

Spider Recording Scheme News

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SRS website: <http://srs.britishspiders.org.uk>

Editorial

by Matt Prince

Thank you to all those who have submitted records so far. Please continue to submit records to your Area Organisers as before, and Area Organisers please synchronise your mapmate records with my CUK "brb". Records in other electronic formats, such as Excel spreadsheets are also acceptable.

I am pleased to announce that Michael Davis has taken over as Area Organiser for East and West Gloucester VC33 and VC34, his mapmate CUK is "fa4". Jeremy Poole (jeremypole20@hotmail.com) takes over as Area Organiser for Dorset VC9.

I apologise to John Partridge who has retired from his role as Area Organiser for Hereford (36) and Worcester (37) and not taken the latter back up as I erroneously reported in the last edition, sorry John!

Hayley Wiswell is also retiring from her vice county role for VCs: 96, 97, 103 and 104.

These vice counties still require organisers: South (3) and North (4) Devon, Berkshire (22), Hereford (36), Worcester (37), Staffordshire (39), Leicestershire and Rutland (55), Nottinghamshire (56), Derbyshire (57), Channel Islands (113), East Inverness-shire (96), West Inverness-shire (97), Mid Ebudes (103) and North Ebudes (104).

As noted last time, please contact me if you are interested in taking over the Area Organiser role for any of these vice counties, all rich in interesting spiders, all under recorded, and all would benefit from even the most basic point of contact. Great experience, whilst valued, is not essential, as there is a network of experts that can help with difficult determinations, conservation issues, etc.

Please help future issues by sending to Richard Gallon SRS News articles of any length on your interesting discoveries and observations.

The Discovery of a Population of *Theridion pinastri* in Bristol, a New Species for the South West of England

by Michael Davis

Theridion pinastri (L. Koch, 1872) was first found in Britain in 1977 (Murphy & Murphy, 1979) and there has been increasing evidence of its range expanding within South East England over recent years (S.R.S. website, 2021).

On the 20th August 2021, while picking damsons on Royate Hill Local Nature Reserve (LNR) in Eastville, Bristol, I noticed a theridiid spider crawling over the back of my hand. I had no hand lens or collecting tube with me but was able to take photos before releasing the spider back where I found it (Fig. 1). On closer inspection of the photographs, I could see the spider had a plain brown cephalothorax, strongly annulated legs and a striking red abdominal median band terminating in a bold white mark anteriorly. After referring to *Britain's Spiders* (Bee *et al.*, 2020) and then seeking confirmation on the Facebook



Figure 1. *Theridion pinastri* found at Royate Hill Local Nature Reserve, Bristol on 20th August 2021. © Michael Davis.



Figure 2. *Theridion pinastri* epigyne from specimen collected in Greenbank Cemetery, Bristol on 6th September 2021. © Tylan Berry.

group UK Spiders, it was concluded that the spider was very likely to be *T. pinastri*. Although potentially possible to identify from habitus alone, I was advised that a species so far outside of its recorded range would most likely require confirmation by genital determination (Tylan Berry pers. comm.).

Royate Hill LNR occupies the site of a former railway line and consists of semi-natural broadleaf woodland, dense scrub and open-ballast type habitats. It borders Greenbank Cemetery, a large Victorian Cemetery with plenty of mature trees, areas of well-maintained lawn and



Figure 3. The habitat where *Theridion pinastri* was found at Royate Hill Local Nature Reserve, Bristol. © Michael Davis.

pockets of wilder grassland areas formed more through neglect than any sort of ecologically sympathetic management plan. On the 6th September 2021, whilst out looking for spiders in the cemetery, I beat a second probable *T. pinastri* from an oak (*Quercus* sp.) about 200 m from where the first individual was found. This one was a mature female which I was able to collect and send to Tylan Berry who confirmed that the spider was indeed *T. pinastri* (Fig. 2). On the 19th September 2021, I found a third individual. This one was in the cemetery again and was beaten from the lower branches of a larch (*Larix* sp.).

