

Spider Recording Scheme News Autumn 2019, No. 95

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

S.R.S. News No. 96 will be published in Spring 2020. Please send contributions by the end of the first week of February 2020 at the latest to Peter Harvey, 32 Lodge Lane, GRAYS, Essex, RM16 2YP; e-mail: grayspeterharvey@gmail.com.

Editorial

Please help future issues by providing articles, short or longer, on interesting discoveries and observations. **The newsletter depends on your contributions!**

We now have 1,140,738 spider records in total in MapMate. Of these records, around 40% have some site-based habitat information associated with them.

Between the SRS website going live in 2010 and moving to a new server in April 2014 there were approximately 158,336 visits from 106,092 users from 171 countries/territories, with 871,104 page views. Since April 2014 the website has had 623,805 sessions from 485,490 users from 204 countries/territories, with 2,220,770 page views.

The facility enabling members of the public to submit records of 14 “easily recognisable” spider species has only generated 552 records, with the top three being *Argiope bruennichi* (146), *Pholcus phalangioides* (93) and *Araneus diadematus* (73). However we are exploring ways iRecord might be used to catch spider records from a wider range of people whilst avoiding damaging the well tested recording system of area organisers and county recorders.

The SRS website allows logged-on users to create and download individual species reports, comprising distribution maps and ecological information, as a pdf. Since 12 March 2015, there have been 166,841 downloads of species reports, 20,753 downloads for identification guidance on 20 “difficult” species groups and 51,149 SRS News downloads. There have 10,116 downloads of BAS Factsheets since 28 Oct 2015 and 5,487 downloads of taxon resource files.

I first collected one male and two female *Megalephyphantes* sp. near *collinus* on 2nd November 1999 at the base of undercliffs on the Isle of Sheppey in Kent amongst tall vegetation growing on an area of shingle and provisionally identified them as *M. collinus* (Harvey, P. 2001. New to Britain: *Megalephyphantes collinus occidentalis* (Machado, 1949)? Spider Recording Scheme Newsletter 39: 2), but Peter Merrett has long since considered that this is likely to be a new, closely related species. It quite soon started to be found in other sites in Kent and then more widely in the south-east, including in a wide range of habitats, see <http://srs.britishspiders.org.uk/portal.php/p/Summary/s/Megalephyphantes+sp.+near+collinus>

As well as occasionally finding them indoors I can wander out now into my garden and find the spider under debris, bricks and in numbers inside two plastic compost bins. On a number of occasions the spider has been found by arachnologists outdoors and incorrectly identified as

M. nebulosus, a species which as far as I know has only ever been found indoors in Britain and to be a significantly smaller spider. There doesn't seem to be much doubt that *Megalephyphantes* sp. near *collinus* has been aggressively colonising the country, and may already be much more widely distributed than current records indicate, as Francis Farr-Cox's article on its occurrence in his garden in Somerset demonstrates. Get searching now: the autumn, winter and early months of the year are when to find it. Needless to say photographs would not allow definitive identification.

Another remarkable discovery described in this SRS News by Geoff Oxford is of a female *Enoplognatha caricis* (= *tecta*) in a plant centre in York. This is one Britain's rarest species, with records of only three previous individuals, one dating from the 19th century.

Megalephyphantes near *collinus* in Burnham-on-Sea, Somerset

by Francis Farr-Cox

On the 14th August I was in our garden collecting some specimens to take live for a BAS stand at a one day event on the 17th at Bristol City Museum organised by the Royal Entomological Society. We have a small model garden railway (16mm gauge for the aficionado) and some removable track sections mounted on wood are stacked away when not in use. The sections are mounted on an inverted wooden U shaped base which provides a good habitat for various genera including *Eratigena* / *Tegenaria*, *Steatoda* and *Amaurobius*. As such it is one of the first place I look for these as they are guaranteed to be



Fig. 1. One of the *Megalephyphantes* sp. near *collinus*.
Photograph © Francis Farr-Cox



Fig. 2. The stack of removable garden railway sections under which a mature male and female *Megalephyphantes* near *collinus* were found. Photograph © Francis Farr-Cox

