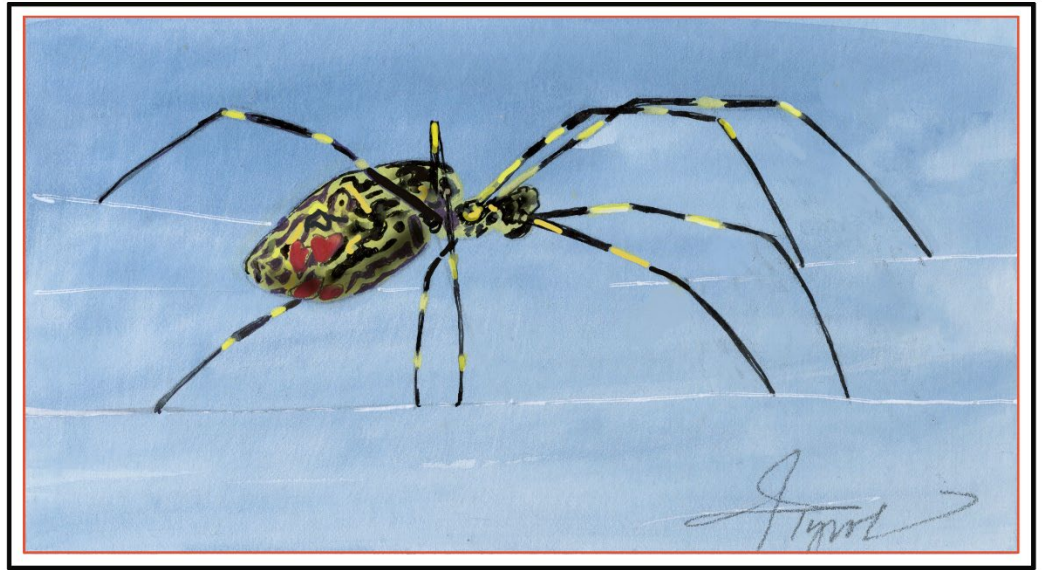


The Outside Story

The Not So Itsy-Bitsy Joro Spider

By Jen Weimer

'Tis the season for spooky stories, and just in time for Halloween, the spider that news headlines have described as “giant,” “flying,” and “venomous” has made its way to New England. While it may be a nightmare for anyone with arachnophobia, the invasive Joro spider (*Trichonephila clavata*) is



quite docile and, if given the choice, will run rather than attack. It also doesn't have wings, and its venom is not harmful to humans.

The reference to flight comes from the Joro spider's propensity to ballooning – a process by which spiders move through the air on silk threads, which they release to catch a ride on the wind. Naturally, the spiders disperse at a rate of about 10 miles per year; any long-distance travel is a result of human transport. The Joro spider's venom effectively subdues insects and small vertebrates, but for humans, a bite is less painful than a bee sting.

Native to parts of Asia, the Joro spider was first reported in the United States in Georgia in 2014 and has spread across the Southeast. Earlier this year, scientists predicted the species would soon spread up the East Coast, and in September, six Joro spiders were reported near Philadelphia, and a single pregnant female was reported in Boston. With the spider's tolerance for cold temperatures, scientists expect them to continue spreading northward.

The Joro spider belongs to the orb-weaver family, whose members are known for their spiral wheel-shaped webs. Joro spider webs are extremely strong and can stretch up to 10 feet across, with support strands that may be more than 20 feet long. These webs can extend between the tops of trees and can catch large insects and other prey. Webs are golden in color and are typically built in trees, shrubs, or on the outside of structures. If a web is disturbed, the spider will quickly rebuild.

Female Joro spiders have bright yellow and greyish-black bands on their bodies, distinct red markings on their undersides, and can grow up to 4 inches long (including leg span). Their legs are black with yellow bands. Immature female spiders have brown heads, narrower abdomens, and a blotchy black and yellow pattern on their backs. Males are about a quarter of the size of the female and are dull brown in color. Joro spiders are most conspicuous in September and October, when they reach maturity and grow to their maximum size. Females lay egg sacs, each containing 400 to 500 eggs, in dense white silk from mid-October through November. Eggs hatch in spring.

A couple of Joro spider look-a-likes you may encounter in the Northeast include *Argiope aurantia*, commonly known as the black and yellow garden spider and *Leucauge venusta*, the orchard orb-weaver. The garden spider is similar in size to a Joro spider but has a black and yellow abdomen without the red coloration seen on the underside of the Joro spider. Garden spider legs are brown near the abdomen and black near the tips. The orchard spider, most often spotted in spring and early summer, is much smaller than a full-grown female Joro spider, and is silver and green in color.

A study published in the journal “Ecology and Evolution” reported that Joro spiders are becoming dominant among orb weavers where they occur, suggesting that native spider biodiversity declines are associated with its presence. Although Joro spiders may pose a threat to native ecosystems, they might also help control other pest populations that are disrupting local biodiversity. Joro spiders will eat anything that falls into their giant webs, including other invasive species such as beetles, lanternflies, and stink bugs.

It may be too early to tell how this new invasion will play out, but one thing is certain: if the Joro spider shows up in your neighborhood, there will be no need to buy fake spider webs for Halloween. If you do spot one of these relatively gentle giants, you can report it to jorowatch.org, a monitoring program developed to collect data to help scientists better understand the spread and distribution of Joro spiders.

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