

BOGDIVERSITY THURSDAY



—*from Head Naturalist Clinton*

Jumping Spiders

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If you look close to the ground or spend time examining wildflowers in bloom, you are likely to encounter our featured group of species today. While spiders may not be an exciting group to encounter for everyone, they are an amazingly diverse group in Minnesota and the Sax-Zim Bog! Today, we will take our first look at spider diversity in the Sax-Zim Bog by featuring jumping spiders!

Jumping spiders are a charismatic and often colorful group of spiders that can be found in most habitats, urban and wild, in Minnesota. Their large, forward facing eyes not only give them a cute appearance, but also gives them great day time vision to hunt insects. In the Sax-Zim Bog we have documented 17 species of jumping spider, making them the second most diverse group of spiders out of 115 total species of spider documented.

As far as spiders go, jumping spiders are a bit of an outlier. For starters, they don't build webs to capture prey like most spiders. They do produce silk, which acts as a tether when jumping from

place to place and to create protective hides. Similar to other spiders, they also use their silk to "parachute" during dispersal. While their large eyes may be a bit off-putting for some, they use their great eyesight and bold colors in elaborate courtship displays, which is also unique in spiders.

Speaking of eyes and eyesight, jumping spiders have four front facing eyes, with four additional smaller eyes wrapping around behind their cephalothorax. All of their eyes are perched fairly high on their heads, giving them nearly 360° vision. Their central eyes gauge depth and the lateral eyes perceive motion. Each set of eyes works together to help find and then plan to jump and capture prey items.

After locating a prey item, jumping spiders will stalk their prey until the target is in pouncing range (sort of like cats!). To jump, jumping spiders rely on hemolymph to power their leap. Hemolymph is more or less invertebrate blood and functions similar to typical vertebrate blood. Jumping spiders are able to leap many times their own body length by using this fluid pressure system without the muscular legs.

We could go on and on about the diversity of jumping spider behavior, coloration, and body types, but there is only so much room in a post!

More information about spiders below!
(Photos below by Head Naturalist Clinton)



This beautiful spider is *Habronattus decorus*! Males of this species are more colorful than the females, which is the case for most jumping spiders. This little male was the first county record for this spider, which we found at the Welcome Center!



Short-bellied Slender Jumping Spider is a species of special concern in Minnesota. A wetland specialist, this species is not encountered with frequency in Minnesota. This species is very long for a jumping spider, with especially long front legs!



Jumping spiders in the genus *Phidippus* are large and often quite colorful. This male Boreal Tufted Jumping spider has bright green chelicerae (the fang bearing mouth parts of spiders) and a boldly colored abdomen!



Male spiders, like this Bronze Jumping Spider, have large chelicerae, lobed, boxing glove shaped palps, and slender abdomens! Their palps are used in drumming displays to females.



This female Grayish Jumping Spider lacks the boxing glove shaped palps of males and has an enlarged abdomen. What a lovely spider!



We found the first jumping spider of the season during Warbler Wednesday #1! This tiny spider is a full grown, male Flower Jumping Spider. They are really tiny, less than half the length of your pinky finger nail.