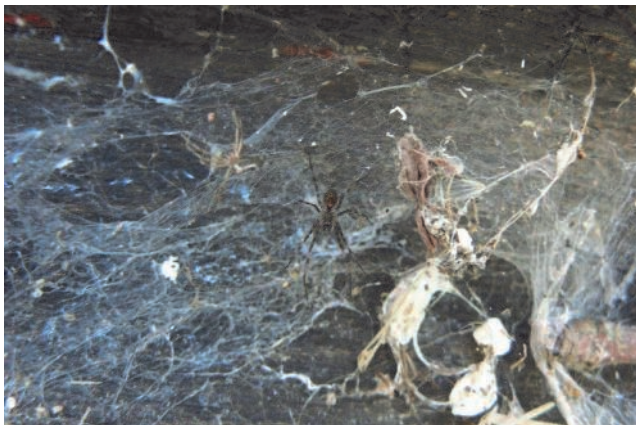


Fig. 3. One of the track sections with a *Megalephyphantes* sp. near *collinus*. Photograph © Francis Farr-Cox



Fig. 4. Bath in which 12 potential *Megalephyphantes* of various sizes including two adults were counted. Photograph © Francis Farr-Cox

there and easy to catch. On this occasion I noticed a species I hadn't seen there before. There were several individuals apparently living on *Eratigena* /*Tegenaria* webs but on the opposite side of the web from the incumbent. They looked like one of the larger “*Lepthyphantes*” but when I potted a female for microscopic examination it didn't look like any of the usual suspects. After contacting Peter Harvey he said it sounded like the specimens could be *Megalephyphantes* near *collinus* but he would not be surprised as the species had been spreading widely in the south east including in gardens and indoors. Peter kindly sent me some

unpublished drawings of both sexes by Peter Merrett of the species and my specimen indeed matched the female. I had found subadult males and decided to revisit the habitat after a while to see if any had matured. On the 23rd August I had another look and found in addition to several females one subadult male and one mature one. The latter was examined under the microscope and agrees with Peter Merrett's drawing. Casting my mind back I remember seeing some large “*Lepthyphantes*” under an old upturned galvanised bath in our back garden a year ago which I never got around to identify. Writing today 25th August I have just re-inspected the bath. There is one large male *Eratigena* /*Tegenaria*, a possible gnaphosid or clubionid in a silk cell and ten individuals of various sizes with all the look of *Megalephyphantes*! The species has definitely arrived in the west of England and may have been here for a year or more. Has no-one found this between here and Surrey or are people assuming it is something less interesting as I suspect I may have done last year?

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***Enoplognatha caricis* (*tecta*) – a rare British spider in North Yorkshire**

by Geoff Oxford

Once again, a local plant centre (Vertigrow, York. SE646566) has yielded an interesting specimen. On 1st July 2019, my wife was considering buying a *Circium rivulare* plant when we noticed a rather dark, round female spider and two egg-sacs under the rim of one pot (Figure 1). That was, of course, the plant chosen. The spider was provisionally identified as *Steatoda paykulliana*, a southern European species, but the size (6 mm head and body) and coloration didn't seem quite right and the epigyne fitted the drawing in Roberts (1995) only with the eye of faith. On seeing a photograph of the spider, Peter Harvey thought it wasn't *S. paykulliana* and suggested I sent the specimen to Peter Merrett for an opinion. Peter agreed it wasn't *Steatoda* but thought it might be an *Enoplognatha* and pointed me to a paper on the southern European species in this genus (Bosmans & Van Keer 1999). The nearest match I could make to their epigyne drawings was *Enoplognatha caricis* (previously *E. tecta*). The Spiders of Europe (2019) website shows considerable variation in depiction of the epigynes of this species, and that in Roberts (1995) is different again. However the York specimen did seem particularly close to the diagram of this species from Wunderlich (1976). I therefore sent the spider to Johan Van Keer for an opinion. He confirmed that it was indeed *Enoplognatha caricis* and commented ‘the shape of the epigyne, the colour of the prosoma, opisthosoma and legs fit completely with my specimens’.

A female of this species was first found in Britain in The Warren, a swamp near Hyde, Dorset, by F. O. Pickard-Cambridge in May 1888 and identified as *Enoplognatha caricis* by O. Picard-Cambridge (1889).



