

REMEMBER THE RAIN



MYSTERIOUS NEIGHBORS

You might live your entire life in the Sourlands without ever seeing a spotted salamander, unless you go out walking on just the right night.

You probably won't be out walking on that night, though, because it will be cold and wet and dark.



Spotted Salamander (Tyler Christensen)

Which is too bad, because spotted salamanders are spectacular neighbors, long lithe amphibians in midnight blue with golden spots. If you do see one, they might seem a bit improbable, so big and colorful that it's hard to imagine they remain nearly invisible the rest of the year.

THE MIGRATION

During the first warm rains of March—warm in a relative way, above 40 degrees or so—spotted salamanders emerge from deep dark places in the soil and begin an epic journey. They are returning to their natal pools—the place where they were born—to mate and lay eggs. They're guided by a small organ in the brain that reads the earth's magnetic field and directs them.

They are accompanied by other amphibians on the move - wood frogs, spring peepers and

WHAT CAN YOU DO?

Drive with care During March nights with precipitation, avoid driving or drive slowly on forested and rural roads, and watch the road for amphibians crossing. The Sourland Conservancy mailing list and the *Sourland Stewards* facebook group posts updates on upcoming migration nights.

Volunteer to chaperone At hot spots for amphibian crossings in the Sourlands, volunteers and conservation professionals gather to help salamanders and frogs make it across the road. You'll witness a nature spectacle and save lives at the same time. Sign up info is at sourland.org/remember

more - also migrating to pools in the woods. Together, the amphibian cohort crosses woods, meadows, and wetlands, seeking shallow inundated ponds known as vernal pools.

They also cross roads and driveways, and here the slower-moving of them—and all of them move slowly compared to a car—are often crushed into the roadbed. A study in Massachusetts showed close to 20% mortality rate of spotted salamanders during migration, per year. Salamanders have lifespans up to 20 years, but at that rate most will perish within five. That level of mortality can add up to local extinction quickly.



Roadkill (Jared Flesher)

ON WARM RAINY NIGHTS

It's not just during the migration rains in March that one can witness large numbers of amphibians moving across roads in the Sourlands and throughout the region. Many frogs and salamanders move on wet nights when their skins are less vulnerable to desiccation. It's typical to catch a glimpse of a hopping frog, illuminated in headlights, during warm rains from March to October. So please, drive with care.

VERNAL POOLS

Inundated pools in natural areas are known as vernal ("spring") pools if they dry up periodically and contain no fish. Those that remain wet throughout the spring months are ideal breeding sites for amphibians.

The Sourlands is rich in these pools because of its poorly-drained bedrock and soils, and expanses of undeveloped forest. The decay of leaves and other plant material in these

wetland pools is at the base of a food chain that includes not just amphibians but numerous bird, mammal, and invertebrate species as well.

Vernal pools can be certified by the New Jersey DEP Endangered and Nongame Species Program (ENSP). The process maps and inventories vernal pools for inclusion in the state's land use regulation database to implement vernal pool protections.



Wood Frog (Jared Rosenbaum)

AMPHIBIANS OF THE SOURLANDS

Species include:

- Spotted Salamander *Ambystoma maculatum*
- Jefferson Salamander *Ambystoma jeffersonianum*
- Marbled Salamander *Ambystoma opacum*
- American Toad *Anaxyrus americanus*
- Northern Dusky Salamander *Desmognathus fuscus*
- Northern Two-lined Salamander *Eurycea bislineata*
- Northern Gray Tree Frog *Hyla versicolor*
- Red-backed Salamander *Plethodon cinereus*
- Slimy Salamander *Plethodon glutinosus*
- Spring Peeper *Pseudacris crucifer*
- Bullfrog *Rana catesbeiana*
- Green Frog *Rana clamitans*
- Pickerel Frog *Rana palustris*
- Wood Frog *Rana sylvatica*



Vernal Pool (Jared Rosenbaum)



More at [SOURLANDS.ORG/REMEMBER](https://www.sourlands.org/remember)