



Golden Garden Spider

Argiope aurantia

The orb-weaving golden garden spider is common throughout North Carolina, and is often called the “writing spider” because it constructs a zig-zag pattern in the center of its web that resembles writing. This spider is large, but it is not poisonous. Still, many people consider it and all spiders creepy.

In ancient times, people believed that spiders could cure disease. They wore them as charms in nutshells, ate them and encouraged them to stay around their homes. Up to the 19th century, people believed that spiders could cure or prevent fevers. Using spider webs as dressing for wounds has been a common practice.

In England in the late 1500s, Dr. Thomas Muffet studied spiders. He believed that spiders could cure a lot of illnesses, including gout. When his daughter Patience was ill, he gave her spiders as pills to cure her. We all know Patience, as “Little Miss Muffet.”

History and Status

The earliest record of spiders is a nearly complete spider spinneret or web 380 to 385 million years old. Clearly, spiders have been around a long time, but hard evidence of their early evolution is lacking because spiders have soft bodies that do not fossilize very well. Even today, there is much to learn about spiders. Some 35,000 species of spiders have been identified and named so far, yet some scientists suspect this may represent only about one-fourth of the world’s total.

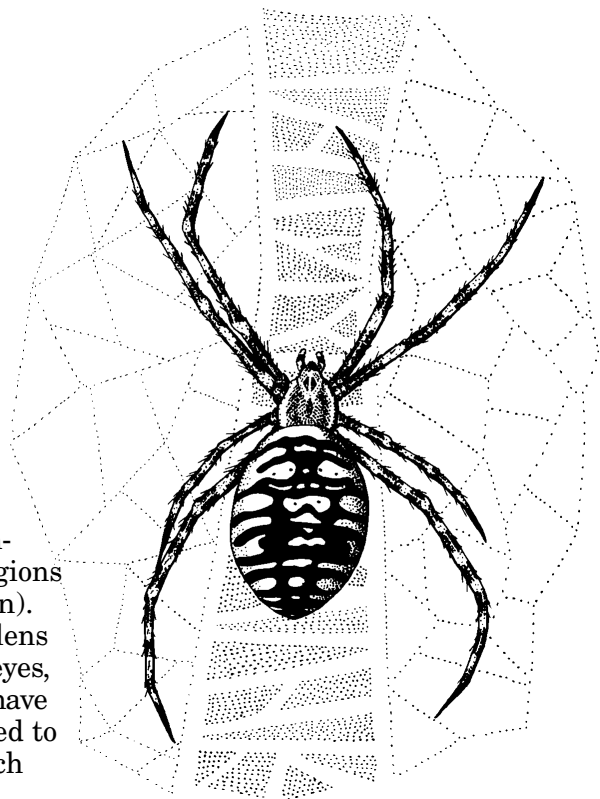
Spiders are a member of the class Arachnida, which is a subgroup of the phylum Arthropoda. Animals in this class have eight legs, no antennae or wings and two body regions (cephalothorax and abdomen). Arthropods also have single-lens eyes as opposed to compound eyes, and their primary mouthparts have 2 to 3 moving parts as opposed to the mandibles of insects which have only one moving part.

Description

The golden garden spider, *Argiope Aurantia*, is large and brightly colored with yellow and black markings. The length of the female may vary from 19 to 28mm, while the smaller male is 5 to 8mm long. The female usually hangs head down in the center of the circular web on the heavier zig-zag bands that look like writing. It is believed that these bands may serve as a warning to birds to help them avoid flying through the web.

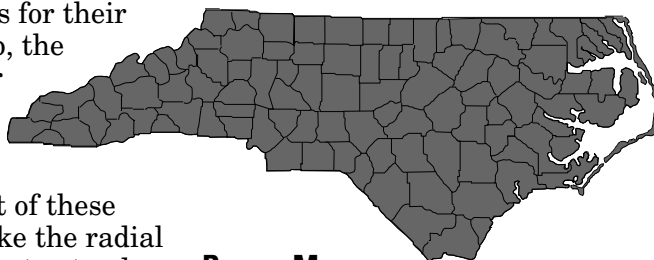
Habitat and Habits

The golden garden spider builds webs in gardens and around homes, and on weeds and tall grasses in marshes or at the edges of fields or streams. These spiders prefer open, sunny locations for their webs. To make a web, the golden garden spider uses different types of silk glands, each of which has a special function. One set of these glands is used to make the radial threads of the web that extend out from the center, as well as a



temporary spiral scaffolding—all of nonsticky silk. Then, using a different set of silk glands, the spider replaces the temporary spiral silk with permanent, sticky silk. In the center of the web, another set of silk glands is used to construct the stabilimentum or zig-zag “writing.” The finished web resembles a wheel with spokes interwoven with spiral threads and, of course, its purpose is to trap insects for the spider to eat. The threads of the web are coated with an antibiotic that helps ward off bacterial and fungal decay. The spider will spin a new web only when the old one is beyond repair, and when it replaces a web, it eats the old silk to recycle it.

