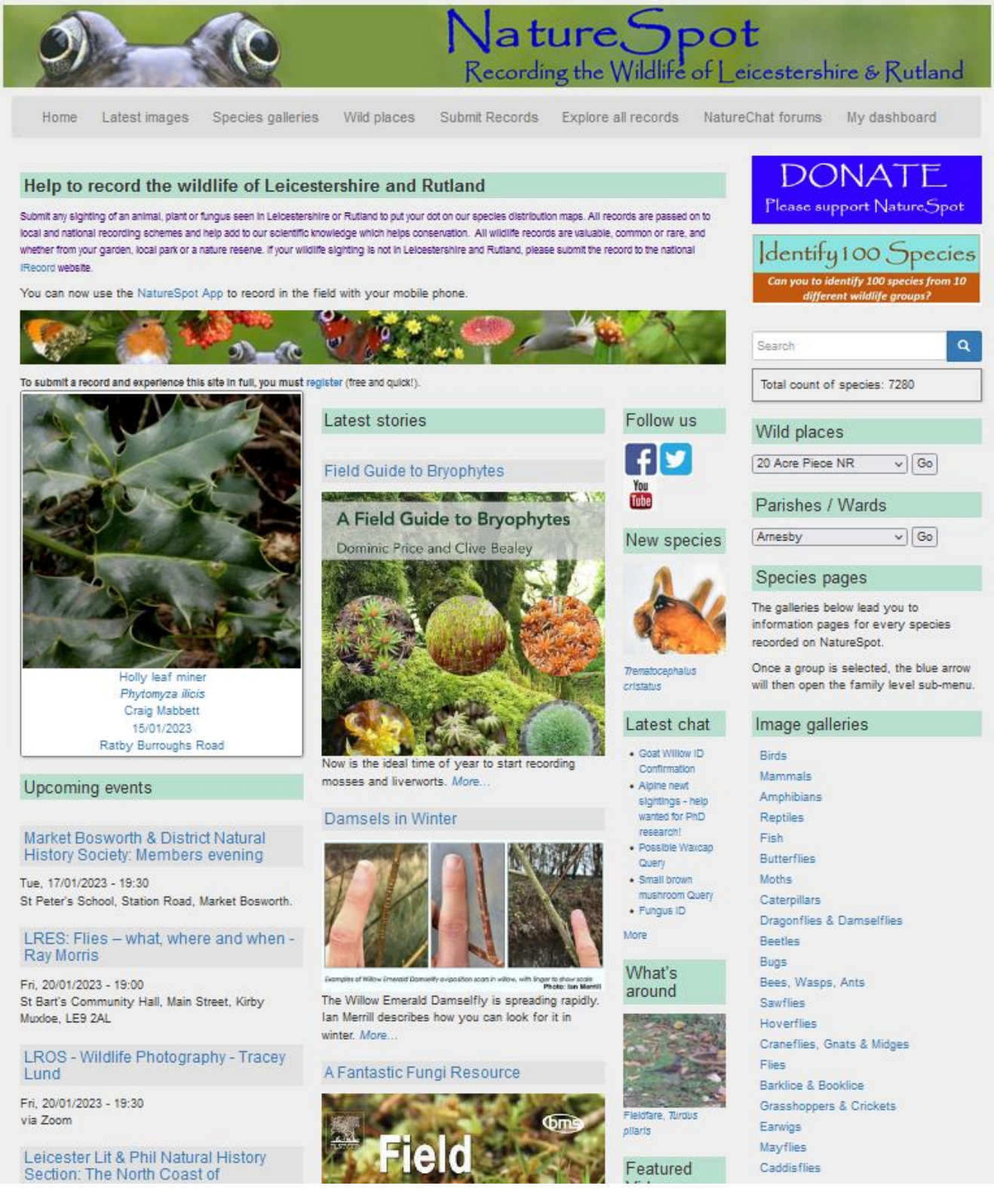
NatureSpot

2022 Annual Report



Introduction

About NatureSpot

NatureSpot is a registered charity (1138852), established in 2009 with the aim of promoting the wildlife and wild places of Leicestershire and Rutland and helping to increase public awareness of, and interest in, local biodiversity. Our aims are:

1. To help the public to identify local wildlife and to learn about the natural environment.
2. To create an online showcase of the wildlife and wild places of Leicestershire and Rutland.
3. To encourage and facilitate wildlife recording.

NatureSpot is a company limited by guarantee and has a Board of Trustees (see below) comprising local naturalists involved in wildlife conservation, biodiversity recording and local natural heritage. We are also supported by experts and professionals such as the County Recorders, the Leicestershire and Rutland Environmental Records Centre (LRERC), Leicestershire County Council, Leicester City Council and the Leicestershire and Rutland Wildlife Trust.

We are funded by grants and donations and supported by many volunteers. Our main activity is the NatureSpot website which profiles wildlife species found in Leicestershire and Rutland and facilitates wildlife recording by local naturalists, and the wider community, as a 'citizen science' initiative.

Trustees

In 2022 we welcomed three new trustees to the NatureSpot board: Ray Morris, Dr Helen O'Brien and Geoffrey Hall. Sadly, we bade farewell to John Clarkson but thank him for his tremendous support during his time with us.

Trustees 2022
Sue Timms (Chair)
Melinda Bell (Chair elect)
David Nicholls (Company Sec)
David Gould
Alan Cann
Graham Calow
Ben Devine
Mike Higgott
John Clarkson (to Sept)
Ray Morris (from Sept)
Dr Helen O'Brien (from Sept)
Geoffrey Hall (from Sept)

Report from the Chair of Trustees

NatureSpot had another excellent year for records, and on behalf of all the Trustees I would like to thank everyone who sent in records last year. Our thanks also go to those who gave up their free time to verify and check records for us, and to all our partners who supported NatureSpot in 2022.