Fig. 1. Female *Enoplognatha caricis* (=tecta) with two egg-sacs under rim of pot in plant centre.
Photograph © Geoff Oxford

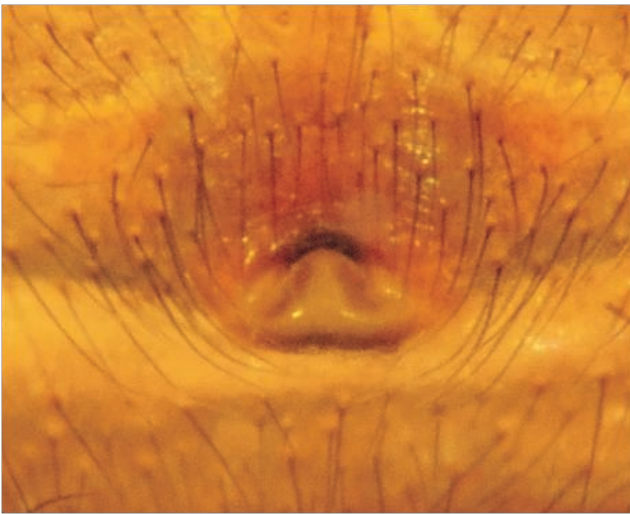


Fig. 2. Epigyne of the *Enoplognatha caricis* (=tecta).
Photograph © Geoff Oxford

Merrett & Snazell (1975) reported the first British male, taken in late July 1974, only one kilometre or so from where the female was found, and in the same system of marshes along the River Piddle. The third specimen, a female, was found by Helen Smith in July, 2009, at Castle Marshes, Barnby, Suffolk, traditional grazing marshes adjoining the River Waveney, and tentatively identified by Pip Collyer (Collyer 2009). The spider was sent to Peter Harvey for a second opinion and confirmed at *E. tecta* (as the species was then called), an identification subsequently endorsed by Peter Merrett. The York specimen is therefore only the fourth to have been reported from Britain.

On its return from Johan, the specimen was sent to Rowley Snazell who could not see why it wasn't *E. caricis*, although he didn't have a female to compare it with. Finally it went to Peter Harvey, who with Pip Collyer's agreement, retains the Castle Marshes female in his collection. Comparing it with the Suffolk specimen, he wrote 'The dorsal abdomen is much darker and not like any photos of *E. caricis* I can find on the internet but I agree there is no obvious structural difference and the epigyne is just as good a match for *caricis/tecta* as the Suffolk specimen'. Where did the York specimen originate? The two possibilities are that it occurs naturally in habitat close to Vertigrow or that it was

imported from Belgium, the source of the plant on which it was discovered (Andrew Williamson, pers. comm.). The habitat it was found in does not correspond to the wet grasslands and marshes described above, or 'bogs and swamps' on the Spiders of Europe (2019) website. Suitable wetland areas in the vicinity need to be sought and checked. One possibility is Strensall Common, an extensive expanse of lowland heath some 2 km north of the plant centre, which certainly contains wet areas. In his email, Johan Van Keer added 'I think it's a bit strange that a species like *E. caricis* travels along with some plants all the way to England'. On the other hand, Peter Harvey notes that unless the spider can be found in suitable seminatural habitat nearby he thinks it more likely that it has travelled along with some plants to England. Time will tell.

I thank Robert Bosmans, Peter Harvey, Peter Merrett, Rowley Snazell and Johan Van Keer for comments and help with identification, and Andrew Williamson (Vertigrow) for information on the origin of the *Circium* plant.

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Cryphoeca silvicola (C.L.Koch) (Dictynidae) and *Robertus arundineti* (O.P.-Cambridge) (Theridiidae) in Berkshire

by Jonty Denton

Robertus arundineti males were found in suction samples from damp disturbed heathy areas at the Hideout (SU8466) on the 11th June. This appears to be the first county record.

Cryphoeca silvicola females were found under a log pile in a small block of ancient woodland at Beaufort Park (SU8466) on the 11th April. Although recorded for Berks on the county map in Vol III of British Spiders (Locket, Millidge & Merrett, 1974), there is no site information in the national dataset (Peter Harvey pers.

Three spiders new to the Surrey List

by Jonty Denton

Anyphaena sabina L.Koch (Anyphaenidae) a female beaten from a hawthorn growing in an open situation in Richmond Park (near the crossroads east of Ham Gate (TQ1971) on the 12th July 2019. This remained the only one in extensive monthly surveys of old hawthorns across the Park

Philodromus buxi Simon (Philodromidae) Having seen just how frequent this distinctive spider has already become in the inner London Parks (just over in Middlesex) and in Greenwich Park in West Kent it was no surprise when it proved to be widespread on trees across Burgess Park (TQ3277) on 16th July 2019.

