

BOGDIVERSITY THURSDAY



—*from Head Naturalist Clinton*

Pirate Wolf Spiders

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Phenology is the study of cyclic and seasonal natural phenomena. Folks who are interested in what marks a change in season often rely on plant bloom periods, the arrival of the first migrating bird species in the Spring, when the first butterfly of the season is observed, or even when the last ice on a lake finally disappears. In wetlands, there is one group of organisms not often thought of when marking the change of season on a calendar and one that might be a good marker of spring... Wolf Spiders! For this BogDiversity Thursday, let's consider one special group of wolf spiders: the Pirate Wolf Spiders!

Why should spiders be considered a marker for the changing season? First, they are one of the more active creepy crawlies that you can find after the snow crusts have left the landscape. If you walk along Gray Jay Way in early to mid-April, one of the most abundant critters you see on the path are wolf spiders! Last, many wolf spiders in the Northwoods overwinter in their penultimate life stage (nearly adults). A good marker of season change is to

note when you start seeing newly molted or egg-sac carrying adults!

In the Sax-Zim Bog we have documented four species of Pirate Wolf Spiders: two species in the genus *Pirata* and two species in the genus *Piratula*. One of these spiders, *Piratula cantralli*, was documented in Minnesota for the first time during one of our BioBlitzes! At present, there are 11 species of Pirate Wolf Spider in Minnesota, with species being found in the northern parts of the state, down to the southern tier of counties. While one of the species on the Master Species List, *Pirata piraticus*, is very common with 887 observations globally on iNaturalist, another species, *Piratula canadensis*, only has 2 observations on iNaturalist (both of which are from Minnesota)!

The Pirate Wolf Spiders are a beautiful group of spiders whose life histories are tied directly to wetlands and peatlands. Without those habitats, you don't have these spiders. These spiders are also unique in their distribution. One of the more beautiful species, *Pirata piratula*, has a Holarctic distribution (just like Great Gray, Northern Hawk, Snowy, and Boreal Owls!) and can be found in Canada, the northern US, Scandinavia, and Russia. This distribution is not uncommon for the Pirate Wolf Spiders.

As a group, wolf spiders are an actively hunting species, with large, forward-facing eyes, robust bodies and legs, and a lack of web making to capture their prey. Many wolf spiders are cryptic, featuring shades of brown and black. Pirate Wolf Spiders, on the other hand, are various shades of browns and yellows, with bright

white markings. Pirate Wolf Spiders are small, as are many of the early season wolf spiders in the genus *Pardosa* and *Schizocosa*. More information about these interesting wolf spiders can be found with the photos below.

(Photos of *Pirata piraticus* by Head Naturalist Clinton; Photos of *Pirata montanus*, *Piratula canadensis*, and *Piratula cantralli* by Chad Heins)



Pirata piraticus is the most common Pirate Wolf Spider in our area and the most beautiful! The white and bluish markings on the abdomen really stand out against its relatives. Then genus name, Pirata, means "sea-robber" and is a good description of their water's edge foraging habitat.



Piratula cantralli was first recorded in Minnesota during one of our BioBlitzes! If you notice in this photo, this spider is holding an egg case. This lets us know it is an adult, but due to how the spider is holding its egg case (the tip of its abdomen) we can identify it as a wolf spider.



Pirata montanus is a fairly widespread species of spider in the US, with most of its distribution found in the eastern United States. The records from Minnesota are some of the western-most of this species in the US!



Last, but not least, *Piratula canadensis*! This unicolored spider is one of the most uncommon species of spider found in the Sax-Zim Bog. Presently, there are only 2 records in iNaturalist for this species, both of which are from Minnesota!