



Maine Vernal Pool
Indicator Species



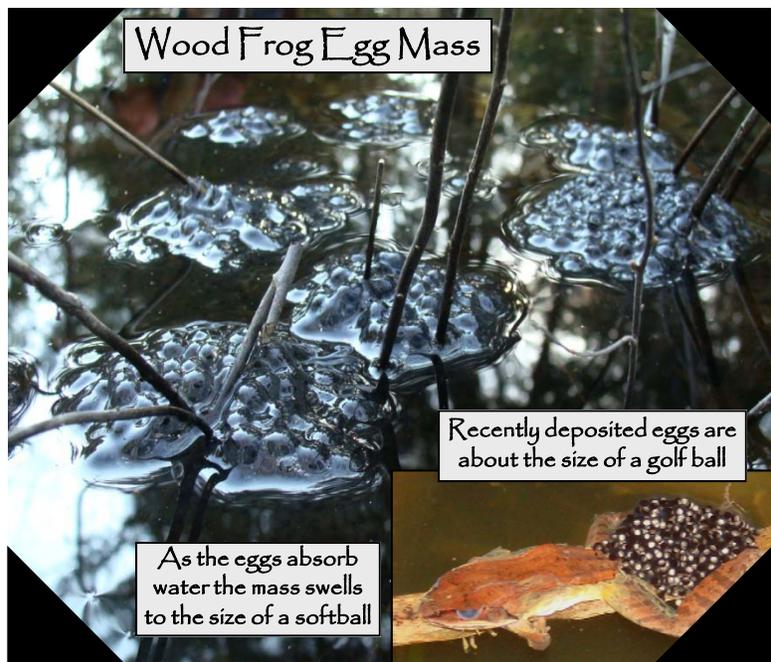
Wood Frog



Wood Frog Egg Mass

Each female lays a single
egg mass which contains
800 to 1000 eggs

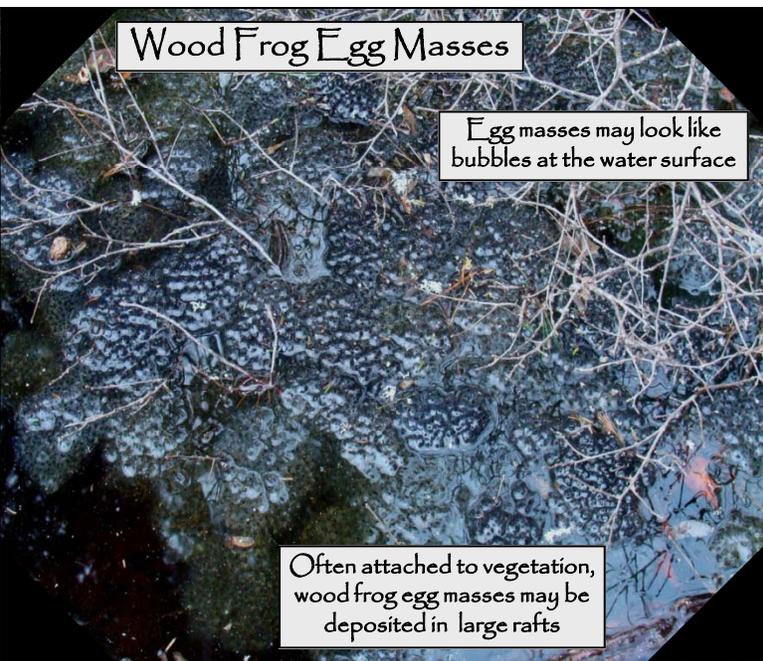
Surface of mass is lumpy in appearance
and lacks outer coating of jelly