As climate change becomes an increasing reality, your data is more important than ever. On a very cold day in January with a sprinkling of snow on the ground, it's hard to recall that 2022 was the warmest year on record for the UK, with a record-breaking 40°C broken for the first time since recording began. July saw extreme heat, and rainfall was below average, making 2022 one of the driest years for many parts of the UK. Leicestershire and Rutland were no exception – a high of 39°C (that's over 100°F) was reported in Leicester on 19th July 2022.

The impact of this on our wildlife is hard to predict – but one thing is certain; the more data we have on species in Leicestershire and Rutland, the more we can begin to understand what climate will mean for the wildlife in our area and in the UK. All NatureSpot's records are added to the National Biodiversity Network and contribute to knowledge about wildlife in the UK. Distribution patterns for many of species are changing as they spread northwards and westwards - so keep sending in your records and be on the look-out for new species turning up!

As a registered charity, NatureSpot is governed by a Board of Trustees. As I stand down following my term as Chair, I am very happy to hand over to Melinda (Min) Bell to steer NatureSpot through these challenging times.

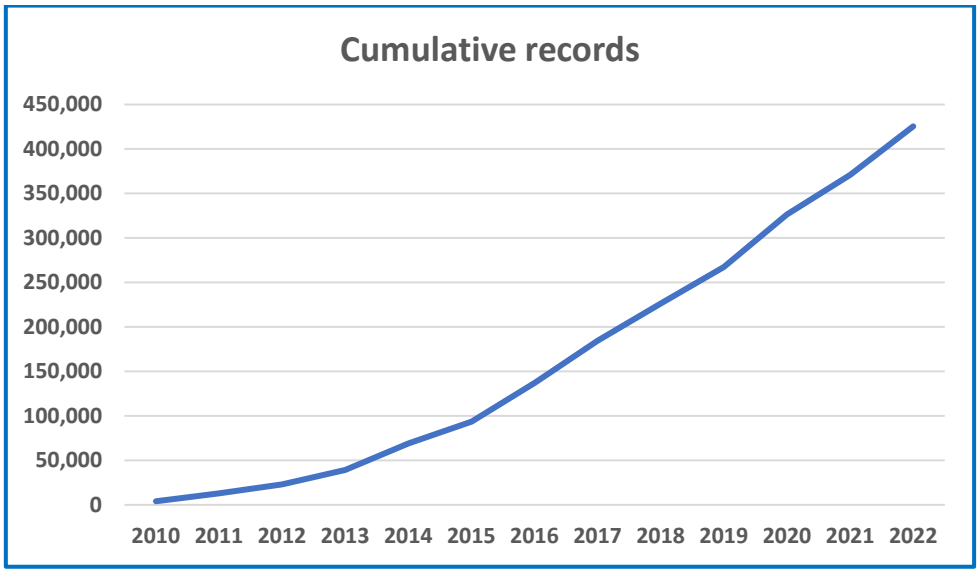
Sue Timms, January 2023

Wildlife Recording

2022 Summary

54,451 records were submitted in 2022, a 22% increase from the previous year, boosted by several thousand moth survey records. This figure is for vice-county 55, the established recording boundary for Leicestershire and Rutland, as NatureSpot only collects data for this area.

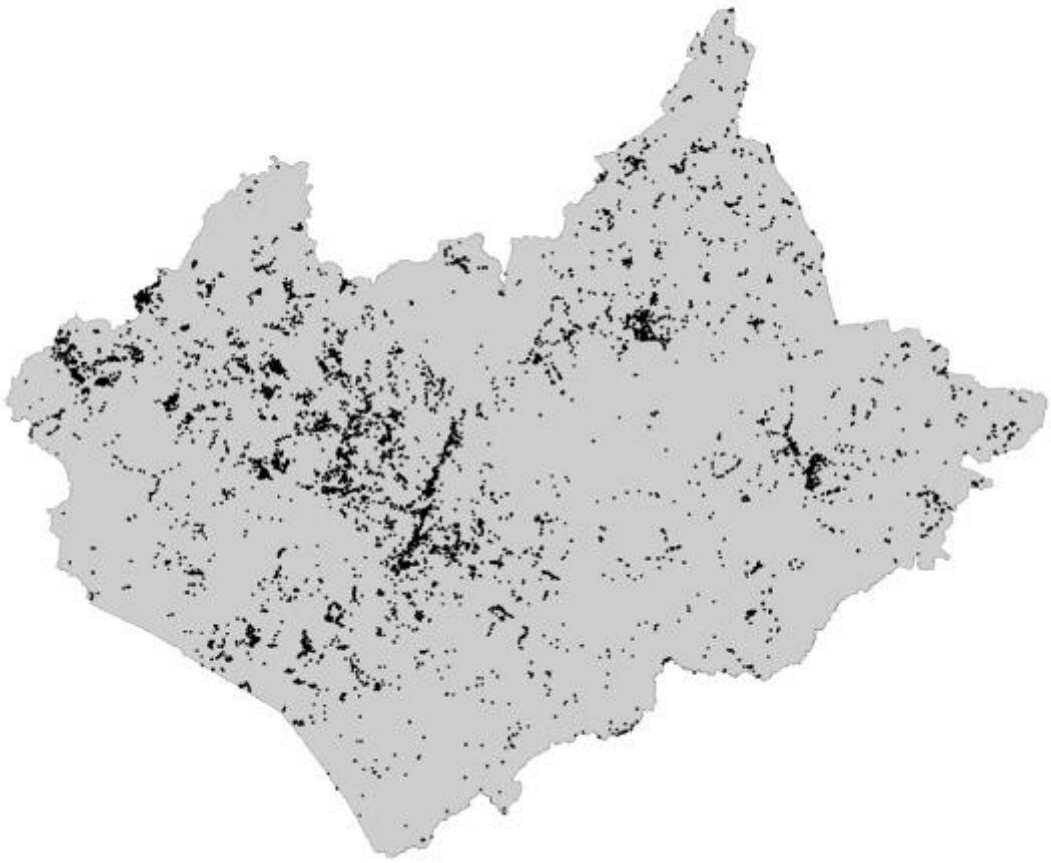
In total, 424,418 records for Leicestershire and Rutland have now been received through NatureSpot's online portal - a major contribution to the scientific knowledge of wildlife in the area.



