researched the population ecology and physiology of Antarctic soil mites which included a three-year tour of duty in the Antarctic over-wintering twice. Don enjoyed life on base and during his time down south did encounter Antarctic wildlife larger than soil mites! (e.g. Elephant Seals and penguins). It was here that he learnt to scuba dive, completing many under-ice dives, and went on 'holidays' man-hauling a sledge across the snow and camping.

It was on base that he learned to cook. Chef required days off and personnel had to take turns standing in – not popular with many. Don enjoyed it and swapped other duties (like latrine duty) with other people's cook duties. Seems a good swap to me! He became an excellent cook.

I met him on his return home when we both worked in the Natural History Section at Leicestershire Museums. I knew what I was getting into when, on inviting me to join him on a weekend woodland walk, it took us two hours to get out of the car park because an interesting beetle was found under a stone – so, of course, he just had to look under many more stones!

At the museum, Don was a contract biological assistant (1978-1981) carrying out field surveys of SSSI sites. This included his writing chapter 4.9 Coleoptera (Beetles) of the *North-east Leicestershire Coalfield Report* (Evans, 1979). He also contributed to surveys of the Ashby Canal, Grantham Canal, the East Leicestershire Rivers and other sites around Leicestershire and Rutland. At this time Don was involved in Jennifer Owen's Leicester garden project by identifying beetles and lacewings (Owen, 1991 & 2010). Don continued this involvement right up until his death in June 2000.

We moved to Worcestershire in 1982, at first renting a farmhouse. Surrounded by old grassland it was a delight to look out of the kitchen window and watch Green Woodpeckers looking for ants amongst the anthills. I remember Don was particularly excited when he found a glow worm *Lampyrus noctiluca* on the kitchen floor. At that time, we often saw their greenish glow on a summer's night along the lane (only the wingless female glows strongly, to attract the flying males).

Don became a teacher of 'A' level biology and particularly enjoyed the academic stimulation of the sixth form, but later returned to his first love of biological recording and conservation. He became a well-known figure with the Worcestershire Wildlife Trust, carrying out field surveys for them. He would often return home happy but covered in 'Bobby's buttons' from goose grass or smelly mud from a pond. Indeed, he always carried an "I've fallen in the pond" set of clothes in the boot of the car.

In 1998 he took on a post of Invertebrate Ecologist (Biological Survey Team) with the National Trust travelling to many National Trust Sites throughout England and Wales - a time that he particularly enjoyed.

It is with great pleasure that I can report that his collection has found a home at Oxford University Museum of Natural History (OUM). A road trip on 2 July 2018 saw the collection safely delivered and we were warmly welcomed by Darren Mann, Head of Life Collections. We enjoyed a fascinating behind the scenes tour of the Hope Department of Entomology at OUM seeing historically significant specimens e.g. a Tse-tse fly sent to the Museum from Africa by David Livingston! We were also very interested to see specimens collected by Charles Darwin and by Alfred Russell Wallace. The founder of the Hope Department of Entomology at OUM was Frederick William Hope (1797–1862) - a close friend of Darwin's. Darwin and Hope were in regular correspondence during Darwin's voyage on *The Beagle* and Darwin often sent insect specimens for help in identification. We also saw how Don's specimens would be curated and incorporated into the Hope collections.

Entomology was Don's passion and, as in the words of J.B.S. Haldane like his maker 'he had an inordinate fondness for beetles.'

A catalogue of Don's VC55 beetle collection (1962-1983) has been lodged with LRERC (ref: 1000-10020304).

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What is a Badger Sett?

Pam Mynott

County Recorder: Badgers

The Protection of Badgers Act (1992) gives legal protection to Badgers and to their setts. In the Act, a Badger sett means any structure or place which displays signs indicating current use by Badgers. I know of only one official list of these signs of current use. It is given in the Forestry Commission Guide to 'Forestry Operations and Badgers' and lists the following signs:

- The shape of the tunnel, not the entrance hole itself, is a rounded or flattened oval (broader than high) with diameter of at least 25 cm.
- Badger footprints, claw marks and soil smoothed by the passage of Badgers may be present near the entrance.
- Badger hairs may be found in or around the entrances or on other features nearby.
- Hay, bracken etc used as bedding will usually have been excavated from tunnels together with fresh soil and piled around entrances.
- Distinct tracks leading to setts.
- Dung pits, latrines and scratching posts are often present close to the tunnels.

In June 2000 it was judged that the legal protection only applied to the tunnels and chambers of the sett, and the areas immediately outside the entrances, or to other structures used by Badgers for shelter and refuge. Badgers will often use places that do not fit the typical picture of a Badger sett. In rocky areas they might use gaps and crevices amongst rocks and boulders, whilst in suburban areas they sometimes use spaces under garden sheds, raised buildings or other structures. Badgers will also sometimes sleep above-ground in a 'nest' – often tucked under a hedge or bush. They may make a den amongst hay bales in farm buildings. These more temporary structures could also fall within the definition of a sett and over the years I have been called to look at and advise on some of these.

In April 2009 I was called to County Hall to say whether a Badger had dug a substantial hole that had appeared in a heap of grit and salt for putting on icy roads. I found there was bedding on the heap and Badger prints leading up the mound to a large hole, so it was indeed a Badger sett. However, it seemed unlikely that a Badger would stay for long in such an inhospitable place. The 'sett' was monitored by County Hall staff and when no more digging, prints or bedding appeared I agreed that the Badger was no longer living there.

A year later, in August 2010, I was asked to examine a Badger hole at a school within a large council estate. It was within a

newly created pre-school play area. The ground there had been levelled with sand and a Badger had enjoyed the easy digging. When I arrived at the school, I found that the roof of the sett had collapsed after heavy rain and the Badger had left. A new Badger hole had appeared on a bank between two football pitches and the school were happy for the Badger's new sett to remain there.

A couple phoned me in 2011 and told me that a Badger had made its home in their stable. The building was full of old furniture awaiting renovation and the Badger had built a nest on an old settee there (Fig. 1). It had brought its bedding in from an adjacent orchard using a gap under the door at the back of the stable. They had been happy for the Badger to remain, but they had now been asked to repair the settee as soon as possible. I went with my husband to see what the situation was and whether it would be possible to persuade the Badger to move to another chair or settee. Although I tiptoed very quietly towards the sleeping Badger it woke up, raised its head and looked straight at me, so I apologised for waking it. It then clambered down from its nest, brushed against my leg, walked over my foot and disappeared through the jumble of furniture. After some discussion my husband Peter carefully removed the heap of bedding consisting of hay and feathers it had removed from the settee. He took the bedding towards the back of the stable. And constructed a barrier from sheets of plywood he had found in the stable to confine the Badger to a smaller area by the rear door. A few days later I rang to see how the animal was progressing. I learned that the Badger had moved all his bedding from the area where Peter had put it. He had then made himself a cosy, shady nest between Peter's partition and the end of another settee. I said that I hoped that the Badger would not remove feathers from this settee to add to its bedding!

In the last two years I have received worrying reports of Badgers within houses. One was seen and photographed in an outside lavatory attached to a house in Lubenham. However, when I went to investigate it had left its temporary sett and was last seen in a neighbour's garden.

In 2018 an even bolder Badger took refuge in an upstairs bathroom (Fig. 2, further details in Mynott *et al.*, 2018). It certainly did not intend to stay there as it frantically tried to dig its way out through the newly laid vinyl on the bathroom floor. My husband was just able to catch it with a grasper as it clambered into the bath. We put it into a Badger cage together with food and water, took it into the garden and left it undisturbed until the evening. Peter then manoeuvred the cage until it was level with the hole in the fence where the Badger must have entered the garden. I scattered peanuts on the far side of the gap to try to tempt the animal out, but it stayed in the cage, so we left. We returned the next morning and found that the Badger had eaten all the food before making its escape and returning to its sett.



Fig. 1. Sett or settee?



Fig. 2. Bath-time for Badgers.

Reference

Mynott, P., Mynott, P. & Frankum, M. 2018. Badger in my bath! *Newsletter of the Leicester Literary and Philosophical Society: Natural History Section*, **107**: 8-9.

Mosses & Liverworts: Highlights of 2018

Uta Hamzaoui

County Recorder: Bryophytes



Fig. 1. A deep patch of *Hylocomium splendens* growing with *Polytrichastrum formosum* among heather on young heathland at Bardon Hill.

Restored heathland at Bardon Hill

The return of a number of bryophyte species due to improved air quality is an ongoing theme of my articles in this journal. It continues to be the reason for some of the most interesting discoveries in the recent study of the bryophyte flora of our counties. In 2015 I reported new Vice-county (VC) records of two heathland species *Hylocomium splendens* (Fig. 1) and *Rhytidiadelphus loreus* from Charnwood Forest, both robust and conspicuous mosses which bryologists would have looked out for in the heathy areas in Charnwood Forest (Hamzaoui, 2015). Subsequent articles mentioned more records of small patches of these species in Charnwood Forest as well as of *Racomitrium heterostichum*, an upland species with a similar re-colonisation pattern in our area (Hamzaoui, 2018).

At Bardon Hill, however, these species and others occurred as deep mats, rather than scattered patches, emphasising the importance of its restored heathland. This area of ca. 1 ha in extent is called 'The Rockery' and is located to the east of the top of Bardon Hill at SK462132. It was surveyed by Sara Botterell and Uta Hamzaoui for Leicestershire and Rutland Wildlife Trust as part of a vegetation monitoring study commissioned by Aggregate Industries. A dense stand of Heather *Calluna vulgaris* has developed on most of this site since the restoration. Apart from Heather, some bushes of Western Gorse *Ulex gallii* and a small patch of Green-ribbed Sedge *Carex binervis*, no other higher plant species typical of heathland vegetation were found. In contrast, a number of lower plants typical of this habitat were recorded, such as lichens of the genera *Peltigera* and *Cladonia* on recently disturbed soil as well as scattered plants of *Polytrichum juniperinum* and *P. piliferum* which are bryophytes that usually occur on rocks or shallow, dry, acidic soils of the Charnwood Forest. Where the vegetation has been allowed to mature without much disturbance, a deep layer of bryophytes has developed, similar to the vegetation of the Bilberry *Vaccinium myrtillus* and Heather heath at Timberwood Hill (Charnwood Lodge Nature Reserve).

What makes the heath vegetation of the Rockery stand out is the diversity in bryophytes and the abundance of otherwise rare and sparsely-occurring mosses. Apart from good

populations of *R. loreus* and *H. splendens*, mentioned above, other species occur here that are characteristic heathland vegetation of the British uplands such as *Dicranum scoparium*, *Hypnum jutlandicum* and *Pleurozium schreberi*. Other species are *Polytrichastrum formosum* (not uncommon in woodland, heath-grassland and other habitats on poor, acidic soils in Charnwood Forest), *Pseudoscleropodium purum* (typical of unimproved grassland and heath) and *Thuidium tamariscinum* (in VC55 generally a woodland species). Unexpected was the finding of *Polytrichum commune* and *Aulacomnium palustre* in this newly established heathland, as in our area these species usually grow in wet and waterlogged situations, often associated with *Sphagnum* species (bog-mosses) in long-standing wet heath habitats in Charnwood Forest. Also surprising was the occurrence of *Rhytidiadelphus triquetrus*, a species that prefers base-rich soils and in VC55 is more often found in the eastern limestone areas of Rutland and on the whole is a rare species in the two counties. There are only three records from the Charnwood Forest, two of which were made in 2018.

These species were probably common in the heathland that covered much of Charnwood Forest at the beginning of the nineteenth century. Subsequently, the Enclosure Act brought about the destruction of heathland, mainly for agriculture. This was a period before heavy atmospheric pollution inhibited their growth, as it did in the nearby Peak District (Elkington *et al.*, 2002). Heathland and its associated species are now rare in the area. Improved air quality, however, has allowed many species to re-colonise and the new plants we find in Charnwood Forest have most likely arrived by spores from heathland areas further away and found good growing condition on the acidic mineral soil. The occurrence of the heathland bryophyte flora (in parts abundant) at Bardon Hill shows that, if the conditions are right, these species can arrive spontaneously and that there is good reason to hope that this is an ongoing process which could lead to a widespread improvement of the bryophyte diversity in our area.

Other notable records

For two of the species mentioned above, more records were also made elsewhere:

***Rhytidiadelphus triquetrus*:** Tugby Wood, SK766020, 24 Feb 2018, S. Mousley, det. U. Hamzaoui. In recent clearing of ancient woodland.
The Brand, SK53651320, 9 Jun 2018, U. Hamzaoui.

***Hylocomium splendens*:** The Brand, SK53651320, 6 Jun 2018, U. Hamzaoui. In a grassy woodland edge.
Timberwood Hill at Charnwood Lodge NNR, SK47141490, 25 Nov 2018, U. Hamzaoui. In Bilberry heath.
Collier Hill at Charnwood Lodge NNR, SK471156, 27 Jan 2018, U. Hamzaoui. Two patches on rock of shaded outcrop.

Two field meetings were held in 2018 at Charley Wood NR, which includes Burrow Wood and Cat Hill Wood, where the British Bryological Society recorded during their AGM in 1998. During the recent survey a number of new records were made in particular, records were made of several epiphytic species: *Frullania dilatata*, *Metzgeria furcata*, *M. violacea*, *Orthotrichum pulchellum*, *Radula complanata*, *Ulota phyllantha*, *Zygodon conoideus* and *Z. viridissimus*. These species were almost absent from VC55 twenty years ago but are now widespread. Interestingly, in 1998, the now common epiphyte *Cryphaea heteromalla* was recorded here and participants of this

meeting still remember their surprise on finding it in the middle of the country.

Outstanding finds of the special habitats in the woodlands were:

Scapania nemorea (Fig. 2): Cat Hill Wood. SK47551518, 2 Oct 2018, T. Blockeel and U. Hamzaoui. 2nd VC record since 1943. On rocks of shaded outcrop. This small liverwort prefers moist or humid habitats and is declining in the lowlands.

This liverwort was since found at Collier Hill of Charnwood Lodge at SK471157, 27 Jan 2019, U. Hamzaoui. 3rd VC record. Very similar habitat to the above site and in the same monad.



Fig. 2. *Scapania nemorea* with characteristic brown clusters of gemmae on the tip of the shoots which makes this species easy to identify.

Heterocladium heteropterum: Burrow Wood. SK477145 and SK477147, 24 Mar 2018, U. Hamzaoui. On rocks by fast-flowing stream. Re-finds of records from 1998 and only recent records. The only other sites where this species was found in the past are Grace Dieu (1906) and The Brand (1939). This is a moss of rocks in humid woodland and western distribution and rare in the lowlands.

Pohlia lutescens: Cat Hill Wood. SK47511520, 2 Oct 2018, T. Blockeel. 3rd VC record. On sandy soil below the root plate of a recently fallen tree. A small plant of open habitats in the lowlands and probably under-recorded.

During a meeting at Mountsorrel and Rothley Marshes NR on 27 January 2018, Rachel Carter made an exciting discovery on the way back on a gravelly track leading from the A6 down to the reserve. It was a large population of the liverwort **Sphaerocarpos michelii** (at SK58551521, Figs. 3 & 4), a species of disturbed habitats with bare soil such as tracks, cereal fields or gardens. From Germany it is described as an archaeophyte, introduced by people with agriculture from mediterranean-atlantic Europe and not known from natural habitats (Philippi, 2000). There are two similar species in Britain which can be separated by the structure of the spores and both are rare. In VC55 it was only recorded twice in the nineteenth and twice in the twentieth century.

In October 2018, Tom Blockeel organised a workshop of the difficult group *Didymodon* which took place at Leicester University Botanic Garden. Tom invited a world expert of the group, Jan Kučera from University of South Bohemia, which attracted some of the best bryologists of the country. At this occasion, I organised a field meeting to Cossington Meadows NR on 26 October, hoping it would reveal some unusual species on the exposed margins of ponds and lakes. Unfortunately, only common species were found as the habitats are

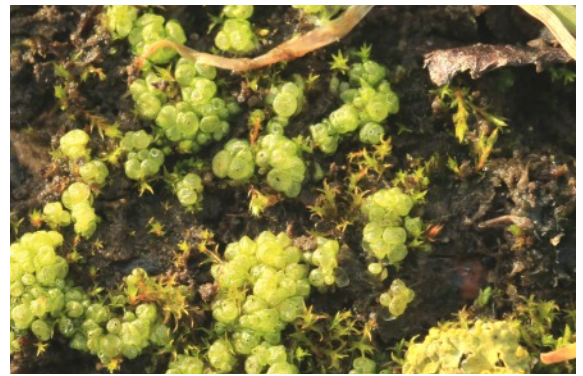


Fig. 3. *Sphaerocarpos michelii* growing with other small mosses under tall Annual Meadow-grass *Poa annua*. The balloon-like structures make the genus unmistakable. Photo: Steve Woodward.

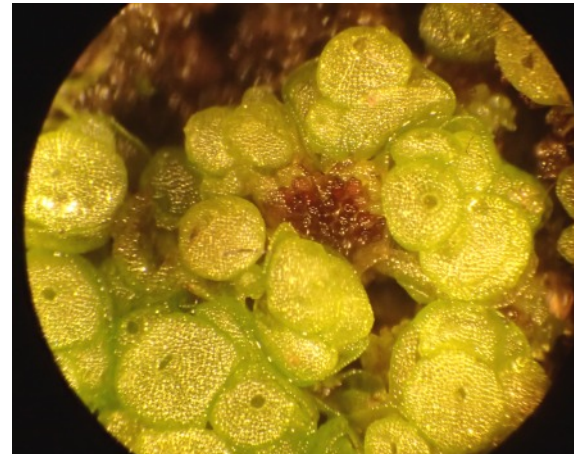


Fig. 4. *Sphaerocarpos michelii* under the microscope. The balloon-like structures surround the female sex organs in which the spores will develop. The male structures (on separate plants) are slender and brown, visible in the centre of the picture. Photo: Steve Woodward.

probably still too new for specialties to occur. In the old hedgerows though, some interesting records could be made with **Cololejeunea minutissima** probably being the most notable (at SK5914). On the wall of the church at Cossington Jan Kučera noticed **Grimmia trichophylla** (at SK60361367), predominantly an upland species growing exclusively on acidic rock. It was confirmed by the attending *Grimmia* enthusiasts Sean O'Leary and Peter Martin. This is the first record of the species since 1988.

Acknowledgements

I would like to thank Rachel Carter and Tom Blockeel for their generous help with recording in VC55 as well as identifying and verifying specimens.

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Moth recording in NW Leicestershire

Margaret McLoughlin

Charnwood Lodge NNR

I have previously reported on the work of the Charnwood Lodge Moth group which has continued in 2018 (McLoughlin, 2018). Our 'priority species' remain those noteworthy species previously recorded on the reserve (SK 4615) but, despite our activities, are absent from our recent records. These include *Macrothylacia rubi* Fox Moth, *Hypena crassalis* Beautiful Snout, *Charissa obscurata* The Annulet, *Xestia agathina* Heath Rustic and *Lithomoia solidaginis* Golden-rod Brindle. At best they remain elusive and it is possible that some will never be seen again. However, we did have success in re-locating *Papestra biren* **Glaucous Shears** with eight individuals in May on the Rough (see McLoughlin, 2018, Fig. 5 for locations) and towards Timberwood Hill thus confirming its presence on the site in numbers not seen since 1964.