All three individuals caught were taken from the lower branches of trees. This fits well with where *T. pinastri* has previously been collected at other locations (Carr & Harvey, 1996). Both specimens from Greenbank Cemetery were found in habitat with widely spaced trees surrounded by grassland. The specimen from Royate Hill LNR was taken from a damson tree (*Prunus* sp.) growing on a woodland edge bordering more open habitat (Fig. 3). Again, this is similar to the types of habitat *T. pinastri* has been regularly recorded from previously (Harvey *et al.*, 1993).

These finds provide strong evidence that there is an established population of *T. pinastri* in the east of Bristol. It will be interesting to survey similar habitats nearby to gain an idea of the extent of this population.

Acknowledgements

Many thanks to Tylan Berry for helping with identification and to Andy Pym for helping to find the second specimen.

References

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Are *Walckenaeria* Species in Danger of Extinction?

by Rainer Breitling

Evolutionary biology is a predictive science: by knowing the “family ties” of a species, we can predict its properties, those of its characters we have not yet observed. The basis for this predictive power of evolutionary knowledge is obvious: the closer related two species are, the more likely they are to share details of their anatomy, behaviour and physiology. As a result, they should also share more abstract, high-level characteristics, e.g., their vulnerability to climate change or environmental degradation. Some years ago, Gavin Thomas used this idea to identify British bird species in danger of serious population decline (Thomas, 2008; Sample, 2008). He mapped species of conservation concern onto a newly constructed detailed phylogenetic tree of British birds and identified a number of common birds to be put on an “early warning” list, species that do not currently show any signs of danger, but that have close relatives that are severely declining.

It was immediately clear that the rich datasets of the Spider Recording Scheme would be a valuable resource to try applying this idea to the British spider fauna. What was missing, however, was an up-to-date phylogenetic hypothesis, a plausible evolutionary tree of the British spiders, which combines traditional taxonomy and morphological information with the latest data from molecular genetics and cladistics. In a recent review article I have tried to fill this gap, proposing a first comprehensive working hypothesis of the relationships among all the species on the latest British spider checklist (Breitling, 2021).

When mapping various ecological variables extracted from the S.R.S. datasets onto the new phylogenetic tree, a number of familiar patterns emerged: the family Linyphiidae is clearly enriched in species of the northern regions, compared to all other families – and *Erigone* and its closest relatives (*Prinerigone*, *Mermessus*, *Semljicola*, *Halorates*, *Mecynargus*, *Wabasso*) share a particularly strong northern tendency in their distributions. This is a well-known and expected trend, confirming that the general analysis is plausible. Perhaps more surprising is that *Lepthyphantes sensu lato* (including all the former members of the genus in its broadest sense) shows an almost equally strong northern affinity. On the other hand, Thomisidae as a group is strongly enriched in species of the south of England, even more so than the typical sun-loving Salticidae.

But the real surprise came when looking for regions of the tree enriched in species of potential conservation concern, in particular widespread species showing an unexpected lack of recent records: here, *Walckenaeria* (and its supposed close relatives *Evansia* and *Moebelia*) shows a statistically highly significant enrichment of species with a high “contraction index”, i.e. being noticeably under-recorded in recent years. There may be an innocent explanation for this pattern: perhaps particularly active experts in this group retired some years ago, leading to an apparent decline in new records; or perhaps the typical habitats of these species have been less actively surveyed in recent years, because they were already explored to saturation. But, of course, it is also possible that there is a real pattern of potential conservation concern.

The analysis in Breitling (2021) used only high-level aggregated data from the S.R.S. website, and the results

are at best tentative and suggestive. I would be interested to hear if anyone has better ideas how to explain the observed pattern in *Walckenaeria* and its relatives, but also similar trends in other groups of linyphiids, such as the members of the *Savignia* group. An explanation would also be required for the opposite pattern seen in Tetragnathidae plus Mimetidae, which are substantially enriched in species with a particularly *low* predicted vulnerability, i.e., these species are more widely distributed and more recently recorded than other spiders. Of course, ultimately, a more detailed look at the spider records, both in the S.R.S. and in personal collections, might provide stronger evidence to refute or confirm the high-level analysis and allow us to decide whether *Walckenaeria* is really on a slow and consistent decline across Britain. Spiders on a whole have so far largely withstood the dramatic global declines seen in their insect prey – could this be the first example of an exception? Or is it merely an artifact of the statistical analysis that we don't need to worry about?

