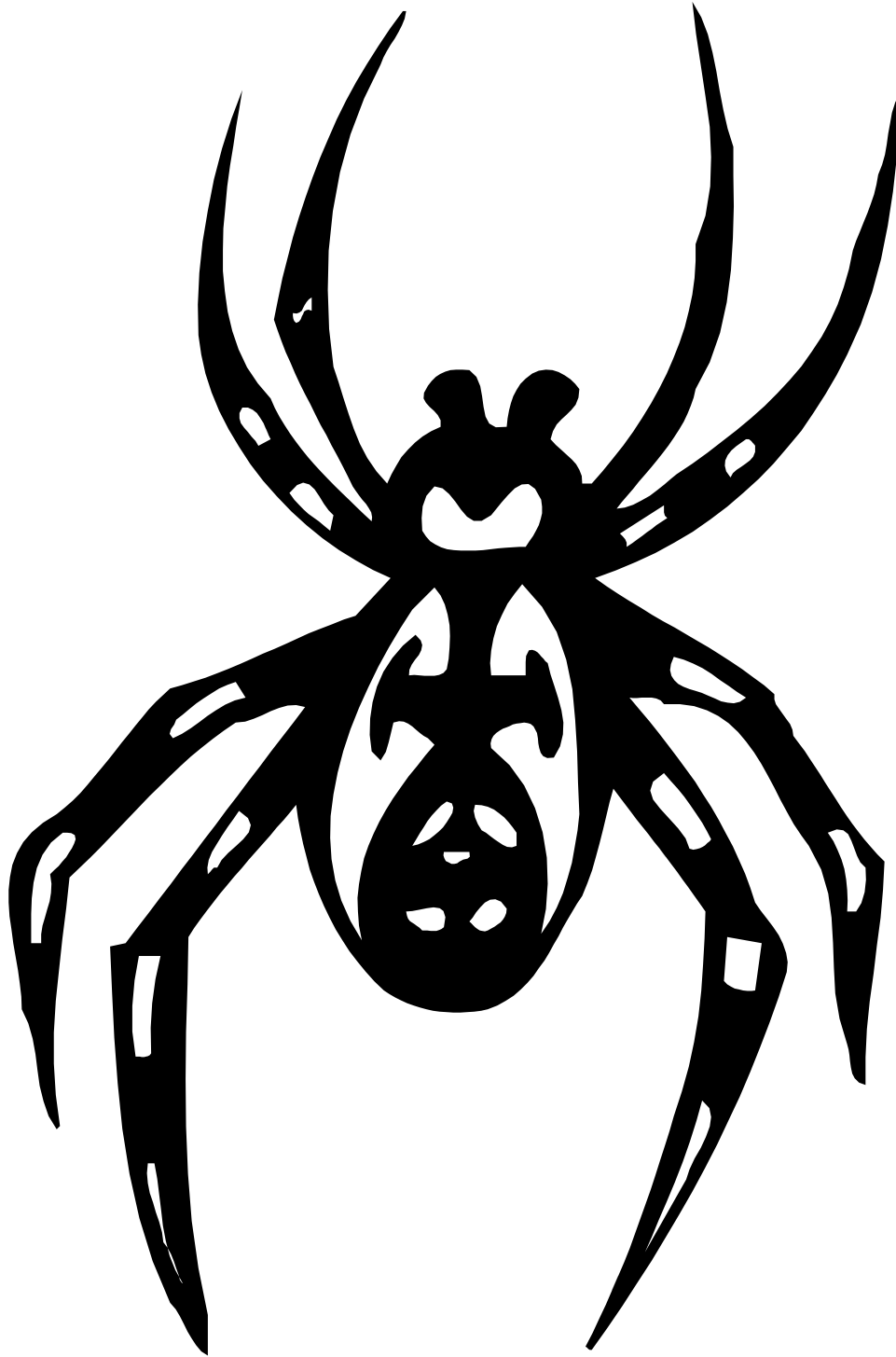


Wild About...



Spiders

Wild About...



Nature notes

There are 600 different types of spider in Britain. In a medium-sized garden there could be up to one million spiders! There are five types of spider commonly found in houses. Most spiders are active at night, resting during the day somewhere cool and shady.

