

# The Invasive Joro Spider Is Getting Cozy in the U.S.

By: Allison Troutner | Updated: Oct 18, 2022



Scientists confirmed the first known occurrence of the Joro spider (*Trichonephila clavata*) in North America in 2013. WIKIMEDIA COMMONS (CC BY 2.0)

An invasive species of spider is making itself comfortable in parts of the southern U.S. But don't let the Joro spider give you the creepy crawlies just yet. Between its golden webs and its Tarzan-esque silk swinging tactic to track down a mate, this invasive species arachnid is a fascinating and, as far as we know, harmless (unless you're a stink bug) addition to the ecosystem.

And we may as well get used to the beautiful yellow Joro spider because it looks like they are planning on taking up permanent residence. Research from the University of Georgia suggests the invasive arachnids can exist in colder climates than previously thought and, therefore, could spread through most of the Eastern seaboard of the U.S.

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## Where Do Joro Spiders Come From?

The Joro spider, scientifically known as *Nephila clavata* is native to East Asia. In Japan, it's called jorō-gumo meaning "entangling or binding bride." In Korea, it's called mudang gumi meaning "shaman" or "fortune teller" spider. The names reflect the beauty and intrigue of this orb-weaver. While the smaller drab males are nothing to write home about, the females feature yellow and bluish-green bands across the body, orangish bands on the spanning legs, and a bright red underbelly. This spider, which can be as large as 3 or 4 inches (8 to 10 centimeters) long, can't actually tell your fortune, but she can weave a beautiful basket-shaped web that reflects gold in the sunlight and can be as wide as 10 feet (3 meters).

## Joro Spiders Globalize and Move Around the World

Along with commonly found electronics and bananas, exotic plants and critters like the Joro spider are known to hitchhike on America-bound commodities, especially in shipping containers. Now, the Joro has jumped from shipping containers and exists in Georgia and parts of South Carolina, and has even been spotted in Tennessee and Alabama. In some cases, homeowners have hundreds of the bright yellow spiders around their homes. They prefer to make their webs high in trees and have been found in forests, urban woods, porch lights, wooden decks, bushes, tall weeds and even on the vinyl siding of homes.

Their ability to adapt to natural habitats and native species food sources in Georgia and South Carolina has allowed the Joro spider's numbers to swell. However, it's only a matter of time before predators catch up with the new invasive species. "I think that the spiders have spread so quickly here because predators, parasites, and diseases have not caught with them yet," said Professor Paul Guillebeau, professor of entomology at the University of Georgia, when we spoke to him in 2021. "If there is a new, large food resource like the booming spider population, something will take ultimately take advantage," he said.

It's just a matter of time before birds or parasitoid wasps figure out there's a new meal in town.



A female Joro spider hangs peacefully in her web waiting for prey, seen here from below.

## How Joro Spiders Mate

Joro spiders tend to build webs very close to each other, which helps individual spiders with the mating process, since males don't make their own webs, a function that is left entirely to the females. To mate, the Joro spider males must pursue the females, albeit very carefully. Joro spiders may use gossamer and float, legs outstretched, on a breeze, from tree to tree or branch to branch, until a female Joro spider is within sight, or they spot a less male-occupied web.

It's kind of cute to think of the Joro spider as a little Tarzan swinging from tree to tree to find his Jane, but that's where the sweetness and romanticism end. If a male spider isn't very careful, he may become dinner for a rapacious female instead. "The male will make a little web and deposit sperm there and then suck up the sperm in structures (pedipalps) near the mouth," said Guillebeau. "Then the male tries to find a receptive female. The males are almost always smaller, so it's tricky business to make your move without being eaten." Guillebeau has seen males around his house wait until a female is busy eating an insect before he gets close — a much safer approach.

## Are Joro Spiders Dangerous?

Though Joro spiders were first spotted in Georgia in 2013 and people are somewhat worried at seeing so many of them so suddenly, it's still far too early to understand their big-picture impact on the environment. So far, however, they seem to be thriving on a diet of brown marmorated stink bugs and other flying insects, which is appreciated by farmers whose crops can suffer from stink bug infestations (stink bugs feed on apples, peaches, berries, peppers, beans and pecans). As orb weavers, they will naturally compete with other orb weavers for prey, but since they often weave their webs higher than other spiders, they may be catching different kinds of prey, noted Guillebeau.

Joro spiders are venomous, like all spiders, but they aren't dangerous to you or your pets and Joro spiders will only bite you or your animals if they are scared enough to do so. "Even if you walk into a Joro web, it will try to escape rather than attack you. If you catch a Joro in your hand, it may bite you out of fear. If I were caught by a giant, I'd probably bite," said Guillebeau. If you do get bitten, you may be somewhat uncomfortable but it's not as bad as a brown recluse or black widow.

What should you do if you see a Joro spider (or any other spider, for that matter)? You may be tempted to kill this invasive species, but instead try being more curious, Guillebeau suggested. "Have a look at it every couple of days. Show your children; they are fascinating to watch. Toss an insect into the web

if you want to see them in action." Guillebeau reminded us, "Don't kill spiders (or anything else) for no good reason. We are all playing our role in the ecosystem."

## Now That's Interesting

The webbing of some spiders, like the Joro, is so strong that scientists have **inserted spider genes** into other spiders, like silkworms, to improve the quality of silk.