Episinus maculipes Cavanna (Theridiidae) I beat an adult female beaten from a large crab apple at the south of Epsom Common (TQ188599) on the 29th July 2019. Remarkably Mike Waite found a female in Durfold Wood (SU9832) just over the county boundary on the 7th August. This spider has certainly hidden under the Surrey radar as I found an immature female on an ornamental *Prunus* in the grounds of St. Francis centre Guildford (SU9750) on the 27th August.

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A taste of the Med. *Meta bourneti*

by Colin Twissell

It was in the middle of May 2019 when I first noticed a spider in the compost bin situated in the garden; a semi-rural area of Churchdown, Gloucestershire. It was of a reasonable size and the colour a lovely glossy light brown, like a milk chocolate glaze. I was curious as to what species of spider it was. I worked along the lines that it might be a *Steatoda* species like the Noble False Widow spider that caused alarm and despondency a few years ago. I looked in a few books and Googled, and



Fig. 1. Location of the compost bin.
Photograph © Colin Twissell



Fig. 2. Inside compost bin.
Photograph © Colin Twissell

although pictures are a useful guide, they are just that. Only a few spiders can be identified to species in the field and the rest require microscopic examination of the female epigyne or male palps.

I checked the compost bin every now and then, the spider was still there, but also three more. I took several pictures of them, which included trying to get a picture of the female epigyne. The picture was not wonderful, but I compared it with drawings of epigynes of *Steatoda* sp. and it didn't match. Having lost our county spider recorder two years ago and with no replacement, I decided to contact Peter Harvey and send him two pictures with my queries, as this spider was more like the cave spider *Meta menardi* and that cannot be right, not in a compost bin! An almost instant email return with a request for the spider, as it was a *Meta*!! What I had only recently discovered was that there is a very similar *Meta*, *Meta bourneti*, a Mediterranean species which is rare, nationally scarce, with a wide, but scattered distribution in Southern England.

I caught and sent the spider off to Essex. Within 24 hours Peter sent an email to say that the spider had arrived safely and it was a mature female *Meta bourneti*! the third post-1992 record for Gloucestershire, with a previous record, pre-1980.



Fig. 3. *Meta bourneti* female in compost bin.
Photograph © Colin Twissell

The mystery is, where have these rare spiders come from. The compost bin is situated in the corner of the garden, which is shaded and gets no direct sun. The bin is two thirds full and the content material quite dry. The requirements for such cave spiders are humidity, darkness and a stable temperature. The fact that the bin hasn't been used recently, the humidity is lower than it might be. The usual habitats are tunnels, culverts, drainage inspection shafts, and have also been found in the hollow trunks of ancient trees. The cavernous void under a neighbour's garden room would be worth investigating, but some cautious communication would be required first!

Meta bourneti was described by the French arachnologist Eugène Simon (1848-1924) in 1922. *Meta* was originally placed in the Araneidae, but the structure of the male palp and the female epigyne as well as the structure of the orb web placed *Meta* closer to the Tetragnathidae family.

An old site for *Meta bourneti* was Rendcomb College: - British Spiders Vol.II Locket & Millidge 1953. The spider was found in a conduit carrying water pipes and also in a neighbouring air-raid shelter. R.S. George mentions this Mediterranean spider, found at Rendcomb, its second British locality, in his "Brief list of the spiders (Aranea) recorded from Gloucestershire" 1957.

With this information and using the internet I found the publication, Rendcomb College Magazine Vol 8 No 10 December 1947, which had some Biological Notes by I.S. Menzies: -

"The most noteworthy addition to Rendcomb fauna is that of the large black and reddish Cave spider, *Meta bourneti*. Previously this spider was known to live in caves in the South of France and Spain, and had only been found in England at one place in Suffolk. Several of these spiders were found a few years ago in a small inspection pit accessory to the College water supply situated on one of the lawns. The specimens were kept but not identified until February, 1947, when an enthusiastic letter relating to the discovery was received from the British Natural History Museum. The spider has now been found also in the covered air-raid trenches, and the opinion of several celebrated arachnologists who subsequently haunted the district was that it probably occurred in other suitable places; possibly they may be found in cavities beneath the stone steps and the balustrades and hollow trees."