We also tried a couple of new sites. Previously the bottom of Heather Field (adjacent to the driveway) in mid-May had borne fruit with *Furcula bicuspis* **Alder Kitten**, a rare moth and very much restricted to this area of the county; so in August we tried the top of the same field. It did produce a couple of different records the most notable of which was *Agapeta zoegana* (flight period May to August) previously only found on The Rough in August 2006 (main foodplant *Centaurea nigra* Common Knapweed). Another site was in and adjacent to Charley Woods. This is a remote location with few records and many species are commonly found on the nearby parts of the reserve but were missing from the record. We continue to be hopeful that further efforts may prove fruitful if we can overcome the physical difficulties in reaching and setting-up on this part of the reserve.

The year produced some noteworthy records. *Eriocrania sangii*, the larvae of which form blotch mines on Birch leaves, was found in April and was the fifth VC55 record – the species is regarded as common but more especially in northern England. The third VC55 record of *Hysterophora maculosana*, a day-flying moth of woodlands where its larvae utilise Bluebell seed capsules, was noted on Collier Hill. A new record for the reserve was *Coenobia rufa* **Small Rufous** with four found in late July near old buildings.

Other noteworthy records

Epinotia immundana: Gisborne's Gorse, May. Three male/female (gen. det.). Third site record.

Parornix devoniella: May, gen. det.

Argyresthia semifusca: July, two locations.

Isotrias rectifasciana: The Rough, June.

Lozotaeniodes formosana: The Rough, June.

Pammene aurita: edge of The Rough close to Timberwood Hill, first recorded in July. Sycamore feeder.

Hypsopygia glaucinalis: near High Tor Farm, July.

Cyclophora linearia **Clay Triple-lines**: The Rough, July.

Eupithecia virgaureata **Golden-rod Pug**: female, gen. det. Not seen since 2003.

The cumulative total for the reserve at the end of 2018 is 455 moth species.



Fig. 1. Dark Spectacle.

Whitwick Garden

As our work at Charnwood Lodge has been driven by the above objectives and identifying any new or previously unrecorded species, this set me thinking on how this might relate to my own garden moth trapping. I live immediately adjacent to part of Holly Hayes Wood in Whitwick (SK4415). This wood has occasionally been trapped in the past (1989, 1995 & 1998) and, having been provided with details of the species recorded then (data from County Recorder, Adrian Russell), I could now adopt a similar approach of checking for species recorded in the past and identifying any new species in my garden. Certainly looking at these records, and checking with the County Recorder, I have two targets: *Acleris bergmanniana* (a small, pretty yellow moth uncommon in VC55) and *Graphiphora augur* **Double Dart** (uncommon and declining rapidly, the larvae feeding nocturnally on a number of trees and shrubs, including Hawthorn and Blackthorn). If access into Holly Hayes Wood is problematic I may have to continue to nudge my trap closer to the fence!



Fig. 2. Dotted Chestnut. Photo: Adrian Russell.

My garden records for 2018 fell just short of 300 species, annoyingly just as last year, but increased the number of species by twelve. These included *Abrostola trigemina* **Dark Spectacle** (Fig. 1) which had only four records from the east of the county in 2017. Other unlikely garden species were *Aethalura punctulata* **Grey Birch**, *Eilema sorocula* **Orange Footman** and the relatively new to VC55 *Conistra rubiginea* **Dotted Chestnut** first recorded in 2012 (Fig. 2).

All genitalia determinations were made by Graham Finch. Details of all records mentioned have been accepted by the County Recorder.

Reference

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Hot spots of Rutland & NE Leics

BSBI meeting July 2018

Steve Woodward
Joint County Recorder: Vascular Plants

Regular readers of this journal will be aware that *Atlas 2020* is an ambitious project to map the British and Irish flora, by the end of 2019. Previous articles have shown how local botanists have been working hard to raise the Leicestershire and Rutland coverage up to the level desired by the sponsoring organisation, the Botanical Society of Britain and Ireland (BSBI). We recognised that Rutland and north-east Leicestershire were lagging behind, which was the main stimulus for organising a national four-day meeting, advertised in the BSBI's diary of events. This article describes the logistics of the meeting and mentions a few highlights (and disappointments). More detailed itineraries and findings are published elsewhere (Hall, 2019). The detailed records have been accepted into the BSBI's database and sent to LRERC.

Our meeting was scheduled between Mon 2 to Thurs 5 July 2018, based at the Volunteer Training Centre (VTC), Rutland Water. The organiser was County Recorder Geoffrey Hall, assisted by Joint Recorders Russell Parry and Steve Woodward. The VTC provided a meeting place to plan each day, working space to look at specimens and facilities for making hot drinks. A charge was made for this by the Leicestershire & Rutland Wildlife Trust, owners of the VTC. Participants were asked to contribute £10 per day, but the money raised did not cover expenses and the organiser was out of pocket.

BSBI national meetings often attract members from far and wide, usually a mix of improvers and experts. Fourteen members and friends took part over the four days - rather fewer than we hoped for. With two exceptions, participants commuted and no-one came from afar. Despite the attractions of Rutland Water and the villages surrounding it, perhaps VC55 lacks the pulling power of rare species and dramatic scenery! Rutland naturalists were invited, via their Natural History Society, alas none came. The turn-out on each day amounted to two car-fulls, so we split into two teams. Each team concentrated on one or two tetrads (2 x 2 km grid squares) per day. The weather forecast was a continuation of the hot and dry weather that had already shrivelled much of Rutland's vegetation (Figs 1, 4). We had permission to explore the reservoir's margin, elsewhere we were confined to public places.

We were in the field by mid-morning and back at base by late afternoon. After a cuppa, with cakes kindly supplied by Jenny Parry, we set about identifying specimens for an hour or so

Fig. 1 (above). Russell and Pete on top of the dam at Rutland Water, with parched grassland below. Photo: Steve Woodward.

before updating the scoreboard. No evening sessions were scheduled, other than an enjoyable *al fresco* meal at the Horse and Jockey, Manton.

The eleven tetrads where we concentrated our efforts were: SK91E (Thistleton North), SK91B (Cottesmore), SK90V (Tixover East), SP99J (Redhill Lodge), SK72Y (Goadby Marwood), SK72S (Wycomb), SK82I (Bescaby Oaks), SK82N (Saltby), SK82H (Stonesby), SK90C (Lyndon) and SK90N (Rutland Water dam). A brief foray was made into SK82G (Stonesby Lodge). The two participants who were staying at the Barnsdale Hall Hotel were able to explore tetrad SK90E (Barnsdale Wood) before breakfast over three days (Fig. 2).

Some of the unusual finds are mentioned below.

We were fortunate to have Rob Cooke join us, as Rob is BSBI Referee for *Polypodium*. These ferns need careful examination of the spore-bearing structures to sort out the species (Fig. 3).

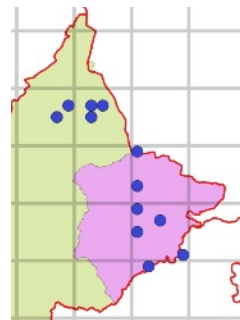


Fig. 2. Tetrads in Rutland & NE Leics. covered during the four day meeting.



Fig. 3. *Polypodium* Polypody ferns are not uncommon on local walls. Checking by Rob Cooke confirmed two species, *P. interjectum* and *P. vulgare*. Photo: Steve Woodward.

At Cottesmore, ***Cymbalaria pallida* Indian Toadflax** (second VC55 record) was discovered naturalised at the side of the pavement, several metres from the nearest garden, also a lone frond of ***Asparagus officinalis* Garden Asparagus** alongside a grassy track.

Near Turtle Bridge, at the River Welland near Barrowden three small shoots of ***Lithospermum officinale* Common**



Fig. 4. Some nice grass verges near Empingham were not totally shrivelled - *Centaurea scabiosa* Greater Knapweed was still flowering. Photo: Steve Woodward.



Fig. 5. *Lithospermum officinale* Common Gromwell. Formerly "occasional" in Rutland, now hard to find. Photo: Steve Woodward.



Fig. 6. Tempting as it was to record all these river plants at Duddington, many were actually just outside Rutland, as the VC boundary with Northamptonshire runs down the middle of the Welland. Photo: Steve Woodward.



Fig. 7. Pete checks the large boulders at the reservoir's edge, where ferns were surprisingly frequent. Photo: Steve Woodward.

Gromwell (Fig. 5) were found by Jean Emeny. The stone-hard seeds helped to secure the identification. Peering over the bridge, no turtles were evident but we found but a large clump of *Cyperus longus*, an alien sedge known as Galingale.

On a circular route around Goadby Marwood village, one team encountered *Datura stramonium* **Thorn-apple** in flower. A small pond harboured the invasive alien *Myriophyllum aquaticum* **Parrot's-feather**.

Scaffold and Stonesby both produced the hybrid between two common docks, i.e. *Rumex x pratensis* = *R. crispus* Curled Dock x *R. obtusifolius* Broad-leaved Dock. No doubt this is commoner than records suggest, but recognised by few people.

In the Bescaby tetrad SK82I, notable plants included *Anisantha diandra* **Great Brome**, *Carex pallescens* **Pale Sedge**, *Mentha arvensis* **Corn Mint** and *Phalaris canariensis* **Canary-grass**.

The reservoir dam at Empingham has large boulders facing the water and a grassy slope on the other side (Fig. 1). Being well clear of the water, the boulders seemed too dry to support much plant life, but we found *Asplenium scolopendrium* **Hart's-tongue**, *Dryopteris filix-mas* **Male Fern** and much *Solanum dulcamara* **Woody Nightshade** (Fig 7).

While passing through the village of Teigh (pronounced "Tee", we learned), we stopped to admire a part of the



Fig. 9. Monika Walton, Geoffrey Hall (with grapnel) and Jean Emeny. Photo: Louise Marsh.



Fig. 8. The scoreboard at the end of the last day brings smiles to the faces of Russell Parry, Steve Woodward, Geoffrey Hall and Pete Stroh (BSBI England Officer). Possibly the rarest sighting of the meeting was Steve's knees. Photo: Louise Marsh.

green that is managed as a hay meadow. We noticed *Malva moschata* **Musk Mallow** and *Ononis repens* **Common Restharrow** among many others. A number of locals approached us to talk about the meadow and its management. Not all of the plants are spontaneous - some have evidently been introduced or at least "boosted".

The meeting produced a total of 2,093 records (Fig. 8). Tetrad recording means listing everything in a tetrad, not just the notable plants, so this total is dominated by common species. They are, nonetheless, all valuable records for building up an unbiased picture of our local vegetation. All who took part enjoyed the experience.

I wish to thank Geoffrey Hall, Russell Parry and Louise Marsh for their help with this article.

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Colour-ringed Gulls at Shawell

Carl Baggott
County Recorder: Birds



Fig. 1. An example of a colour-ringed Lesser Black-backed Gull, photographed at Quarteria, near Faro, Portugal on 11 October 2018.

Back in January 2012, I began visiting the area around the landfill site near Shawell (SP5480). This location attracts many thousands of gulls throughout the year and the plan was to improve my identification skills. As well as identifying the gulls, I also began to notice that some had coded plastic colour-rings fitted to their legs. At the time of writing, I have made over 3800 separate readings of nine species of gull. The colour-rings originate from numerous ringing schemes from all over Europe and some from as far away as Russia.

The Lesser Black-backed Gull *Larus fuscus* is known as a long-distance migrant and so colour-rings are employed as an aid to learning more about these journeys (Fig. 1). Large numbers arrive at Shawell during peak migration times and amongst the colour-ringed birds are many that appear annually and often on the same date each year. The oldest Lesser Black-backed Gull recorded at Shawell was ringed in Suffolk in 1986 and was almost 30 years old when last recorded in 2016. Many migrate south to Iberia and Morocco and several have subsequently been relocated as far south as the Gambia in West Africa. A Norwegian ringed bird that was at Shawell in September 2018 was relocated near to the southern border of the Gambia a couple of months later.

The nominate subspecies of Lesser Black-backed Gull *Larus fuscus fuscus*, known as 'Baltic Gull', is a rare visitor to Britain. The regular migration route taken by this subspecies is south-easterly, usually through Israel and into East Africa. However, colour-ringing schemes have shown that a few head south-west following the same route as the subspecies *graellsii* and *intermedius*. I have recorded two colour-ringed 'Baltic Gulls' so far at Shawell and both came from a breeding colony in north-west Norway. Getting recognition for these birds has proven to be difficult due to misunderstandings over the situation in Norway. I have now travelled to Norway on two occasions to study these birds and, with help from Morten

Helberg and Mars Muusse, I wrote a paper for the journal *British Birds* (Baggott, *et al.* 2018). The paper clarified the situation in Norway but an official decision is still awaited. There is some good news, however, as a bird I identified at Shawell as an unringed second calendar-year 'Baltic Gull' has been accepted by the British Birds Rarities Committee (BBRC). Second calendar-year birds are identifiable in the field based on proven identification criteria. Other age groups are very difficult to separate from small dark examples of the subspecies *intermedius* and BBRC states that for acceptance they should be colour-ringed as chicks and from a colony of known provenance.

The Herring Gull *Larus argentatus* is another interesting visitor. Most of the colour-ringed birds have not travelled too far, but occasionally a real wanderer appears. Two colour-ringed adults have been seen that were ringed at the Kandalakshskiy Nature Reserve, which is part of the Russian Kola Peninsula and approximately 1500 miles away from Shawell. There are also annual sightings of birds that were ringed in the very north of Norway. The Great Black-backed Gull *Larus marinus* visits in impressive numbers during winter and many are Norwegian breeders from as far away as Vardø in the north of the country. The westward spread of Caspian Gull *Larus cachinnans* has been noticed at Shawell, with colour-ring readings of birds from east Germany and Poland being made regularly. A Caspian Gull ringed in Belarus has also been recorded. Yellow-

legged Gulls *Larus michahellis* are regularly seen; however, only two sightings have been made of colour-ringed birds and both were juveniles that were ringed in Switzerland. An adult Glaucous Gull *Larus hyperboreus* that was ringed at Pitsea Landfill site, Essex, in March 2015, was at Shawell during February and March 2017. This is an Arctic breeding species, but we still await a sighting from its breeding area.

The small gulls are represented by Black-headed Gull *Chroicocephalus ridibundus*, Common Gull *Larus canus* and Mediterranean Gull *Ichthyaetus melanocephalus*. The colour-rings fitted to these smaller gulls are harder to read, but still many have been read. The most impressive sightings are of a Black-headed Gull that was ringed in Croatia and seen twice at Shawell and a Mediterranean Gull that was ringed as a chick in Hungary.

Colour-ringed gulls can be found in many locations, so please keep your eyes open. Details of the ringing schemes can be found at www.cr-birding.org/colourprojects. Alternatively, contact myself and I will help you find the correct scheme.

Details of the records on which this article is based have been entered onto the LROS and BTO databases.

Reference

Baggott, C., Helberg, M. & Muusse, M. 2018. Breeding 'Baltic Gulls' from the Horsvær archipelago in Norway and the occurrence of such birds in Britain. *British Birds*, **111**: 499-511. <https://britishbirds.co.uk/article/breeding-baltic-gulls-from-the-horsvaer-archipelago-norway-and-the-occurrence-of-such-birds-in-britain/>

Market Bosworth Country Park butterfly surveys

Janet Sykes

Market Bosworth & District
Natural History Society

Background

In 1998 the Market Bosworth & District Natural History Society embarked upon a millennium project to create a wildflower meadow on Market Bosworth Country Park. With support from Leicestershire County Council Country Parks Department, the park Rangers and funds from Leicestershire and Rutland County Council's Rural Action Grant scheme, work commenced and over the next three years the meadow was created. In the following years survey work was carried out on the meadow and on the tenth anniversary the Society's efforts were documented in a report (Underwood, 2011). During the surveys, butterflies were observed and over the ten years some 23 species were recorded.

Butterfly survey method

So, what next? One option discussed was to follow-up on the butterfly observations, taking a more structured, formal approach. This proposal was accepted and the project expanded to cover a greater area of Market Bosworth Country Park, while still including the wildflower meadow.

The survey method adopted was based upon the Berkshire, Buckinghamshire & Oxfordshire Wildlife Trust's Butterfly Monitoring Transect Guidance Notes. With the help of a friend, experienced in conducting such surveys, a route was prepared. The route devised comprises seven sections, of between 120 m and 310 m in length (Fig.1). Where possible each section was chosen to cover a particular habitat type. The route and map, along with a record sheet and set of instructions, were combined into a survey booklet, and we were ready to go!

The survey process is simple: observers walk the route at a steady pace and for each species encountered; no more than 5 m in front and 2.5 m either side; a running tally is kept for each section of the route. At the conclusion of each survey the record sheet is completed. When all surveys for the year are finished the results are collated and entered into MapMate. The results are also sent to the Park Ranger and to the County Recorder.

Results

So how did we get on? We aimed to conduct four surveys each year, one held each month

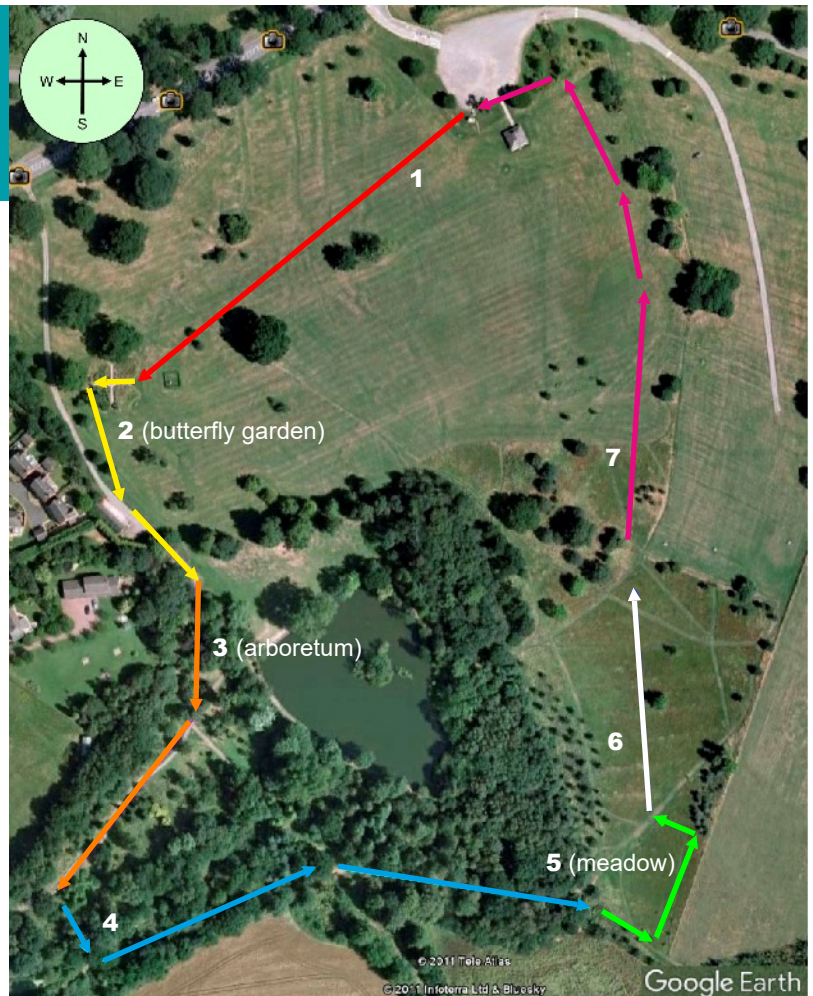


Fig. 1. Route of transect survey with sections colour-coded. Location: SK4102.

between May and August. However, the survey events are very weather dependent and some years we have not managed to do four surveys but have always managed at least one. The survey events are publicized to the members and everyone is welcome to take part. As a result, the numbers attending is variable and this quickly caused one change to be made to the recording process. The '5 m in front and 2.5 m either side' requirement was abandoned and instead we adopted a more gentle afternoon stroll approach recording any butterflies seen in each section. The nominated recorder endeavours to avoid over-registering observations. In total during the eight years we have conducted 27 surveys, five with zero sightings (Table 1).