Record distribution

As with most citizen science biological recording, there is a strong recorder bias to the NatureSpot data, with a pattern that is similar to that seen for all VC55 record data, indeed the same pattern exists for nearly all taxon groups. The most recorded areas are the city of Leicester, Charnwood Forest, Rutland Water and Melton. The least recorded areas are the south-east and western areas of Leicestershire. The reasons for this bias are many, but include where people live and where there are interesting wildlife sites to visit.

Work is underway, led by the Centre for Ecology and Hydrology (CEH) to develop statistic modelling tools that enable the data to be analysed in a way that compensates for the uneven distribution. In addition, NatureSpot is developing plans to encourage more recording from these less visited areas.



Distribution 'dot' map of 2022 records submitted to NatureSpot

Verification

Every record submitted to NatureSpot is individually checked by an expert and only accepted where there is satisfactory evidence to confirm the species identity. This evidence can comprise images, a description of key features or knowledge of the recorder's skills and competence. In 2022, 98% of submitted records were accepted and a further 0.7% considered plausible. This is slightly higher, but a broadly similar pattern to previous years.

NatureSpot uses the verification system developed by the Biological Recording Centre (BRC) on iRecord, the national online recording system. NatureSpot is part of the iRecord family with some sharing of software. All NatureSpot records are securely held on the BRC warehouse server. This verification system offers verifiers five options: confirmed correct; assumed correct, plausible; unable to verify; incorrect. In addition, records may be queried, seeking more information before a decision is made, or forwarded to an expert for assessment.

A major effort is made each year to ensure every record is reviewed and verified by the year end. This ensures that all contributions from recorders are recognised and incorporated into the final dataset ready for distribution.

A further benefit of NatureSpot being linked with iRecord and the BRC is that the NatureSpot records are made available to national experts who help with verification. In 2022, 3,274 (6%) records were verified by these national experts. The remainder were verified by local experts appointed by NatureSpot, and assisted by County Recorders and other specialists.

The number of national verifiers recruited by iRecord has generally been growing and last year 61 of these helped with the verification of NatureSpot data, including well known experts in their fields such as Roger Morris, Gavin Broad, Barry Warrington, Joe Botting, Rob Edmunds, Helen Roy and Tristan Bantock.

Evidence

High data quality is a key objective for NatureSpot. Verifiers are asked to adopt a cautious approach and to carefully assess the evidence presented with each record submission.

Though it is not necessary to submit images with all records, particularly for the more common species, it does help verifiers to confirm the identification. Records of unusual species or from an unfamiliar recorder do normally need an image to allow a correct verification decision, though confirmation from a known expert or a satisfactory description of the identification method may be sufficient. Records from known recorders may also be accepted based on their experience and track record.

The verification status can be, and is, amended should a mistake be realised, or further information becomes available. Feedback from County Recorders when the records are distributed at the year-end is always highly valued in this regard.

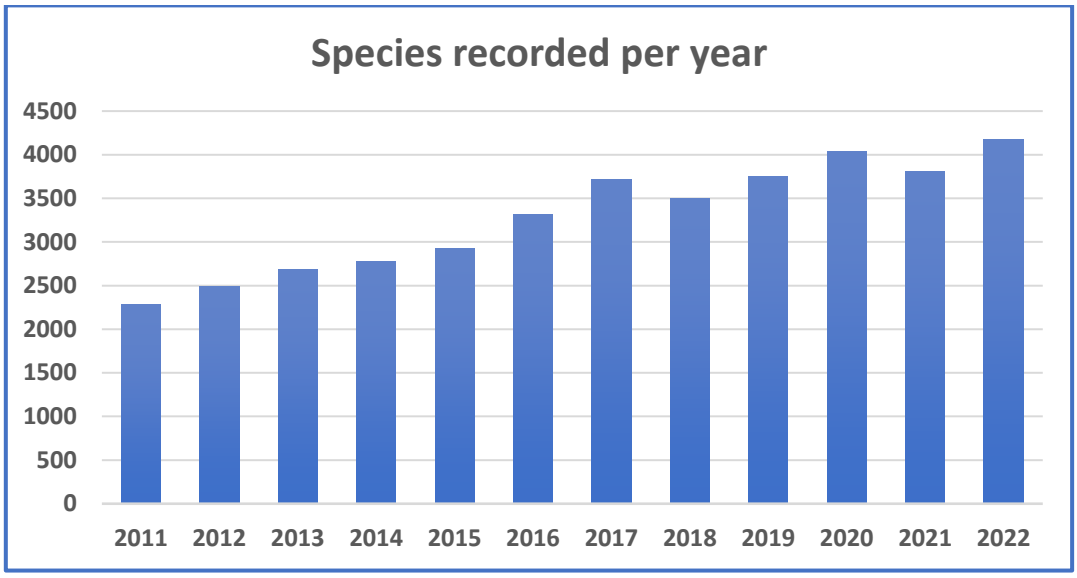
NatureSpot has developed a number of initiatives to help and guide recorders and help improve data quality. The species account aims to include a detailed description of the key features needed to identify that species, including reference to similar species with which it could be confused. Every species has been given a RAG (Red / Amber / Green) rating representing the identification difficulty. Recording advice also states the evidence needed with the submission for the record to be accepted. Both the RAG rating and the recording advice appear on the recording form when that species is selected as a reminder to the recorder. The updating and improvement of this information is an ongoing process.

Data distribution

At the year end, NatureSpot data is incorporated into the ORCA database used by the Leicestershire and Rutland Environmental Records Centre for all VC55 data. The data is also shared with all local and some national recording schemes, as well as a number of land managers such as the Leicestershire and Rutland Wildlife Trust and the National Forest. In addition, all NatureSpot accepted records are published on the National Biodiversity Network Atlas with an update made each month.