References

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***Marpissa muscosa* in Wiltshire**

by Tone Killick

On the 20th August 2021 I was working in Ashton Keynes in Wiltshire (SU049940) relocating a family to their new home. Whilst I was in the dining room, I looked up at the ceiling and in the corner spied a large spider. I didn't have my glasses on but, through the blurred vision of age, I could clearly make out the shape of a jumping spider and it was big! I called one of my colleagues, "Oi – Beetlejuice! Come here mate!" and yes, he is called Beetlejuice for a good reason. I asked him to keep an eye on the spider whilst I ran off to the truck to grab a tube. I



Figure 1. *Marpissa muscosa* adult male from Wiltshire. © Tone Killick.



Figure 2. *Marpissa muscosa* adult male from Wiltshire. © Tone Killick.

was very excited at this point as I already had a good idea what the species was.

I returned with the tube and Beetlejuice had done his job well, pointed to the spider and said, "I'm getting a haircut Tuesday"; did I not say he was called Beetlejuice for a reason? I grabbed a chair and tapped the spider with a small brush, causing it to drop and dangle by its silk safety line. It was then a case of me gently raising the tube to collect the spider. I immediately checked it under a 10x magnification hand-lens and my suspicions were correct, I had found my first *Marpissa muscosa*, commonly known as the "Dining Room Ceiling Jumping Spider". Aww I jest, the actual vernacular is Fencepost Jumping Spider (Figs. 1–2). These are in joint first place with the Nationally Rare *Marpissa radiata* as the UK's largest Jumping Spider; females range between 8–10 mm and males 6–8 mm. My specimen, an unmistakable male, was bang on 8 mm. Don't you just love it when spiders read the rule book!

The next surprise was that there are no records for this species in Wiltshire. *Marpissa muscosa* has a predominately South-East England distribution, with a few scattered West and North records (S.R.S. 2021). I am under no illusions that, just because there aren't any records on S.R.S., *M. muscosa* hasn't been found before in Wiltshire, but it is certainly a rarity in the county and one I have now had the pleasure of meeting.

Reference

<http://srs.britishspiders.org.uk/portal.php/p/Summary/s/Marpissa+muscosa>

A Further *Diplocephalus protuberans* (O. P. -Cambridge, 1875) Record in Caernarvonshire, North Wales

by Richard C. Gallon

This year has already proved fruitful for new records of the Nationally Rare and Vulnerable linyphiid *Diplocephalus protuberans* in North Wales (Gallon, 2021a, 2021b). So I was delighted to find another new location for this species recently.

On the 25th September 2021 I visited Coed Gorswen NNR, a deciduous woodland nature reserve with a particularly interesting spider fauna. I was unsuccessfully trying to re-record *Gongylidiellum murcidum* which I'd found there back in April 2000. However, a dry woodland



Figure 1. *Diplocephalus protuberans* woodland stream habitat at Coed Gorswen NNR. © R. Gallon.

stream (SH75547102, Fig. 1) produced a female *D. protuberans* by vacuum sampling, and a male by sieving stream-debris (leaf-litter and small twigs).

I have never found this *Diplocephalus* species in numbers, but its habitat preference certainly seems to be small, mossy, cobbly, streams with some tree cover.

Acknowledgment

Thanks go to Mike Howe (Natural Resources Wales) for encouraging me to re-survey Coed Gorswen NNR.

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***Theridiosoma gemmosum* New to Cheshire and Radnorshire**

by Richard C. Gallon* & James McGill

On the 3rd November 2021 we visited Wybunbury Moss NNR to survey winter-active spiders. The weather was very kind to us and we were able to survey across the site with Angela Lidgett kindly acting as our local guide and Nicola Bacciu in support.

The reserve's northern, wet woodland (Willow and Birch) fringe yielded distinctive sub-adult specimens of *Theridiosoma gemmosum* by vacuum sampling the ground flora, largely composed of *Sphagnum*. A sub-adult male was found by RG at SJ69585028 (Fig. 1), and two juveniles at SJ69635030 by JM. These records appear to be new Vice-County records for Cheshire and represent the most northerly records of this species in England.