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Total |
|-----------------------|------|------|------|------|------|------|------|------|-------|
| No of surveys in year | 3 | 3 | 4 | 4 | 1 | 4 | 4 | 4 | 27 |
| Zero result surveys | | 1 | 1 | 1 | 1 | | 1 | | 5 |
| Total No. of species | 15 | 7 | 15 | 12 | 0 | 19 | 16 | 17 | 21 |

Table 1. Number of surveys undertaken and species found.

For the most years, four surveys have been completed and for those years a good number of species have been observed. The notable exceptions being 2012 and 2015, where the low numbers were primarily due to poor weather conditions.

Over the eight years of the transect survey a total of twenty-one species of butterfly have been recorded. The species seen are listed in Table 2, together with two further species only seen between 2000 and 2010. No species were added after 2010.

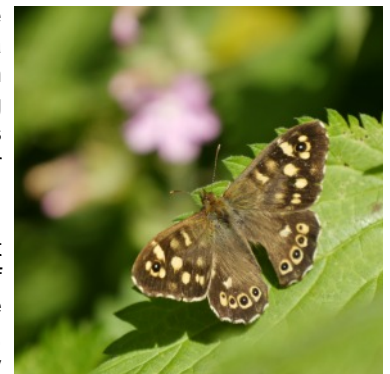


Fig. 2. Speckled Wood.
Photo: Peter Sykes

| Species | No of years when observed |
|--|---------------------------|
| Essex Skipper <i>Thymelicus lineola</i> | 4 |
| Small Skipper <i>Thymelicus sylvestris</i> | 8 |
| Large Skipper <i>Ochlodes faunus</i> | 6 |
| Orange-tip <i>Anthocharis cardamines</i> | 5 |
| Large White <i>Pieris brassicae</i> | 7 |
| Small White <i>Pieris rapae</i> | 6 |
| Green-veined White <i>Pieris napi</i> | 8 |
| Brimstone <i>Gonepteryx rhamni</i> | 4 |
| Speckled Wood <i>Pararge aegeria</i> | 7 |
| Small Heath <i>Coenonympha pamphilus</i> | 1 |
| Ringlet <i>Aphantopus hyperantus</i> | 7 |
| Meadow Brown <i>Maniola jurtina</i> | 8 |
| Gatekeeper <i>Pyronia tithonus</i> | 7 |
| Marbled White <i>Melanargia galathea</i> | 1 |
| Red Admiral <i>Vanessa atalanta</i> | 6 |
| Painted Lady <i>Vanessa cardui</i> | 3 |
| Peacock <i>Inachis io</i> | 6 |
| Small Tortoiseshell <i>Aglais urticae</i> | 6 |
| Comma <i>Polygonia c-album</i> | 5 |
| Small Copper <i>Lycaena phlaeas</i> | 4 |
| Holly Blue <i>Celastrina argiolus</i> | 3 |
| Brown Argus <i>Aricia agestis</i> | 4 |
| Common Blue <i>Polyommatus icarus</i> | 8 |

Table 2. Butterfly species observed 2000-2018 and number of years when observed.

Analysis

As mentioned above, the survey route sections cover different habitat types. An analysis of the number of species, and number of records seen, by survey section shows an interesting result (Table 3). The most successful section for butterflies is consistently section 5. As this is the wildflower meadow, this is a most pleasing result for the Society! It is also interesting to note that at 120 m this is also the shortest section of the route. The second most popular sections are 2 and 3. Section 2 includes an area that was previously the park butterfly garden and section 3 travels through the arboretum and includes an area of brambles.



Fig. 3. Small Tortoiseshell. Photo: Peter Sykes

Conclusions and way forward

During the eight years of the survey a total of 21 species have been observed, compared to 23 during the first ten years of the meadow. The two missing species had been observed only once, so there is no significance to be placed on the small reduction in number of species. Not surprisingly, years with better weather result in more surveys and a higher number of records and species. The wildflower meadow is the most successful survey section for the variety and numbers of butterflies. This supports the value of having a habitat with a good variety of flowers.

The Society plans to continue with the surveys. They are simple to run and are a good introduction to survey work. The site is local to Market Bosworth and the surveys are popular with the members. So, a better picture of the butterfly population of the park will continue to develop.

| Year | Most popular section by: | |
|------|--------------------------|----------------|
| | No. of Species | No. of Records |
| 2011 | 5 | 5 |
| 2012 | 5 | 5 |
| 2013 | 5 | 5 |
| 2014 | 2, 3, 7 | 5 |
| 2015 | | |
| 2016 | 5 | 3 |
| 2017 | 5 | 5 |
| 2018 | 2, 5 | 5 |

Table 3. Comparison of survey sections (see Fig. 1).

Acknowledgement

The Society is indebted to Mary Penton for her help in collating the results and entering them into MapMate, and to Mary & David Penton for hosting the post event tea & cake. That always helps!

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LRERC: ORCA update and Record Verification

Kirsty Gamble Leicestershire & Rutland Environmental Records Centre

LRERC, the archive for ecology information in VC55, collates, standardises and validates data from sources including the County Recorders' Network and local naturalists, LRERC staff, partners and contractors, members of the public, ecology consultants and NatureSpot. Data is then used by partners to further knowledge on species abundance and distribution and to aid conservation of species.

LRERC's new database, ORCA, is now fully up and running (Timms, 2018). We have added some large datasets in the last year, including updates to the botany records and the 2017 LROS data. We have also been working with LRWT to start to transfer their data onto ORCA. We are now providing our data searches to commercial customers through ORCA and eMapper.

Significant developments to the ORCA software have been introduced in the last year, one of which is the ability to allow our partners access to the database, restricted to a taxonomic group or geographical area as appropriate. This access can be used by County Recorders to view records from their taxonomic group (see Woodward & Ikin, 2013) and by partners such as LRWT to view all data.

ORCA is also able to record the verification status of records in a consistent way. A summary of our policy (Timms & Gamble, 2019) is below and a full copy is available on request.

1. Verification Policy

All incoming records received from a non-verified source are added to ORCA with verification status **unassessed**. Ideally, these will be assessed by County Recorders and assigned a different verification category (see 2).

Records from verified sources, such as national schemes and societies, County Recorders or NatureSpot are imported into ORCA with either **Known Correct**, **Presumed Correct** or **Accepted by NatureSpot**.

Verification on ORCA can be amended by LRERC whilst retaining the verification history of the record. Verification comments can also be added to records, which in some cases may help to explain the level assigned.

A number of records in ORCA were transferred from LRERC's previous database, Recorder 6, with the verification status of **Presumed Correct** or **Known Correct**. These may not all be the correct verification status in accordance with our policy and LRERC will be working to correct these, in partnership with County Recorders.

2. Verification status

Verification status in ORCA falls within four categories; **unassessed**, **verified**, **unconfirmed** and **incorrect**.

Verification status can be seen in reports from ORCA and is shown by the coloured boxes on the Species Records page. The levels are listed in Box 1 along with their colour codes. The ticks show that a category appears in eMapper data-searches.

3. Unassessed Records (blue)

Unassessed: Records which have not gone through any verification processes.

Unassessed (LRWT) : Records which have been added to ORCA from LRWT's database and do not fall into any of the verified categories of **Known Correct** or **Presumed Correct**.

4. Verified Records (green)

Records that have been subject to a verification process and are considered to be correct.

Known Correct: These are records which have been received from, or accepted by, a National Recorder/Scheme or by a County Recorder/Panel, or from a source considered to be equivalent to these.

Unassessed ✓
 Unassessed (LRWT) ✓
 Known Correct ✓
 Presumed Correct ✓
 Accepted by NatureSpot ✓
 Unconfirmed ✓
 Known Incorrect
 Probably Incorrect
 Not accepted by C/N Recorder

Box 1. The various levels allowed in Verification status, with their colour codes.

Presumed Correct: Records that have been accepted by CRN as considered to be correct, including records from a reliable source, a common species or an easily identifiable species. It includes a backlog of data moved from LRERC's Recorder 6, where the current level of refinement of verification was not possible. LRERC have also marked some old records as **Presumed Correct**, on the basis that they that can no longer be verified but are from a source that is considered reliable.

Records that are not from a recorder's specialist group will be marked as **Presumed Correct**.

Accepted by NatureSpot: This includes all records which have been subject to the NatureSpot verification process. Note that if the record has been verified by a County Recorder or national expert, the record is given **Known Correct** or **Presumed Correct**.

5. Unconfirmed Records (red, orange or pink)

Records that have been subject to verification and are plausible are considered to be **Unconfirmed**. These records may not have sufficient supporting evidence to be considered correct, or may be records where a trusted recorder has some doubt, and includes 'plausible' records from NatureSpot and iRecord.

6. Records unlikely to be correct

Records that have been through a verification process and are considered unlikely to be correct. LRERC have only been able to include these records within the database since data has been transferred to ORCA. Records not considered to be correct were previously removed from Recorder 6.

Known Incorrect : Records which are known to be incorrect.

Probably Incorrect: Records where there is sufficient doubt as to the identification of the species. These records may have been submitted with insufficient information to confirm identification, or may be a species which is very unlikely to occur at a particular location.

Not accepted by C/N Recorder: Records where the County or National Recorder has insufficient information to confirm identification. These may include 'confusion species', or species where records will only be accepted if supported by a specimen.

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Freshwater Jellyfish in Leicestershire



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Life Cycle

The Freshwater Jellyfish *Craspedacusta sowerbii* is not actually a jellyfish at all, true jellyfish being strictly marine. It is a species of Hydrozoan (related to the *Hydra* species familiar from British freshwaters), within the Phylum Cnidaria, a group of mainly marine species which tend to be little considered by naturalists in non-coastal counties such as Leicestershire!

The life cycle of *Craspedacusta*, (described by Fitter & Manuel, 1978) is complicated and it seems that the entire life cycle is rarely, if ever, completed in temperate climates. The most obvious form of the organism, the mature jellyfish (medusa), may be 20 cm across the bell, but in north-west Europe remain generally smaller (about 2 cm across). The medusa is the sexually reproducing stage, which produces polyps – the polyp stage (or hydroid) lives on plants or amongst bottom debris, budding off other polyps which separate and move away. During warmer weather hydroids may produce medusa buds which develop into tiny jellyfish 1-2 mm across; these break off and swim away. To complete the lifecycle, the medusae, the typical jellyfish forms, grow to maturity, reaching 2 cm, and propagate sexually, producing planula larvae which develop into the next hydroid generation.

Habitat and Blooms

Freshwater Jellyfish are found regularly in aquaria and hothouse ponds across Europe, but they occasionally also turn up “in the wild”, in lakes, reservoirs and canals. There appears to have been little work done on habitat requirements in Britain.

They rarely persist at a site for more than a few years, so the Measham population is surprisingly long-surviving. It is not known how Freshwater Jellyfish reach new sites, although the usual mechanisms for the dispersal of small organisms with limited mobility (carried on waterbirds’ feet, etc.) have been suggested. At colonised sites, the precise factors which cause occasional swarming are unclear. Swarming events, producing blooms of jellyfish medusae, appear to be triggered by long, warm spells of weather. In British waters, the main blooms appear in August and September, usually when water temperatures exceed 20C, and the species has generally vanished by October.

Distribution

The origins of the Freshwater Jellyfish are disputed, suggested as being Brazil (Amazon), China and “Unknown, not native to Europe”. The Yangtze River valley in China appears to be the best documented possibility (Link 1). World distribution is wide but patchy, with records from 20 European countries, nine in Asia, six in Africa, four in Central/South America, whilst USA and Canada share the bulk of the sightings.

The species was first discovered by William Sowerby, the director of the Royal Botanic Gardens in Regent’s Park, in the garden’s tropical water lily tank in 1880, hence the popular name “Sowerby’s” and the specific name *C. sowerbii* or *C. sowerbyi* (both forms are used in the literature).

Plant-hunters may have inadvertently brought the jellyfish to Britain during the Victorian era; alternatively, they may have arrived in England in materials imported for the Great

Background

In February 2018, the owner of a fishing lake on the edge of Measham contacted Leicestershire and Rutland Wildlife Trust to report the presence in his lake, during June the previous year, of a swarm of tiny jellyfish, which he thought might be unusual! Indeed, it was unusual: neither local naturalists nor conservation/biology staff from the Environment Agency were aware of the species being present in the area, although further investigations revealed an earlier record at Newbold. The species has only been seen in England in about 20 instances: there is much still to be learnt of its biology.

Identification

Unpredictable and ephemeral, with an entirely soft-bodied structure featuring no hard skeletal components, it is difficult to obtain and preserve specimens of the jellyfish. Identification could be confirmed by photographic evidence, comparing images (see Fig. 1) with illustrations in several field guides and websites. The genus *Craspedacusta* consists of three or four species but only *C. sowerbii* has been known to colonise freshwaters away from its place of origin (outside Europe), so in Britain it is not possible to confuse it with any closely related species: in fact, the Collins guide (Fitter & Manuel, 1978) states that “This interesting and distinctive creature can hardly be mistaken for any other freshwater organism”.

Fig. 1 (above). Freshwater Jellyfish medusa. Photo taken at Measham, June 2017, by Paul Simpson.

Exhibition of 1851. In 1928 the jellyfish were found in the unheated waters of the Exeter Ship Canal, later spreading to a number of sites (especially canals) throughout Britain.

Summer sightings have increased since the 1980s in canals, shallow freshwater lakes and flooded quarries (Howes, 2009). Distribution in Britain shows no apparent pattern – some records are from industrial sites, some from fisheries, some unexceptional rural lakes. As of 2018, there have been over 20 occurrences in England, from Cornwall to Yorkshire, four in Wales and one in Scotland. Lists of records in Britain are maintained on the Freshwater Jellyfish website (Link 2). There are a number of inaccuracies in the listings, including those relating to the two Leicestershire sites, for which the correct details are as follows:

Record details

First record: Stanigal Water, Newbold, SK400198, early September 2006, Michael Gray, det. Fiona Walker.

Prior to the Measham report, Freshwater Jellyfish had been observed at Newbold in 2006, although this appearance did not appear to make much impact, being little known in the area. Stanigal Water (also known locally as Stanny Pond, Fig. 2) is 13 km east of the Measham lake. It is a post-industrial site consisting of a small lake surrounded by mature woodland (alder, ash, oak, birch, etc.) notable for its large population of breeding Toads. Carp are also present. It is next to the Pipe Yard industrial area and is thus probably a long-abandoned clay pit. The site is accessible down a track running to the west from the Newbold to Worthington road. The lake has an area of about 6500 sq m and perimeter of 410 m.

A swarm of Freshwater Jellyfish was reported on the local BBC website (15 September 2006), having been observed by Michael Gray, a local wildlife enthusiast, who realised he had witnessed something unusual. He sent a photograph to Fiona Walker at LRERC, who confirmed that this was the “first sighting in Leicestershire”.

Second record: Pot Kiln Lake, Measham SK336127, June 2017 (most recent occurrence at site), Paul Simpson and others, det. Andrew Heaton.

Freshwater Jellyfish were reported to LRWT from this fishing lake (Fig. 3) on the northern edge of Measham, well stocked with a variety of fish. The most recent showing of the jellyfish here was in June 2017 but they have been present ever since the site was given over to fishing in around 1995. Freshwater Jellyfish appear approximately every other year but only when conditions are suitable. Their appearance may be controlled by temperature, shelter/exposure, day length, salinity or other factors. The Measham lake would be a good site to investigate the triggering factors, as there is a history of recording

occurrences, and willing helpers from amongst the fishery members and Wildlife Trust volunteers.

The lake, which is spring-fed, was excavated by RJB Mining in 1991- 93, specifically as a fishing lake, for Measham Fishing Club and for the Parish Council; it was not worked as a gravel pit although it has that appearance. The central lake (which has some smaller ponds around it) has a surface area of approximately 5100 sq m and a perimeter of 333 metres. It is open, lightly planted (a “Rotary Wood”) with small trees of varied species including alder, ash, and oak, and some aquatic vegetation introduced, such as water-lilies (which may have been the source of the jellyfish). It was stocked in the early 1990s and fishing started around 1995. It now harbours Common Carp (and Mirror Carp), Grass Carp, Roach, Rudd, and Bream.

The footpath around the site passes through varied habitat – some recently created and still developing, some patches of more mature woodland, and ponds holding frogspawn on a March visit. The site is accessible from New Street, Measham; a café is open to non-fishery members, though fishing is members only.

Considerations

Is there anything special about these two Leicestershire sites?

Both Leicestershire sites are man-made, consisting of large ponds or small lakes surrounded by woodland, but the Newbold site is rather more mature than the recently-planted Measham site. The Newbold site has other significant wildlife interest (a large population of toads), although it appears to be more impacted by shading from the adjacent woodland and by turbidity caused by the activities of the Carp. No conclusions seem possible on the basis of two sites; further studies being needed at other locations to identify features in common - or it may be that colonisation is random.

Do Freshwater Jellyfish pose a threat to other aquatic life?

According to the US Dept of Interior (Link 1), impacts are unclear. Freshwater Jellyfish may disrupt zooplankton communities by feeding preferentially on larger zooplankton and more vigorous species such as copepods (tiny crustaceans). Even in aquatic nature reserves, however, very rarely are plankton populations actively managed. Howes (2009) has studied feeding behaviour of the jellyfish medusae: they may feed on fish eggs, but they are not thought to be an important predator of fish. They do not pose a threat to humans, as the nematocysts (stinging cells) cannot penetrate the human skin.



Fig. 2. Stanigal Water, Newbold, June 2018. Photo: Andrew Heaton.



Fig. 3. Pot Kiln Lake, Measham, March 2018. Photo: Andrew Heaton.