A further publication of Rendcomb, the Rendcomb College Chronicle Vol.12, No.5 March 1962 had some Natural History Notes by C.M. Swaine: -

"Recent changes in the heating system at the College have rendered the cellars in general, and "Little Hell" in particular, unsuitable for the roosting bats: and the construction of the new swimming pool has destroyed the cavity on the terraces in which the Spanish Cave Spider (*Meta bourneti*) was originally found in its second known British station. Fortunately, a few are still to be seen in another spot nearby."

With the above information I made contact with Rendcomb College, but there was no indication that this spider is still present. I was informed that the College has 230 acres and numerous buildings and the old building has listed status so the steps, a likely habitat, are therefore rarely touched.

This now leaves a big dilemma of how to create a suitable habitat for a sustainable population of *Meta bourneti*. My first step has been to invert a moulded ridged pond liner and place it next to the garden composter with the possibility of it being adopted by a wandering or ballooning spiderling.

An interesting paper published in 2018 on the ecology and life history of *Meta bourneti*, present in caves in Sardinia, gives a very detailed study of this spider, but this type of habitat and that of a compost bin are vastly different. Nevertheless, the basic requirements are the same, temperature, humidity and illuminance. So, I need to manage the microclimate requirements. *Meta* spiders have a complex life history. During their early stages the spiders are phototaxic and disperse into the outdoor environs, while the adult phase become photophobic. They are apex predators in cave systems and presumably are the same for the compost bin, but the construction of an orb web will require more space for a sustainable population.

The presence of an egg-sac would complete the cycle!

Acknowledgements

Peter Harvey for his help and expertise.

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Intraspecific oophagy by the theridiid *Steatoda grossa*

by Tone Killick

On the morning of the 8th July 2019 I was about to leave for work and whilst in my garage checked on a female *Steatoda grossa* and the egg sac she had produced two days previously. What I happened upon was quite remarkable. A larger female *S. grossa* entered the web of the spider I was observing and stole her egg sac. The female whose egg sac was being stolen attempted to stop the intruder and for around half a minute both spiders with spinnerets facing each other were trying to entangle each others legs with silk before the intruder won the day causing the host spider to retreat. The intruder then cut free the egg sac and attached it to her spinnerets before moving several inches away from the host web. The intruder then commenced to consume the contents of the egg sac. I went indoors to get my digital camera but unfortunately as I attempted to photograph the *S. grossa* consuming the eggs she got spooked and retreated. I cursed my luck and left for work. Luckily for me, when I returned from work later that day she was still feeding on the egg sac so I didn't take any risks and made do with a phone camera shot (Figure 1).



Fig. 1. Intruder feeding on conspecifics egg sac.
Photograph © Tone Killick

After a couple of hours, I retrieved the egg sac from the spider as I wanted to investigate how many eggs had been consumed and had she made tears in the silk to get access to them. The first thing that stood out was the shape (Figure 2) which was completely different to the usual pear drop egg sac of *S. grossa* (Figure 3). This was



Fig. 2. Predated egg sac showing the irregular shape.
Photograph © Tone Killick

obviously due to the spider manoeuvring the sac so she could get to the eggs.



Fig. 3. Typical pear drop egg sac of *Steatoda grossa*.
Photograph © Tone Killick

The next things that caught my eye were the empty egg casings known as chorion which were dotted around the sac (Figure 4). From experience, these egg casings would indicate that the sac contained newly hatched spiderlings but of course this wasn't the case with this egg sac which had only been produced a couple of days previously. Although I could not see any obvious tears in the sac, the *S. grossa* had somehow accessed them and sucked the contents out, leaving just the empty shells. I started to wonder how common egg predation was amongst spiders; it was time to hit the books!



Fig. 4. Predated egg sac with empty egg casing remains.
Photograph © Tone Killick

The phenomenon of egg predation is known as oophagy and there is a wealth of literature on this behaviour, with spiders consuming arthropod eggs (Ahmed, *et al.* 2018), (Nyffeler, *et al.* 1990), their own infertile eggs which I observed in the dictynid, *Nigma puella* in 2016 (Figures 5,6) and even their own fertile eggs (Ahmed, *et al.* 2018).

