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Spectacular Spiders

There are over 660 different species of spider in Great Britain, ranging from tiny money spider the Minute Maro (*Maro minutus*), to the huge Cardinal Spider (*Tegenaria parietina*) with a leg span of more than 10 centimetres. The heaviest spider in Britain is probably the Four-spot Orbweaver (*Araneus quadratus*) which weighs up to 2.5 grams!

Spiders are not insects. They belong to a class of animals known as Arachnids, which also includes harvestmen, scorpions, mites and ticks. However, like insects, they are invertebrates which means they don't have a backbone. Most adult arachnids have four pairs of legs and two pairs of mouthpart appendages: pedipalps and chelicerae. Pedipalps are adapted for feeding, defence and courtship. The chelicerae are primarily used for biting or chewing, and it is through these modified mouthparts that spiders deliver the venom that subdues and kills their prey. It is unusual for a spider to bite a human, and even rarer for a spider bite to cause any severe reactions in the UK.

Nursery Web Spider (*Pisaura mirabilis*)
© Greg Hitchcock

Let's meet some Spectacular Spiders

Chameleons aren't the only animals that can change their colour. The **Flower Crab Spider (*Misumena vatia*)** sits on flowers to wait for prey to land nearby. It then pounces and traps its insect prey using its crab-like front legs. But the Flower Crab Spider has an extra special trick up its sleeve - it can change colour to match the flower it is sitting on; crab spiders can be white, green or yellow.

Flower Crab Spider (*Misumena vatia*)
© George Cook

The female **Nursery Web Spider (*Pisaura mirabilis*)** creates a tent-like web for her young - a nursery web! Her spiderlings are safe inside their nursery as she stays with them to protect them from predators. The male Nursery Web Spider gives a silk wrapped gift to a female spider before mating. However, this isn't just a romantic gesture, it's a survival tactic! The wrapped-up insect gift is given to the female to distract her while he mates with her, which stops her from attacking him. Sometimes the male cheats and wraps up some rubbish instead!

Long before humans invented diving, **Diving Bell Spider (*Argyroneta aquatica*)** had evolved successful diving techniques. They trap air in fine hairs on the abdomen creating a scuba tank and build a silken diving bell underwater, that they fill with air. This enables the spiders to roam underwater hunting small animals.

Wolf Spiders (*Pardosa spp.*) are so named because it was once thought that they hunted in packs. When a male wolf spider finds a female, he wishes to mate with, he will dance for her! If she isn't impressed, she may attack him, but if she likes the dance, she may allow him to mate with her. His dance consists of waving his front legs and vibrating his abdomen! Wolf spiders are great mothers.

Wolf Spider (*Pardosa sp.*)
© Alex Hyde/Back from the Brink

The female carries her egg sac around with her to protect it. She basks in sunlit areas to help the eggs develop quicker and moistens it to stop it drying out. When the young hatch, she carries her babies around on her back for about a week and they all share food.

Some spiders are masters of disguise. The **Sand Running-spider (*Philodromus fallax*)** is flecked with black, yellow and white and lives on sand dunes from Cheshire around the bottom of Britain to Lincolnshire, when it stops moving it blends into the sand and disappears. Another endangered species is the **Lichen Running-spider (*Philodromus margaritatus*)**, which lives on tree trunks in Scotland and Central South England and looks like a bit of lichen.

Do you ever find house spiders (Eratigena or Tegenaria sp.) in your bath? Contrary to popular belief, they don't come up the plug hole but have fallen off of the wall into the tub. They are most likely to be males, out looking for a female to mate with.

The **Horrid Ground-weaver (*Nothophantes horridus*)** is one of the rarest spiders in the world. It has only ever been found in four limestone quarries around Plymouth, one of which has now been developed.

The **Fen Raft Spider (*Dolomedes plantarius*)** is one of our largest spiders – adult females can grow to around 7cm in length (including their legs). They are rather attractive and have black or brown bodies with white or cream stripes. Fen Raft Spiders live and hunt on the water's surface, sensing vibrations with their legs. They lie in wait amongst the wetland plants for prey to come within striking distance. Their hairy legs allow them to skate across the surface of the water to grab their prey. The spiders also use their leg hairs to sense the vibrations produced by aquatic insects and other small creatures – which they eat. Larger individuals have been known to catch larger animals such as tadpoles and small fish! When they are scared, they climb down plant stems and hide underwater.

Fen Raft Spider (*Dolomedes plantarius*)
© Steven Falk

The **Cloud-living Spider (*Semljicola caliginosus*)** lives on mountains in Cumbria, Yorkshire and the Scottish Highlands. This species is under threat from climate change - a few degrees rise in temperature may push the Cloud-living Spider to extinction. Outside Britain it has only been found in Siberia, where it was recorded in 2006.