Conclusions

The Freshwater Jellyfish *Craspedacusta sowerbii* is an enigmatic species, recorded rather rarely in Britain, and its appearance unpredictable. There are gaps in our knowledge of the species, and even its origins are debated. Monitoring and further investigations of blooms when they occur would be very helpful. A full and accurate listing of all British records would be very useful.

Freshwater Jellyfish may be one of those rather rare non-native species which cause no ecological problems, filling an unoccupied niche in aquatic habitats and accepted in the countryside with little concern. Indeed, their swarming behaviour constitutes a fascinating natural phenomenon which may prove an attraction to visitors to those sites where it occurs.

An Information Note on the Freshwater Jellyfish *Craspedacusta sowerbii* in Leicestershire and elsewhere, giving fuller details on the species, has been prepared by the authors, and is available from Ben Devine, Leicestershire and Rutland Wildlife Trust.

Market Bosworth Nats Bioblitz 2018

Janet Sykes

Market Bosworth & District
Natural History Society

In July 2018 the Market Bosworth & District Natural History Society held its fifth garden bioblitz. This year the event was kindly hosted by Shelley Howard in her Sutton Cheney garden. Although the event fell in the middle of the summer heatwave and drought, the sixteen volunteer recorders managed to identify 284 species in the 24 hour period. A surprisingly good total in view of the conditions.

The event started on the Friday evening with moth trapping (Fig. 1) and bat detecting. In addition, the use of both mammal traps, and a hedgehog tunnel, during the evening confirmed the presence of both Wood Mouse and Hedgehog, bringing the mammal total to seven.



Fig. 1. Waiting for the moths to turn up. Photo: Peter Sykes.

The next day focused on everything else that we had the skills to identify. The largest species totals were: Fungi: 10, Beetles: 12, Caddisflies: 9, Butterflies: 9, Moths: 101, Lichens: 40, Flowering plants: 65, Birds: 12.

The results have been collated into a report and circulated to the host and all taking part. In previous years the observations have also been submitted to LRERC and NatureSpot and the intention is to do the same with this year's results. A copy of the report can also be requested from Janet Sykes (janetvera@btinternet.com).

The Society would like to thank all the recorders that took part, without whose expert knowledge the event would not be possible.

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Link 1. US Dept of Interior – information on non-native species.

<https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=1068>

Link 2. Freshwater jellyfish website - country lists of Freshwater Jellyfish records. www.freshwaterjellyfish.org

New review of amphibians and reptiles

Andrew Heaton

County Recorder: Amphibians & Reptiles

A promise, at the 2018 Recorders' Conference, to publish a review of local amphibians and reptiles has been fulfilled with the production of a paper by Andrew Heaton. It covers the work undertaken by members of LARN (Leicestershire and Rutland Amphibian and Reptile Network) over the last two decades. Running to some 36 pages and six main sections, the contents, summarised below, indicate the breadth of studies undertaken by the Network and identify a selection of issues set out in the paper.

Amphibians and Reptiles in Leicestershire and Rutland: A Review. By Andrew M. Heaton, County Recorder for Amphibians and Reptiles, 2018.

The full document is available from the author or to download from ARG-UK website:

www.arguk.org/get-involved/news/amphibians-and-reptiles-in-leicestershire-and-rutland-a-review-2018

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- 5. Species Accounts: Checklist of all Species in the Two Counties** Amphibians; Reptiles; Distribution Maps for each species
- 6. The Future** Likely Future Pressures on the Herpetofauna; Recording Future Changes; Conclusions

Recent Records of Interesting Vascular Plants

Geoffrey Hall
County Recorder: Vascular Plants

The cold snap in the spring, followed by a long, hot, dry summer produced difficult growing conditions for many plants and made recording hard work in the constant heat. Oh well, at least you knew what the weather was going to be like when you stepped outside. By mid-July, many summer-flowering annuals had shrivelled up and died without having flowered or produced seeds and a lot of streams and ponds had dried up. What effect this will have on next year's populations of these species remains to be seen. It was not all bad news though; many trees survived, aquatic and marginal plants in rivers and canals did well, and plants on the draw-down regions of lakes and reservoirs prospered. It was fascinating to see which plants did survive the drought: I remember crossing a field of desiccated spring-wheat near Newton Harcourt with only the shrivelled remains of *Lepidium coronopus* Swine-cress for company, when I found some plants of *Kickxia elatine* Sharp-leaved Fluellen (Fig. 5) and *Kickxia spuria* Round-leaved Fluellen (Fig. 4), which are both scarce in VC55, growing and flowering well.

The first and the last?

A single plant of *Himantoglossum hircinum* Lizard Orchid (cover photo) was found on a grass verge near Tonge on 12 June by Dave Gray (see his report on p. 4). This is the first county record - one which many botanists will welcome with open arms. The orchid has a devoted group of followers who report on social media that it has produced a vigorous, new rosette and so it may flower again next year. The south-facing verge slopes downwards to a fence and is fairly open, so there is hope that it will spread in the coming years.

After a whole day searching the recorded sites for *Astragalus danicus* Purple Milk-vetch, much of it spent on hands and knees, a single plant (Fig. 1) was found at a new site on Luffenham Heath Golf Course (SK961030, access permission required) on 24 May by Geoffrey Hall, Steve Woodward, Russell Parry and Helen Ikin. It has been recorded in eight tetrads, but has disappeared from seven of them. The golf course is the last known site, although it had not been seen since 1995. The golf course managers seemed keen to look after it, so there is hope that it may increase in its current location.



Fig. 1. *Astragalus danicus* Purple Milk-vetch at Luffenham Heath.



Fig. 2. *Torilis nodosa* Knotted Hedge-parsley in suburbia at South Wigston.

Notable native species, archaeophytes and hybrids

Torilis nodosa Knotted Hedge-parsley (Fig. 2) was found on 6 July by Geoffrey Hall along Guthlaxton Way (SP614982) and Newton Road, South Wigston (SP614983). There were a hundred or more plants growing as compressed rosettes in the gaps between the paving stones and the kerb, yet still flowering. Some more plants were growing in the verge next to the road and around planted tree bases, where they had become much taller and bushier. Nearly all the records of this species are from the east of the vice-county in Rutland, so it is surprising to find it in a suburban housing estate. However, it is thought to be spreading northwards so it may have arrived recently although, given its location, it could have been undetected for a long time.

Crepis biennis Rough Hawk's-beard has been recorded in four locations this year, having not been recorded for a decade. David Broughton, the County Recorder for both Huntingdonshire (VC31) and mid-west Yorkshire (VC64) recorded it at Hemington Hill (SK454269) and Lockington Village (SK465279) on 22 May. The Leicestershire Botanical Recording Group (LBRG) visited the British Gypsum Plant at Barrow upon Soar on 16 June and found it on a grassy bank (SK5916). It was also found in a field near the British Gypsum Works at Fishpool Brook, Barrow upon Soar (SK583182) on 5 September by Rupert Simms, where it was frequent. It has never been common in VC55, with only 27 records in 18 tetrads (eight records in seven tetrads since 2000).

The LBRG also found *Linum bienne* Pale Flax (Fig. 3) at the Gypsum Plant (SK5916) on 16 June, the first record since 1969. *L. bienne* is a biennial or short-lived perennial that grows in dry, sunny calcareous or neutral grasslands and grassland-scrub mosaics, chiefly near the sea, with a few inland records. Its habitats include cliff-slopes and coombes, path and field margins, roadsides, railway banks and old quarries. It favours warm, sheltered, south-facing slopes and relatively infertile, drought-prone soils, typical of the grassy banks in the Gypsum Works, but it is not thought to be native in VC55.

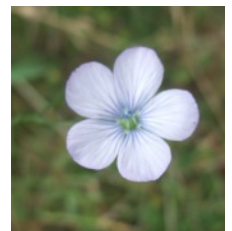


Fig. 3. *Linum bienne* Pale Flax at British Gypsum, Barrow upon Soar.

In addition to the Newton Harcourt site mentioned earlier, Fluellens were found as arable weeds at Clipsham by Steve Woodward and Helen Ikin on 31 August. *Kicxia spuria* **Round-leaved Fluellen** (Fig. 4) occurred in some abundance on the public footpath at SK964171, whereas *K. elatine* **Sharp-leaved Fluellen** (Fig. 5) was restricted to a few plants nearby at SK967167. These two are not natives but ancient introductions (archaeophytes). It is interesting that these two scarce species occurred (more-or-less) together at both Newton Harcourt and Clipsham.

Two scarce pondweeds have been found this year which I hope will encourage recorders to try looking for aquatic plants more often in the future, as the counties are short of records for aquatic species. *Potamogeton friesii* **Flat-stalked Pondweed** was recorded at Charnwood Water (SK545182), Loughborough on 23 August by Steve Woodward and Helen Ikin. There are only six records in five tetrads since 2000 of this species which is characteristic of mesotrophic and eutrophic water. It is most common in the fens of East Anglia and, although never common in VC55, it has declined a lot in recent years, principally from canals. *Potamogeton compressus* **Grass-wrack Pondweed** was found in quantity at Frisby Lakes (SK6918) on 30 August by Geoffrey Hall, Ben Devine and Claire Install. There have been 25 records since 2000 in nine tetrads, and its stronghold now is along sections of the River Wreake and in southern sections of the River Soar. It is most often found in undisturbed, fairly shallow lakes off the main rivers and can be quite abundant. Losses of both species in recent years have been greatest in canals because, no doubt, of greater disturbance from increased leisure boat traffic.

The hybrid sedge *Carex x pseudoaxillaris* (*C. remota* x *C. otrubae*) was found twice this year, at Tugby Wood (SK766020) by Andy Lear on 22 June and at the former Leicester Marina in Leicester City (SK590076) by Ben Devine on 26 July. Although it often occurs where both parents grow together, there are only eight records from four sites in VC55 since 2000. Given that its parents are fairly common, it is most likely an overlooked hybrid.

The LBRG recorded several plants of the hybrid orchid *Dactylorhiza x grandis* (*D. fuchsii* x *D. praetermissa*) (Fig. 6) on the grass bank at the British Gypsum Works, Barrow upon Soar (SK5916) on 16 June where it was growing with large stands of both parents.

Herb-Paris searches in 2017 and 2018

As part of the work for Atlas 2020, Russell, Steve and I have been searching for rare plants in the counties. One of these is *P. quadrifolia* **Herb-Paris** (Fig. 7), an Ancient Woodland Indicator plant in VC55 (Squires & Jeeves, 1994, p. 90), which has been recorded from some of the LRWT Reserves (Cloud Wood, Great Merrible Wood, Prior's Coppice, Launde Big Wood and Launde Park Wood), and also recently from Grace Dieu Wood, Pasture Wood at Breedon on the Hill, Church Wood at Loddington and Pickworth Great Wood (Fig. 8). In 2017, Russell and I searched Glooston Wood, but did not re-find it. Mike Jeeves had found it there in 2003, but we had little time on site and a return visit is needed. In 2018, we searched for it in some of its previously recorded sites in hectad SK70, many of which are on private land. I am indebted to Adrian Russell for providing contacts to obtain access to these sites. Re-finds were made in Skeffington Wood (SK7603, SK7503) on 1 May, Loddington Reddish (SK7702) on 9 May, and Tugby Wood (SK7601, SK7602) on 26 June, but we did not find it in Tilton Wood. There are three more sites we need to search in SK70; Crow Wood, Priest Hill Wood



Fig. 4. *Kicxia spuria* Round-leaved Fluellen threatened to trip up users of the public footpath at Clipsham. Photo: Steve Woodward.



Fig. 5. *Kicxia elatine* Sharp-leaved Fluellen in a bean field at Clipsham. Photo: Steve Woodward.



Fig. 6. *Dactylorhiza x grandis* a hybrid orchid at British Gypsum. Photo: Steve Woodward.



Fig. 7. *Paris quadrifolia* Herb-Paris. Photo: Steve Woodward.

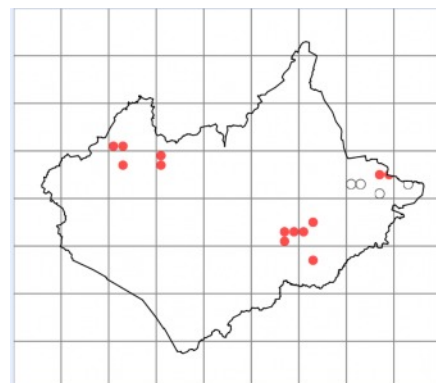


Fig. 8. *Paris quadrifolia* Herb-Paris distribution. Solid dots: 2000 or later, open dots: pre-2000. Source: BSBI and its recorders, Feb 2019.



Fig. 9. *Ceratochloa carinata*
California Brome from Sharnford.
Photo: Graham Calow.



Fig. 10. *Althaea officinalis* Marsh
Mallow at Ellis Meadows NR,
Leicester.

and Brown's Wood. New sites have been found by John and Sally Mousley who recorded it in two woods near Loughborough: in Burleigh Wood (SK5017) on 16 April 2017, and in Holywell Wood (SK5018) on 10 May 2018. These latter two records are particularly good finds, as there are old records in the area but with insufficient detail to identify the sites. The current records are mainly within the Charnwood and Leighfield Forests, and show the importance of these areas for this lovely and unusual plant.

Unusual aliens

Ceratochloa carinata (syn. *Bromus carinatus*) **California Brome** (Fig. 9) was found by Graham Calow on 9 June near Sharnford (SP49Q) confirmed by Tom Cope (BSBI Referee for grasses). This is only the second county record, the first being by Andy Lear on 7 August, 2003.

Bidens frondosa

Beggarticks was found twice this year, the first records since 2007: first, in the Ashby Canal near Shenton (SK30V) by Geoffrey Hall, Steve Woodward and Helen Ikin on 6 September and second, at Basin Bridge Lane, Wykin (SP395956) by Graham Calow on 13 September. Species of *Bidens* flower late in the recording season and the achenes (fruits) need to be examined to identify them accurately (Fig. 11). It seems to be spreading out from its heartland in Birmingham through Warwickshire in recent years, so it was not unexpected at these sites.



Fig. 11. *Bidens* fruits: the shape and the marginal hairs differ between *B. tripartita* Trifid Bur-marigold (left) and *B. frondosa* Beggarticks (right).
Photo: Steve Woodward.

Typha shuttleworthii, an unusual Reedmace (Fig. 12), was found by Sue Timms in the Ashby Canal at Moira (SK310156) on 8 December, identified by Richard Lansdown (BSBI Referee for water plants). It was hiding in plain sight among

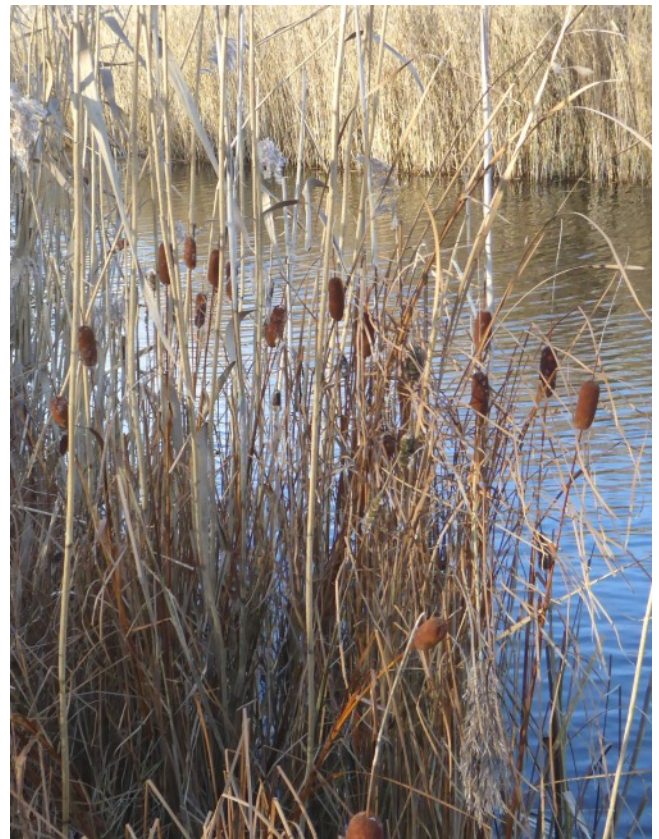


Fig. 12. *Typha shuttleworthii*, an alien Reedmace. Past its best in December, but still identifiable with specialist help.
Photo: Sue Timms.

some *Typha latifolia* Common Reedmace on the margin of the canal, and was most probably introduced there some time ago, given its spread. This is the first record of its being naturalised in Britain (i.e. outside a garden pond). Originally classified as a subspecies of *T. latifolia*, it was raised to species level in 2009 and is present in lowland areas in Central and Southern Europe in stream and river valleys. Interestingly, it is the only species of *Typha* covered by the Bern Convention and is protected by law within its native range, as it is rare and disappearing. It is included in national red lists or in red data books in many European countries (Kozłowska *et al.*, 2011).

More seaside plants

The recently-created Ellis Meadows Reserve in Leicester City, within the grounds of the former John Ellis School in Belgrave, has a lake at SK591069 that has been planted with native marsh plants, but some plants commonly found in coastal regions in the south have been introduced as well. A few plants of ***Althaea officinalis* Marsh Mallow** (Fig. 10) were recorded by Geoffrey Hall and James Lindesay on 3 August on the edge of the lake (SK591069) which is fringed by a dense stand of ***Bolboschoenus maritimus* Sea Club-rush**.

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Market Bosworth Hedgehog Survey

Nick Crowley

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Following a talk given by Simon Thompson of Warwickshire Wildlife Trust to Market Bosworth and District Natural History Society in 2017, entitled *Help for Hedgehogs*, the society was made aware of the possibility of having some Hedgehog tunnels on loan. A Hedgehog tunnel (Fig.1) comprises two sheets of paper, separated by food and two strips of ink. In order to get to the food, any creature has to cross the ink, leaving footprints on the paper as it exits the tunnel. Each



Fig. 1. Hedgehog tunnel, opened to reveal bait, ink pads and paper. Photo: Peter Sykes.

evening a new sheet of paper is installed and the ink refreshed. The following morning, the paper is removed. Recording is simply noting the presence of footprints on the paper (Fig. 2, Table 1). Surveying started in May 2018 and is ongoing. We borrowed five tunnels and one of the first to be set up was at our annual garden Bioblitz, which in 2018 was at Sutton Cheney (p. 25). In addition to a tunnel, a trail camera was used which caught a Hedgehog entering the tunnel at night (Fig. 3). Participants had a tunnel for five nights. Besides Hedgehogs, it was sometimes possible to identify other animals too (Fig. 2).

Since Summer 2018, surveys have taken place in seven villages. The main locations have been gardens in Newbold Verdon and Market Bosworth, but other villages in the first year of surveying have been Sutton Cheney, Barlestone, Dadlington and Weddington (Warwickshire). Sixteen gardens have been surveyed so far, with 56% showing evidence of Hedgehog footprints (Table 2). There was a marked difference, however, between Newbold Verdon (90%) and Market Bosworth (0%).

| Day | Date (2018) | Hedgehog tracks? | Other tracks? | Bait taken? |
|-----|-------------|------------------|---------------|-------------|
| 1 | 31 May | Y | N | Y |
| 2 | 01 Jun | Y | N | Y |
| 3 | 02 Jun | Y | N | Y |
| 4 | 03 Jun | Y | N | Y |
| 5 | 04 Jun | Y | N | Y |

Table 1. Example of results from Peters Avenue, Newbold Verdon.



