Woodland Pool Conservation:

Amphibian Migrations and Road Crossings

Spotted salamanders are the most commonly seen member of the mole salamander group, often burrowed under moist, rotting logs as seen here.

A typical woodland pool.

Hudson River Estuary

Hudson River Estuary Program
www.dec.ny.gov/lands/4920.html

Why did the salamander cross the road?

Have you ever witnessed large numbers of salamanders and frogs crossing the road on rainy spring nights? Ever wonder where they came from and where they're going?

Mole Salamanders and Wood Frogs

The forests of New York are inhabited by a group of salamanders that are seldom seen, as they spend much of their time under leaves and moss on the forest floor, in burrows created by small animals and hunkered down under rocks and rotting logs. Referred to as "mole salamanders" because of their subterranean shelters, this group belongs to the family *Ambystomatidae* and, in the Hudson Valley, includes the spotted salamander (*Ambystoma maculatum*), the Jefferson salamander (*A. jeffersonianum*), the blue-spotted salamander (*A. laterale*) and the marbled salamander (*A. opacum*). The mole salamanders forage on the forest floor for a variety of invertebrates, including earthworms, snails and insects. Another small amphibian you may see while walking in the forest is the wood frog (*Rana sylvatica*). Mole salamanders and wood frogs are important links in forest food webs and indicators of healthy, functioning ecosystems.

Seasonal Migrations and Road Mortality

While they spend much of the year in their terrestrial habitats, mole salamanders and wood frogs all breed in woodland pools, a type of small wetland found in forests. During early spring rains when temperatures rise above freezing, these amphibians migrate to breeding pools by the hundreds, if not thousands. The marbled salamander is different from the other species in this group, as its migration occurs in the fall.

Wood frogs are often observed on roads during spring migrations.

Volunteers assist amphibians to safety during road crossings, and record their observations.

But why are these amphibians so frequently seen crossing the road? Migration distances to woodland pools can vary from a few hundred feet to more than a quarter of a mile! Unfortunately, migration pathways often cross roads and long driveways, leading to mortality of slow-moving wildlife, even in low traffic areas. Fragmentation of forest habitats and loss of wetlands are both contributing to declines in amphibian populations in the region.

How can you help?

The Hudson River Estuary Program and the Cornell University Department of Natural Resources are working together to conserve forests, woodland pools and the wildlife that depend on these critical habitats. You can help by telling us when and where you see migrations of woodland pool amphibians. Your observations will enable us to identify and map road crossings where salamanders and frogs are especially vulnerable and learn more about where their habitats are located. This information can then be used for community planning and for groups of volunteers interested in starting "crossing guard" programs for the breeding season. Over time, we can also learn whether the period of spring migrations may be shifting due to climate change.

Hudson River Estuary Biodiversity Program

Data collection forms and instructions are available from the Hudson River Estuary Biodiversity Program and can be down-loaded at www.dec.ny.gov/lands/51925.html. The Amphibian Migrations and Road Crossings project is part of a larger effort to partner with local communities to conserve the diversity of plants, animals and habitats that sustain the health and resiliency of the entire estuary watershed.

This project is implemented in partnership with Cornell University.

Cornell University

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