Species

The number of different species recorded on NatureSpot continues to grow. In 2022, records of 4,174 different species were submitted, the highest in our history. 252 of these were species not previously recorded on NatureSpot (see New Species below).



The table below lists the taxon groups of the species records received in 2022. Moths top the list as usual, thanks to the popularity of garden moth trapping and this year boosted by a major moth survey of NE Leicestershire by Pete Leonard. NatureSpot has a bulk import tool that can allow large datasets or previously unshared data to be easily added. 68% of all records are from the three most recorded groups of moths, birds and wildflowers, the remainder are widely spread amongst all other groups in a similar pattern to previous years.

Taxon Group	Record no.	%
Moths	24114	44.3%
Birds	7784	14.3%
Wildflowers	5188	9.5%
Butterflies	2166	4.0%
Fungi	1642	3.0%
Beetles	1580	2.9%
Bugs	1520	2.8%
Mammals	1460	2.7%
Trees, Shrubs & Climbers	1209	2.2%
Bees, Wasps, Ants	936	1.7%
Flies	896	1.6%
Hoverflies	826	1.5%
Dragonflies and Damselflies	779	1.4%
Spiders	638	1.2%
Grasses, Rushes & Sedges	609	1.1%
Slugs & Snails	450	0.8%
Mites, Ticks & Pseudoscorpions	389	0.7%
Craneflies, Gnats & Midges	329	0.6%
Lichens	226	0.4%
Mosses & Liverworts	210	0.4%
Sawflies	201	0.4%
Caddisflies	180	0.3%
Grasshoppers & Crickets	163	0.3%
Ferns & Horsetails	162	0.3%

Amphibians	136	0.2%
Woodlice, Crustaceans	118	0.2%
Springtails & Bristletails	101	0.2%
harvestman (Opiliones)	99	0.2%
Lacewings & Scorpionflies	55	0.1%
Slime Moulds	54	0.1%
Centipedes & Millipedes	48	0.1%
Reptiles	41	0.1%
Fish	32	0.1%
Algae, Bacteria, Virus	24	0.04%
Earwigs	21	0.04%
Barklice & Booklice	18	0.03%
Mayflies	17	0.03%
Worms	12	0.02%

The most recorded species in 2022 are listed below. The list is dominated by moths and birds, as is commonly the case. The species highlighted in green are new to the top 30 this year.

2022 Top 30	Record no.	Taxon
Large Yellow Underwing	396	Moths
Mallard	357	Birds
Mute Swan	328	Birds
Setaceous Hebrew Character	300	Moths
Brimstone Moth	292	Moths
Light Brown Apple Moth	271	Moths
Common Wainscot	268	Moths
Gadwall	258	Birds
Eastern Grey Squirrel	239	Mammals
Red Fox	239	Mammals
Tufted Duck	238	Birds
Lapwing	228	Birds
Woodpigeon	227	Birds
Small Tortoiseshell	224	Butterflies
Willow Beauty	209	Moths
Common Marble	206	Moths
Lesser Yellow Underwing	204	Moths
Square-spot Rustic	199	Moths
Blackbird	196	Birds
Vine's Rustic	195	Moths
Black-headed Gull	192	Birds
Teal	191	Birds
Green Carpet	190	Moths
Moorhen	184	Birds
Straw Dot	180	Moths
Flounced Rustic	179	Moths
Dark Arches	178	Moths

Heart & Dart	177	Moths
7-spot Ladybird	174	Beetles
Flame Shoulder	173	Moths

New species

252 'new' species were recorded during 2022 and added to the NatureSpot galleries. The selection below is a small sample of these:

Allantus rufocinctus
Sawfly

Pterocallis maculata
Green-barred Alder Aphid

Orchestes testaceus
Jumping Weevil

Alabonia geoffrella
Moth

Polygala calcarea
Chalk Milkwort

Euura salicis
Sawfly larva

Bryum pseudotriquetrum
Marsh Bryum Moss

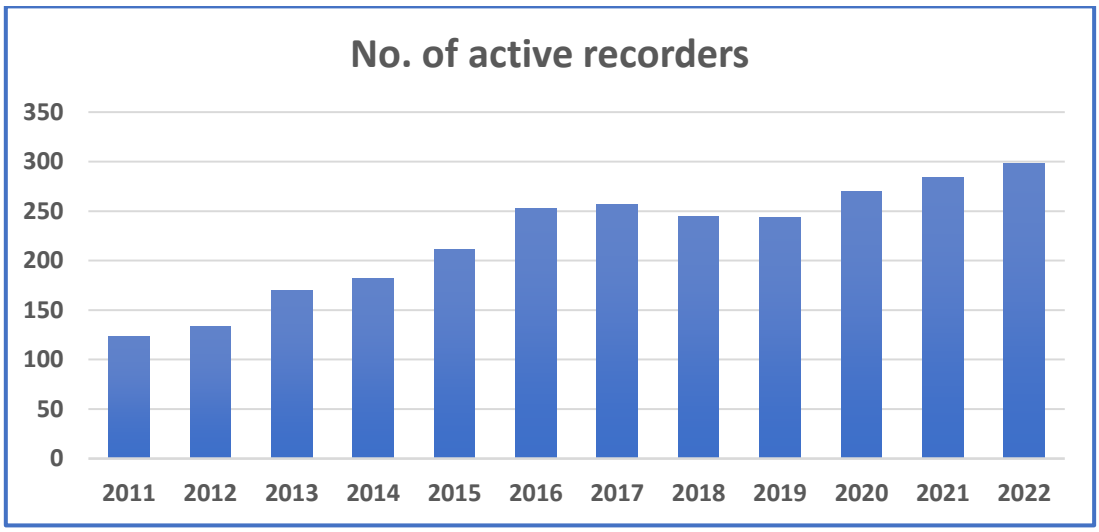
Cyathus striatus
Fluted Bird's Nest

Ptychoptera lacustris
Phantom Cranefly

Image credits *(left to right from the top): Ian Harding/ Peter Smith/ Graham Finch / Tim Sexton/ Peter Smith / Graham Calow / David Nicholls/ Catherine Horrell/ David Nicholls.*

Recorders

The number of active recorders submitting wildlife records to NatureSpot in 2022 was the highest to date (298). Of these, 100 were new recorders submitting records for the first time.



