



A Big Night for Little Creatures

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Migrations. The word calls to mind the great herds of wildebeest, zebra, and gazelles in their circular trek across the Serengeti and Masai Mara. Canada geese traversing the sky from north to south in V-formation.

Chinook salmon, running against the current, evading hungry grizzly bears and at last returning to the upper reaches of their natal stream. It is a word that conveys a sense of vast distances, covered by animals that occupy a cherished spot in the popular imagination.



A Big Night, Cont.

There is another migration that takes place every year right here in the Northeast, perhaps even in your own neighborhood or, if you are fortunate, your own backyard. This drama is performed by secretive creatures, slight in stature, and of an ancient lineage. Come the first rainy evening of spring, and if the temperature is right, they begin their procession, leaving behind burrows and the leafy cover of the upland forest floor. This is the Big Night when, step by step, they ply their way across formidable distances, measured in the tens of thousands of inches, to return to the ancestral vernal pools of their birth for an opportunity to court, mate, and spawn.

The Big Night migration involves several different species of the class Amphibia. Lacking the hard shells of reptiles, an aquatic environment is essential for the survival of amphibians in the early stage of their life cycle, and vernal pools provide just such an environment. However, unlike other wetlands, they are dry for most of the year, their existence hinted at only by dark stained leaves and a depression in the ground. It is with the spring rains that they fill up and become a seasonal habitat for all manner of fauna, ranging from planaria to fairy shrimp, darners to eastern box turtles. Some amphibians, like the wood frog and the spotted salamander, will only reproduce in vernal pools, and specifically, the vernal pool of their birth.

For all the effort required to make their journey, there is no guarantee that they will arrive at their destination.

Risks abound for the migrants. Even before the migration begins, they may be deprived of suitable habitat by the clearing of forested upland for lawn or other purposes. Even a well-manicured forest floor can be detrimental. The path from upland to pool is also fraught with danger. The amphibians are small and move slowly under the cover of darkness, over and around all manner of obstacles to reach their destination. Since the New England landscape is crisscrossed with roadways, the problem is evident: drivers regularly and unknowingly crushing amphibians beneath the wheels of their vehicles.

Having run the gauntlet, the migrants may finally arrive at their destination to find that it has been sedimented, graded or paved out of existence. Even should they find the pool as they left it the previous year, the water itself may be severely compromised by fertilizers, deicers, and other chemical agents, typically introduced by stormwater runoff from streets, parking lots and yards. This can have dire consequences for the living things that the pool would normally sustain.

There are steps that you can take to protect vernal pools and the creatures who depend on them. Consider setting aside yard-space to grow wild and naturalize. If your property is forested, allow leaf and branch litter to remain undisturbed where it falls. Remember, if your yard is within a half-mile of a vernal pool, it might be upland habitat for vernal pool-dependent amphibians. You can also avoid driving on rainy nights between March and April if the temperature is 40 degrees or more. If you must, remember that the first two hours after sunset is prime time for migrants. Avoid smaller, wooded roads, and especially roads known to run near vernal pools.



A Big Night, Cont.

If you are planning construction, tree removals, or other projects within 100 feet of any wetland or intermittent stream, 200 feet of a perennial stream or river, or within a 100-year floodplain, please contact the [Sudbury Conservation Department](#). They can advise you on additional steps to keep these resource areas from being inadvertently damaged or destroyed, and whether the work might require a permit. The Town's [GIS](#) can be used to find vernal pools, flood zones, and more.

Since time immemorial, the movement of animal populations in tune with the cycles of nature have been a prominent feature of life on our planet. The drama of the vernal pool, played out over countless rainy spring evenings by tiny actors, is no less a part of that natural heritage. As with so many organisms, their survival is increasingly precarious. Together, we can ensure that Sudbury continues to host its own Big Night for many years to come.