David was always recognisable in the field, often wearing his wellingtons and windproof jacket, a hat if it was very sunny, and a backpack, and carrying a sweep net and beating stick, a carrier bag containing his green plastic sieve and white bin lid used for sorting the catch. A bumbag containing tubes of spirit for any specimens required for determination later under the microscope. His other indispensable piece of kit, usually hanging from his mouth, was his pooter.

David was a very good, all-round, field naturalist and his generosity with his knowledge was complemented by his teaching skills when surrounded by young and old alike on field meetings. He often helped out at G.N.S. Bughunts and local WATCH groups and nearly always had a crowd of followers. He contributed many articles to The Gloucestershire Naturalist and to the B.A.S. Newsletter. He generated thousands of spider records over the years and kept them in an index card system, as he never mastered digital recording programes. Once digitised his records will be sent to the Spider Recording Scheme.

Learning to Love Spiders and More

by Keith Elder

Spiders didn't get a mention during my biology undergraduate degree course in the late 1960s, because, I think, spiders were perceived as having no economic importance. As I recall, the invertebrate courses I attended were dominated by insects, marine and freshwater invertebrates, and the various invertebrate groups that carried human diseases.

But for me spiders have always been source of fascination. However, beyond House spiders (*Tegenaria* spp.) and the Garden Spider (*Araneus diadematus*), which have always been very familiar from childhood, around the home and in the garden, I knew nothing of the 660 plus other species in the UK. So, when the Field Studies Council (FSC) advertised a *Learn to Love Spiders* day at their Preston Montford Field Centre near Shrewsbury two years ago, I leapt at the opportunity to find out more.

The enthusiasm of tutors, Nigel Cane-Honeysett and Dr Richard Burkmar, and the opportunity to begin guided identification in the field proved a good foundation to find out more during an FSC *Spider Field ID* course later in the year. I have since attended an *Introduction to Pseudoscorpions* day at Liverpool's World Museum in conjunction with Cofnod and an FSC *Pseudoscorpions ID* day course at Preston Montford. The FSC day courses, supported through the BioLinks project (www.fscbiodiversity.uk), are not only instructional but bring likeminded people together and are ideal for the enthusiast who wants to learn about invertebrate identification.

Returning home after the *Spider ID* course, I discovered my first 'new to me' spider, a Daddy Long-legs Spider (*Pholcus phalangioides*) hanging from the ceiling in the entrance to my daughter's house (Fig. 1). Its long legs and cylindrical body, hanging upside down from the ceiling, make this spider very obvious, but I hadn't noticed it during the numerous times I had previously entered the house. I would imagine 'in plain sight but unseen' is common for many invertebrates.

Village halls, I have since discovered, are a fruitful location for Daddy Long-legs Spiders with the high ceilings of toilet cubicles busy, if that's not the wrong word to use for a spider which shows little or no discernible movement or activity week after week. Also, in my enthusiasm for this 'new to me' spider I noticed its innocent presence on entering a local craft shop, high above the stocks of yarn. I then made the not-to-be-repeated mistake of pointing it out to the shopkeeper. I knew by her reaction that its undisturbed life would soon be a thing of the past. Lesson learnt, although educating people that spiders are to be enjoyed and not feared must be a role for B.A.S. members.

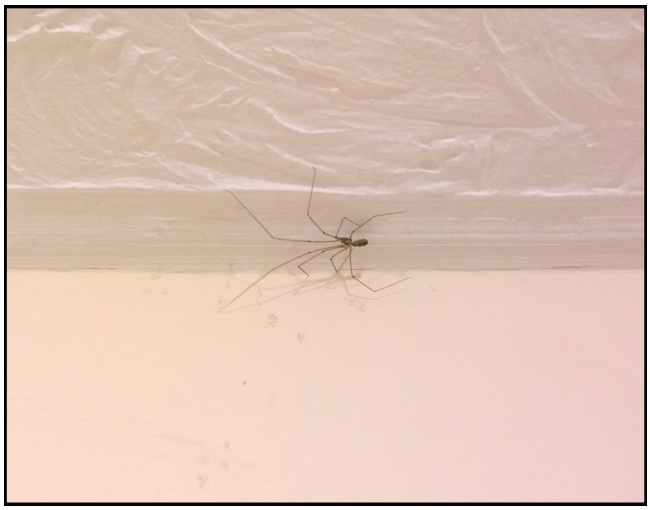

Figure 1. *Pholcus phalangioides*. © Keith Elder.

I've gone on to discover some of the other 660 or so species using my WILDGuide book, *Britain's Spiders*. There are many more to find. Now it's up to me to use my eyes.

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Observations of *Amaurobius similis* Feeding on Banana (fruit of *Musa* sp.) and *Vespula vulgaris* (common wasp) in Scotland

by Chris Cathrine

The author has recently observed two interesting feeding behaviours in *Amaurobius similis* in Stirlingshire (VC86) and West Perthshire (VC87): immobilisation of a *Vespula vulgaris* (common wasp) and feeding on banana (fruit of *Musa* sp.).

Amaurobius similis build webs from cribellate silk, often around window frames and other structures, which they use to capture prey. They are common in the Caledonian Conservation Ltd. office, near Bridge of Allan, Stirlingshire, which is within an old converted farm building at Keir and Cawdor Estates. On 16th September 2016 a female *A. similis* was observed to capture a *V. vulgaris* (common wasp). The spider emerged from its retreat when the *V. vulgaris* became entangled and approached from the abdomen of the prey. The spider then proceeded to work around the stinger, which the wasp was thrusting frantically, by making repeated punctures with its fangs. The thrusts of the wasp's abdomen became weaker at which point the spider moved to the thorax and made a final puncture before moving away. The *A. similis* then waited for the *V. vulgaris* to become motionless, before returning to feed on its immobilised prey. The spider appeared to employ a strategy of disarming the wasp's stinger before treating it similarly to any other

prey item. It would be interesting to explore this behaviour further, to try to determine if it is innate or learned.

