

## Some Spider

By Susan Camp

“You mean you eat flies?” gasped Wilbur.

“Certainly. Flies, bugs, grasshoppers, choice beetles, moths, butterflies, tasty cockroaches, gnats, midges, daddy longlegs, centipedes, mosquitoes, crickets— anything that is careless enough to get caught in my web. I have to live, don’t I?”

So responds Charlotte, the beautiful, intelligent, amazing, literate spider and star of E.B. White’s beloved children’s classic, “Charlotte’s Web”. White’s Charlotte is a barn spider, *Araneus cavaticus*, but every summer we enjoy our own Charlotte, who builds her elegant web in a sunny spot outside our front bedroom window. Our Charlotte is a black and yellow garden spider, *Argiope aurantia*, also known by various common names, including yellow garden orb-weaver and writing spider, because of her distinctive web design.

*Argiope aurantia* is found in all lower 48 states, southern Canada, and Central America. Writing spiders build their webs in sunny marshes or fields, riparian woodlands, or on the eaves and window frames of buildings. They are active throughout the summer. Females range from  $\frac{3}{4}$  to  $1\frac{1}{8}$  inches in size. Males are much smaller, ranging from  $\frac{1}{8}$  to  $\frac{1}{4}$  inch long. The striking black and yellow coloration of these silver-faced spiders and their gorgeous, intricate webs make them popular subjects for nature photographers.

Both the female *Argiope* and the original Charlotte are orb-weavers, meaning that they spin circular webs of up to two feet across, with spokes radiating from a spiral center. *Argiope* consumes the inner spiral of her web every night and rebuilds it in the morning. She adds a vertical zigzag pattern of silk, called a stabilimentum, down the center, leading to another common name, zipper spider. The purpose of the stabilimentum is not known, but it may help to attract prey or stabilize the structure.

Most of the time *Argiope* remains suspended upside down in the center of her web, waiting for prey to become ensnared in the sticky strands of silk. She can vibrate the web by vigorously moving her legs, possibly to further ensnare trapped insects or to chase away predators. Once an insect becomes entrapped, she injects venom to paralyze and partly digest it. She then cocoons the prey in silk for consumption a few hours later. Besides insects, she will eat small geckos and anoles. All spiders produce venom to immobilize and kill their prey, but most are harmless to humans. *Argiope* may bite if provoked, but her bite is not dangerous to a healthy person.

The male *Argiope* weaves a small zigzag web close to, or actually inside, a female’s web. He plucks the strands of her web to attract her attention, rather like a medieval troubadour making beautiful music on his lute to court his lady love. The female repays his affection by killing and possibly eating him after mating.

In late summer or early fall, she lays her eggs at night and encases them in a multi-layered protective cocoon that resembles a brown paper sack, which she suspends in her web. Each cocoon contains up to 1000 eggs. The female grows increasingly frail as cool weather sets in, and she will die by the first frost. The eggs will hatch in early spring and the spiderlings will disperse to new locations by long strands of silk carried on the wind. Some young spiders will remain in the area where they were hatched. My husband and I believe that the Charlotte who spins her web on or near our front window each summer is a daughter of the previous year's Charlotte.

Many people are fearful of all spiders and destroy the webs or the spiders themselves. While black widow and brown recluse spiders are cause for concern, garden spiders help us by eating annoying insects. Helpful information can be found in books like the "National Wildlife Federation Field Guide to Insects and Spiders of North America" and numerous online articles and photographs. If you are fortunate to have your own *Argiope aurantia*, enjoy her beauty, for she is one of the wonders of the garden.

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