Wood Frog Egg Mass

Recently deposited eggs are
about the size of a golf ball

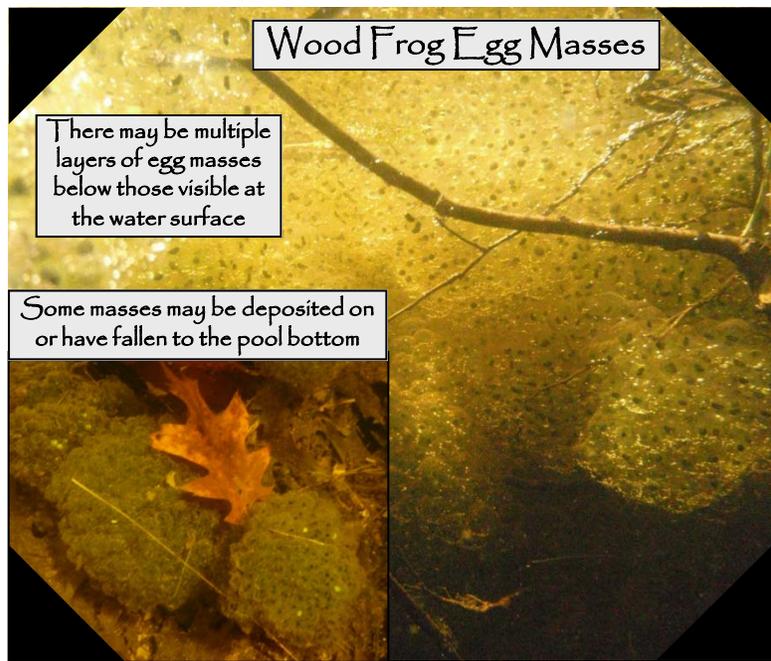
As the eggs absorb
water the mass swells
to the size of a softball



Wood Frog Egg Masses

Egg masses may look like
bubbles at the water surface

Often attached to vegetation,
wood frog egg masses may be
deposited in large rafts



Wood Frog Egg Masses

There may be multiple
layers of egg masses
below those visible at
the water surface

Some masses may be deposited on
or have fallen to the pool bottom

Often seen in pool shallows, wood frog tadpoles are small, dark, and numerous.

Large, chunky bull frog and green frog tadpoles usually overwinter in permanent bodies of water. No additional tadpoles are in pools in the early spring when wood frogs hatch.

Wood Frog Tadpoles



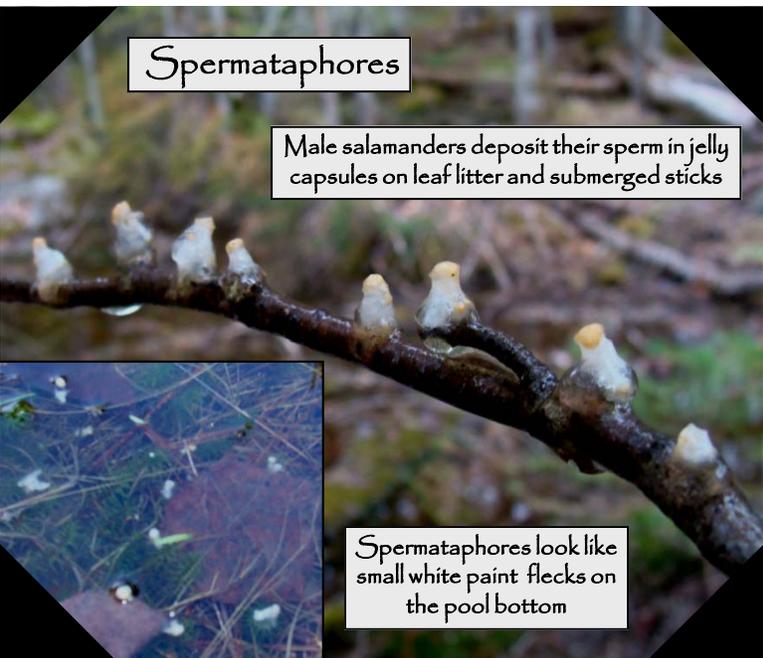
Bull Frog and Green Frog Tadpoles



Spermatophores

Male salamanders deposit their sperm in jelly capsules on leaf litter and submerged sticks

