



# Who built this?

## Spider egg sacs – Part 2

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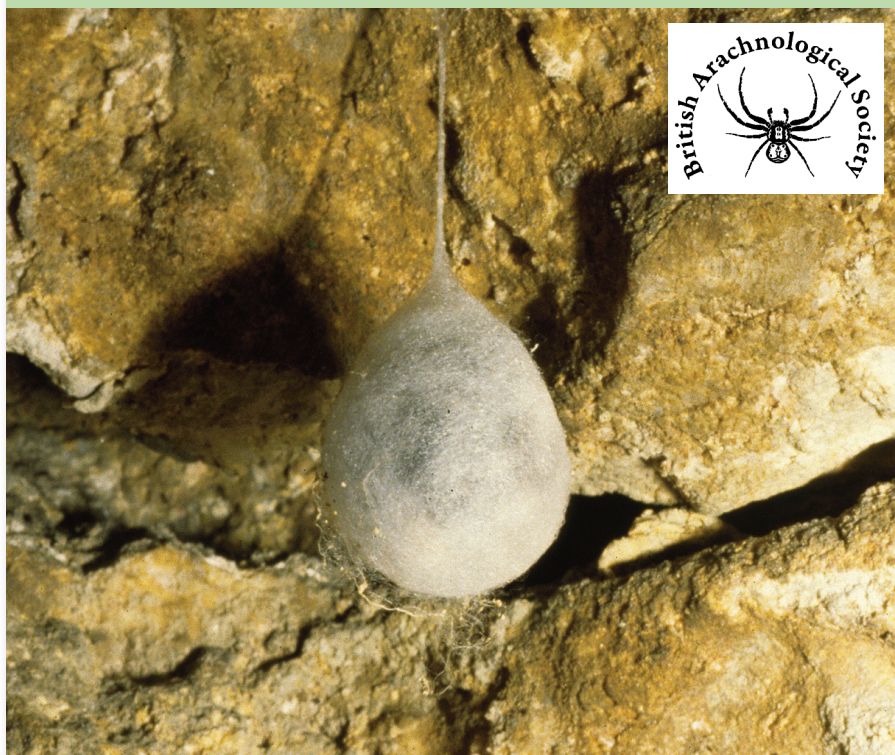


Fig. 1. The beautiful egg sac of a Cave spider (*Meta* spp.). (Geoff Oxford)

In Part 1 of this two-part series, I described nine British spiders that produce egg sacs distinctive enough to identify reliably the species that made them. Indeed, in some cases, e.g. Pirate spiders, the egg sac is easier to find than the spider itself. In this article, I consider some examples of egg sacs that are characteristic enough to narrow down the builder to a relatively small number of spider species, rather than a single one.

### Cave spiders *Meta* spp.

Both *Meta menardi* and *M. bourneti* live in very dark, dampish places, such as tunnels, culverts, under manhole covers and, indeed, natural caves. They are large spiders and produce correspondingly large, pure white egg sacs, which they suspend from the roof of their 'cave' by a thread. The egg sacs, about 20 to 25 mm in diameter and each containing 200 to 300 eggs, always remind me of upside-down hot air balloons. When seen in numbers they are an impressive sight. The thin suspending thread probably protects the eggs from crawling predators. These egg sacs are very distinctive, but it is impossible to tell which *Meta* species is responsible. Geography can help. *Meta bourneti* is mostly found in southern and eastern England, whereas *M. menardi* is much more widespread across England, Wales and Scotland (but not, apparently, in parts of the Midlands and East Anglia).

