

Purseweb Spider

(*Atypus affinis*)



Advancing Arachnology



Male Purseweb Spider

The Purseweb Spider is more closely related to the tarantulas and trapdoor spiders of the tropics than to any other British species.



Main picture: Nick Hunt, Insect Geof Oxford

Pursewebs built against a rock face and (inset) in limestone grassland



Evatt Jones

How to recognise a Pursweb Spider

The spider itself is rarely seen because it lives, for most of its life, in a closed silk tube (the purseweb) that is mostly underground. The tube of an adult is about 10 mm in diameter and between 15 and 25 cm long, with about two-thirds underground. The above ground part of the tube may lie along the ground surface between grass roots, hang down from a bank or project upwards against a rock. The silk is well camouflaged by soil particles, carefully applied by the spider. Determination and the correct 'search image' are needed to spot them! No other British spider creates a structure like this. The web's resemblance to an old-fashioned coin purse gives the species its common name, although it is often referred to as a 'dirty sock'!

If the spider is seen, its chunky appearance and relatively large, protruding jaws are unlike any other British species. It is also unique in Britain in that the jaws operate parallel to one another in a stabbing motion, whereas the jaws of all our other spiders converge like pincers.

Prey capture

The Pursweb Spider is very much a sit-and-wait predator. It lurks within the underground section of its tube until a potential meal, such as a beetle, walks over the part of the tube above ground. Picking up the vibrations, the spider runs up the tube and spears the prey through the silk roof using its long, dagger-like jaws. The prey is dragged inside through a slit in

FACT FILE

Purseweb Spider
(*Atypus affinis*)

Body length:
males, 7-9 mm;
females, 10-18 mm

Appearance:

- Cephalothorax (front section of the body) – Brown (female), black (male) and shield-shaped. A raised front half, with a conspicuous white band containing

the muscles that operate powerful jaws (chelicerae). The jaws are as long as the cephalothorax.

- Abdomen (back section) – Oval and brown. Males have a darker shield (scutum) at the anterior end. The spinnerets are

conspicuous.

- Legs – Short, thick and glossy, and the same colour as the cephalothorax.

Habitat: Usually in short, open turf in old grassland and heathland and occasionally among rock outcrops.



Adult female Purseweb Spiders are rarely seen above ground

The Purseweb Spider's fangs are parallel and dagger-like



Tim Jones

the silk and the hole rapidly repaired before the spider retires below with its quarry, to begin feeding. In the southern parts of England and Wales, the Purseweb Spider itself can fall prey to a specialist parasite, the wasp *Aporus unicolor* (Pompilidae). The wasp locates and paralyzes the spider within the purseweb and lays an egg on it. The hatching larva eats the victim and pupates amongst the remains of the spider's previous meals.

Life history - and it can be very long

Purseweb Spiders are most likely to be spotted when mature males leave their webs to search for a female during the autumn, or more rarely, in spring. Once they have located a likely female's web, they tap on it rapidly with their legs and pedipalps to announce their presence. If the female is receptive she remains still and the male opens the web and enters. If she's not receptive, she will tug at the silk and the male will continue his search. Mating takes place within the web and, at least in some cases, the male and female cohabit for several months after pairing. Surprisingly, eggs are not laid until late summer the following year when 50 to 200

are enclosed in a silk sac attached to the tube wall. The young emerge in autumn but do not leave the protection of their mother's tube until spring the next year. They normally disperse in March or April and build their own miniature tube webs. However, the life cycle may be even more complex and variable than this; young have recently been recorded dispersing from a web in late autumn. They take about four years to reach maturity and can live for three or four years after that – a very long life span for a British spider.



Hilary Grant

Newly emerged young disperse along silk tightropes



Joyce Simmons



Helen Smith

Purseweb Spiders are found in well-drained, sunny sites with loose soils - such as limestone grassland (top) and heathland (above)



Based on Spider Recording Scheme data 2022

Purseweb Spider in Britain

Where are they?

The Purseweb Spider is a scarce species found predominantly in south-east Britain, although there are scattered outposts, often near the coast, from North Wales to southwest Scotland. The spider requires habitats with good drainage, plenty of sunshine and a substrate suitable for burrowing. These conditions are often provided by sandy heathland, chalky grassland and coastal sites, but the spiders are also found in soil-filled rock crevices.

For more information

britishspiders.org.uk/srs_Atypus_affinis

Bee, L., Oxford, G. & Smith, H. (2020) *Britain's Spiders*. 2nd edn. Princeton WILDGuides.

Burkmar, R. & Price, R. (2019) The Purseweb spider; a very British tarantula. *British Wildlife* 30: 399-406.

The British Arachnological Society

The BAS is Britain's only charity devoted exclusively to spiders and their relatives. We use science and education to advance the wider understanding and appreciation of arachnids, and to promote their conservation.

Find us at: www.britishspiders.org.uk, on **Twitter** @BritishSpiders and on **YouTube** at youtube.com/c/BritishArachnologicalSociety