Whilst reading through the literature, the Salticidae family seem to be the most likely to prey on eggs and most observations of egg predation were by cursorial species, i.e. active hunting spiders. Web-based species such as the Theridiidae family featured less in the literature. Many of the theridiid cases were of spiders eating their own eggs whether fertile or infertile. An interesting observation was of a female *Parasteatoda (Achaearanea) tepidariorum* who, whilst creating her egg sac, dropped it, exposing the eggs. She then went on to consume the eggs (Montgomery, 1903). I then came



Fig. 5. *Nigma puella* with egg sac containing infertile eggs.
Photograph © Tone Killick



Fig. 6. Three days after producing her egg sac, the female *Nigma puella* consumed the contents.
Photograph © Tone Killick

across the *Argyrodes* genus. These tiny spiders belonging to the theridiid family are kleptoparasites and hang around the webs of larger spiders waiting for the opportunity to steal small prey items from the web. So this didn't surprise me that *Argyrodes* sp. would also be oophages (Pasquet *et al.* 2010) but I could not find a verified case of a theridiid preying on a conspecific's egg sac. I spoke to a friend, Gábor Kovács, who has done a lot of research regarding *S. grossa* and he told me that egg sac theft is known in *Latrodectus hasselti* (Downes, 1984) although in that theridiids case it was not predation but some other driving force. He has observed this behaviour in *S. grossa* but never managed to get photos and remarked that my image is very unique. Now we come to why the *S. grossa* predated a conspecific's egg sac. *S. grossa* in the UK are predominantly found in garages and sheds which are harsh habitats, dark, dry and void of water. These extremely resilient spiders can go very long periods without food or water so the obvious reason for the predation would be as a valuable food source, but here I must make a confession. The *S. grossa* in my garage are well fed, well at least the ones that I know of, including the large female that stole the egg sac and this is because I feed them one or two crickets a week! So was the predation a form of intraspecific competition? It would make sense as *S. grossa* can produce several egg sacs from a single mating which would make resources like food, water, space and mates highly competitive. Whatever the reason, once again these fascinating creatures have me in awe and I find myself thinking of the quote by E.B.White, "Once you begin watching spiders, you haven't time for much else" and a smile comes to my face as I reply "how right you were". There is a postscript to this! After retrieving the egg sac from the female *S. grossa* I opened it to investigate the contents further (Figure 7).



Fig. 7. Retrieved egg sac opened on 8/7/19.
Photograph © Tone Killick

There were a good 60-70 eggs still intact and this gave me the opportunity to photographically document the development although I must confess I didn't know if this would be possible with the eggs not protected by the silk sac. I placed the egg sac into a small plastic container to protect from predators, placed back into the garage and kept up observations.



Fig. 8. 13/7/19 little had changed in the development.
Photograph © Tone Killick

On the 29th July 2019 my observations were rudely interrupted when I was rushed to the hospital due to a freak accident involving a chicken bone! I was in the hospital for ten days and was discharged on the 8th August 2019. The first thing I did was check on the *S. grossa* eggs and surprise, I was met with first instar spiderlings (Figure 9).



Fig. 9. 8/8/19 - 1st instar spiderlings.
Photograph © Tone Killick

Unfortunately my discharge from hospital was premature and two hours after taking the photograph I was rushed back in to spend a further two weeks. When I was eventually well enough to return home the spiderlings had moulted through to 2nd instar and were in the process of dispersal.

I removed the lid of the container and allowed them to make their way into the garage.



Fig. 10. 21/8/19 - 2nd instar spiderlings.
Photograph © Tone Killick

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Mystery of the *Episinus* eggsac....

by Tone Killick

Just over two years ago on the 10th June 2017 I was grubbing amongst the moss and vegetation looking for spiders in my usual patch in Gloucester when I came across a wonderful looking eggsac (Figure 1). I was clueless as to what species had created it so posted a photo on my Twitter and it wasn't long before Helen

Smith of the British Arachnological Society replied suggesting *Episinus* sp. (Theridiidae family) and Helen was spot on. This amazing little work of art somewhat resembling those created by the pirate spiders Mimetidae family, have a brilliant white wiry outer covering rather than the bronze or gold that surrounds the sacs of UK mimetids. The eggs were of a pinkish hue and the overall appearance was truly beautiful! I noted that the eggsac was just laying in the moss and at the time assumed it was created where I found it.