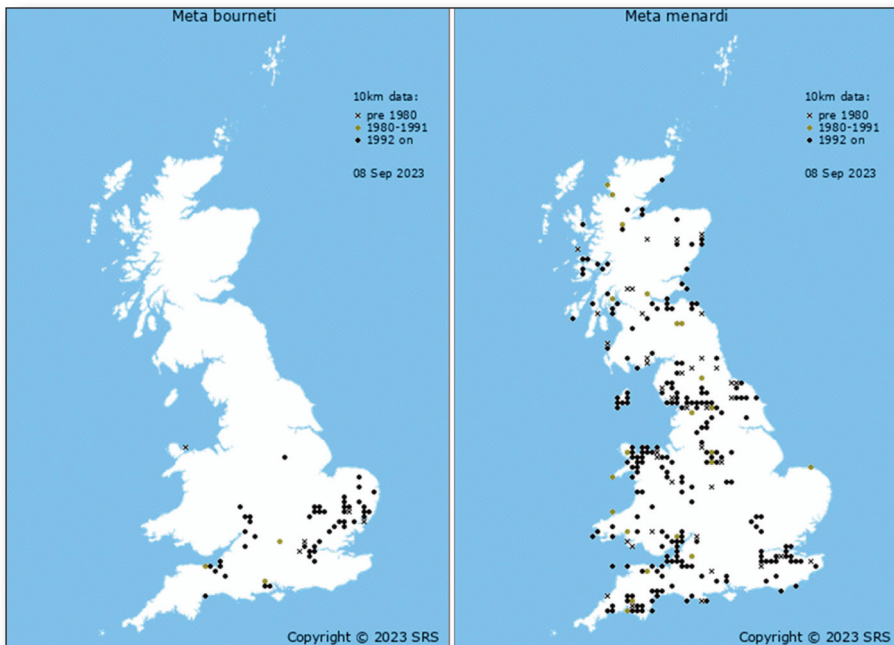


Fig. 2. Distributions of the two Cave spider species (*Meta*).  
(Spider Recording Scheme)



## Large house spiders *Eratigena* spp.

These species will be in almost everyone's house, shed, garage and garden. Their egg sacs, covered with white silk, are between 8 and 15 mm in size and each can contain 60 to 80 eggs. Typically, they are found near the female's web, either fixed to a surface or hung on a rope of silk.

Characteristically, bits of debris, often the remains of meals, are woven into the outer silk covering, presumably as camouflage. Which of the two common species do you have? As



Fig. 3. Egg sac of a Large house spider (*Eratigena saeva*) decorated with the remains of previous meals. (Geoff Oxford)



Fig. 4. A pure white egg sac of *Eratigena agrestis* – notice the bumpy surface resulting from a layer of soil beneath the outer silk. (Geoff Oxford)



with the Cave spiders, geography can help: Wales and the West Country have largely *E. saeva*; the Midlands and eastern England mostly *E. duellica* (see 'Further reading'). Farther north, you could have either species, or, around Newcastle upon Tyne and Perth/Dundee, even a third, *E. atrica*.

A related species, *E. agrestis*, lives under debris on waste ground and grasslands and under logs in deciduous woodland; it is not normally associated with houses in Britain. It makes an egg sac similar to other *Eratigena* species, 10 to 12 mm in diameter, but, if handled, it can feel surprisingly heavy and has a bumpy texture. This is because the spider adds a layer of soil beneath the external silk covering, possibly to put off ant predators.

### **Long-jawed spiders** *Tetragnatha* spp.

These orb-weaving spiders (six species) are often, but not exclusively, found in damp habitats, for example by ditches or along the edges of canals and rivers. Their egg sacs are remarkable and look nothing like you, or a potential predator, might expect. An external layer of silk, white or grey with green or blackish tufts, surrounds the eggs and the sac strongly resembles a patch of mould. If an insect dies and its body begins to decay, this is exactly what it might look like. Not a very enticing meal. Another suggestion is that the egg sac looks like a bird dropping – still not enticing! These



Fig. 5. Egg sac of a *Tetragnatha* spp. on an umbellifer seed head looking like the remains of a mouldy fly. (Geoff Oxford)





slightly flattened egg sacs (5 to 7 mm across) are usually attached to leaves, but those produced on dried seed heads of plants, for example, appear more spherical.

### Meshweb spiders

*Brigittea/Dictyna* spp.

These tiny spiders spin seemingly haphazard webs of fleecy silk at the branch tips of shrubs and trees, for example heathers and pines, or amongst leaf litter on the ground. The egg sacs are often laid within the web, or sometimes on leaf surfaces.

They are extremely neat discs of bright white silk, some 2.5 to 5 mm in diameter and containing 8 to 18 eggs. The centre of each



Fig. 6. A line of *Dictyna uncinata* egg sacs on a window. Each disc is 2.5 mm across. (Geoff Oxford)



Fig. 7. Multiple egg sacs of *Brigittea* or *Dictyna* species on a dead leaf. (Geoff Oxford)

disc is visibly bumpy, revealing the position of the eggs. Multiple egg sacs are often laid in a cluster or line. Figure 6 shows an extreme case of this – a female *Dictyna uncinata* somehow got into our house and presented us with a precise row of seven egg sacs running down a window pane. One place I can be almost certain to find them is on our wheelie bins – I am not sure why! Although the female is often lurking nearby, the egg sacs are much more noticeable than the spider itself. We have one *Brigittea* species in Britain, and four *Dictyna* species.