Spermatophores look like small white paint flecks on the pool bottom



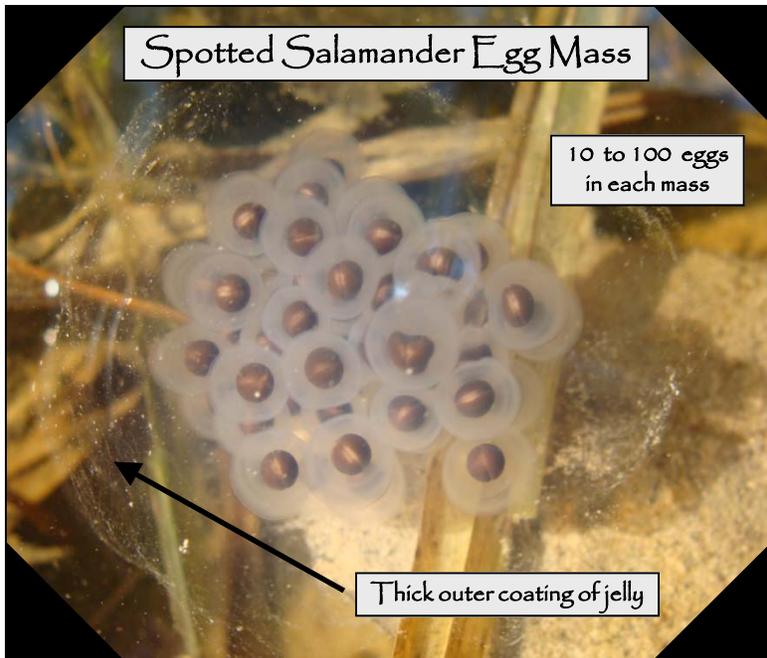
Spotted Salamander



Spotted Salamander Egg Mass

10 to 100 eggs in each mass

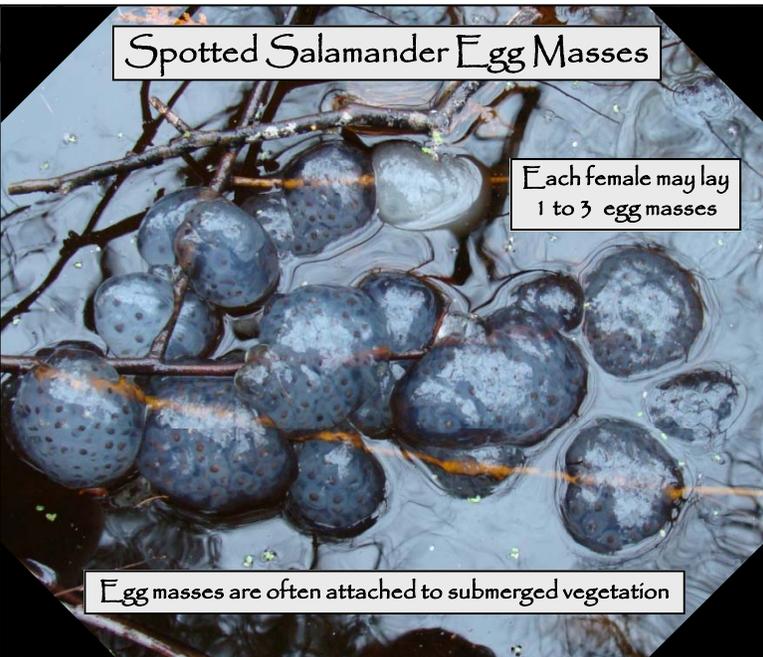
Thick outer coating of jelly



Spotted Salamander Egg Masses

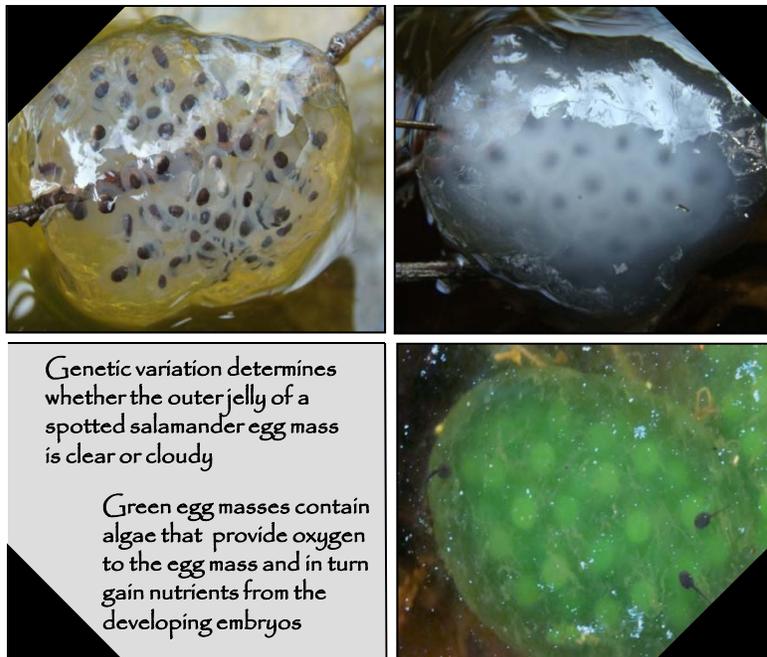
Each female may lay 1 to 3 egg masses

Egg masses are often attached to submerged vegetation



Genetic variation determines whether the outer jelly of a spotted salamander egg mass is clear or cloudy