Fig. 3. Hedgehogs approaching tunnel at Peter's Avenue, Newbold Verdon. Trail camera.

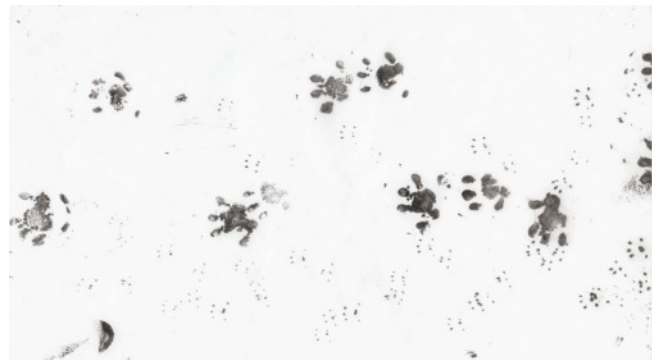


Fig. 2. Hedgehog and mouse footprints from the tunnel at Desford Road, Newbold Verdon.

So far, most of the gardens surveyed are those of members of the society and people who knew or suspected they had Hedgehogs. Obviously, this leads to bias. It should be borne in mind that the survey was set up for those who asked to take part; it is more a citizen science survey to encourage participation.

It is not possible to draw conclusions, such as "Newbold Verdon has many Hedgehogs and Market Bosworth has none". In Newbold Verdon many of the gardens surveyed were large and mature. Furthermore, they gave way to fields and were close to big spaces, like playing fields on the edge of the village. Other gardens were located in estates that dated from the 1960s. In contrast, the majority of the gardens in Market Bosworth were on more recently-built estates. A notable exception was a Market Bosworth garden that backed onto a spinney and despite two surveys, did not yield positive results (Table 2). The garden in Barlestone showed a negative result, even though Hedgehogs had been seen there recently. Another factor that should be taken into account is the time of year. For example, two adjacent gardens on Desford Road in Newbold Verdon showed a positive result for one garden in July and negative for the other garden surveyed later in the year.

A very pleasing aspect of the survey was the uptake and interest shown by the primary school in Newbold Verdon. This came about as a result of a pupil and her family visiting a garden participating in the survey during Open Gardens. The positive results, coupled with the use of a trail camera, generated great interest and enjoyment. The pupils involved presented their results to the school at an assembly.

Acknowledgement

A big thank you is owed to Janet Sykes who initiated the survey, organised the loan of tunnels and retrieved and collated the results.

| Village | No. of gardens | Results |
|---------------------|----------------|--------------|
| Newbold Verdon | 6 | 5 positive |
| Market Bosworth | 5 | all negative |
| Carlton | 1 | positive |
| Sutton Cheney | 1 | positive |
| Dadlington | 1 | positive |
| Weddington (Warks.) | 1 | positive |
| Barlestone | 1 | negative |

Table 2. Survey results summary.

Observations on the Dingy Skipper in VC55

Richard M. Jeffery
County Recorder: Butterflies



I guess it could be said that the Dingy Skipper *Erynnis tages*, of all our native butterflies, could be classed as the definitive 'Little Brown Job' (Fig. 1). It certainly has one of the most unfortunate names, even though it may be apt. Greyish-brown wings with brown blotches, and edged with white spots make it unlike any other UK butterfly and it cannot be mistaken for any other species. It could, however, be confused with a couple of day-flying moths, namely the Mother Shipton *Callistege mi* and, more likely, the Burnet Companion *Euclidia glyphica*. Dingy Skippers are inhabitants of grassland areas, disused quarries and old railway lines. Any sites that can be classed as 'brownfield' could support localised colonies. Open areas of upland heath and open woodland rides are also frequented, with the SSSI area of Bardon Hill (SK4513) being a good example. The butterfly is on the wing from early May to late June and occasionally there can be a second brood in late July and into August. Fortunately for butterfly spotters, it has the endearing habit of basking low down on bare patches of ground, wings wide open, on sunny days and is relatively easy to approach. It has a wingspan of up to 30 mm.

Nationally, the butterfly is scarce and is regarded as a 'High Priority' Conservation species; this is also true for the East Midlands. I had, however, long suspected that the Dingy Skipper should be more widespread in Leicestershire and Rutland and felt that under-recording was a key factor here. Regular sightings have been made over the years at Ketton Quarry (SK9705) and Bloody Oaks Quarry (SK9710), both LRWT reserves in Rutland. Also in Rutland, the Clipsham Old Quarry area (SK9815) regularly produces the highest numbers in the vice-county in a year, with over 70 individuals recorded in the spring of 2018. Further west, the area around Lount was historically known for Dingy Skipper as well as Grizzled Skipper *Pyrgus malvae*. Work is in progress to see if the Grizzled Skipper is still in residence, but there are good

numbers of Dingy present here, peaking at well over 30 on 21 May 2018. The nearby nature reserve at New Lount (SK3918), founded on the old colliery site, has a small population of Dingy Skipper that seem to prosper in an area carpeted with Bird's-foot-trefoil *Lotus corniculatus* and Lady's Mantle *Alchemilla vulgaris* agg., sheltered by a belt of broadleaf trees. Maybe these butterflies are migrants from the old Lount site. Bagworth Heath Country Park (SK4506) has risen from the remains of the former Desford Colliery and the varied habitat here, including areas of short grassland and heathland, has proved very much to the butterfly's liking. Over 40 individuals were recorded here in May 2018.

The distribution map (Fig. 2) for the five year period covering 2010-14 shows the extent of the butterfly in the East Midlands. It is apparent from this map - and the same still applies today - that the Dingy Skipper is concentrated in both the north-west and the east of the vice-county, with only a rather vulnerable population surviving in the area around Asfordby Hill in the north. The butterfly does appear to be absent from the southern half of the vice-county. Lack of recording could be a contributory factor here, but given that a lot of land in this part of the vice-county is given up to agriculture, then realistically it could be safe to assume that this is the reason for the butterfly's absence.

For many of us who have a passion for wildlife in any of its various guises, we seem to be blessed with a sort of 'sixth sense': a hunch that a particular species should be there at a particular spot. One area that struck me as a likely home for Dingy Skipper was the heart of the new National Forest, with all of the derelict coalfields and quarry sites being turned from 'Black to Green' (Devine, 2016). Since taking on the role of Transect Co-ordinator for the vice-county, five butterfly transects have been set up in the area, primarily to ascertain which species had moved into the National Forest and further, to monitor any other species that may take up residence. The

Fig. 1 (above). Dingy Skipper.

nature reserve and cycling centre at Hick's Lodge (SK3215) was the first of the transect sites to reveal the butterfly's presence with 11 individuals recorded in the 2014 season and (with the exception of 2015) the butterfly has been recorded here in subsequent seasons. Similar results have been noted on the transect at Pick Triangle Wood (SK3018) on the Leicestershire/Derbyshire border, although here they are generally recorded in single figures. The following year (2015), a new transect was set up at Donisthorpe Woodland Park (SK3116), also on the Derbyshire border, and the butterfly was found to be present here too. In 2016, an additional transect was started at Sarah's Wood, not far from the National Forest Headquarters at Conkers. Each year this site has produced a solitary sighting. Management of the National Forest is a complex subject and it is hoped that by continuing our surveys, butterflies in general and the Dingy Skipper in particular will influence any future plans the National Forest Company may produce.

I tend to look upon Bardon Hill Quarry as my favourite butterfly site in the vice-county. Maybe this is because I have walked my transect here for the last six years and have got to know the site quite intimately, or maybe because there have been some exciting developments over the last two or three years which have opened up new possibilities. Whatever way I look at it, Bardon Hill is home to some key butterfly species in the vice-county. In the last two or three years Green Hairstreak, Purple Hairstreak and Silver-washed Fritillary have been recorded on site. For the first four years of surveying I had noted significant colonies of Bird's-foot-trefoil and thought that Dingy Skipper 'should' be here, but each spring survey proved disappointing with a nil return. Then one sunny day in May of 2017, I took a short break from recording, sitting on the stony ground at the bottom of the slope on the north side of the quarry and I was pleasantly surprised to see a solitary Dingy Skipper land but a metre from where I sat (I did not even have to move to take a photograph). Since that day, the butterfly has been recorded in reasonable numbers in 2017 and 2018 in several different areas of the site, although not quite reaching figures that could be considered significant enough to regard the population as stable. There are not many upland heath areas in the vice-county, but Bardon Hill does boast one of the best (this will get better in the coming years as the additional area given over to heathland develops). It was here that I discovered a few individuals using some wayward trefoil plants that had seeded in amongst the heath.

We are well aware of the threats of climate and habitat change to our native wildlife, with butterflies probably more vulnerable than most species. Butterfly numbers are rarely consistent year on year; high numbers recorded one year do not necessarily indicate that the same will happen in the following year. With each passing year though, the range of many species seems to move and expand. Dingy Skippers seem to be following that trend and are being found in more sites in the vice-county. Or maybe they were already there and had gone unnoticed. How sustainable these small populations are remains to be seen and will need to be watched closely over the next few years. I still genuinely believe that there are more sites where the butterfly could already be present.

The biggest threat to the butterfly, from my observations, is that of scrub encroachment. By their very nature, the butterflies prefer areas of short, unimproved grassland with a plentiful supply of trefoil and areas of bare, stony ground to bask on sunny days. Nature, however, does not like bare patches and these tend to be colonised relatively quickly,

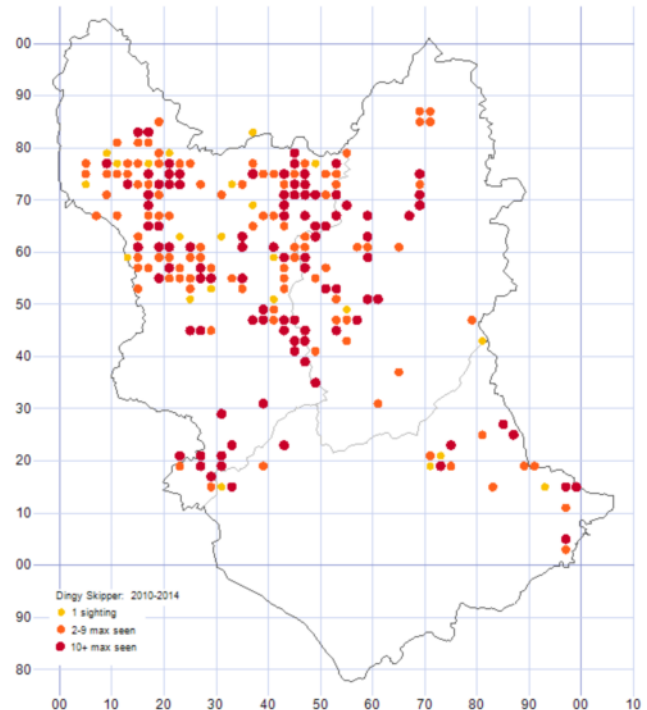


Fig. 2. Distribution of Dingy Skipper in the East Midlands 2010-14. Leics and Rutland below, with Notts and Derbys above. Reproduced with permission of East Midlands Butterfly Conservation.

sometimes by the host plant, but invariably with shrubby plants like Gorse and Silver Birch. If left unchecked these can soon overwhelm the site and the very conditions in which the butterfly thrives can quickly be lost. Lack of grassland grazing has also resulted in a much longer sward, putting pressure on the host and larval food plant, even choking patches out of existence. Maintaining populations of Dingy Skipper, therefore, needs constant monitoring and a great deal of attention if they are not to be lost.

Butterfly Conservation nationally and East Midlands Butterfly Conservation regionally have taken both the Dingy Skipper and its companion the Grizzled Skipper on board as a high priority conservation species for the foreseeable future. Recording known sites and seeking out potential new sites are key primary tasks that need to be undertaken this coming spring, prior to any conservation strategy being formulated. Any sightings of the butterfly or its host plant would be greatly appreciated. If anyone sees Dingy Skipper during the coming flight period, or visits any potential sites with good colonies of Bird's-foot-trefoil and short grassland, then please let me know as soon as possible so that follow-up visits can be made.

It is hoped that the continued existence and, indeed, expansion in the range of this diminutive butterfly can be sustained and that it will still be around for future generations to enjoy. The Dingy Skipper, however, may well have to rely on our assistance for its continued survival.

Details of the records on which this article is based are (or soon will be) on the database of the UK Butterfly Monitoring Scheme <http://www.ukbms.org>.

Reference

Devine, B. 2016. Biological Recording in the Heart of the National Forest: The Black to Green Project. *LRR*, **12**: 39-40.

Hooked on Leaf Mines

Sue Timms

What causes leaf mines?

Leaf mines are traces made by the larvae (grubs) of small insects as they feed within a leaf. The larva feeds on leaf tissues between the upper and lower surface, leaving a characteristic feeding pattern that can be a blotch, a gallery or 'tentiform' in shape. It may be visible on the upper or lower surface, or both. The leaf epidermis is unharmed and gives protection to the larva from predation and weather. The larva will often pupate inside the mine, sometimes in a cocoon.

Insects from various groups have leaf-mining larvae: moths, flies, sawflies and beetles. The adults of these insects are tiny and rarely recorded; the moths seldom turn up in moth-traps and the flies are likely to be overlooked as 'midges'. Correct identification of the adults often requires microscopic examination or genitalia preparation. It is a job for a specialist and in VC55 the distribution or abundance of many of these species is unclear. Their larvae, however, often leave unique feeding signs in host-plants and, with care, this allows identification of some of these under-recorded species.

When, where and how to look

September to November is a good season to look for leaf mines. Searching the leaves of broad-leaved deciduous trees (including fallen leaves) is a good way to find mines of moths, sawflies, beetles and some flies. Mines can be common in younger trees on the edges of woods, hedges, roadsides or in parkland. Young plantations (e.g. in the National Forest) are also good places to look because of the variety of trees planted.

Common herbaceous plants (or 'weeds') like dead-nettles *Lamium*,ampions *Silene*, Meadowsweet *Filipendula ulmaria* and Hogweed *Heracleum sphondylium* are host to many of the fly-mines.

Many insects are host-specific in their larval stage and you will need to identify the plant because all the keys and descriptions start with the host plant (we botanists have an advantage!).

Fig. 1 (above). *Stigmella tityrella* – a typical moth gallery mine, with a single line of frass, in Beech (Heather, November 2018).

There are three main types: blotches, galleries/corridors and tents. The best way to see the shape of the mine is to hold it up against the light. The way the frass (droppings) is deposited in a gallery mine is often helpful and one of the first things to learn is that moth larvae leave a single trail, as in *Stigmella tityrella* (Fig. 1), whereas fly larvae leave a double trail of frass (Fig. 2).

Holding a leaf mine against the light will also tell you if it is 'tenanted' by a larva. The colour of the body and head, plus any spots or rings on the belly, can be helpful, as can the patterns of the 'pro-thoracic plate' (I think of this as the back of the neck). I have found it is often best to open up the mine to have a good look at the larva.

Flies

Fly mines are either blotches, galleries, or a combination of the two. They are often found in herbaceous plants, with a few in deciduous trees and shrubs. Many fly-miners are from the Agromyzidae family and this group of flies is particularly under-recorded.

Aulagomyza heringii (Fig. 3) is the first VC55 record for this nationally scarce fly, confirmed by Barry Warrington, National Agromyzidae Recording Scheme Organiser.

The mines of *Pegomya flavifrons* (Fig. 4) and *Phytomyza crassiseta* (Fig. 5) are the first VC55 records of which I am aware, although they are widespread nationally – the lack of records probably reflects the difficulty of recording the adults. Both mines were confirmed by Barry Warrington.

Sawflies

Mines made by sawflies in the Tenthredinidae family are always blotch mines, usually in deciduous trees, notably birch *Betula* and alder *Alnus*, and a few herbaceous species. It can help to dissect out the larva – they have reduced thoracic legs and no prolegs (on the abdomen).

Two species are common on Alder - *Heterarthrus vagans* has large mines (Fig. 6), and the larva has two dark pro-thoracic plates, while *Fenusa dohrnii* (Fig. 7) has small mines, often constrained by leaf veins and with several to a leaf; the larvae have a pale brown head.

Moths

Many families of micro-moth make leaf-mines, often (but not always) in deciduous trees. The mines of moths in the Nepticulidae and Gracillariidae families seem to be most commonly recorded. In the Nepticulidae, *Stigmella* mines are some of the commonest and are almost always galleries (Fig. 1). *Ectoedemia* species often make blotch mines, or combinations of blotch and gallery. *E. argyropeza* makes triangular mines in the angle between two veins of Aspen *Populus tremula* (Fig. 8), retreating into the petiole, where it makes a small gall. The leaf beyond the mine stays green in fallen leaves and these 'green islands' can be very noticeable.

'Tentiform' and blister mines are made by moths in the Gracillariidae family. *Phyllonorycter* mines (Fig. 9) start with a small blister made by separating the cuticle of the leaf from the cells underneath. The cuticle is silk-lined and contracts, making a distinctive pucker in the epidermis, often with a crease. *Parornix* mines are very similar and it is helpful to examine the larvae; they all have four spots on the pro-thoracic plate. In contrast, *Phyllocnistis* species are Gracillariid



Fig. 2. *Agromyza alnivora* – a fly mine, on Alder, with a double line of frass (Bagworth Country Park, September 2018).



Fig. 3. *Aulagromyza heringii* corridor mine from an Ash on the old hospital playing field in Glenfield.



Fig. 4. *Pegomya flavifrons*, on Chickweed *Stellaria media* (Thornton Reservoir, November 2018).



Fig. 5. *Phytomyza crassisetata*, on Germander Speedwell *Veronica chamaedrys* (Bagworth, November 2018).



Fig. 6. *Heterarthrus vagans* larva, with dark pro-thoracic plates, on Alder (Ellistown, September 2018).



Fig. 7. *Fenusa dohrnii* on Alder, several mines to a leaf (County Hall, September 2018).



Fig. 8. *Ectoedemia argyropeza*, 'green islands' in fallen Aspen leaves (Albert Village, November 2018).



Fig. 9. *Phyllonorycter rajella*, lower surface tentiform mine, Alder (Ellistown, November 2018).



Fig. 10. *Phyllocnistis saligna*, gallery mine in upper epidermis, Crack Willow (Willesley Wood, August 2018). A recent arrival in VC55.



Fig. 11. *Bucculatrix albedinella* makes very small gallery mines in Elm *Ulmus*, with characteristic side branches; the larva leaves the mine to feed externally on the leaf (County Hall, November 2018).



Fig. 12. *Heliozela resplendella*, on Alder. The larva cuts an oval section out of the leaf, which then drops to the ground with the larva inside, to pupate (Ellistown, September 2018).