Fig. 1. Eggsac found 10th June 2017.
Photograph © Tone Killick

Fast forward two years. Old habits die hard and as per usual on the 6th July 2019 I was out in the strip of woodland which my garden backs onto, looking for spiders. A small river runs through the woodland which is dominated by large conifers and habitat is damp and shady. Crawling around with my bum in the air I spotted some old rotten fence panels that had been dumped. I turned over the first one and immediately saw an *Episinus* sp. egg sac. Lying the panel horizontally on the ground, I took a few photos (Figure 2) and then returned the wood to the position I found it in. The very next panel that I turned amazingly also revealed an *Episinus* sp. eggsac and I decided to take the piece of panel home with me in the hopes of capturing the moment the young emerge. Once I got home I placed the panel against my garage wall vertically and again, took a few photos (Figure 3). It was while I was editing the photos that I noticed the second eggsac seemed to be hanging by threads of silk. Now the old grey matter is starting to work overtime because I had assumed *Episinus* produced their egg sacs right there in the ground layer. The idea that *Episinus* egg sacs hung by a thread never even occurred to me. So, I googled *Episinus* egg sacs but this turns up nothing. Not one picture! I hunted through the literature on *Episinus* sp. and again zilch! I returned to the garage where I had the piece of fence panel and picked it up horizontally and raised it above eye level. Low and behold the eggsac was dangling by 2 or 3 thin threads of silk. I'm quite excited now and yes, it's an eggsac, but then we are a strange bunch us spider watchers! I quickly made my way back to the woodland and checked on the first eggsac and this too is hanging by silk threads.

So, I decided to hunt through the literature again, as surely somewhere there must be some description regarding *Episinus* eggsac construction. After several



Fig. 2. First sac found on 6th July 2019.
Photograph © Tone Killick



Fig. 3. Second sac found on 6th July 2019.
Photograph © Tone Killick

hours and much cursing I actually found something. It was in a spiders of Europe field guide by Heiko Bellmann (Bellmann, 1997) There was one problem, it was printed in German and to be honest, German is all Greek to me! Luckily I have app for every eventuality and this one is quite clever although results are far from perfect. I run my phone across the German text and apparently it translates to English (photo 4). Did I mention it wasn't perfect? Anyways, here was the sentence I was looking for "hung up on a thread strand" .

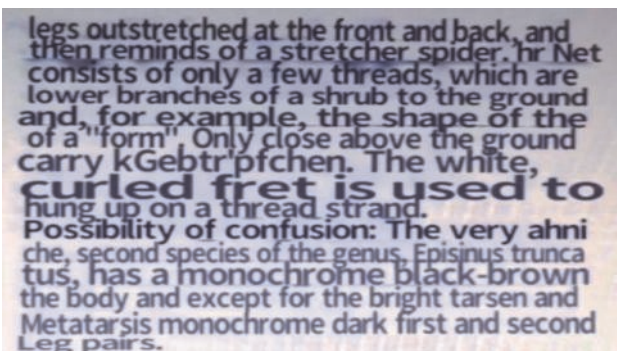


Fig. 4. Phone app translation!

Amazingly, I found more information and this time on my own bookshelf. William S. Bristowe (Locket & Millidge, 1979), a British arachnologist was the man who got me hooked on spiders and their behaviours. His book, *The World of Spiders* is, in my opinion, probably the most informative book on spider courtship and behaviour ever written. It was in this book that I came across his

description of an *Episinus* egg sac. To quote Bristowe "The eggsac is rounded or slightly pear-shaped and suspended by a few threads" (Bristowe, 1958) Not only was there a description but also a wonderful line drawing by the talented Arthur Smith (1916–1991) .

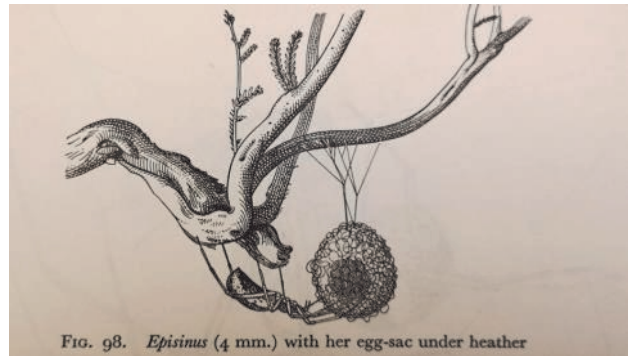


Fig. 5. Line drawing by Arthur Smith.

