

# Vernal Pool Trivial Pursuit

The following images may be used to test your ability to distinguish between vernal pool habitat and habitat that does not meet the definition of a vernal pool

# Vernal Pool Definition

Naturally occurring, temporary to semi-permanent pools occurring in shallow depressions in *forested landscapes*. Vernal pools provide the primary breeding habitat for wood frogs, blue-spotted and spotted salamanders, and fairy shrimp and provide habitat for other wildlife including several endangered and threatened species.



Like most animals, frogs, salamanders, and fairy shrimp do not read and do not always abide by our definitions. In addition to breeding in vernal pools, they may also be found using habitat that does not meet our definition of a vernal pool. The presence of vernal pool species in a roadside ditch does not make the ditch a vernal pool.



Vernal pool – semi-permanent pool within large forested wetland complex



Not a vernal pool – skidder ruts



Not a vernal pool - slow-moving stream. Blue-spotted and spotted salamanders, especially in southern NE and parts of Maine, may lay some eggs along slow moving streams but this does not make the streams vernal pools.



Vernal pool – shrub swamp dominated by winterberry and blueberry bushes which are often used as attachment sites for wood frog egg masses



Not a vernal pool - road-side ditch





Vernal pool - isolated depression surrounded by forested upland



Not a vernal pool - retention basin



Not a vernal pool - recently abandoned beaver flowage. In general, large flowages complete with dead standing trees, are not prime vernal pools.



Early fall potential vernal pool - check in spring. If it contains egg masses then it is a vernal pool within a forested wetland.



Definitely NOT a vernal pool - farm pond once stocked with game fish and teeming with predatory bull and green frogs



Vernal pool - isolated depression surrounded by forested upland



Vernal pool - floodplain depression along the bank of a large river



Vernal Pool - Floodplain depression along the bank of a small stream





Potential vernal pool - check for egg masses

This is most likely a vernal pool in a forested wetland (common in central and southern Maine)



Not a vernal pool – permanent natural pond that hosts a breeding population of spring peepers. If you see pond lilies or plants like pickerel weed, chances are, it is a permanent water body.



This is a difficult call. It is hard to tell whether the road went through the pool OR the road work created a rut that serves as a pool. You will have to use your judgment. If it is an active road, it should NOT be called a pool.

If this were a shallow pool in the woods (not part of a road) read below.

This is technically a vernal pool. It may hold water for too short a time to be productive, but in good rain years, it may produce wood frogs and salamanders and it may hold water long enough to support fairy shrimp. There are pools that only produce vernal pool amphibians once in five years but they are very productive on that fifth year.



Vernal pool - Upland isolated pool...you can see rafts of wood frog egg masses attached to woody material at the pools surface.

The following images may be used to test your ability to identify vernal pool breeding animals and their egg masses



Blue-spotted salamander



Raft of wood frog eggs that contains many layers of masses on top of one another.



Wood frogs in amplexus (larger, salmon-colored female on bottom; smaller, darker male on top).





Small raft of wood frog egg masses.

Tadpoles are beginning to hatch and masses have deteriorated to the point where individual masses are not discernable.



Wood frog and spotted salamander egg masses deposited on the floor of a dry pool (arrow points to 2 spotted salamander masses).



Spotted salamander egg mass with green symbiotic algae (*Oophilia amblystomatis*) that provides oxygen to the egg mass which in turn gains nitrogen and phosphorous from the developing embryos.



Drippy blue-spotted egg masses attached along stick



Large raft of wood frog eggs



Mosquito larvae on left and fairy shrimp on right



Wood frog egg mass deposition next to an older mass that has absorbed water and expanded in size.



Wood frog tadpoles feeding on remains of spotted salamander egg mass (note the outer jelly envelope).