### **Running foliage spiders *Agroeca* spp.**

*Agroeca* species attach their egg sacs by a stalk to low vegetation. They resemble an upturned wine goblet and are sometimes referred to as ‘fairy lamps’. The stalk is 10-12 mm long and the egg sac itself is about 7-8 mm across and contains 40 to 60 eggs. When first made it is pure white (Fig. 8, left) but the female can then camouflage it using particles of



Fig. 8. The beautiful ‘fairy lamps’ of a Running foliage spider before (left) and after (right) being camouflaged. (Left: Alexis Orion – Wikicommons; Right: Mike Davidson)



soil, lichen or other debris (Fig. 8, right). The best place to find these beautiful structures is amongst heather on heathland. The egg sacs described above are made by *Agroeca brunnea* and *A. proxima*, and probably by the four, much less common, *Agroeca* species as well.

Finally, I consider two groups of spiders in which females carry their egg sacs around with them in characteristic ways, which can also aid identification.

### **Nurseryweb Spider (*Pisaura mirabilis*) and Raft spiders *Dolomedes* spp.**

These large, beautiful spiders, all in the same family (Pisauridae), are unique in that females carry their egg sacs under their bodies, held in their jaws, rather than attached solely to their spinnerets (see below).



Fig. 9. A Nurseryweb Spider female with her enormous egg sac. (Geoff Oxford)





They behaviourally control the development of their young by exposing or shading the egg sac from the sun, for example on top of or beneath a leaf, respectively. In hot weather, our two Raft spiders, *Dolomedes* species, which live in very wet habitats, periodically dip their egg sac into water to keep them hydrated. Unlike the Nurseryweb Spider, which has an off-white egg sac, Raft spiders have much larger, grey sacs that become brown with age. When the female feels that her young have hatched from the egg and undergone their first moult within the egg sac, she builds a conspicuous silk tent – the nursery web. Females can be seen inside their ‘tents’ still holding their sacs for a few days until the spiderlings emerge; after that they sit on the outside, guarding the young until they eventually disperse. By far the most likely species you will see carrying her egg sac in her jaws is the Nurseryweb Spider, as both Raft spider species are very uncommon. During late spring and early summer, and sometimes in August too, she can reliably be found amongst long grass in orchards and meadows, and on roadside vegetation, either carrying her egg sac or established in a nursery web (see ‘Further reading’).

### **Wolf spiders (Lycosidae) and Comb-footed spiders (Theridiidae)**

Like the Nurseryweb Spider and the Raft spiders above, all female Wolf spiders carry their eggs sacs with them as they move about. A few of the Comb-footed spider species do this too. In both these families, the sacs are attached to the spinnerets, at the rear of their abdomens, rather than carried in their jaws.

Distinguishing these two groups is fairly easy. Wolf spiders are larger and move rapidly across open ground, especially in warm sunshine, whereas the Cream-backed Comb-footed Spider *Neottiura bimaculata* and the commonest *Rugathodes* species, *R. instabilis*, are slower moving and found in denser



Fig. 10. A female of one of the Wolf spider species (*Pirata piraticus*) that lives in damp habitats. (Geoff Oxford)



Fig.11. A female Cream-backed Comb-footed Spider *Neottiura bimaculata*, one of the few species in the family that transports egg sacs in this way. (Geoff Oxford)

habitats. They also differ in overall appearance - Wolf spiders' abdomens appear dull (they are covered with fine hairs) but in the Comb-footed spiders they are normally shiny. Finally, Wolf spiders have large and obvious eyes, especially the four on top of their head, but those in the Comb-footed spiders are small and inconspicuous.

I thank Helen Smith for valuable comments on this article.

**Geoff**

### Further reading

BAS Factsheet 2: Large house spider

BAS Factsheet 15: Nurseryweb Spider

See: [britishspiders.org.uk/factsheets](http://britishspiders.org.uk/factsheets)

**DID YOU KNOW?**



When a bee lands on a flower, it begins to suck up the nectar from inside the flower with its long snout, collecting pollen in so-called "pollen pouches" on its hind legs. Because the bee must go so far inside the flower to gather the nectar, tiny pollen particles stick to the bee's furry body.

Info: <https://plantura.garden/uk/>

Photo: Andrew Smith