While *Amaurobius* spp. are predators, the author has observed male *A. similis* feeding on fruit in his previous home in Doune, Perthshire, and his current home in Stirling. On several occasions, male *A. similis* have been observed feeding on banana (fruit of *Musa* sp.) left on the author's kitchen table, prior to clearing. The spiders stand over mushy sections of the fruit and use their chelicerae and palps to manipulate small portions in to their mouths. Whether this is for sustenance or moisture is unclear. Furthermore, this has only been observed by the author during winter months (November, December, and January). The author has observed this behaviour each year in Doune (2014–2018) and now Stirling (2018–present). Female *A. similis* have not been observed feeding on bananas – this may be due to their more sedentary nature making encounters unlikely, whereas males leave their webs in search of mates and will roam more widely, feeding opportunistically.

Despite reports of spiders from a range of families feeding on a variety of plant matter, there appears to be no published account of fruit ingestion, although they have been observed to feed on plant-associated liquids with high sugar content (e.g. nectar, stigmatic exudate, and honeydew) (Nyffler *et al.*, 2016). However, Sean McCann observed an araneid feeding on papaya in French Guiana in 2010 (Sean McCann, pers. comm. 10 January 2019). Once considered uncommon, nectar feeding is now thought to be a relatively general behaviour in spiders from a number of families, and accounts for ~75% of reported plant feeding incidents (Taylor & Pfannenstiel, 2009; Nyffler *et al.*, 2016). Due to their biology, spiders are unable to digest solid particulates internally, however the mushy banana matter observed to be ingested by *A. similis* may be similar in consistency to sugary liquids, such as nectar.

Nyffler *et al.* (2016) found that more than 80% of reported incidents of spiders feeding on plant matter could be attributed to the families Anyphaenidae, Clubionidae, Eutichuridae, Salticidae, Thomisidae and Trachelidae. There do not appear to be any published accounts of Amaurobiidae ingesting plant matter. Therefore, this appears to be the first published record of spiders eating fruit, and a member of the Amaurobiidae family ingesting plant matter.

Acknowledgements
The author is grateful to Catherine Scott and Sean McCann for providing information on other observations of spiders eating fruit. He would also like to thank his children, Logan and Ross Cathrine, for leaving pieces of mushed banana out on his kitchen table, leading to these observations of *Amaurobius similis* feeding on fruit.

References

Nyffeler, M., Olson, E. J. & Symondson, W. O. C. 2016. Plant-eating by spiders. *J. Arachnology*, **44:** 15–27.

Taylor, R. M. & Pfannenshiel, R. S. 2009. How dietary plant nectar affects the survival, growth, and fecundity of a cursorial spider *Cheiracanthium inclusum* (Araneae: Miturgidae). *Env. Entomol.,* **38:** 1379–1386.

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British Arachnological Society Survey of Clumber Park for *Thanatus formicinus* (Clerck, 1757) 19th–21st October 2018

by Richard Gallon*, Geoff Oxford° & Bill Parker•

Following the discovery of *Thanatus formicinus* (Clerck, 1757) in September 2017 at Clumber Park, Nottinghamshire, Helen Smith (B.A.S. Conservation Officer) was approached by Carl Hawke (National Trust) to undertake a survey for the species. *Thanatus formicinus* had been listed as *Critically Endangered (Possibly Extinct)* in the recent status review of British spiders (Harvey *et al.*, 2017), but to everybody's surprise was discovered at Clumber Park later that same year.

Previous British records of *T. formicinus* were from the Ashdown Forest (Sussex) and Beaulieu Heath (Hampshire), with their most recent sightings in 1969 and 1894 respectively. It was therefore a huge relief when Lucy Stockton, accompanied by Trevor Harris, discovered a female specimen at Clumber Park on the 7th September 2017 (Stockton, 2017). Not only was this a new locality for the species in Britain but it also represented a significant range extension, being 300 km north of previous sites.

RG, GO and BP volunteered to conduct the Clumber Park survey in late October 2018 with the aim of understanding better the distribution and habitat preferences of *T. formicinus* across this extensive 1500 ha site. The plan was to arrive on Friday afternoon and spend the weekend undertaking survey work in the Park (19th–21th October 2018), staying in a bunkhouse provided by the Trust. However, at the eleventh hour, we learnt our accommodation had been attacked by arsonists, but the Trust had kindly arranged for us to stay at the Lock Keeper Inn at Worksop.

The three of us rendezvoused at the Inn on Friday afternoon and then drove down to Clumber Park to meet Gareth Jones, Clumber's Lead Ranger. Gareth gave us some background information and furnished us with site maps, before leading us down to where Lucy had discovered the original specimen (Fig. 1). The site was an area of heather heath over sandy soil stretching along a shallow depression known as The Long Valley. We were surprised to hear that only 18 years previously the area was a closely mown carpark; hardly the pristine age-old habitat you would expect a rare spider to inhabit.

Figure 1. Bill, Gareth with his daughter, and Geoff grubbing at the original Long Valley *Thanatus formicinus* site (19th October 2018). © R. Gallon.