

## The Forest Speaks

### Amphibian love is in the air

The South East Properties in Windham are home to over a dozen vernal pools of various sizes. Maybe you've heard of vernal pools. Maybe you've seen some in the woods. You might have seen one and thought it was just a big puddle. But a vernal pool is a unique and important ecosystem. So what's so special about a vernal pool?

Vernal pools form in shallow depressions in the woods. Little or no vegetation grows in them. To be considered a vernal pool, the pool can't have a permanently flowing outlet and must hold water for at least two months after the ice is gone in the spring. Vernal pools dry out from year to year, or every few years. Although this might seem like it's not the most hospitable environment, it is ideal for species that can develop to small adults quickly since there are no fish in vernal pools to eat little tadpoles.

One thing that defines a pool as vernal are the species that are found there. There are several species that only reproduce in vernal pools, so their presence helps to define a pool as vernal. One species is the fairy shrimp. These .5"-1.5" long crustaceans spend their entire lives (which are only a few weeks long) in vernal pools. The eggs hatch in late winter or early spring. The females eventually drop an egg case that will remain in the pool bottom until the next year. Wood frogs also utilize vernal pools for mating and reproduction and are the most noticeable species. Although you will see them swimming about in a vernal pool during the breeding season, wood frogs are terrestrial frogs. Adults only use water for breeding and spend the rest of their year in the woods. Once they are 2-3 years old, they gather at vernal pools where the males engage in lots of croaking and quacking noises to attract females. This makes vernal pools much easier to find! A walk at the town forest this time of year is accompanied by the sounds of romance. The females lay eggs in gelatinous clumps which are usually attached to sticks in the water. Usually by mid to late April (probably later this year), tiny black tadpoles emerge and begin their race to maturity before the pool dries up. Spotted salamanders & blue spotted salamanders (part of a group called mole salamanders) also utilize vernal pools for breeding. They will often converge on the pools on rainy nights during the breeding season. They will also deposit gelatinous egg masses which also hatch into tiny tadpoles. The tadpoles can be distinguished from the frog tadpoles by the presence of feathery gills. They also tend to grow slower than the frogs.

Many amphibians return to the pools where they hatched for breeding, so the loss of a pool can mean the loss of a population. The vernal pool habitat can be protected by leaving a wide forest buffer between the pools and development or roads. It is also important to leave trees near them that can provide shade which inhibits evaporation and keeps the water temperature cool. If you are lucky enough to have a vernal pool on your own property, you have a wonderful opportunity to care for a delicate habitat. Avoid filling in vernal pools and avoid allowing run off from fertilizers, driveways, etc. To learn more about vernal pools in New Hampshire, we invite you to visit [www.extension.unh.edu/Vernal-Pools](http://www.extension.unh.edu/Vernal-Pools).

Submitted by the Windham Forestry Committee