Fig. 13. *Rhamphus pulicarius* on a Grey Willow *Salix cinerea* (Thornton Reservoir, November-2018). The beetle larva is oval and bright yellow; it can be seen at the top of the dark mine in the centre of the leaf.

moths that make long silvery galleries in the leaf epidermis and petiole (Fig. 10).

Several other families also mine leaves, leading to a huge variation in shape and habitat. Examples are shown in Figs. 11 and 12.

Beetles

A few species mine leaves, mainly in the Curculionidae family (weevils), leaving blotches or broad gallery mines.

Rhamphus pulicarius (Fig. 13) makes mines in Grey Willow *Salix cinerea*. This species (confirmed by Graham Finch) appears to be rarely recorded in VC55, but I have found these mines in several sites in NW Leics.

Finally, a word of warning: it is not always possible to identify a species from its leaf mine. This is frustrating when (as sometimes happens) you arrive at a pair of species. In these cases, the only thing to do is to rear the larva out to an adult – not something I have tried as yet.

Acknowledgements

Barry Warrington of the National Agromyzidae Recording Scheme (Link 1) has my special thanks for looking at all the

fly-mine records posted on NatureSpot - his comments on records are always helpful and encouraging.

Further information

Details of all the records mentioned are at LRERC.

Link 1: National Agromyzidae Recording Scheme: www.brc.ac.uk/scheme/national-agromyzidae-recording-scheme

The leaf and stem mines of British flies and other insects: www.ukflymines.co.uk/index.php

British Leafminers: www.leafmines.co.uk

Bladmineerders en plantengallen van Europa www.bladmineerders.nl Many of our leaf-miners are also found in northern Europe - Google will translate for you.

Smart, B. 2nd edition 2018. *Micro-moth Field Tips*. Lancashire & Cheshire Fauna Society.

Photos of VC55 mines can be seen on NatureSpot: www.naturespot.org.uk.

Harry Ball 10 Aug 1931-27 Feb 2019 - An appreciation

Adrian Russell

I first met Harry at New Walk Museum, Leicester, in the early-1980s, before the advent of computers, when he was one of the volunteers who undertook the gruelling work of transcribing records from Lepidoptera sighting cards onto individual species index cards and maps. I was in the museum recently and I had a look at these cards and was immediately reminded of the neatness and meticulous nature of Harry's work. Back then, I was completely new to mothing but Harry soon took me under his wing and invited me along to his regular moth trapping sessions around the county, sharing his knowledge and enthusiasm with me. Many other budding naturalists benefited from similar support over the years, whether it was through his evening moth trapping sessions or his weekend daytime surveys. I am sure that they, like me, owe a great debt of gratitude to him for all of his help and encouragement over the years.

Harry was a first-rate naturalist who was interested in all forms of wildlife, whether it was butterflies and moths, birds, mammals or plants. He was very skilled at breeding butterflies and moths, he had an incredible ability to find and identify birds' nests and he was one of the first people in the county to undertake small mammal trapping. However, whilst there are, and have been, plenty of good all-round naturalists in the county, Harry was a very special one in many ways and I have already mentioned his willingness to encourage beginners.

Harry undoubtedly got a lot of pleasure from his interest in nature, but more than that, he was a recorder. He noted everything that he saw on his countryside visits, passing all of this valuable information onto the local Biological Records Centre so that it could be used to help improve our understanding of wildlife and to support nature conservation in the county.

But, unlike many other naturalists, Harry never restricted himself to nature reserves and other well-known sites; he always had a

keen eye for an interesting-looking site and would always seek the permission of the landowner first. Now, this is where Harry's skills were unrivalled. Some years ago, there was a prestigious, privately-owned site in Rutland that many naturalists wanted to visit, but everyone knew that there was no way anyone could get permission to access the site. But Harry succeeded and was able to record the wildlife there for over twenty years. There's another site where one had to cross a farmer's field to get to the wood that we were interested in. Not only did Harry get permission to cross this land, but the farmer would even move his cattle out of the field whenever Harry wanted to visit. This all reflects on Harry's affable nature and his ability to get along with other people, of all backgrounds. People never felt threatened by Harry. But, without fail, he would also ensure that he informed land-owners of his findings at the end of the year, something that all too many naturalists overlook.

Harry surveyed more sites in the county for butterflies and moths than anyone else and all of this information will make a massive contribution to the book I am writing on *The Butterflies and Moths of Leicestershire & Rutland*. It is a real regret to me that he did not live to see it published, as I am sure that he would have been proud of it. My only consolation is that this book will be part of the legacy that Harry has left behind; his contributions to improving our knowledge of the natural history of the county will never be forgotten.

Harry was a founder member and staunch supporter of the Leicestershire Entomological Society. I think I speak on behalf of all members and all of his friends from the natural history community when I say that we'll all remember Harry with fondness, not only for all of the valuable contributions that he made over the years, but as a lovely man, fun to be with and always cheerful and positive, even in recent years when his mobility and health had deteriorated. We'll all miss him.

VC55 Diptera - a preliminary assessment

Ray Morris

County Co-ordinator: Diptera

Introduction

Since taking on co-ordination of the fly (Diptera) records for VC55 (little appreciating the challenge!), it has become apparent that while some groups e.g. Hoverflies and Soldierflies, have been reasonably well recorded, particularly as modern identification aids are available, others have not. As of September 2018, in Britain there are 106 fly families with 7,171 taxa (DF, 2018) – a daunting task for any budding dipterist! This review gives a preliminary assessment of the status of flies in Leicestershire & Rutland (VC55) and has depended very heavily on the records held by LRERC, the increasing numbers of records coming from contributors to NatureSpot (www.naturespot.org.uk) along with data held by LRWT. I am grateful to all for permission to use this information. However, other sources have also been used from which, as far as I am aware, records have not been extracted. Some of these are mentioned later in this article.

Fly records – where to get them

The most obvious way to record flies is to carry out surveys of a range of habitats using a variety of methods. It should be noted that many taxa can be broad in their tastes and found everywhere, whereas others may have limited habitat requirements e.g. many leaf-mining flies are host-specific. Even with the easier families, records of some taxa are few and far between in VC55, with some even being rare nationally.

However, other record sources must also be pursued. For example, historical data in local and national publications should be scoured for reports of VC55 taxa, while examination of collections can also turn up unexpected records. An open mind is essential if a complete as possible listing of our taxa can be achieved. A good example was when the Herbert Art Gallery & Museum in Coventry published a booklet detailing their holdings of hoverfly specimens (Palmer undated; Morris, 1998). John Saunt, a well-known entomologist in Warwickshire at the time, periodically made forays into Leicestershire (1915-1930) and specimens of 13 taxa now appear in the Herbert's collections.

Checking the activities of past VC55 entomologists can also be fruitful. For instance, some fly records from W. A. Vice (Kramer, 2011) are listed on record cards (see example in Morris, 2017) as part of the production of the Leicestershire volume of the *Victoria County History*. Some of Vice's hoverfly observations go back as far as the 1870s e.g. *Helophilus pendulus* and *Meliscaeva* (as *Syrphus*) *auricollis* taken at Blaby on 23 August 1873. P. A. H. Muschamp was another avid fly recorder from the 1920s to 1950s, but was erratic at keeping detailed records, with some of his specimens merely labelled "home" for instance. Under such circumstances this may necessitate research of public documents e.g. census returns and trade directories, to locate where the person was living at the time. In the case of the Vice records, many are located at "Blaby" but were probably from his family base at Blaby Mill between Blaby and Countesthorpe. The use of a Malaise trap by Jenny Owen at her Scraftoft Lane garden in



Fig. 1. *Pocota personata* (Syrphidae): Mating pair Melton Country Park 2012. Photo: Paul Ruddoch.

Leicester resulted in huge amounts of data over a 30 year period, with many specimens being identified by recognised experts (Owen, 2010). Even Henry Walter Bates got in on the act when he recorded *Conops flavipes* (Conopidae) at Buddon Wood in August 1844 (Bates, 1844). Further back, Crabbe reported a range of Diptera in the Vale of Belvoir including reference to Tipulidae, Tabanidae and Conopidae although with no data (Crabbe, 1795). Is it possible his notebooks still exist?

More recently, planning applications have used professional entomologists to carry out intensive surveys. A visit to Nottinghamshire in 2015 by members of the Dipterists Forum spilled over into some Leicestershire sites where records were generated by acknowledged national experts. A 2017 LRWT contract for an audit of the spider fauna of Charnwood Lodge NNR (Wilson, 2018) produced, as a by-product, a few fly species new for the site.

The influx of records from NatureSpot has increased awareness of some fly families, with several contributors now extending their recording into the more traditional procedures by keying out taxa, rather than relying on photographs alone. Others, who do not wish to go down this route, submit their records to national help sites such as iRecord. Most important has been access to records held by LRERC, while the Collections Resources Centre at Barrow upon Soar has original specimens of historic importance and cannot be overlooked.

Identification challenges

Some fly families are relatively easy to record - however many are small, often not very colourful (and thus not photogenic). These are usually quite difficult for the amateur recorder to identify - even to family. Added to this is the unreliability of some keys available which are often quite old, immersed in technical jargon and do not include species that may have arrived in recent years. An example of the latter is the Dolichopodidae (Long-legged Flies), which has a current national list of 304 taxa (DF, 2018) compared to the 267 listed in the 1978 identification keys (D'Assis Fonseca, 1978, still in use). Others e.g. the Bibionidae, have changed little over the decades in their number of taxa, with very good keys and only 18 current taxa.

Often, flies need experts to identify specimens, as not everything can be done just from photographs. Some are even regarded as too difficult for the most experienced! The Dipterists Forum (the national society, see www.dipteristsforum.org.uk) has a useful guide for budding fly recorders (Ball, 2008) that indicates the level of difficulty for families, summarised in Box 1. When recording flies from

1. Easy to moderate. No more difficult than most hoverflies. Good keys available.
2. Good families to move on to. Only a small proportion of difficult taxa and genera. Genitalia examination may be needed but are usually straightforward. Keys may be available although these may be old and require supplementing with more recent publications.
3. Can be successfully tackled with care and experience although can be quite taxing. Usually need microscopy and genitalia examination. Keys may not be available or are out of date requiring supplementary literature.
4. Considerable experience with microscopy etc essential. Access to voucher specimens and a good library advisable.
5. Impossible for all practical purposes due to taxonomic difficulties and lack of recent keys.

Box 1. Categories used to assess the difficulty of identification of fly families (Ball, 2008).

photographs, it is important to remember such difficulties with identification and illustration of diagnostic characters should be a priority. Accordingly, images of flies from difficult groups must be identified with caution, especially if diagnostic characters are not visible. A recent example has been deciding whether a photograph was of the dolichopodid *Argyra agyria*. Although likely to be this species, the pattern of bristles on the middle femora were not clear enough to definitely confirm the identification.

While some fly families are difficult to identify by keying out the adults, they may demonstrate other characteristics or behaviour that allows recognition. Good examples are the larval stages of the Agromyzidae and Cecidomyiidae, which create mines or galls respectively in varying parts of food plants. Others may show a preference for dung or rotting fungi, etc. as part of their larval development, emphasising the wide diversity of not just taxa but their habits too.

An excellent example of a family to be avoided by the beginner is the Phoridae (Scuttle Flies), which are numerous but very small, with incredibly difficult keys and few experts - even worldwide! Arriving at an identity, even to genus, is an achievement in itself. Access to Diptera collections is often helpful, but in many cases close examination of a fresh or alcohol-preserved specimen is the only reliable way of confirming identification. Dry-mounted specimens are often too brittle to handle when examining for the finer characters.

The VC55 Diptera database as of 2018

The author is compiling a database of Diptera records. At the time of writing, over 1,300 taxa from 85 families, represented by more than 35,000 records (around 70% being Hoverflies), are held in the VC55 Diptera database. The data are still being scrutinised, however, for misidentification and duplication, while nomenclature is being checked and updated as necessary. The database is expected to expand each year as expertise grows for the various families and greater awareness of their presence through means other than just looking at adults. A good example of the latter is the increasing ability to identify members of the Agromyzidae by recognition of their mining activities (see article on p. 32). At this time the

database records must be treated with caution, as all records must be checked for validity, taking into account the method of identification, the experience of the recorder/identifier, the level of difficulty for some and even a consideration of national status. Additionally, taxonomists are constantly updating nomenclature and records need to be reviewed regularly to ensure current names are in use.

Perhaps not surprisingly, the best recorded of the flies are the Syrphidae (Hoverflies), with the VC55 database having a provisional list of 207 taxa of the 283 nationally, aided by the availability of excellent keys and photographic guides. Even so, in VC55 some are only known from a single record or a single site such as *Pocota personata* (see Fig. 1) and *Neoascia obliqua* from the Melton Mowbray area (Paul Ruddoch).

The nematoceran family Limoniidae has a provisional VC55 list of 115 taxa of the 222 nationally while the Dolichopodidae has a current list of 97 taxa of the 304 nationally. Some families are so scarcely recorded that they are represented in VC55 by single records e.g. *Acartophthalmus nigrinus* (Acartophthalmidae) and *Atelestus pulicarius* (Atelestidae), both found by Andy Godfrey at Buddon Wood in 2013, while *Melieria crassipennis* was recorded at the Spearwort Fields at Aylestone on the outskirts of Leicester in 2016 and 2017 (David Gould) - one of only three VC55 sites.

In the Stratiomyidae (Soldierflies) a single record of *Stratiomys singularior* was taken at Loddington in 2012 by John Szczur with the set specimen having been examined and confirmed by RM. From the same area, the Soldierfly *Oxycera terminata* was recovered from three ditches during a study using emergence traps (Aquilina, 2006), while near Skeffington Wood national recorder Alan Stubbs took a single *Oxycera pardalina* (1989) which was not recorded again until 2011 when found at a disused railway line at Loddington, again by John Szczur.

Some notable additions in recent years

Andy Godfrey reported discovering *Podocera soniae* (Stenomicrodidae) at Buddon Wood (2012), as well as his previous *Podocera delicata* record from Holwell Mouth (2001); identity of the former having only just been made (Godfrey, 2018). Both were new and are still the only records for VC55, with *P. soniae* being an addition to the British list!

Just before completion of this article, Kate Nightingale sent me records of two flies which were new to VC55, having been confirmed by national experts. The first was the nationally uncommon *Acletoxenus formosus* (Drosophilidae; see Fig. 2), photographed several times during October 2018 in her Cropston garden, with at least two individuals identified from abdominal markings. She also photographed *Chetostoma curvinerve* (Tephritidae; see Fig. 3) at Charnwood Lodge NNR in 2016, but this was only recently identified, with relatively few widely-scattered national records.



Fig. 2. *Acletoxenus formosus* (Drosophilidae): Cropston 2018. Photo: Kate Nightingale.

Of particular note was the addition of four new taxa of leaf miners (Agromyzidae) to the local list, detailed below, thanks to the support of national recording scheme organiser Barry Warrington, confirming photographic evidence provided by NatureSpot contributors. In this instance, an image of the effect of an insect is more useful than one of the causer itself!

Aulagromyza fulvicornis: Owston Woods, SK7907, 14 Jun 2018, Graham Calow. Leaf mine on Grey Willow.

Phytomyza crassiseta: Bagworth, SK4508, 25 Nov 2018, Sue Timms. Leaf mine on Germander Speedwell.

Phytomyza hellebori: Broughton Astley, SP4392, 17 Aug 2018, Graham Calow. Leaf mine on Stinking Hellebore.

Phytomyza glechomae: Leicester, Fosse Park, SK5600, 28 May 2018, David Gould. Leaf mine on Ground-ivy.

Conclusion

This brief review sought to show that Diptera are a major challenge for the amateur entomologist, but with the promise of a fertile hunting ground for increasing our local knowledge of flies. As part of the *Leicestershire Entomological Society Occasional Publications Series* (LESOPS), reviews of VC55 Diptera have been restricted to Syrphidae (Kramer, 1989; Frankum, 1989), Tipulidae (Kramer, 2011) and Stratiomyidae (Morris, 2017), while short notes regularly appear in the *LES Newsletters*. It is anticipated that future LESOPS will form a baseline for further research of many more fly families in VC55.

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Fig. 3. *Chetostoma curvinerve* (Tephritidae): Charnwood Lodge NNR, 2016. Photo: Kate Nightingale.

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Rare toadstool on Horse-chestnut stump

Richard Iliffe & Chris Peat



Most toadstools in the genus *Pluteus* are rather dull, usually found in various shades of brown. *Pluteus aurantiorugosus* is a notable exception. This beautiful specimen was photographed in Carlton churchyard (SK396049) by Chris Peat in 2017. It is a rare species, said to be restricted to the south of England, but the Leicestershire Fungus Study Group has also recorded it locally in Grace Dieu Wood.

Floral Diversity and Human Population

Russell Parry

Joint County Recorder: Vascular Plants

Our very first vascular plant record for Leicestershire is dated 1653 (Blith, 1653). At this time Leicestershire's human population is estimated to be very approximately 70,000 and, included in that figure, Leicester stood at 5,000 (Link 1). The equivalent figures for 2017 are 1,044,000: a 15-fold increase, and 350,000: a 68-fold increase (Link 2). The plant was Woad *Isatis tinctoria*, a species introduced to Britain by humans and cultivated for its blue dye. It was last recorded in VC55 in 1954 but may still be grown by a few 'back to basics' enthusiasts. The human need for this plant has brought about both its recording and probable extinction.

We have records from before 1700 of only four other species of plant. In 1666 Crested Cow-wheat *Melampyrum cristatum* is our second (slightly doubtful) record (Merrett, 1666). It is not a useful plant but it is a very charismatic native. It has only ever been recorded in the Rutland part of VC55 and our last record was in 1964 from Newell Wood. This raises two vital points about our ability to record change. The first is that records are entirely dependent on recorders! Many species were present before 1653, but we have no records. The second is that Botanical Society of Britain and Ireland surveyors were recently refused permission to survey this site. Change is hard to assess without access.

The other three pre-1700 records are:

Perennial Flax *Linum perenne* (Merrett, 1666), another very pretty native whose last natural site, Shacklewell Hollow (just east of Empingham), was more or less destroyed by the owner soon after 1963;

Lombardy Poplar *Populus nigra* 'Italica' (Loudon, 1838), our second recorded archaeophyte (see box, top right), which seems to still be on the increase because of its very useful speed of growth and 'space-saving' shape. It also happens



Fig. 1. Sadly, not seen in Leicestershire since c. 1920: Sheep's-bit *Jasione montana*. Photographed in Pembrokeshire by Steve Woodward.

archaeophyte: a non-native plant that arrived before 1500 AD.

neophyte: a non-native plant that arrived after 1500 AD.

to be one of the very few species identifiable at more than 100 metres or at 70 mph!

Dwarf Elder *Sambucus ebulus* (Gibson, 1695), yet another species thought to be introduced to Britain by human agency, this one for its medicinal properties.

Already it is becoming clear what a huge influence our human population and activities are having on our wildlife. On the positive side, my first VC55 recording hero was Dr. Richard Pulteney who, despite the relatively poor identification resources which must have been available to him, provides us with first records of most of the taxa recorded in VC55 before 1800. His records centre on Loughborough and Leicester with particular emphasis on Charnwood Forest. He was born in 1730 and his first records were published in 1747.