So, there were descriptions of *Episinus* egg sacs but still no photos! I needed to get a good photo showing the eggsac hanging by its threads, which proved more difficult than I imagined. My flash and diffuser were cancelled out due to the eggsac hanging under the wooden panel. This now called for a bit of improvisation! I took the panel and placed it onto a filing cabinet in my garage and then placed a brick on the end to hold it in place. Then with the camera in one hand and a torch in the other I took a few shots. Well, about twenty in all to be honest but I eventually got a shot I was happy with (Figure 6). Hopefully now, when someone searches for *Episinus* egg sac, my image appears on google ultimately adding to our knowledge of the private moments in a spider's life.



Fig. 6. Eggsac in situ.
Photograph © Tone Killick

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A new record of the Purseweb Spider in Essex

by Peter Harvey

The Purseweb spider *Atypus affinis* is very rare in Essex. There was great excitement when the species was first found in Essex at Highbeach in Epping Forest in 1919 and also later "observed in a number of places in the higher parts of the forest" (Dallas, 1938; Essex Field Club, 1920; Main, 1921) where it occurred under overhanging heather. However there are no modern records for Epping Forest, although there does not seem to be any real reason why it should not still occur.

On 25 September 2019 Jonathan Kelly photographed an adult male *Atypus affinis* at Hangmans Wood, Grays by the footpath that runs along the northern side of the wood at TQ629793 (see Figure 1). The only other county records have been made by the author at 3 sites in South Essex, Grays Chalk Quarry (TQ609789) in 1985-1986; just below Hadleigh Castle (TQ810859) in 1990 and Broom Hill, West Tilbury (TQ654777) in 1991-1992. The silk tube is well camouflaged with bits of earth and debris and the three previous modern sites were discovered when males were trapped in pitfalls in the late autumn. It seems likely that in all these sites the spider makes its tubes in the ground in undisturbed grassland around the edge of scrub and at Grays Chalk Quarry tubes were subsequently identified in quite dense scrub adjacent to what was at the time an open flower-rich area.



Fig. 1. Male Purseweb spider *Atypus affinis* at Hangmans Wood, Grays in Essex. Photograph © Jonathan Kelly

The presence of grazing may be a factor explaining the association with the edge of scrub. The life of the spider is long, possibly up to 7 or even 8 years (Bristowe, 1958) and it spends almost all this time inside its purseweb. There are presumably significant resource implications for the rebuilding of purse-webs after trampling. *Atypus* must therefore require relatively undisturbed habitats and although probably overlooked it is always likely to be very local in modern Essex.

What makes the new Hangmans Wood record surprising is that there is no obvious favourable habitat for *Atypus* in the general vicinity. Hangmans Wood is a 3 ha SSSI notified in 1992 for its deneholes, the remains of medieval chalk mines, which provide the most important underground hibernation site for bats in Essex, but Hangmans Wood itself is included within the SSSI, as an

area of semi-natural habitat in which bats can feed. The wood is a relict fragment of ancient woodland, but at some stage in late 1960s or early 1970s the understory was cleared "to discourage lurkers, and the wood has thereupon been transformed into a mere collection of trees with the loss of much of its interest and meaning" (Marren, 1990), where the result is illustrated by a photograph in taken in January 1982. However not only is the ancient woodland flora still almost completely absent, but the adjacent grassland areas are also floristically poor with little or no structure. They were probably treated with selective weed killer in the past and are nowadays managed as amenity grassland areas (see Figure 2). These do not appear to present likely *Atypus* habitat and there is no other suitable habitat nearby, so more or less the only possibilities would be the rougher edges of the path where the male was found or some of the paths through the wood itself.



Fig. 2. Area at Hangmans Wood where *Atypus* was found. Photograph © Peter Harvey

The association with old and undisturbed habitats and the dramatic loss of unimproved grasslands in the county means that even if further colonies are discovered they are likely to remain isolated. The spider is vulnerable to inappropriate management. Without management to control scrub the open habitat will disappear, as may already have happened at the location in Grays Chalk Quarry. On the other hand intensive grazing and mowing of grasslands are also likely to destroy colonies. Occasional rotational management to control scrub would seem the most appropriate answer for this species.

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