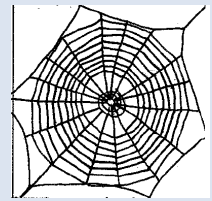
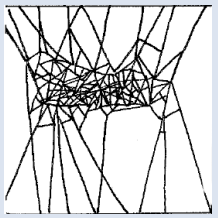
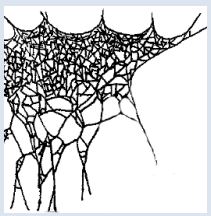
SPIDER KEY

Web-Building Spiders

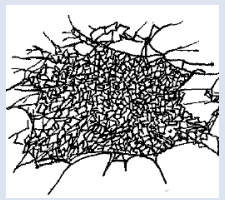
Sheet Web Spiders


Orb web spider

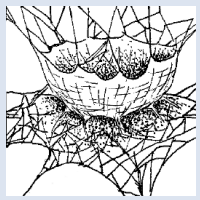

Cobweb spider


Cellar spider

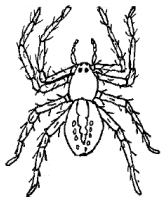

Funnel web spider

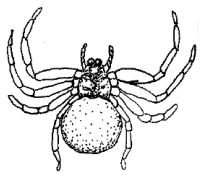

Platform spider

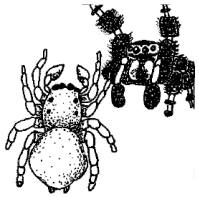

Filmy dome spider

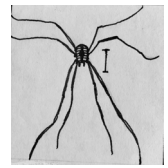

Bowl & doily spider

Spiders without Webs


Wolf & nursery spider


Crab spider


Jumping spider


Harvestmen

Burrowing Spiders


Trapdoor spider


Turret & folding door spider

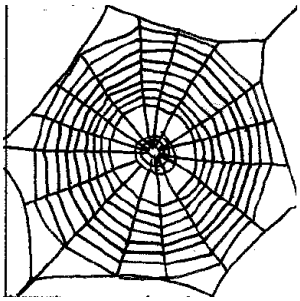

Tarantula spider

See Photo Credits on page 22 for sources.

Longer Version

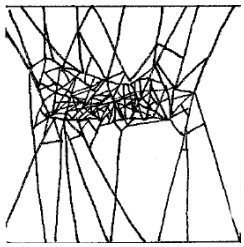
SPIDER KEY

Web-Building Spiders



Orb web spiders. These often (but not always) live alone, and will eat other spiders they meet. The motto of many female orb spiders might be that "a husband's place is inside the stomach of his wife," because many female orb spiders would eat their former mate just as they would any insect.

Most orb spiders eat and rebuild at least part of their web every day or night. Their webs are almost like another part of their bodies. They use them to catch meals and to sense the world around them. Orb spiders have very poor eyesight, but they don't need to see well because they use their webs to feel the world around them. They have special lines in their webs to sense prey. When something touches these lines, the lines vibrate, and the vibrations are a message to the spider, telling it there is something in the web. The spider can tell by the way the web vibrates if the movements are from a male spider looking for a mate, a delicious struggling insect victim, or something else. If these lines were cut, the spider's main sense would be cut off and it would not be able to sense movement in its web. The orb spider prepares its trap by putting sticky drops on a thread in the web, and then "plucking" the thread (like a string of a guitar) with a leg. This spreads the sticky drops along the silk lines of the web. When it catches an insect, an orb spider uses its front legs to quickly spin the insect as it uses its back legs to pull out silk, wrapping the victim like a mummy.



Cobweb spiders. The webs made by spiders in this family are irregular, usually with a platform with threads going up and down above and below it. The threads are sticky and tough, and the webs can be found in cracks, and underneath leaves, rocks, or loose bark. This large family has many kinds of spiders in it, including the poisonous black widow. Be careful not to touch black widows, and do not reach under rocks or logs without looking.