Of the 688 taxa of vascular plant recorded before 1800, 59 have not been re-found for many years. These include 44 natives, 12 archaeophytes and 2 neophytes. Of these, seven taxa seemed to have been relatively common in the 18th century:

Sheep's-bit *Jasione montana* (native, Fig. 1) – grows in dry heaths;

Corn Buttercup *Ranunculus arvensis* (archaeophyte, colonist) – an arable weed;

Shepherd's-needle *Scandix pecten-veneris* (archaeophyte, colonist) – an arable weed;

Long-stalked Yellow-sedge *Carex lepidocarpa* (native) – grows in damp places;

Large Thyme *Thymus pulegioides* (native) – grows in dry, open situations;

Prickly Poppy *Papaver argemone* (archaeophyte, colonist) – an arable weed that grows in dry, disturbed places;

Floating Club-rush *Eleocharis fluitans* (native, Fig. 2) – grows in acid, wet situations.

Their disappearance highlights some of the causes of our most remarkable habitat changes.

- Agricultural practice has become much more mechanised and uses very powerful weed-killers, pesticides and fertilisers. These activities do not suit the arable weeds mentioned, but the human population has to be fed.
- Many of our rare habitats were created for human use, but are no longer needed for their original purpose. Their maintenance is now a challenge.
- Thanks to drainage techniques, the surface of our two counties is generally much drier. There are now many more man-made waters, but fewer boggy areas.



Fig. 2. Floating Club-rush *Eleocharis fluitans* was common in boggy places in the eighteenth century but has not been seen in VC55 since 2005. Photographed in Pembrokeshire by Steve Woodward.

- Of course, there are one or two more buildings with their associated infrastructure.

However, let us not be too down-hearted. My investigations are still at an early stage, but what is becoming clear is that we are gaining species and taxa much faster than we are losing them and, after all, it is our job to record things as they are, not as we would like them to stay. We could not be living through a faster rate of change except perhaps at the start of the next ice age! It is now so exciting that it is almost impossible to keep up! Look at these figures.

- In 1850 the first Flora of Leicestershire was published. It was written by Miss Mary Kirby and is a fine piece of recording. Between 1800 and 1850 a further 315 taxa were added to our knowledge, i.e. about six new taxa per year. We still have 256 of these. The population figures by 1850 were 230,000 and 60,000 (Links 1 & 3).
- Then in 1886 the second Leicestershire Flora arrived (Mott *et al.*, 1886). The population figures were 321,000 and 122,000 (Links 1 & 3). In these 36 years, 137 more taxa were added (about four per year), 91 of which remain today. One of its distinctions is to exclude 39 named species mostly on the grounds of them having been planted. The list of exclusions is immediately followed by the sentence "The line between the admitted and excluded species is not a very definite one." This problem continues to test us!
- There was then a gap of almost 50 years until the publication of our first flora to include both Leicestershire and Rutland (Horwood & Gainsborough, 1933). The 1931 census gives Leicestershire as 542,000 and Leicester 240,000. This introduces my third recording hero, Arthur Horwood, who prepared this closely-printed tome of almost a thousand pages. A work of true scholarship, it also divides Leicestershire into twelve regions for direct comparison to the 1886 flora. A further 448 taxa which are recognised today are added (plus many variations which, I thank my lucky stars, modern botanists have chosen to ignore) at the rate of nine per year. Some 228 of these have not been recorded in recent years.
- Then a further 345 taxa were added in the publications of Messenger's 1971 *Flora of Rutland* and Primavesi and Evans' 1988 *Flora of Leicestershire*. That is a rate of six per year. Some 87 of these have not been recorded in recent years.

- Next comes Michael Jeeves' 2011 *Checklist*. Another 210 taxa are added at ten per year. The population of Rutland was then about 37,000.
- Finally, I can tell you that thanks to the almost superhuman efforts of recorders since then to the end of 2018, a further 240 taxa have been added to the counties' list at the rate of thirty per year. And a reminder - the Leicestershire population figure in 2015 had topped a million with the city at just under 350,000.

To conclude, about 1,900 taxa of vascular plant were recorded in VC55 between 1653 and 1988 with just fewer than 480 not recorded since 2000. This and the later figures above suggest that the recording of new taxa has so far outnumbered extinctions: overall, humans contribute to, rather than negate, the diversity of our flora. However, it should be borne in mind that recorders now have greatly improved identification aids and that transport around the counties is much easier. What a shame that some land owners do not want us to increase our knowledge and understanding of our ecosystems.

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Lepidoptera records - new and old

Adrian Russell
County Recorder: Moths

Last year I wrote about working towards publishing *The Butterflies and Moths of Leicestershire & Rutland* (Russell, 2018) and I can report that a leading publisher of natural history titles has expressed an interest in publishing such a book, much to my surprise! Having decided that 2019 was the cut-off for records for the book, I urged local recorders to make one final effort. Many have responded admirably, especially in relation to some of the under-recorded areas of VC55. At the time of writing I am still working my way through 2018 records, but the final tally for 2017 was a record-breaking 84,664 records. Hazel Graves and Margaret McLoughlin provided invaluable assistance by helping to process a backlog of paper-based records from the Loughborough Naturalists' Club. The VC55 Lepidoptera database currently holds 861,000+ records and I am sure that the one million records mark will be passed by the end of 2019. It is one thing to amass such a volume of records, but how to ensure their reliability?

Modern records (i.e. post-1999) are not too problematic. Most recorders are aware of recording standards (e.g. those species requiring dissection to confirm identity) and of the importance of taking photographs and/or retaining specimens to support records of particularly noteworthy species. This is especially important in relation to potential new VC55 records. This was illustrated early in 2018 when Dave Cole recorded *Eriogaster lanestris* **Small Eggar** from his Morcott garden (SK9200) on 3 April, the first record of this species for over a hundred years, the specimen being retained and photographed (Fig. 1). Photographs and/or specimens also support the eight species new to VC55 in 2018 (opposite). The arrival of *Calophasia lunula* **Toadflax Brocade** in VC55 during 2018 was followed by a second from a Leicester garden (SK576068) on 9 June (Gary Freestone) and then by larval records from Empingham (SK948088) on 25 August (Andrew De Jardin; Fig. 2). This indicates that the species may have arrived prior to 2018 or is already established in VC55. The larvae of this moth are very distinctive, feeding on toadflax (*Linaria* spp.), and are well worth looking out for on the Purple Toadflax growing as a weed in many gardens.



Fig. 1. *Eriogaster lanestris* Small Eggar.



Fig. 2. Larva of *Calophasia lunula* Toadflax Brocade.
Photo: Andrew De Jardin.

The main problem with post-1999 records comes in relation to citizen science projects, such as the *Big Butterfly Count*, where a large number of records come from people who do not normally submit records to local recording schemes. Knowledge of recorders and their identification skills is generally one of the most important considerations when processing and validating records and here, this is rarely the case. For this reason, some County Butterfly Recorders outside of VC55 completely ignore such datasets. I think this is a shame and I do my best to assess records such as these, screening-out records of less common species that do not seem right. Generally, I adopt a pragmatic approach and accept the vast majority of records of common species on the basis that they are unlikely to significantly affect the integrity of the VC55 database. However, most County Recorders (and not just County Lepidoptera Recorders) rue the downside that comes with the many new recorders who record using apps and online systems, namely that they are not in direct contact with them.

There are different challenges when it comes to validating earlier records. The Leicestershire Lepidoptera Recording Scheme started in the 1970s and it is often impossible to know whether or not records from the 1980s and early 1990s were validated at the time of submission or processing. Judging by some of the records that made their way through to national recording schemes, the validation was often light-touch, at best. There were not many moth recorders in the 1970s but some produced some very interesting records that could be questionable, especially when one considers the quality of the identification guides available at that time e.g. South (1907). On the other hand, the dramatic changes in the status of species in recent decades means that many that used to be common then are rare now and *vice versa*. However, most

moth recorders in the 1970s were also collectors (e.g. Simon Davey from Barrow upon Soar) many of whom donated their collections to the museum upon leaving the district. David and Peter Macqueen, originally from Quorn, were both prolific garden recorders. Whilst David died some years ago, I recently succeeded in tracking down Peter (now in Cumbria) who still has an interest in moths and, even better, their collections and papers are still in his possession. The former should enable some of their noteworthy records to be validated and the latter will help add detail to such records, especially dates, as their records were mostly submitted as annual lists.



Fig. 3. William Daws (courtesy of Old Mansfield Society).

PRODENIA LITTORALIS. – A specimen of this moth was attracted by the light in my brother's house in Quorn, in Leicestershire, and was secured by him; but, I am sorry to say, it was damaged in the capture. As he was not collecting at the time, he kindly gave the specimen to me. I do not know the exact date of capture, but it was some time in September, 1906, possibly imported in some stage with tomatoes. Is this moth double-brooded? Usually the imago appears in March and April. – William Daws, 39, New Wood Street, Mansfield, Notts.

When it comes to pre-1950 records, there are invariably no surviving recorders to contact. However, the principal recorders in the 1930s to 1950s were Herbert Buckler and Arthur Lisney. Both donated their extensive collections and papers to the museum helping to provide a very clear picture of the Lepidoptera in Leicestershire (not VC55 – they never ventured into Rutland!) during that period, with reliability and validation not being a significant issue.

As far as pre-1920 and nineteenth century records are concerned, validating these, over a century later, with very few voucher specimens surviving, is almost impossible. Furthermore, one could even question whether such records should be validated; it could be argued that they should be accepted on face value. While I have found that researching these records can be extremely time-consuming, it can help shed light on the reliability of some of the old records of noteworthy species. The example of a little-known record of the *Spodoptera littoralis* Mediterranean Brocade from VC55 illustrates this (Daws, 1907; box by Fig. 3). At that time, South (1907) described this species as an inhabitant of tropical and sub-tropical regions that had occasionally been reared from caterpillars found in imported tomatoes. More recently, Bretherton, Goater & Lorrimer (1983) stated that importation with chrysanthemums is the main source in Britain, with no moths from imported larvae having been found in the wild. However, it was also acknowledged as an occasional immigrant, citing four records between 1960 and 1979.

At first sight, the Daws record might seem more than a little dubious, particularly as it is mentioned that the specimen was damaged. William Daws (Fig. 3) was described in early census returns variously as a painter, taxidermist or naturalist. From around 1901, he was employed to look after the collections within the Porth Enys Museum established in Mousehole, Cornwall by William Edward Baily. He had inherited his father's Mansfield Brewery-derived wealth and his grandfather's passion for butterfly collecting, building up sizeable collections including 30,000 British and foreign Lepidoptera (Ruhmund & Turk, 2008). In 1903, shortly before Baily's death, the museum, collections and building were donated back to his home town. This became the Mansfield Municipal Museum with Daws (and later his son, also William) as curator. Daws also contributed a number of articles and notes to *The Entomologist* and *The Entomologist's Record and Journal of Variation* between 1899 and 1921. It seems fair to assume that he was a competent enough entomologist to reliably identify a specimen of such a distinctive species as the Mediterranean Brocade, even when damaged. The brother who caught this moth in Quorn was Samuel Daws, a hosiery

warehouseman who, at around that time, lived in Freehold Street before moving to the nearby Mansfield Avenue. Irrespective of which of these locations he was living at in 1906, old Ordnance Survey maps show that his house either backed directly onto, or was in very close proximity to, allotments and this raises the possibility that the moth originated from imported chrysanthemums (a flower often grown on allotments) growing there. The only remaining puzzle is the basis for Daws' statement that this species usually appears in March and April.

First VC55 record details for 2018

***Calophasia lunula* Toadflax Brocade:** Braunstone garden, SK5502, 29 May, Len Holton.

***Agrotera nemoralis*:** Sapcote garden, SP4993, 1 Jun, Graham Calow.

***Coleophora binderella*:** Sapcote garden, SP4993, 25 Jun, Graham Calow.

***Tinea columbariella*:** Sapcote garden, SP4993, 25 Jun, Graham Calow.

***Pediasia contaminella*:** Sapcote garden, SP4993, 25 Jul, Graham Calow.

***Macdunnoughia confusa* Dewick's Plusia:** Littlethorpe garden, SP5496, 21 Jul, Michael Lester.

***Cryphia algae* Tree-lichen Beauty:** Littlethorpe garden, SP5496, 3 Aug, Michael Lester.

***Chrysoclista linneella*:** Knighton garden, SK5900, 23 Jul, Alan Cann.

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Soil mites

Steve Woodward

Introduction

Soil mites occur in vast numbers in soil and leaf litter (Beccaloni, 2009), yet few people are aware of them. Being tiny and hidden from view, they are scarcely mentioned in popular field guides yet they perform a crucial role in nutrient recycling. Like spiders, mites are Arachnids and possess eight legs (when mature), but the legs are relatively shorter, the body shape is very different and eyes are inconspicuous. Biologists recognise at least 2100 species of mites in the UK (Shepherd & Crotty, 2018), but the true number is unknown - the group has not received much specialist attention. Soil mites had been more-or-less impenetrable to amateurs, but during the Field Studies Council course *Soil Mesofauna* (April 2018) I learned that a key was in preparation. We used a draft during the course and, under the supervision of its authors, I was able to put names to some Leicestershire mite specimens. The key aims to identify specimens to family level (quite an achievement in itself!) but in two cases, the family was small and species-level identification was possible.



For more information see Link 1.

Record details

Oribatida

Phauloppia lucorum: Grace Dieu Wood, SK43611759, 29 Jun 2011, SFW & H. Ikin, conf. M. Shepherd. In leaf litter sample from dry woodland with oak, Rowan & Bracken. Thornton, SK468076, 1 Mar 2015, SFW & H. Ikin, conf. M. Shepherd. On wall of church. Whetstone, SP557975, 15 Feb 2015, H. Ikin & SFW, conf. M. Shepherd. Abundant in moss on gravestones.

Euzetes globulus: Grace Dieu Wood, SK43611759, 29 Jun 2011, SFW & H. Ikin, conf. M. Shepherd. In leaf litter sample from dry woodland with oak, Rowan & Bracken.

Damaeidae: Grace Dieu Wood, SK434179, 20 Nov 2011, SFW & H. Ikin, conf. M. Shepherd. From *Carex pendula* bases.

Prostigmata

Smarididae: Swannymote Wood, SK437173, 14 Aug 2011, H. Ikin & SFW, conf. M. Shepherd. Pitfall traps in abandoned pasture.

References

Beccaloni, J. 2009. *Arachnids*. Natural History Museum.

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Link 1: <http://soilbiodiversityuk.myspecies.info/>

Abbreviations

These are used most frequently in this journal - others should be expanded in the article, where they first appear.

BSBI Botanical Society of Britain & Ireland

conf. identification confirmed by

CRC Collections Resources Centre (Barrow upon Soar)

CRN County Recorders Network

det. determined (reliably identified) by

FSC Field Studies Council

GIS Geographical Information System

JNCC Joint Nature Conservation Committee

LBRG Leicestershire Botanical Recording Group

LES Leicestershire Entomological Society

LESOPS LES Occasional Publication Series

LNC Loughborough Naturalists' Club

LNR Local Nature Reserve

LRERC Leicestershire & Rutland Environmental Records Centre

LROS Leicestershire & Rutland Ornithological Society

LRR Leicestershire & Rutland Recorder

LRWT Leicestershire & Rutland Wildlife Trust

LWS Local Wildlife Site

MV Mercury Vapour (light trap)

NBN National Biodiversity Network

NHS Natural History Society

NNR National Nature Reserve

NR Nature Reserve

ORCA The database used by LRERC

OS Ordnance Survey

RDB Red Data Book

RIT(S) Rothamsted Insect Trap (Survey)

RNHS Rutland Natural History Society

SSSI Site of Special Scientific Interest

VC55 Vice-county 55, approximately equivalent to the historic counties of Leicestershire and Rutland combined (see p. 6).

Recorders' Roundup

The various groups of plants and animals are listed here, together with contact details for the person to whom records should be sent. *County Recorders* are usually appointed by a national or local society (and are generally very experienced with the group), whereas *County Co-ordinators* are less formally "adopted", but willing to collate records and help where they can. If a recent vice-county checklist is published, it is mentioned, along with significant updates or other brief notes provided by the Recorder or Co-ordinator.

Algae

Included under this heading are Green, Red and Brown algae, Desmids, Diatoms, Charophytes (Stoneworts) and Cyanobacteria (Blue-green algae).

County Co-ordinator: Geoffrey Hall:
geoffrey.hall@ntlworld.com

For Charophytes see *LRR* 11: 30. For other algae see *LRR*, 11: 42 and *LRR*, 14: 23-28.

Fungi

Included under this heading with the true fungi are slime moulds and downy mildews, but not lichens (see below). Note that some fungi may be reported in the society bulletins under "Galls".

County Recorder: Tom Hering: tfhering@btinternet.com
01509 672664

An electronic copy of the checklist can be obtained from Tom on request. A charge of £5 (including postage) will be made for a printed copy.

Checklist: Hering, T. Aug 2015. *Checklist of Fungi in Vice-county 55 (Leicestershire & Rutland)*. Leicestershire Fungi Study Group.

Lichens

County Recorder: Tony Fletcher:
a.fletcherfletcher@btinternet.com

No recent checklist is published but Tony has completed a catalogue of verified museum specimens (see *LRR*, 10: 24). This is available at LRERC and CRC.

Bryophytes

Covers mosses, liverworts and hornworts.

County Recorder: Uta Hamzaoui: uta.hamzaoui@yahoo.de

Checklists: Ballard, D. W. 2004. *Leicestershire Bryophyte Flora*; Jackson, P. E. 1990. *Rutland Bryophyte Flora*. Leics. Museums.

Flowering plants & ferns

County Recorder: Geoffrey Hall: geoffrey.hall@ntlworld.com
Joint Recorders: Russell Parry & Steve Woodward.

Checklist: Jeeves, M. 2011. *The Flora of Leicestershire and Rutland: Checklist and Rare Plant Register*. Leicestershire & Rutland Wildlife Trust.

Invertebrates - general

Articles about insects and other invertebrates appear in the Leicestershire Entomological Society's publications, back issues of which are freely available from NatureSpot at <http://www.naturespot.org.uk/content/leicestershire-entomological-society>

Summaries of invertebrate records are also published in *LNC Heritage* and *RNHS Fieldfare*.

Decapoda - Crayfish

County Recorder: Jools Partridge:
jools.partridge@leics.gov.uk or
<https://www.facebook.com/LeicestershireCrayfish>

Checklist: See Partridge, J. 2013. Crayfish - too many species! *LRR*, 9: 37.

Isopoda - Woodlice & water slaters

County Co-ordinator: Helen Ikin:
helen.canids@btinternet.com

Checklist: Daws, J. 1994. *Leicestershire Woodlice*. Leics. Ent. Soc. LESOPS, 9.