Back on the 19th September 2021 RG visited Aberithon Turbary (Fig. 2) on the way back home from an extended spider survey trip to south and mid Wales. At SO01555740 an immature male and immature female *Theridiosoma gemmosum* were vacuumed from bog vegetation, representing a new Vice-County record for Radnorshire.



Figure 1. *Theridiosoma gemmosum* habitat in wet woodland at Wybunbury Moss. © Richard Gallon.



Figure 2. *Theridiosoma gemmosum* habitat at Aberithon Turbary. © Richard Gallon.

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Some Interesting Spider Records From Meathop Moss NNR Raised Bog: *Sibianor lae* and *Heliophanus dampfi*

by Richard C. Gallon

Traveling to Northumberland on the 18th June 2021 presented the perfect opportunity to call in to Meathop Moss NNR in Cumbria. I have a particular fondness for surveying spiders on raised bogs, so this site would be an ideal location to break the long car journey.

I arranged to meet Paul Waterhouse, the reserve's warden, on site so that he could indicate areas I could survey without disturbing the site's rare birds. As we walked, Paul described how the bog had been a nature reserve since 1919, being one of the 284 "Rothschild Reserves". As such, Meathop's raised bog was largely intact, having avoided much of the ravages experienced by other bogs across Britain.

I was delighted to hear about the site's unmodified bog surface, knowing that this could well hold an interesting spider assemblage. Paul reined in my excitement saying



Figure 1. Raised bog habitat at Meathop Moss.
© Richard Gallon.

that the site was extremely well-recorded, having been visited regularly by naturalists over the years. Once on the open bog's boardwalk Paul left me to get on with surveying.

The first vacuum sample (Fig. 1) was emptied out on the tray and an incredible smorgasbord of rare spiders materialised from the sieved heather litter. First to catch my eye was an adult female *Singa hamata* bumbling across the tray (Fig. 2). *Marpissa nivoyi* was followed by a characteristic square-bodied *Sibianor larae* (Fig. 3), accompanied on the tray by several juvenile *Heliophanus*. The volume of fine heather litter passing through the main sieve was an issue, so I marched back to the car for a finer sieve to improve efficiency.

I sampled at several points across the northern section of the bog, producing further records of *S. larae* (Table 1) and juvenile *Heliophanus*.

I finally found single adult males of *Heliophanus dampfi* at SD44268203 and SD44368198 (Fig. 4), which was a relief, since it meant I didn't have to rely on DNA barcoding to confirm species identification from juveniles. These *H. dampfi* records represent new Vice-County records for Westmorland. James McGill has recorded juvenile *S. larae* previously from an adjacent raised bog.

I would like to thank Paul Waterhouse (Cumbria Wildlife Trust) for allowing me to survey this interesting site, and James McGill for information on his *S. larae* records.

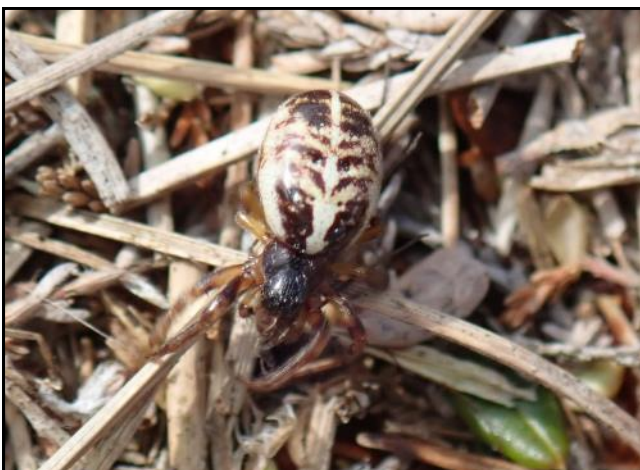


Figure 2. *Singa hamata* adult female, Meathop Moss.
© Richard Gallon.



Figure 3. *Sibianor larae* adult male, Meathop Moss.
© Richard Gallon.

Table 1. *Sibianor larae* records from Meathop Moss NNR, 18th June 2021

Abundance	Grid reference
1♂ 1♀ 1 immature ♀	SD44348194
1♀	SD44328199
1 imm. ♂	SD44268203



Figure 4. Bilberry area of raised bog. Meathop Moss.
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