- Spiders range in size from tiny money spiders to the great raft spider and the cardinal spider, which can be over 13 cm across!
- All spiders have eight legs, each made up of seven segments.
- On the end of a spider's abdomen are silk-spinning organs, called spinnerets. There are different types of silk for different purposes e.g. cocoon silk is thick and smooth, whilst web silk is like sticky, coiled elastic.



Spiders' silk is one of the strongest materials known to man. The United States Army is thinking about using spiders' silk to make bullet-proof jackets. The silk is so strong and stretchy, it can absorb the impact of most bullets better than man-made fibres.

- Most spiders have 6 to 8 eyes, but cannot see very well, and rely on other senses instead.
- Spiders are covered in hairs and bristles, connected to their nervous systems, which pick up vibrations that may signal food, a mate or a predator.
- Spiders are brilliant at catching and eating unwanted insects – the ultimate, environmentally-friendly flytraps! Spiders inject their prey with a poison that paralyses, and digests it. They then suck the digested juices out, leaving the empty shell behind. Any food not eaten may be wrapped up in silk, and then stored for a later meal.
- Female spiders lay eggs in a silken sack. Some carry the sack around until the eggs hatch, whilst others leave it in a cobweb, or under leaf litter. The eggs hatch into spiderlings, which look like miniature adults.

Spiders

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Nature notes

Spider Names

Spiders are often named after the type of web they build, like orb-web spiders and funnel weavers, or by where they live, like the water spider. The water spider is fascinating, being the only spider to spend most of its life underwater. It builds a domed diving bell, out of silk, that it fills with air bubbles. It rests in the bubbles during the day, hunting for food at night.

From the very small to the very big, here are some of the spiders found in Britain:

Money spider

This is a very small spider – about 2 mm long. Most have black bodies with brown legs and are easiest to find in late summer/early autumn. Some money spiders spin hammock-like webs. Look close to the ground on garden plants and grass. In autumn, money spiders make gossamer webs that are caught by the breeze, and drift across fields and gardens. Rising air currents can carry the webs for more than 100 miles, before they drift back to the ground.

Raft spider

These are the biggest spiders in Britain and are found in marshes or swamps, usually in southern England. They are big, strong spiders – the females are about 22 mm, males 10-13 mm. They eat large prey such as damselflies, bluebottles, and even small fish! By vibrating the surface of the water with their legs, they trick fish into coming to the surface, then pounce on them. Male spiders attract females by waving their front legs at them.



House spider

There are a couple of spiders that are frequently found in houses and garden buildings. The females tend to be bigger than the males – up to 18 mm across. After mating, males and females live together for a few weeks until the male dies – then the female eats his body! Female house spiders are thought to live for up to four years. House spiders only come out at night and catch their prey by pouncing.

Spitting spider

This spider gets its name from the way it attacks its prey, by spitting! It can spit, over a distance of 10 mm, a spray which sticks the prey to its surroundings. This spray is made up of sticky gum and poison. When the prey is stuck, the spider moves in and kills it, by biting. This is a very slow moving spider, that would struggle to catch any food without this little trick.

Spiders



How to watch spiders

Many different spiders can be found living inside, and outside, buildings. Gutters and windows are ideal places for spiders to make webs, whilst nooks and crannies in walls are excellent places for spiders to shelter.

Spiders are very hard to examine as, when captured, they often curl up in a ball and 'play dead'. If you can find a spider, look at it under a magnifying glass.

- Can you see its jaws?
- Can you see its spinnerets (the organs used to spin silk)?

Equipment

To watch spiders, you can use:

- a beating tray
- a pooter
- jam jar or tub with lid
- magnifying glass

Spider Signs

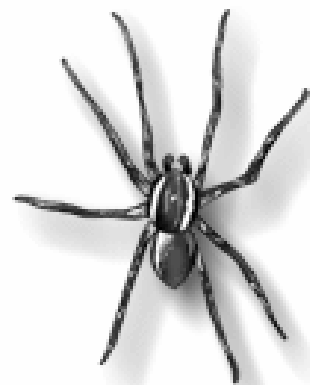
Web design is remarkable, differing between each species. Spiders with similar webs tend to be closely related. On frosty or dewy mornings, you often see webs, showing where spiders have been active at night. Spiders are great to study all year round, but dewy/frosty days are great for recording webs.