The total overall number of different contributing recorders is 1652.

NatureSpot tends to receive regular submissions from core recorders rather than lots of occasional submissions from the general public. This has the benefit that NatureSpot verifiers build up their knowledge of the recording abilities and reliability of individual recorders, whilst the recorders develop their identification skills and interests through regular dialogue. This said, part of NatureSpot's mission is to facilitate more recording so it is very pleasing to see so many new contributors.

Whilst it is necessary to be registered with NatureSpot to submit records, not all registered users actively record. We know that many users use the site as a source of information, including many that would submit records, but they live outside of Leicestershire and Rutland.

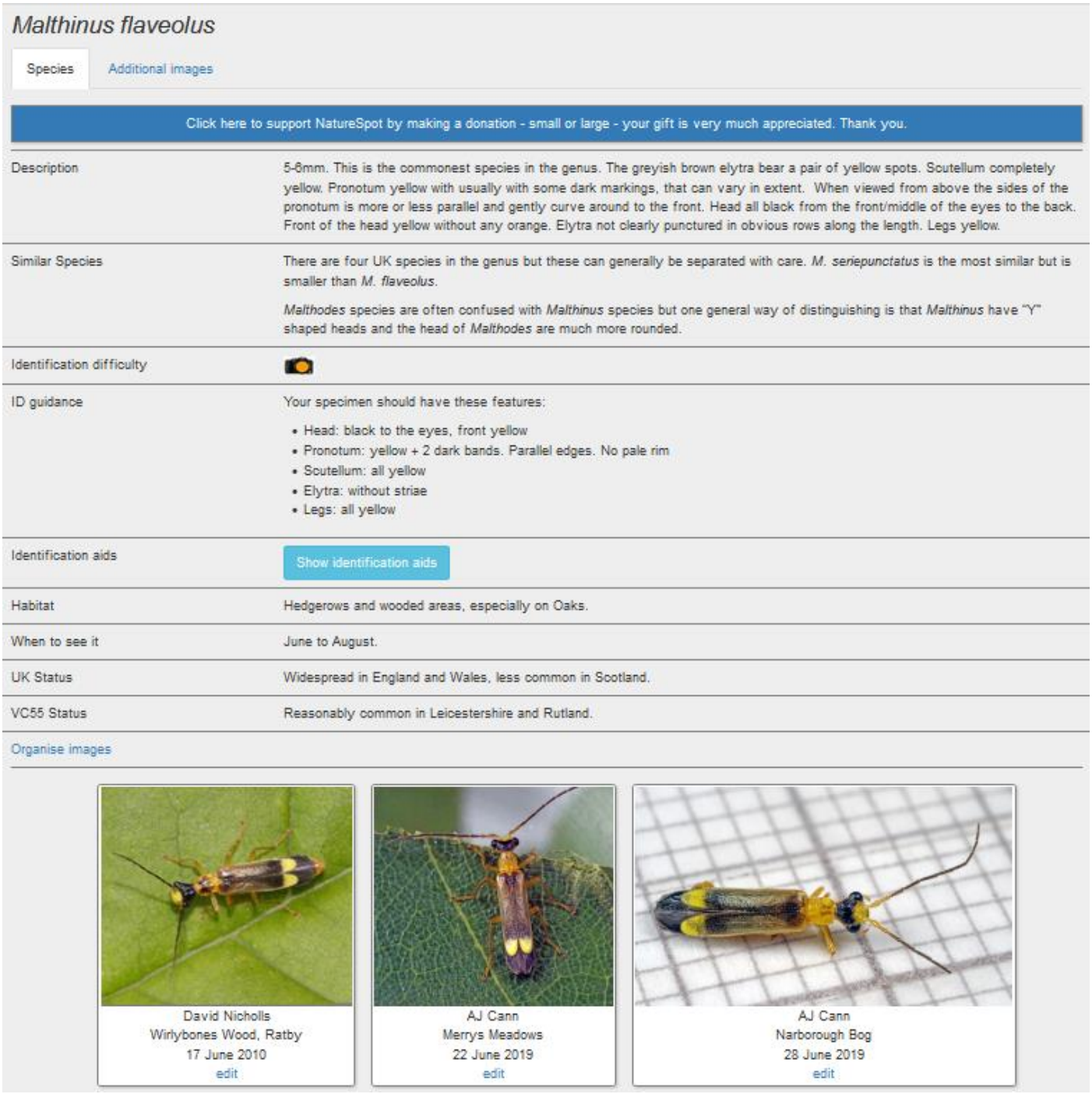
This year, NatureSpot launched the 100 Species Challenge as part of its partnership work with the Saving The Saffron Brook project. By the end of 2022, 36 people had signed up. This included a few group applications, particularly from school classes.

Species Galleries

The total number of Leicestershire and Rutland different taxa recorded on NatureSpot at the end of 2022 was 7,550. This includes a number of aggregate species plus a few higher taxon entries, such as genus, so the number of full species featured was 7,279 at the end of 2022. New species are regularly added and though it is expected that this number diminishes over time, due to the majority of resident species have already been included, several hundred continue to be added each year.

Every species/taxon recorded has an information page in the galleries, illustrated with the best images submitted by recorders (all taken in Leicestershire and Rutland). Where possible, images are selected that show the key identification features and also represent different colour forms, sex differences and juvenile stages.

The illustration below provides an example (in this case for the beetle *Malthinus flaveolus*).



Malthinus flaveolus

Species | Additional images

Click here to support NatureSpot by making a donation - small or large - your gift is very much appreciated. Thank you.