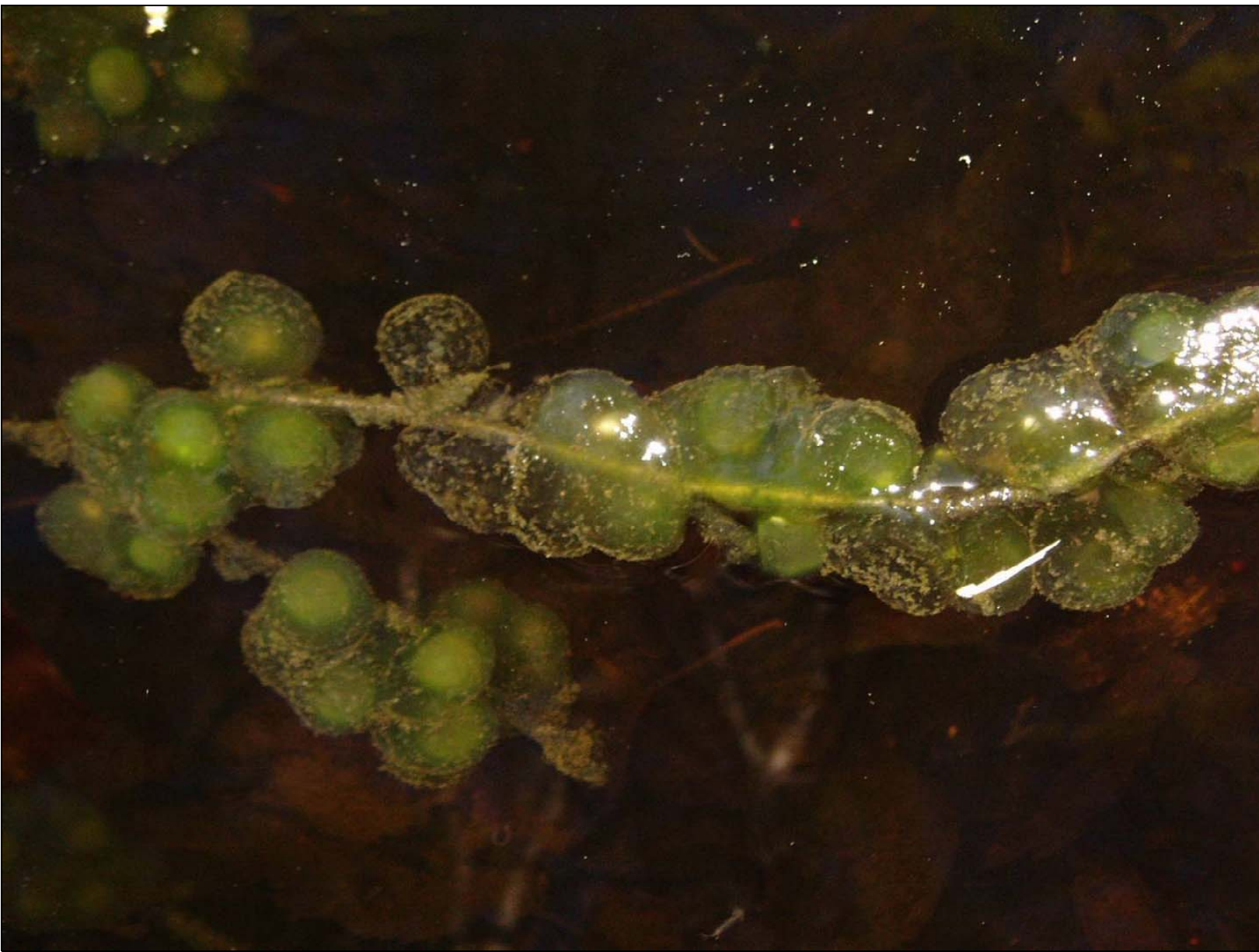
Large cluster of spotted salamander egg masses



Juvenile wood frog.



Raft of wood frog egg masses attached to winterberry shrubs



String of blue-spotted egg masses deposited along stick.



Recently deposited wood frog egg mass



Spotted salamander



Blue-spotted egg masses that were deposited on underside of floating piece of birch bark



Spermatophores – look like small white paint flecks on the pool bottom





Recently deposited spotted salamander egg masses; note this is the clear variety of egg mass. Spotted salamanders also lay cloudy and green filmy masses.



Wood frog egg masses – note lumpy external appearance



Cloudy spotted salamander egg masses



Long strings of infertile blue-spotted hybrid egg masses