You can record spiders and webs in different ways:

- Drawing the web
- Photography
- Collecting a web

To make webs easier to see when there is no dew or frost to highlight them, you can gently spray water over them (using a plant sprayer).

If you find a web, study it carefully, but don't touch it as webs are easily damaged. Look for the spider in its near-by lair. It may be in a crack on a wall, or on a plant. In walls, they often spin silk tubes.

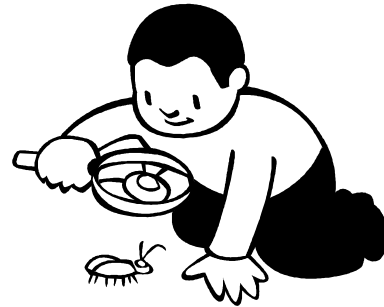




In your nature diary

Inspect a web, and try to answer the following questions. Write your findings, and draw diagrams, in your nature diary.

- How is the web attached, and what is it attached to?
- Is there any damage to the web? What could be the cause?
- Are all the threads the same?
- Are there any drops of gum? Where is the gum?
Using a blade of grass, touch the web gently, one strand at a time. Where does the grass stick? Is this the same place that you could see the gum?
- Does the spider walk on all the strands, or just a few?
- Very gently cut a strand of the web, being careful not to destroy it! Look at the web the next day. Does the spider mend the web? How long does the web stay there? Most garden spiders will keep a web for a couple of days, eat the old silk, then use it to make a new web. This way it doesn't waste the silk!



Wild About...



Survey for spider webs

The window spider is often responsible for the big webs you see across windows. Its web is identified by the missing sections of silk in an upper corner. This spider sits in a silk tube on the edge of the web. When an insect lands on the web, a vibration travels along the main thread, called a signal thread, to the spider, which comes scuttling out.

You can study window spiders from inside your house. Work out which way your house faces, and draw a plan of your house and number the windows on each wall. Are there more webs facing one way compared to another? Do your spiders prefer warmer south facing windows, or cooler north facing ones?

Keep safe - don't try hanging out of upstairs windows to count webs.

Spiders tend to prefer dirtier window frames. If the windows have been washed, wait for about a month and then begin recording. This gives the spiders a chance to build new webs.

North-facing windows	Number of webs
Window 1	
Window 2	
Window 3	

East-facing windows	Number of webs
Window 1	
Window 2	
Window 3	

South-facing windows	Number of webs
Window 1	
Window 2	
Window 3	

West-facing windows	Number of webs
Window 1	
Window 2	
Window 3	

Spiders

Wild About...



What to do

Collect your own spider's web

If you find a web, without a spider living in it, you could collect it. When you are looking for a web, choose a dry day, with no wind, and make sure that the web is dry, with no droplets of water on it.

You will need:

- A spider's web
- A sheet of newspaper
- A can of white or black spray paint – available from art shops
- A can of hairspray
- A sheet of card big enough for the web and a colour that goes well with the paint
- Scissors

Instructions

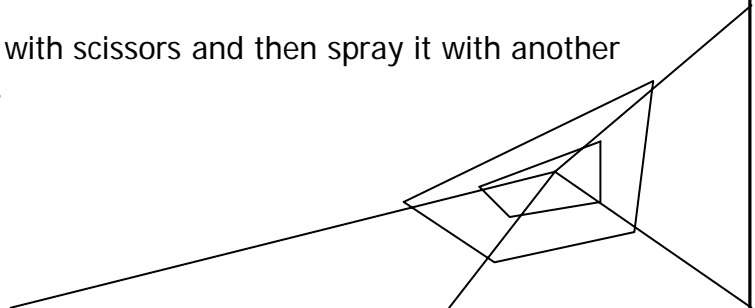
Put the newspaper behind the web, so that you do not get paint on anything.

Spray both sides of the web lightly, and as evenly as you can, with the paint. Keep the nozzle away from the web so the pressure of the paint won't damage it.

Leave the web to dry, spray it again, then spray it on both sides, with the hairspray to make it sticky.

Before the web dries, line the card up with the web and push it against it. Be careful, as the web is delicate.

Cut the strands that support the web with scissors and then spray it with another coat of hairspray to secure it in place.



Spiders