Description	5-6mm. This is the commonest species in the genus. The greyish brown elytra bear a pair of yellow spots. Scutellum completely yellow. Pronotum yellow with usually with some dark markings, that can vary in extent. When viewed from above the sides of the pronotum is more or less parallel and gently curve around to the front. Head all black from the front/middle of the eyes to the back. Front of the head yellow without any orange. Elytra not clearly punctured in obvious rows along the length. Legs yellow.
Similar Species	There are four UK species in the genus but these can generally be separated with care. *M. seriepunctatus* is the most similar but is smaller than *M. flaveolus*. *Malthodes* species are often confused with *Malthinus* species but one general way of distinguishing is that *Malthinus* have "Y" shaped heads and the head of *Malthodes* are much more rounded.
Identification difficulty	
ID guidance	Your specimen should have these features: • Head: black to the eyes, front yellow • Pronotum: yellow + 2 dark bands. Parallel edges. No pale rim • Scutellum: all yellow • Elytra: without striae • Legs: all yellow
Identification aids	Show identification aids
Habitat	Hedgerows and wooded areas, especially on Oaks.
When to see it	June to August.
UK Status	Widespread in England and Wales, less common in Scotland.
VC55 Status	Reasonably common in Leicestershire and Rutland.

Organise images

David Nicholls
Wirlybones Wood, Ratby
17 June 2010
edit

AJ Cann
Merrys Meadows
22 June 2019
edit

AJ Cann
Narborough Bog
28 June 2019
edit

The species pages are constantly being revised and added to in order to provide accurate and useful information, particularly on how to reliably identify the species. Where appropriate, we are adding ***Identification Aids*** – which is an expandable field allowing images, illustrations and text to be added to help identify the species and distinguish it from similar species it could be confused with.

Wild Places and Parish Pages

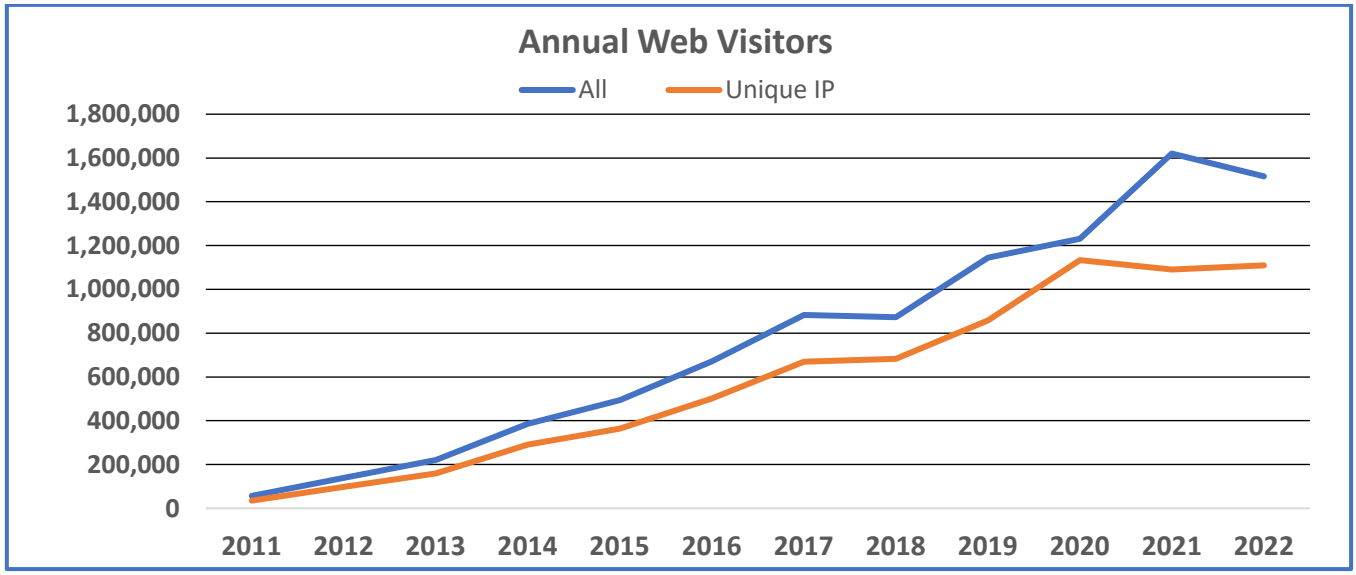
Other key elements of the NatureSpot website are the feature pages for a defined local area, which showcase the wildlife of that area. This is done in two ways, firstly for **Parishes** (or wards in the city) and secondly for '**Wild Places**' – sites of known or potential wildlife interest with public access. Records and images for each parish/site are automatically displayed on these pages creating a dynamic and up to date account of recent wildlife sightings. Many of these site/parish pages are administered by local volunteers.

A significant number of new wild place and parish pages were also set up during the year. At the end of 2022, we featured:

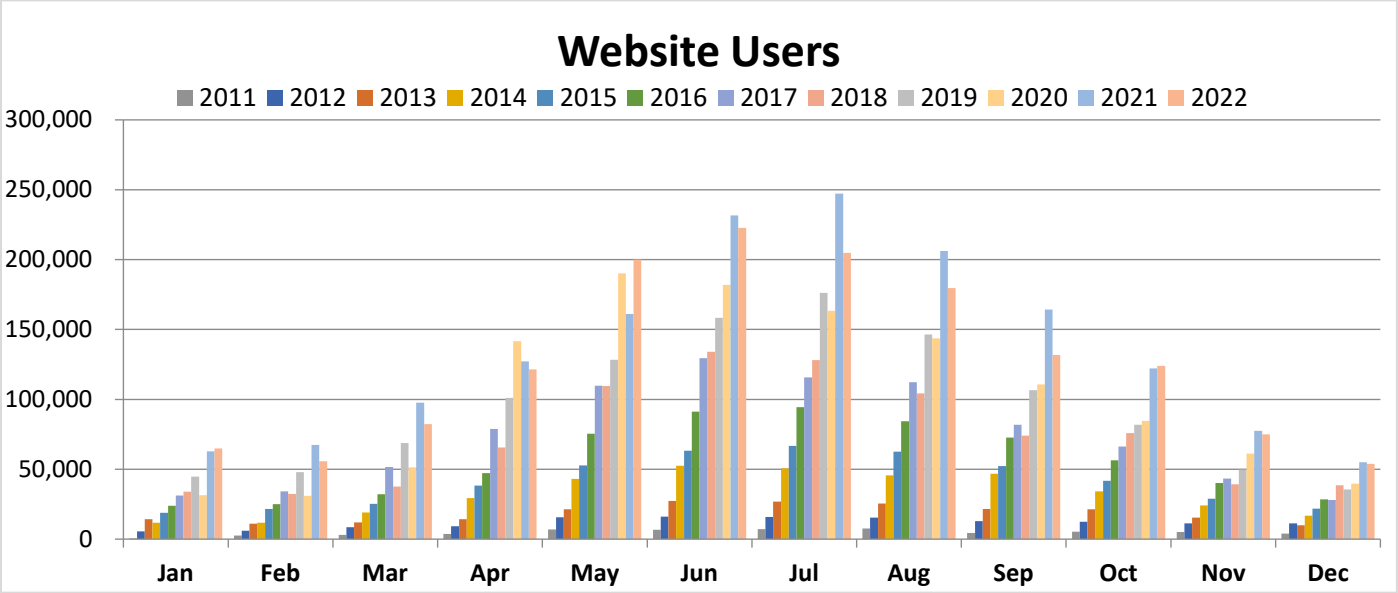
Parish / Wild Places	2022
No. parish pages	76
No. Wild Places	492

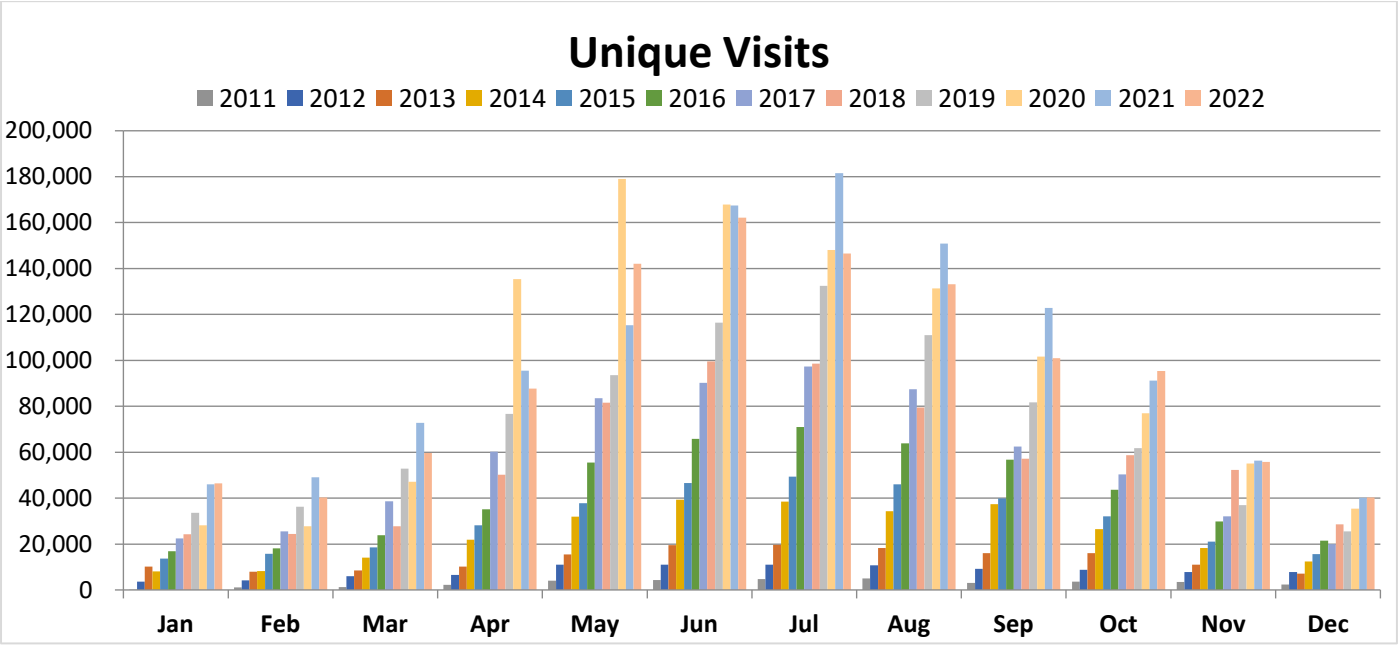
Website visitors and Social Media

Visits to the NatureSpot website are monitored using Google Analytics. This records many details of each visitor, including: country of origin, their operating system, the search engine used and the search term entered. It also identifies 'unique' visitors – access from computers with different IP addresses.



Visitor numbers remain high and at similar levels to last year. There is a distinct seasonal pattern to web visits, peaking in June/July. There is a similar seasonal pattern of record submissions due to flowers and invertebrates being more numerous and more easily seen in the warmer months.





In 2022 the NatureSpot website received over 3 million page views. 67% of these visits came from the UK, the rest coming from a wide range of countries or territories worldwide.