There are lots of species of **jumping spider** in the UK, and worldwide it is the largest spider family, containing over 5,000 species. Jumping spiders have a very large front pair of eyes and are thought to possess the best vision for an invertebrate after cephalopods (octopus and relatives). This vision, along with an ability to jump, allows them to actively hunt their prey during the day. Their keen eyesight also plays a part in courtship, where males undertake elaborate dances to woo a female (and avoid being eaten!).

Distinguished Jumping Spider (*Attulus distinguendus*) © Roman Willi

- The **Distinguished Jumping Spider (*Attulus distinguendus*)** is found on just two sites in the UK, West Thurrock Marshes in Essex and Swanscombe Peninsula in Kent.
- **Zebra Jumping Spiders (*Salticus scenicus*)** have excellent eyesight. If you take a close look at one, it may well turn its head and look straight back at you! They are small – the females are just 7mm long - but they are big for spiders – half of all species are tiny money spiders, less than 4mm long!

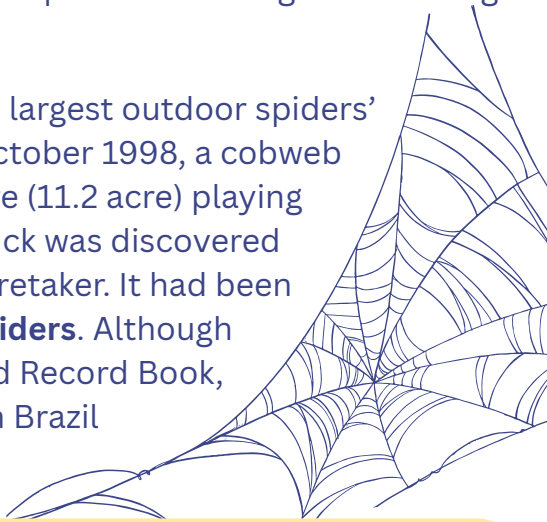
For more than 70 years, the **Ladybird Spider (*Eresus sandaliatus*)** was thought to be extinct in Britain. It was rediscovered in 1980, on one last remaining site which supported only a few spiders. Since 2000, over 20 populations have been established on Dorset heathland. Spiders have been carefully released onto new sites – increasing the number of Ladybird Spider populations. The male spider has spectacular colouring and it's not difficult to see why it is called the Ladybird Spider! Both male and female Ladybird Spiders spend most of their lives in their silk-lined burrows.

Spider Silk

Spider silk is produced as a liquid protein in the spider's abdomen. At the tip of the abdomen are two or three pairs of spinnerets, these spin the silk which immediately solidifies to form threads. Spider silk is incredibly strong and elastic – it can be stretched to one third longer than its original length without breaking. Spiders use their silk for different uses, it can be used to construct webs to catch prey, to protect eggs, to wrap prey, or to weave a shelter.

Some spiders use silk to colonise new areas. On fine days in late summer or autumn tens of thousands of small money spiders climb to the tops of blades of grass or fence posts and spin strands of silk. As the wind catches the silk the spiders become airborne and drift along with the breeze. This 'ballooning' allows the spiders to travel huge distances and up to astounding heights. Weather balloons over 1000m up in the atmosphere have caught ballooning spiders!

The Guinness World Record for the largest outdoor spiders' web is held by British spiders. In October 1998, a cobweb that covered the entire 4.54 hectare (11.2 acre) playing field at Kineton High School, Warwick was discovered by Ken Thompson - the school's caretaker. It had been created by thousands of **money spiders**. Although not recorded in the Guinness World Record Book, larger web formations also occur in Brazil and Panama.



*Did you know that the web of an average **Garden Cross Spider (Araneus diadematus)** contains up to 30 metres of silk!*

Ladybird Spider (*Eresus sandaliatus*) © S Dalton

Spiders are in many ways the most exciting creatures on earth. Right here in the UK we have spiders that'll dive underwater to catch tadpoles and even small fish, spiders that tend their young in little creches made from silken tents, little wolves that carry their spiderlings around on their backs, even cute jumping spiders that'll bounce around like they're on pogo sticks - and will even show off to you if they think you're a rival! What spiders are NOT is dangerous - I'd love a chance to convince every kid out there that spiders are wonderful before they grow up and inherit their parent's fears!!!

~ Steve Backshall ~

Horrid Ground-weaver (*Nothophantes horridus*) © Tom Thomson

Spectacular Spiders

Buglife is actively working to improve perceptions around spiders and to save some of our most rare and vulnerable spider species. You can help too!

Find out how by scanning the QR code our visiting our website: buglife.org.uk/get-involved/

You could become a spider spotter! Share your sightings through the iRecord app or by emailing the British Arachnological Society with your photos.

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