

Web of Life: Why We Need Spiders

by Danae Wolfe

WE'RE DEVIATING from our usual focus on six-legged arthropods to feature the eight-legged brethren of our beloved insects. If you're like many people, the very thought of spiders may elicit a visceral reaction. After all, as much as three to fifteen percent of the world's population suffers from arachnophobia, or fear of spiders. But despite their bad rap, spiders are one of the best garden predators, collectively consuming up to 800 million tons of prey every year.

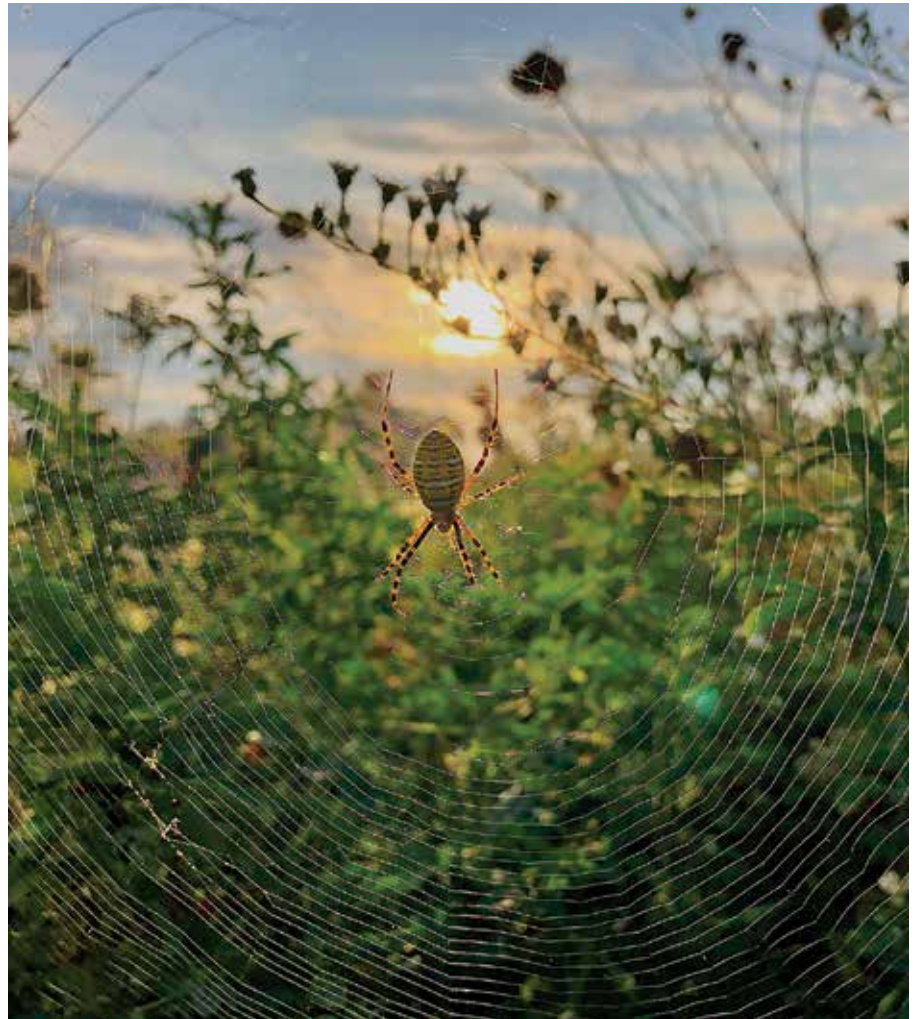
MAKINGS OF A SPIDER

Of the more than 45,000 species of spiders worldwide, around 4,000 make their home in North America. Spiders are arachnids and are closely related to ticks, scorpions, and mites. Where insects have three main body parts (head, thorax, and abdomen), spiders have only two—the cephalothorax (a fused head and thorax) and the abdomen. All spiders have eight legs, and while many also have eight eyes, some species have six or fewer.

In addition to their eight legs, spiders have two modified appendages called pedipalps, which the arachnids use for sensory purposes like tasting and smelling. Males also use these limblike appendages for mating and courtship. Spiders have mouthparts called chelicerae, or jaws, which often contain fangs that the animals use to inject venom into prey before consuming it. All spiders have spinnerets that extrude silk, but not all spiders spin webs. Some species use their silk to construct molt sacs, nests, or hammocks where they rest.