2022
1. United Kingdom (67%)
2. United States (17%)
3. China (2%)
4. Canada (2%)
5. Germany (2%)
6. Andorra (1%)
7. Ireland (1%)
8. France (1%)
9. Netherlands (1%)
10. India (1%)

Users accessed the website in the following ways:

Sources	2022
Web search	76.6%
Direct	17.6%
Social media	4.0%
Other	1.8%
Technology	**2022**
Mobile Phone	58%
Desktop Computer	38%
Tablet	4%
Social media referrals	**2022**
Twitter	61%
Facebook	14%
Reddit	23%

Twitter / Facebook

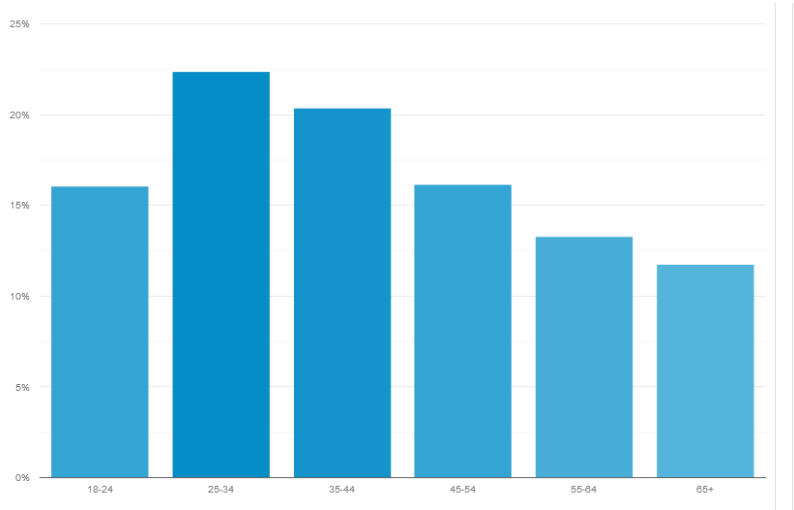
Over the year, the NatureSpot Facebook group grew from 300 to over 500 members, a 79% increase. The NatureSpot Twitter account now has 944 followers, a 12% increase over the year, with an annual reach of nearly a quarter of a million views.

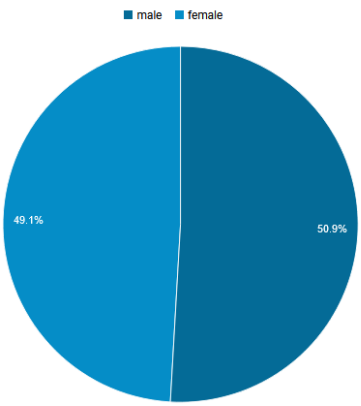
YouTube

Although we published fewer videos in 2022 than in the previous two pandemic years, the NatureSpot YouTube channel grew by 45% to 479 subscribers and was watched for over 2000 hours.

Demographics

The age range and gender of NatureSpot users in 2022 (according to Google Analytics data) were:





Feedback

Comments from site users are almost all very positive, with a few examples given below.

- *Keep up the fantastic work you're doing with NatureSpot - it's becoming the envy of wildlife recorders in every other county!*
- *Your site is incredibly useful on a national level. Other local groups could try to replicate it but so far I'm not aware of any coming remotely close. I can't praise this site enough.*
- *It's a great resource. I know several people who regularly use the species galleries pages who don't live in Leicestershire or Rutland and wish their county had something similar.*
- *I absolutely adore your website. It is my first point of call when I want to find good images of certain species and a regular for me to scour to see if I can identify what I have photographed.*
- *I have been following this site for many years, and have found it an invaluable reference source for identifying species of all kinds. Excellent work. One of the very best out there! Thank you!*
- *This is such a valuable resource to help me, as a relative newcomer, to identify species. It's terrific having so many photos for each species to show the variation, angles, etc. I am really grateful for all the work that you have put into this site - thank you!*
- *An excellent resource for identifying species in neighbouring Nottinghamshire. Thank you, your hard work is appreciated. (I have made a donation!)*
- *I'm not in Leics & Rutland but this is a fantastic resource for wildlife ID anywhere in the UK (at least). Thank you!*
- *Although I live (against my will) in the London area, I go on trips to look at wildlife every chance I get. This is by far the best website for identifying UK species.*

Support for local wildlife groups and projects

We provide a web platform for a number of local wildlife groups and projects, including those listed below, helping to promote their work and publications. We also allow these groups to publicise their activities directly onto the NatureSpot events listings.

- Leicestershire Entomological Society
- Leicester Amphibian and Reptile Network
- Leicestershire Moth Recorders
- Leicestershire and Rutland Mammal Group
- Market Bosworth & District Natural History Society
- Literary & Philosophical Society – Natural History Section
- Leicestershire and Rutland Badger Group
- Road verge biodiversity project

If you would like to use the NatureSpot web platform to publicise and promote your group, project or events then do get in touch.

Developments in 2022

Partnerships

NatureSpot has three core partners: Leicestershire County Council, Leicester City Council and Leicestershire and Rutland Wildlife Trust. In addition, we work closely with a wide range of district and parish councils as well as most of the natural history societies in the two counties. We also work closely with the Centre for Ecology and Hydrology to share both data and technology with the national iRecord system. NatureSpot is also a partner with the National Biodiversity Network.

Projects

We have continued to work in partnership with Leicestershire County Council in support of the **Urban Verges Biodiversity project**. This initiative is engaging and supporting parish councils in taking over the management of selected verges in their areas with the aim of improving their biodiversity value. NatureSpot's role has been to undertake a site survey of the existing flora and to use this data to advise parish councils on management options. We also delivered a number of training events for volunteers engaged in the project. This work will continue in 2023. More details are available here.

We also produced over 20 **guides to common wildlife** found in Leicestershire. These are available as free downloads on the NatureSpot website.

We are also partners with the National Forest Company to support the **Charnwood Forest Landscape Partnership Scheme**. NatureSpot provides wildlife recording support and help with data management.

In 2022 we also became a partner in the **Saving the Saffron Brook River Restoration Scheme**. This has involved delivering a programme of **guided walks and training events**, and also the development of the **100 Species Challenge** – a fun, engagement activity which helps participants learn to identify 100 different species across a range of different wildlife groups.

During 2022 we added new functionality to aspects of the website. This included adding latest images and record details to all the species pages, improving the format of how we presented Wild Places on our maps and introducing a filter to inform recorders if they are trying to submit a record from outside of Leicestershire and Rutland. Other developments included numerous technical fixes and improvements to enhance performance, address various issues and to improve the visitor experience.

Further Information

If you would like further information or an explanation of anything included in this report, please contact:

David Nicholls
dnicholls@naturespot.org.uk