Some cobweb spiders set traps to catch insects that crawl on the ground. They put sticky drops at the ends of silk lines where they connect to the ground, called "sticky gumfoot lines." When an insect walks by, it may get caught in one of these sticky drops and try to get away. When it does, the silk line breaks off the ground like a rubber band, snapping the victim into the center of the web, and to its doom. As it struggles, it gets tangled in other threads. These spiders are also called comb-footed because they have tiny combs of hairs on their back pair of legs. They use these to comb silk out of their spinnerets to wrap their prey.

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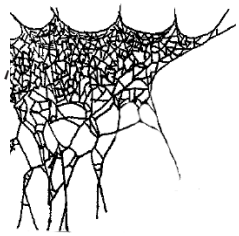
Longer Version

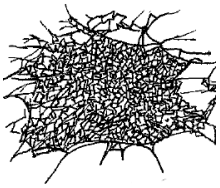
Web-Building Spiders



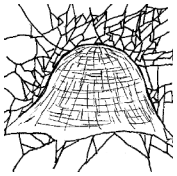
Cellar spiders. You'll find these spiders hanging upside down in loose, irregular, "messy" webs in corners of houses or cellars. These spiders have long thin legs. If you scare them, some shake their webs to try and make themselves and their web blur and seem to disappear. The female carries her round egg sac in her jaws like a dog carries a ball. People often call their webs "cobwebs," but they are not actual cobweb spiders. They are sometimes called daddy-long-legs, and are often confused with Harvestmen (see below).

Funnel web spiders. Most funnel web spiders spin platform webs leading to a silk tube. Funnel spider silk is not sticky, and when insects land on a funnel spider's web they find it hard to move around on the funnel shape and may bounce, as if on a trampoline. Funnel web spiders can run quickly on top of their webs, grab their struggling victims, and return with them to their funnel to eat them. The back end of their funnel is open, so it can be used to escape when threatened.

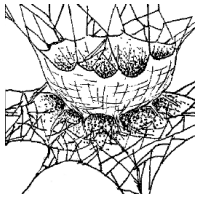
The males often move in and share the female's web after mating. In fall, the females hide their eggs under bark or leaves, not in their web.



Platform spider



Filmy dome spider



Bowl & doily spider

Sheet web spiders. There are different kinds of spiders that build sheet webs, including platform spiders, filmy dome spiders, and bowl and doily spiders. These spiders usually hide, hanging upside down underneath their platform, dome, or bowl, waiting for prey.

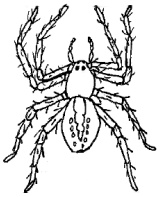
Their webs have trip thread traps that extend vertically above the platform, and that break when flying insects crash into them. The threads snap like rubber bands, knocking the insects into the silk web to their doom.

The spider quickly grabs the victim through the web and pulls it underneath to eat it. Because this rips their webs, sheet web weavers have to fix their webs after every catch.

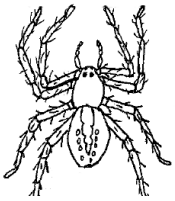
The males and females often live together in the same web.

Longer Version

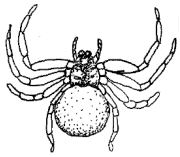
Spiders without Webs



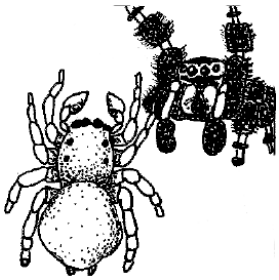
Wolf spiders. These spiders are one of the most commonly seen spiders. Instead of making webs, these spiders chase down their prey like lone wolves. They run around on the ground and some climb plants, leaving a silk "dragline" wherever they go. Some hunt during the day and some at night, and they rest under stones or wood in silk "sleeping bags." The male finds a female to mate with by following her dragline. To convince her that he's a date and not a meal, he waves in a pattern as he approaches her. After mating, her mood changes, and she may try to eat him. After the eggs are laid, the female carries the eggs attached to the end of her abdomen, then when her large young hatch, they hang on to their mom's abdomen for weeks or months. But after they leave, she may eat them.



Nursery web spiders. These look a lot like wolf spiders, but they carry their eggs next to their mouth, like a dog carries a ball, not at the end of their abdomen. They don't spin webs, but when their eggs are almost ready to hatch, the female spins a nursery tent, and puts the eggs inside. Many can run on the surface of water and even stay underwater for some time.



