

BOGDIVERSITY THURSDAY



—*from Head Naturalist Clinton*

Blue-spotted Salamander

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One of the most joyous markers of Spring is the chorus of frogs coming from ephemeral ponds in woodlands, wet meadows, and other wetlands. There is another group of amphibians that serve as an important marker of the season to some, but they don't make sounds and are seldom seen. Today, let's take a closer look at the Blue-spotted Salamander!

Salamanders are not well represented in Minnesota's herpetofauna, compared to other states. Of the 22 species of amphibian found in Minnesota, only 6 are salamanders (with 1 newt and 1 mudpuppy). In the greater Sax-Zim Bog ecosystem, we have documented 8 species of frog and toad and just 1 species of salamander. And not for a lack of trying! Salamanders can be very difficult group to find, even when you know where and when to look, but more on that later.

Blue-spotted Salamander is not a particularly large salamander, only reaching 3-5 inches as adults. They belong to the genus *Ambystoma*, the Mole Salamanders. This group of salamanders

spend a lot of their time underground (hence the name mole!), emerging from underground haunts during Spring to breed, on nights with damp conditions, or during Fall to undergo a small migration to overwintering sites. A variable species, Blue-spotted Salamanders can entirely lack blue spots or be entirely speckled with blue!

Spring is one of the better times to look for salamanders, as they migrate from overwintering sites to breeding ponds. Typically, when air temperatures reach 40 degrees during the night and woodland ponds are thawed, you can expect movement from salamanders. Breeding ponds are typically fishless, sometimes ephemeral, and usually only visited for a couple of days by breeding adults. Larval salamanders hatch a couple of weeks after eggs are laid and must have consistent water sources for two to three months after hatching. Young salamanders undergo metamorphosis sometime in August and leave the water until they are old enough to breed. Salamanders, like all amphibians, need clean water to breed successfully. Blue-spotted Salamanders are particularly sensitive to the acidification of breeding ponds.

If you are hoping to find salamanders, get familiar with their preferred habitats! Once you find the right place to look, your odds increase in finding one. Blue-spotted Salamanders spend most of their time under leaf litter, underground, or under logs. Flipping logs is a common way to find salamanders but can also be destructive. Only flip logs that are easily moved and place them back in the same orientation you removed them. If you find a salamander (or other critter!) under a log, do your best to

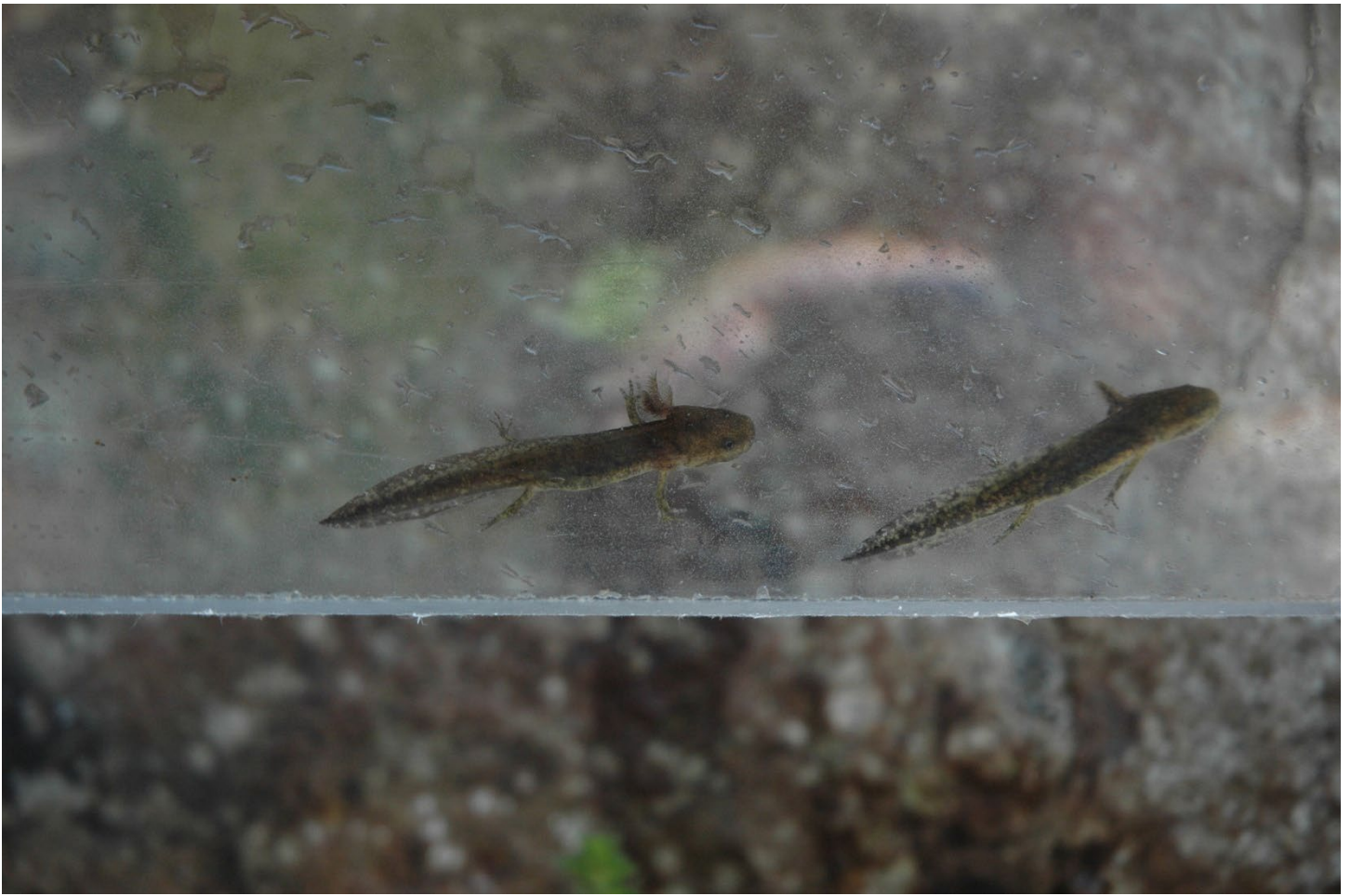
minimize your time for photos and place it back where you found it. With amphibians, it is important to keep your hands moist and free of sunscreen, bug spray, or other lotions. Since amphibians take in moisture (and toxins) through their skin, be mindful of handling them and avoid it if you can.

More information about Blue-spotted Salamanders in the photos below!

(Photos of adult salamanders by Chris Smith and Head Naturalist Clinton; photos of larval salamanders by Head Naturalist Clinton)



Blue-spotted Salamanders can be active quite early, often moving around as the snow melts. This adult was found on April 10, with an air temp in the mid-20F range!



Larval salamanders look similar to adults, but have external gills, paddle tails, and would not be able to live out of water. These Blue-spotted Salamander larvae will metamorphose in August or as late as September in some cases.



If you flip over a log, you may be lucky enough to find a salamander! Be careful when flipping logs and place each log back in the exact location you found it.



Blue-spotted Salamanders are gorgeous!