Araneae - Spiders

County Co-ordinator: Paul Palmer: palmerpjp@gmail.com

Checklist: Crocker, J. & Daws, J. 1996. *Spiders of Leicestershire & Rutland*. Loughborough Naturalists' Club; in conjunction with: Crocker, J. & Daws, J. 2001. *Spiders of Leicestershire & Rutland: Millennium Atlas*. Loughborough Naturalists' Club. A database of these records is held at LRERC. An update is published in *British Arachnological Society Newsletter*, 132: 21.

Acari - Mites & ticks

County Co-ordinator: Ivan Pedley: ivan.pedley@gmail.com

No recent checklist. Note that some mites may be reported in the society bulletins under "Galls".

Opiliones - Harvestmen

County Co-ordinator: Ray Morris: ray@cactusbob.net

Checklist: Daws, J. 1994. *Leicestershire Harvestmen*. Leics. Ent. Soc. LESOPS, 8. Update in *LRR*, 11: 7.

Pseudoscorpions

County Co-ordinator: Ed Darby: lboro.ecols@ntlworld.com

Checklist: Crocker, J. 1976. False Scorpions. *LNC Heritage*, 61: 1-11. Update in *LRR*, 11: 9.

Chilopoda - Centipedes

County Co-ordinator: Helen Ikin:
helen.canids@btinternet.com

Checklist: see *LRR*, **12**: 9.

Helen says "I am not experienced enough to check specimens with any certainty so I recommend that you use the National Recording Schemes if you need any identifications confirmed." Visit <http://www.bmig.org.uk/>

Diplopoda - Millipedes

County Co-ordinator: Helen Ikin:
helen.canids@btinternet.com

Checklist: Daws, J. & Ikin, H. 2010. *The Millipedes of Leicestershire and Rutland*. Leics. Ent. Soc. LESOPS, **23**.

Collembola - Springtails

County Co-ordinator: Alan Cann: alan.cann@gmail.com

Please email me with any questions or for assistance with identification of specimens. There is no formal VC55 Collembola checklist at present but I do keep this up to date and I am planning on publishing a formal checklist as a LESOPS at some point:
<https://collembolla.blogspot.com/p/checklist.html>

Nascent springtail atlas:
<https://collembolla.blogspot.com/p/vc55-atlas.html>

Online identification guides:
<https://collembolla.blogspot.com/p/identification-guides.html>

Ephemeroptera - Mayflies

County Co-ordinator: Steve Woodward:
grobysteve@talktalk.net

No recent checklist. A trickle of records has come through NatureSpot and from environmental consultants (via LRERC).

Odonata - Dragonflies & damselflies

County Recorder: Ian Merrill: i.merrill@btopenworld.com

Checklist: Merrill, I. 2015. *The Dragonflies of Leicestershire & Rutland*. Available from:
<http://www.naturespot.org.uk/sites/default/files/downloads/VC55%20Odonata%20Checklist%20March%202015.pdf>

Orthoptera - Grasshoppers & crickets

County Recorder (Leics.): Helen Ikin:
helen.canids@btinternet.com

County Recorder (Rutland): Phil Rudkin:
phil.rudkin@talktalk.net

For Leics, see *LRR*, **14**: 41-42. Distribution maps for Rutland appear in *RNHS Annual Report* for 2017.

Plecoptera - Stoneflies

County Co-ordinator: Steve Woodward:
grobysteve@talktalk.net

Checklist: Fawcett, J. E. 1971. Leicestershire Stoneflies. *Transactions of the Leicester Literary and Philosophical Society*, **LXV**: 33-48. Updated by: Woodward, S. 2009. Leicestershire Stoneflies and their Musical Talents. *LRR*, **5**: 21-22.

No records were received in 2018.

Hemiptera - Bugs

County Recorder: Dave Budworth: dbud01@aol.com

No recent checklist. Note that some bugs may be reported in the society bulletins under "Galls".

Phthiraptera - Sucking & biting lice

County Recorder: Frank Clark: ClrFlea@aol.com

Psocoptera - Barklice & booklice

County Co-ordinator: Helen Ikin:
helen.canids@btinternet.com

Checklist: see Woodward, S. & Ikin, H. 2013. Psocoptera (Barkflies) in VC55. *LRR*, **9**: 21-22.

Thysanoptera - Thrips

County Co-ordinator: Ivan Pedley: ivan.pedley@gmail.com

Coleoptera - Beetles

County Co-ordinator: Graham Finch:
finchgraham1@gmail.com

Checklist: Finch, G. L. 2015. *An annotated Checklist to the Beetles of VC55*.
<http://www.naturespot.org.uk/sites/default/files/downloads/Checklist%20of%20the%20beetles%20of%20VC55.pdf>

Updates have appeared in recent editions of *LNC Heritage*, *LES Newsletter* and *LESOPS*.

Diptera (part): Crane-flies & allies

Families: Tipulidae, Cyndrotomidae, Pediciidae, Limoniidae

County Recorder: John Kramer:
john.kramer@btinternet.com

Checklist: Kramer, J. 2011. *The Craneflies of Leicestershire and Rutland (VC55)*. Leics. Ent. Soc. LESOPS, **26**. Updates in recent editions of *LES Newsletter*.

Diptera (part): Stilt & stalk flies

Families: Micropezidae, Tanypezidae

County and National Recorder: Darwyn Sumner:
darwyn.sumner@ntlworld.com

Diptera (others): Various flies

Families: Syrphidae (Hoverflies), Stratiomyidae (Soldierflies), Dolichopodidae (Long-legged Flies), Conopidae.

County Co-ordinator: Ray Morris (he may be able to help with other families too).

Checklists: Morris, Ray. 2016. A provisional checklist of VC55 hoverflies. *Leics Ent. Soc Newsletter*, **54**: 6-7.

Hymenoptera (part): Sawflies

County Co-ordinator: David Nicholls: 69-71 Church Lane, Ratby, Leics, LE6 0JF, 0116 2393159, dnicholls@naturespot.org.uk

During 2018 records of 51 sawfly species helped to expand the VC55 species list and give greater insight into their distribution. Many gardeners are most familiar with these insects as larval pests of some common garden plants. A species that may be considered a member of this group is *Pristiphora rufipes* Aquilegia Sawfly which turned up in VC55 for the first time. I found it at Rothley Brook Meadow, Glenfield (8 Aug, SK528056) with Graham Calow following up with another in his garden at Sapcote (22 Aug, SP4994) with confirmation by national expert John Grearson. According to the NBN Atlas (accessed 25 Feb 2019) there are only eight other records in the UK, all widely dispersed. A sawfly worth keeping an eye open for, as the host plant is often in gardens.

Many sawflies can be recognised through their larval activities as they may form mines or cause the development of galls. A widely-recorded sawfly leaf-miner this year in Britain was *Fenusa dohrnii* European Alder Leaf-miner, another species with an exclusive taste for a single plant species. The blotch-like mines, which are readily recognisable, were noted by Graham Calow near Croft Hill (10 Jul, SP5096) and again at Burbage Common (19 Sep, SP4495).

No checklist. Note that some sawflies may be reported in the society bulletins under "Galls".

Hymenoptera (part): Bees, wasps & ants

Excluding wasps in the sub-order Apocrita - Parasitica (ichneumons, etc.). Wasps in that group may be covered under "Galls".

County Co-ordinator: Helen Ikin: helen.canids@btinternet.com

The Ivy Bee *Colletes hederæ* has, at last, turned up in VC55, with 18 records being submitted to NatureSpot in 2018 and verified by BWARS specialists. The locations are Empingham, Oakham, Market Overton, Narborough, Stoney Stanton, Broughton Astley, Croft, Thurlaston, Aylestone, Glenfield and Breedon on the Hill.

A spider-hunting wasp *Priocnemis fennica* was found by Stephen Smith at North Farm, Shenton, SP395992 on 13 Aug 2018, in grassland by a pond. The ID was confirmed from the specimen (a female) by Mike Edwards. This is either the first or second VC record (a pre-1960 record needs investigating).

Solitary Bees and Wasps are listed in: Archer, M. E. 1990. The Aculeate Solitary Wasps and Bees (Hymenoptera, Aculeata) of Leicestershire. *Transactions of the Leicester Literary and Philosophical Society*, **84**: 9-25. Helen notes that this is out of date, several species having been added recently (some reported in recent editions of *LRR* and *Leics. Ent. Soc. Newsletter*).

Ants are covered in: Ikin, H. 2012. Provisional Checklist of VC55 Ants. *Leics. Ent. Soc Newsletter*, **47**: 3.

Lepidoptera - Butterflies

County Recorder: Richard M. Jeffery: 10 Cedar Road, Earl Shilton, Leics. LE9 7HE. Home: 01455 845112. Mob: 07803 599247. winrich168@btinternet.com

See also Facebook page: Butterflies and Moths of Leicestershire and Rutland.

I am willing to receive records throughout the year (monthly, for example) in Excel spreadsheet format, Word document, Mapmate, or even mailed in paper form. Whatever format is used, the essential information required is: date; species; quantity; site name; O.S. grid ref.; recorder's name. Any other descriptive information is useful but optional.

Any information will be gratefully received and will be of equal importance, whether it comes from transects, site surveys, casual sightings or garden records. If any moth sightings are submitted at the same time, I will forward the details on to Adrian (see below).

Lepidoptera - Moths

County Recorder: Adrian Russell: adrian@wainscot.demon.co.uk

Russell, A. 2013. *The Butterflies and Moths of Leicestershire and Rutland: Provisional List of Macromoths Recorded from VC55 (2013 Update)*. Unpublished but available from the author.

Mecoptera - Scorpionflies

See under *Neuroptera*.

Megaloptera - Alderflies

See under *Neuroptera*.

Neuroptera - Lacewings

County Co-ordinator for Neuroptera and allies: Steve Woodward: grobysteve@talktalk.net

Steve says says "I am not experienced enough to check all specimens with any certainty so I recommend that you use the National Recording Scheme if you need any identifications confirmed". <http://lacewings.myspecies.info/>

A trickle of records for common species has come through NatureSpot in 2018.

Checklist: see *LRR* **14**: 13-19.

Raphidioptera - Snakeflies

See under *Neuroptera*.

Siphonaptera - Fleas

County Recorder: Frank Clark: ClrFlea@aol.com

Checklist: Clark, F. 2006. *Fleas (Siphonaptera) of Leicestershire and Rutland (VC55)*. Leics. Ent. Soc. LESOPS, **22**.

Trichoptera - Caddisflies

County Co-ordinator: Ray Morris: ray@cactusbob.net

Checklist: Morris, R. 2015. The caddisflies (Trichoptera) of Leicestershire & Rutland (VC55). *Br. J. Ent. Nat. Hist.*, **28**: 133-150. See also *LRR*, **14**: 31-33.

Molluscs

County Co-ordinator: David Nicholls: 69-71 Church Lane, Ratby, Leics, LE6 0JF, 0116 2393159, dnicholls@naturespot.org.uk

A checklist, guide and key to VC55 species is available from: <https://www.naturespot.org.uk/taxonomy/term/19567>:

Fishes

County Recorder: Andrew Heaton: aheaton@ntlworld.com

The Bullhead is unusual: each year brings a handful of new records, so it is amongst the most widely-recorded fish in Leicestershire and Rutland - yet it is a rarity across the Continent and a European Protected Species. Britain is the stronghold of Bullhead populations, thus we have a special responsibility to record and protect them. A new study at Stoney Cove suggests there may be a significant number of Bullheads there, despite this deep stillwater site appearing so unlike the fish's favoured habitat of fast-flowing streams. Of other records, the identification of a Brook Lamprey nest at Shephed is welcome; rather less so was the sighting of a goldfish in Willesley Wood Lake.

A Provisional Atlas of Freshwater Fish is available from the County Recorder. A checklist dated 2016 is available at: www.naturespot.org.uk/content/species-lists-vc55

Amphibians

New County Recorder: Ben Devine: herpsrecorderVC55@hotmail.com

Following notes by retiring County Recorder: Andrew Heaton: aheaton@ntlworld.com

A Common Toad at Stoney Cove was a rare record and, pleasingly, was followed by sightings of toad tadpoles. Several examples of what appear to be newly-recognised Great Crested Newt breeding ponds were identified, such as those at Boothorpe, Shenton and Goadby Marwood.

Twenty years of studying amphibians in Leicestershire and Rutland have been documented in a comprehensive report, see [p. 25](#).

Reptiles

New County Recorder: Ben Devine: herpsrecorderVC55@hotmail.com

Following notes by retiring County Recorder: Andrew Heaton: aheaton@ntlworld.com

The lack of Slow-worm records in the last few years, especially in Rutland, has been causing some concern. Luckily, this last year has seen something of a comeback,

with records received from new sites (Saltby Airfield, Stretton Wood) and confirmation of presence at several Rutland sites. Equally welcome is the confirmation of a small Adder population surviving at Beacon Hill, and the continuing colonisation of new sites by Common Lizards, especially in the Moira area of the National Forest. Perhaps the latter are more mobile than their legless cousins!

The report mentioned under Amphibians (above) also covers Reptiles.

Birds

County Recorder: Carl Baggott: cdbaggott@gmail.com
Home tel. (evenings only) 01455 444834.

Checklist: Fray, R., Davis, R., Gamble, D., Harrop, A & Lister, S. 2009. *The Birds of Leicestershire and Rutland*. Helm. Updated by *LROS Annual Reports*.

Mammals

Other than bats and Badger.

County Recorder: Helen O'Brien: Helen.O'Brien@leicester.gov.uk

An unpublished draft was prepared by Michael Jeeves in 2007.

Bats

County Recorder: Nathalie Cossa: batrecords@outlook.com

Checklist: see Harris, J. 2013. Checklist of Bats in Leicestershire & Rutland. *LRR* **9**, pp. 6-7.

Badger

County Recorder: Pam Mynott: pamela.mynott@btinternet.com

Galls

Gall-causers belong, strictly speaking, to one of the preceding groups - especially Fungi, Mites, Hemiptera, Coleoptera, Diptera, Hymenoptera - Parasitica. Galls do, however, have their own dedicated recorders and a national recording scheme supported by the British Plant Gall Society.

County Co-ordinator: Maggie Frankum: maggiefrankum@uwclub.net

Although Maggie does not wish to gather vice-county records, she is willing to help with identification and can advise on how to submit local records to the national scheme (as well as LRERC).

Other Groups

Sue Timms has bravely volunteered to field enquiries about all the unpopular groups: Sue.Timms@leics.gov.uk

Editorial Policy

Leicestershire & Rutland Recorder is the journal of the Leicestershire and Rutland County Recorders' Network, an informal association of naturalists who record our local flora and fauna.

The purpose of the journal is to share information about biological records in our vice-county (VC, see below), to support local naturalists and to encourage newcomers to participate in biological recording.

The intention is to publish annually (though this will depend on the volunteer editor having time available).

The geographical scope is Watsonian Vice-county 55: "Leicestershire", whose boundary is (with minor deviations) the historic counties of Leicestershire and Rutland combined.

Articles or short notes will be considered for publication if they satisfy any of the following criteria:

1. Reports of significant finds/losses:
 - (a) first VC (or historic county) records and the first few subsequent records;
 - (b) new site records for designated species (national or local Red Data Book, Nationally Notable, VC Rare Plant Register, etc);
 - (c) losses of the same from the VC or a site;
 - (d) species re-found after long absence from the VC or district.

Important Note: LRR will promote good practice in recording, i.e. validation (where necessary) and proper storage of record details. Significant finds must be validated by an appropriate county recorder or national specialist. The record details (What, Where, When, Who-says-so) must be accessible. Furthermore, they should be accessible and comprehensible to a reader 100 years in the future! The best way is to print them in LRR. If they are published elsewhere, then a cross-reference should be made. If they are not published, then their whereabouts must be stated. Ideally, this will be the Leicestershire & Rutland Environmental Records Centre.

2. Distribution studies showing new information (fieldwork or desk-based):

- (a) distribution maps;
- (b) population censuses;
- (c) surveys of sites or habitats.

3. News of current and proposed recording projects.

4. Species "heading our way" to look out for.

5. Accounts of particular taxonomic groups:

- (a) VC checklists;
- (b) history of recording.

6. Accounts of sites with potential for further good records; or whose wildlife interest has been damaged.

7. Identification:

- (a) Resources available (books, web sites, apps, training courses);
- (b) ID hints for local species.

8. Fieldwork equipment and techniques.

9. News on museum natural history reference collections.

10. News on local or national societies that promote recording.

11. Processing and storage of records.

12. Biographies of notable local recorders.

13. General guidance for novices, e.g. dealing with voucher specimens, keeping records, grid references, validation, where to find help.

14. Good photographs of local species, if reliably identified.

The journal is not intended to compete with existing periodicals produced by the local societies: ornithological records properly belong in the LROS publications, for example. Priority will be given to groups that are not already covered at the VC level: mammals, reptiles, amphibians, fish, vascular plants, algae, lichens, bryophytes. It is hoped that there will be enough material on invertebrates to share between this journal and the LES publications.

Submitting Articles

Amateur naturalists, whether novice or expert, are encouraged to submit short or long articles for publication, so long as the subject matter is covered by the Editorial Policy (see above). Articles need not be "scientific" - a simple statement giving the record details of a notable observation is acceptable. Most of the recording activity in the vice-county is done by amateurs, some of whom may have little or no experience of writing an article. The editors will be pleased to help knock it into shape. Items from professionals are also welcome, as long as they are written in a straightforward, jargon-free style.

Before starting to write anything lengthy, please get in touch with the editorial team - it would be unfortunate if two authors covered the same topic and one had to be rejected! We strongly recommend authors to follow the *Guidance for Authors* paper, available from the editors. Its purpose is to avoid the time-wasting process of sending drafts back and forth to sort out details of presentation.

Electronic format is preferred, but short submissions are acceptable on paper. The best way to send articles is by email, attached as a Microsoft Word file (.doc or .docx). Otherwise, please put onto a CD, DVD, or memory stick but not floppy disc.

There is no need to set out the text or apply any formatting other than Italic and Bold. All further formatting will be done by the editors with Desktop Publishing software. For tables, please use Word's table facility - avoid using tabs or spaces to align table entries. Simple tables are better in Excel. Do not embed any illustrations in the text - send them separately.

If you want to include line drawings, maps or diagrams, please consult with the editors well ahead of the deadline to agree a suitable format. For charts created from an Excel spreadsheet, please send the spreadsheet (as .xls or .xlsx). Photographs will need to be sharp and have reasonable contrast to be considered for publication. Please send them as jpegs (attachments, not embedded in the email text), of at least 1.6 MBytes. Illustrations will need captions, sent either as a separate file or at the end of the article text.

The author will be responsible for obtaining permission to publish material (including photographs and maps) that is not his or her original work. This applies to material found on the Internet.

Articles are accepted on the understanding that the editors will have the right of reproduction in print and on the Internet.

See p. 3 for deadline.

Editor: Steve Woodward

grobysteve@talktalk.net

Assistant Editors: Rebecca Pitman, Ray Morris

The Editor, L&R Recorder
Leicestershire & Rutland Wildlife Trust
The Old Mill, 9 Soar Lane, Leicester, LE3 5DE

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