Crab spiders. These spiders hold their legs out at their sides like crabs, and can walk forward, backwards, or sideways. Crab spiders wait in ambush for passing insects. Some are brightly colored and wait inside flowers to ambush bees and other insects.



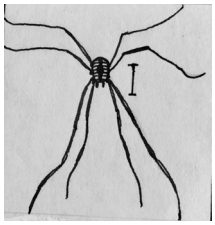
Jumping spiders. These spiders are often brightly colored, active during the day, and in sunshine. They walk with a lot of stops and starts, and jump on their prey. They are easy to tell apart from other spiders because they have four big eyes on the face and four smaller ones on top of the head.

Jumping spiders sometimes jump 40 times their own length! Try multiplying your height by 40 and see how far you would have to jump to do this. Before jumping, the spider attaches a silk thread so it can climb back in case it misses. Because they use their eyes to find prey, jumping spiders have the best eyes of any spiders, and among the best of all animals without backbones.

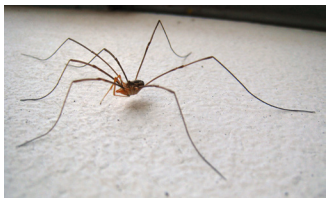
Most spiders do some dancing, but jumping spider dances can be fancy. After finding a female by spotting her, or by following her silk dragline, the male does a courtship dance. He waves his first legs in front of the female, wags his abdomen, and hops. If the female is of the same species, she may signal with her legs to "Come on over!"

Spiders without Webs

Longer Version



Harvestmen. A-ha!! Caught you! These are spider "cousins," not real spiders. Spiders have bodies clearly divided into two parts, abdomen and cephalothorax. Although Harvestmen also have these two parts, they appear not to—in other words, they don't have a "waistline." They are called harvestmen because when first scientifically described they were seen at harvest time.



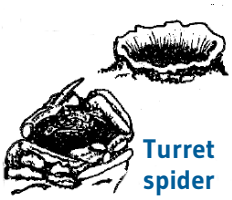
Harvestmen clean their long, thin legs by pulling them between their jaws. They can't make silk and they eat very small insects. For real spiders that eat each other, mating can be dangerous. That is not the case with harvestmen, who eat only tiny insects. They can easily mate with any number of partners of the opposite sex they meet. But sometimes males fight with each other. They often have armor or spines on their body for defense.

Burrowing Spiders

Trapdoor spiders. These dig tube-like burrows lined with silk. The top of the lid may be hard to find, because it is camouflaged with leaves, twigs, or whatever may be lying around. The trapdoor may be held shut by the spider, sometimes with an amazing amount of force.

The trapdoor spider makes many silk "telegraph lines" around its burrow, then waits inside for a vibration that tells it that an insect is walking by. Then it rushes out, grabs its prey, and pulls it into its burrow where it eats it.

Turret & folding door spiders. Some spiders make an open "turret" around the entrance to their burrow. They mix soil and plant materials with silk to build a small wall, up to about 1 inch high, at the burrows' opening. These spiders hide inside, sense vibrations from insects wandering by, and then run out to catch their prey. Some turret spiders attach plant materials to their turrets so they stick out from the burrow, like spokes on a bicycle wheel. This allows the spiders to sense vibrations over a larger area.



Folding door spiders live in burrows, but they don't close their burrows with trapdoors. Instead they build silk and plant materials into an opening that can be pulled closed. These spiders lie in wait at the entrance of their burrow and feel shaking to sense and catch prey.

Longer Version

Burrowing Spiders

Tarantulas. These spiders are the largest of all spiders. Most tarantulas are covered in fuzzy hair, and live in silk-lined burrows in the ground or in trees. Many people keep tarantulas as pets because they live a very long time, and aren't harmful to humans. They do have big fangs and a painful bite, but they need them for catching their prey. Tarantulas are sit-and-wait predators that almost never leave their silk-lined burrows, waiting for prey to stumble in. They ambush and eat big insects, other spiders, centipedes, and millipedes. "Tarantula hawks" are wasps that paralyze a tarantula, then lay an egg inside their body. The most common time of the year to observe tarantulas is during mating season, when males leave their burrows to search for the burrows of females.