The golden garden spider has very poor vision, locating its prey



Range Map:

Found statewide

by detecting vibrations of the trapped insect in the web. It injects its prey with venom and quickly wraps it with silk. When it eats its prey, it injects digestive enzymes to break down the soft tissues into a liquid which the spider sucks into its mouth. The exoskeleton of the prey is dropped to the ground.

Range and Distribution

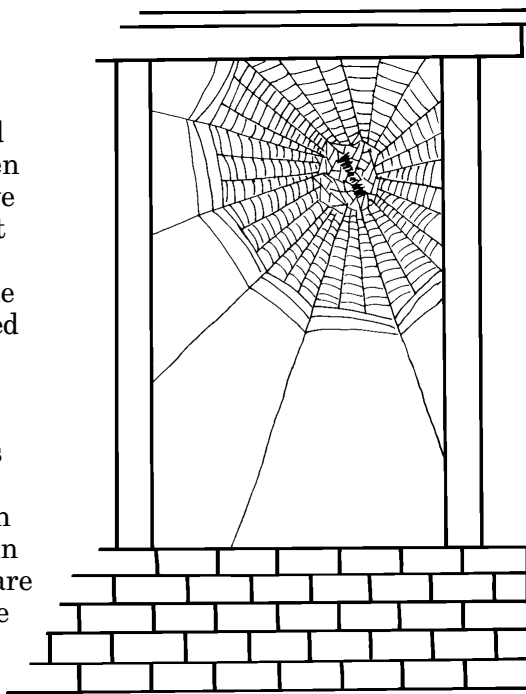
The golden garden spider is found throughout the United States, but it is not common in the Rockies and the Great Basin areas. Species of the Argiopes are found in tropical and temperate regions of the world.

People Interactions

Many people have a fear of spiders, and this fear is so common that it is known as arachnophobia. Perhaps to help overcome this fear, many cultures from ancient times have created myths and legends about spiders. The Greeks tell the story of Arachne, the weaver, while the Navahos relate the legend of the "Spider Woman." Even in modern times, youthful readers have delighted in E.B. White's wonderful story about a spider in his book, *Charlotte's Web*.

Though some spiders are dangerously toxic to humans—the black widow and brown recluse, for example—most are harmless. Still, unless you are an expert at identifying spiders, it is best to leave them alone. Indeed, spiders play an important role in control of insect pests, and the countless species that exist are a vital part of the ecosystem. For this reason, care should be taken with the use of insecticides in areas inhabited by spiders since you may be killing a very helpful ally.

If you have a golden garden spider in your yard, don't disturb it. Instead, pull up a chair and spend some time watching it. If you're fortunate, you may see an insect become trapped in its web, and



observe how this handsome spider reacts. You may also find it fascinating to watch the construction of a web by a golden garden spider or other orb-weaver. Nature offers few shows as fascinating as the construction of a web, and there's no charge for admission.

References

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 Ellis, Harry. "Discovering the World of Spiders," *Wildlife in North Carolina* (August, 1980).
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 Walther, Tom. *A Spider Might* (Sierra Club Books, Charles Scribner's Sons, San Francisco/ New York).

Credits

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GOLDEN GARDEN SPIDER

Classification

Class: Arachnida
 Order: Araneae

Average Size

Length: 25mm (1")

Food

Insects and other spiders

Breeding

The male initiates courtship by entering the web of the female and pulling on the silk threads of the web in a way that signals his presence and announces his intentions. This behavior causes the female to forego her normal instinct to consider him her next meal, and mating takes place.

Young

The female lays an average of 1,000 eggs and covers them with a tough silk cocoon. This egg sac provides a safe, well-insulated place for the spiderlings through the winter until they hatch in May. Upon hatching, the young spiders disperse because the immediate environment could not support but a few of them. When they have found a suitable hunting territory, they begin their own webs.

Life Expectancy

The arrival of cold weather each fall will kill the adult spiders, but the female's final act of enclosing the eggs in the sac will ensure that the next generation of golden garden spiders will survive.