NATURAL PEST CONTROL

Spiders are often indiscriminate predators, feeding on a wide diversity of insect pests in the garden including aphids, beetles, and mosquitoes. Though they help



Many orb-weaver spiders, like this banded garden spider silhouetted against the rising sun, construct large wheel-shaped webs that they use to catch prey.

keep populations of pests in check, they may also feed on beneficial insects like bees and wasps. Spiders are also prey to a variety of larger animals including birds, reptiles, amphibians, and small mammals that enjoy the high-protein treat.

COMMON GARDEN SPIDERS

From outdoor habitats like the garden to indoor environments like our basements,

spiders are all around us. While I wish I could cover all the incredible types of spiders in this article, space allows for only a few. Here are a few common classifications of spiders that can be found in the garden.

Crab spiders are aptly named for the way they hold their forelegs up and out like the claws of a crab. Varying in color from dull grays and browns to brighter shades



A male green lynx spider, which is well camouflaged on a leaf, has spiny legs that help it capture prey and protect itself from predators.

of green, yellow, and even pink, many species of crab spider camouflage themselves against flowers while they lie in wait for unsuspecting prey. These spiders don't spin webs, but females use their silk to build flat nests where they lay eggs.

Jumping spiders are the largest family of spiders in the world, with more than 6,000 described species. Thanks to their four large anterior eyes, jumping spiders share the burden of being the world's cutest spiders. Though rather small, these arachnids are acrobats, jumping many times the length of their body to ambush prey. Like crab spiders, jumping spiders do not use their silk to construct webs, but rather build cozy hammocks in and among leaves and flowers.

Orb-weaver spiders range in size and color, from the small and flashy orchard spider to the much larger banded garden spider. Most orb-weaving spiders construct spiral, wheel-shaped webs that they use to capture prey. Even more impressive than the intricate design of their webs is the fact that many species construct a new web every day. Just imagine rebuilding your home each day!

Lynx spiders generally don't build webs, unlike their web-weaving kin. Instead, these spiny-legged spiders spend their days resting on plants waiting to ambush

prey. While some lynx spiders are a drab gray or brown, others are brightly colored, donning neon shades of green like the green lynx spider.

Wolf spiders are mostly ground-dwelling arachnids, living under rocks or in logs and leaf litter. These spiders do not spin webs to catch prey, but rather hunt by chasing down prey on the ground. Female wolf spiders carry their egg sac on their spinnerets and after the babies hatch, they will crawl up onto mom's back where they'll remain for several weeks as they grow and develop.



Jumping spiders can be found curled up in silk hammocks that they construct in leaves and flowers.

Tarantulas are often portrayed as large scary creatures, but despite their negative reputation, these spiders are quite skittish, coming out of their underground burrows only to hunt and mate. In the U.S., tarantulas live mostly in the arid southwestern desert regions in states like Arizona, New Mexico, California, and Texas. Some tarantulas are indeed large and may have a leg span up to 11 inches, but others are quite small, measuring less than a quarter-inch in size.

Want to find out more about these and other spiders around us? I recommend you check out *Spiders of North America* by Sarah Rose (Princeton University Press, 2022).

SPIDER-FRIENDLY GARDEN PRACTICES

Supporting spiders in the garden is rather easy. In fact, the same rules that apply to helping pollinators also apply to helping these eight-legged predators. Practicing integrated pest management (IPM), which relies on managing pests through commonsense methods, is one of the best ways to support both spiders and insects in the garden. IPM entails a variety of pest management techniques like observing and identifying when a pest problem exists in the garden, preventing pest problems through proper selection of plants and planting techniques, and only using chemical control for pests when absolutely necessary. When possible, avoid using pesticides, especially those that indiscriminately kill pests.

Also consider adopting lazy landscaper practices, especially when it comes to spring and fall garden clean up. Many spiders make their homes in leaf litter and log piles. Being a lazy landscaper will not only save you precious time and energy, but it will also provide the perfect home for a variety of spiders that are sure to return the favor by keeping your garden pests under control. A true win-win for all involved!

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