

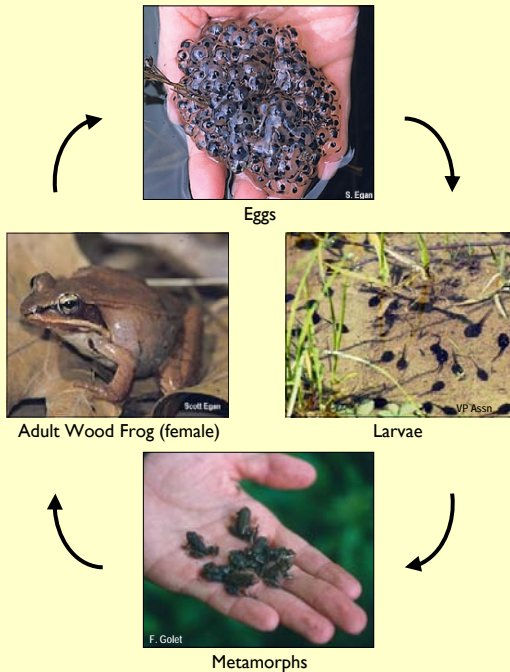
# The World In Your Backyard

## Look Around You.

Vernal pools provide important habitat for a diversity of wildlife. Try observing a nearby vernal pool in the springtime. You may hear the high-pitched chorus of Spring Peepers or the banjo-like note of the Green Frog. You might even be able to track the life cycle of frogs or salamanders in your backyard.

## Check It Out!

Watch frogs develop from tadpoles in your backyard.



Most pool-breeding amphibians migrate to breeding pools between late February and early April. In the Wood Frog life cycle (pictured above), individuals mate and then (1) each female deposits a gel-like mass containing several hundred eggs. (2) The eggs hatch within a week or so and the larvae develop in the pool for about 4 months, (3) at which time they leave the pool as *metamorphs*. (4) Most spend the remainder of their lives in upland forests, first as juveniles and then as adults, except during a brief period in the spring when they return to the pools to breed.

Photos courtesy of: Scott Egan, ENSR; Frank Golet, University of Rhode Island; Vernal Pool Association



For species like the spotted salamander, larvae must grow rapidly throughout their time in the pool so that they are ready to live on land before the pool dries.

## RESOURCES

**Rhode Island Wetlands -Vernal Pools.** Rhode Island Department of Environmental Management, Office of Water Resources, Providence, RI.  
<http://www.dem.ri.gov/programs/benviron/water/wetlands/vernal.htm>

**Rhode Island Vernal Pools.** University of Rhode Island, Department of Natural Resources Science, Kingston, RI, and Rhode Island Department of Environmental Management, Providence, RI.  
<http://www.uri.edu/cels/nrs/paton/>

**Vernal Pool Association.** Peabody, MA.  
[http://www.vernalpool.org/vernal\\_1.htm](http://www.vernalpool.org/vernal_1.htm)

**Vernal Pool Conservation Fact Sheet.** New Hampshire Audubon Society, Concord, NH.  
<http://www.nhaidubon.org/conservation/vernal.htm>



**NEIWPCC**  
New England Interstate Water  
Pollution Control Commission



Rhode Island Department of Environmental Management  
235 Promenade Street  
Providence, Rhode Island 02908  
<http://www.dem.ri.gov>

# Vernal Pools



Photo by Jon Mitchell

**Vernal pools are a special type of freshwater wetland and a vital resource for many species in Rhode Island**

## What are Vernal Pools?

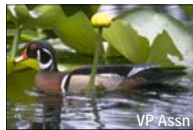


Spotted Salamander

Vernal pools are small bodies of water that form in shallow depressions on the landscape. Vernal pools (sometimes called “seasonal ponds”) are not permanent water bodies. They are special wetlands that fill with water between late fall and spring, from rising groundwater, melting snow, and rainfall (“vernal” means spring).

The length of time that surface water is present varies by pool, but most vernal pools contain water in the spring and dry up by mid-summer (although some might not dry up in particularly rainy years). Because they lack a permanent water source and dry periodically, vernal pools cannot support permanent fish populations.

Vernal pools range in size and may be surrounded by dry land or located within other wetlands, such as forested swamps. During the growing season, the deepest part of some vernal pools may contain water lilies or grasses, other pools may be dominated by trees and shrubs, and some pools may only have a layer of leaves and moss on the bottom.



Wood Duck

## Why are Vernal Pools Important?

Vernal pools provide important habitat for many wildlife species, including dragonflies, pool-breeding amphibians (frogs, toads, and salamanders), reptiles (such as the spotted turtle), waterfowl (such as the wood duck), insect-eating songbirds, and mammals.



Spotted Turtle

The seasonal nature of these pools is what makes them so unique and valuable, particularly as breeding sites for certain amphibians. Periodic drying prevents the establishment of permanent fish populations that would prey on other vernal pool animals.



Spring Peeper

In Rhode Island, at least 11 species of amphibians breed in vernal pools. The wood frog, spotted salamander, marbled salamander, and Eastern spadefoot toad depend on pool drying and the absence of fish for breeding success and survival. The spring peeper, gray treefrog, pickerel frog, American toad, green frog, bullfrog, and red-spotted newt can breed in both vernal pools and permanent ponds.

The quality of the habitat surrounding a vernal pool is also critical to juvenile and adult amphibians that rely on it for their survival after the pools dry.

## Protection Tips

Activities in or near a vernal pool may require a permit from DEM. The tips below are provided to help you protect these important wetlands.



Gray Treefrog

- ✓ Do not stock vernal pools with fish.
- ✓ Do not fill in the pool with leaves or other debris, even when it is dry.
- ✓ Do not dig into the bottom of the pool, even when it is dry.
- ✓ Leave a buffer of natural vegetation around the pool for as great a distance as possible. Many vernal pool species require at least 300 yards of natural habitat around their pools to survive.
- ✓ Avoid cleaning up trees, shrubs, brush, and dead trees in and around vernal pools, as amphibians need these for egg mass attachment.
- ✓ Avoid activities that change the movement of surface water to or from a pool.



Marbled Salamander

### Winter



Many vernal pools fill in fall or winter. Frozen ground helps retain water produced by rains or melting snow. Pools are easily visible when ice-covered in the leafless forest.

### Spring



Vernal pools typically hold water for a few months during the spring and early summer. Most biological activity takes place in the spring once the ice thaws.

### Summer



Vernal pools often dry up by mid-summer because they do not have a permanent source of water. As a result, vernal pools cannot support a permanent fish population.