Green egg masses contain algae that provide oxygen to the egg mass and in turn gain nutrients from the developing embryos



Blue-Spotted Salamander



Dark slender body with bright blue spots

Blue-Spotted Salamander Egg Mass



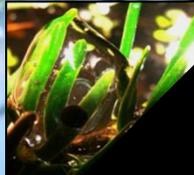
Egg masses are difficult to see below the water surface and may not be visible without gently lifting submerged vegetation

Drippy, transparent jelly surrounds each mass

Blue-Spotted Salamander Egg Masses



Blue-spotted eggs may be deposited individually on the pool bottom or in small clusters along submerged sticks



Often brownish-grey and larger bodied than blue-spotted salamanders, hybrids have varying amounts of light blue flecking



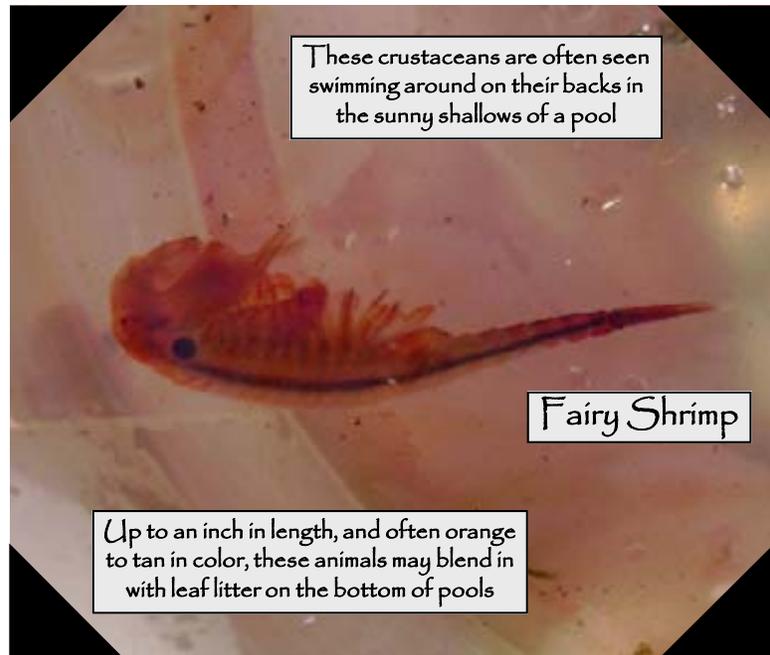
Hybrid Blue-Spotted Salamander

Hybrid Blue-Spotted Salamander Egg Masses



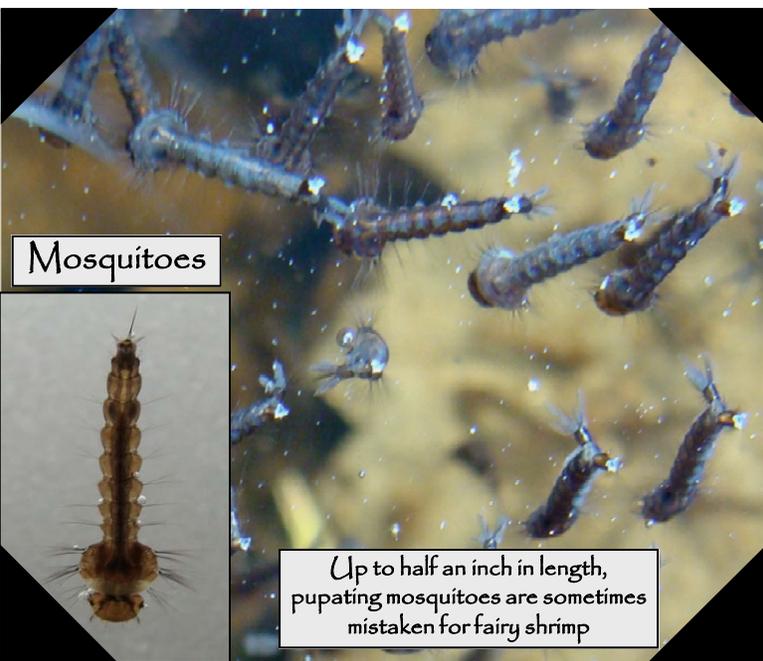
Often containing white infertile embryos, hybrid egg masses may be deposited in long strings of "pearls" along submerged vegetation

These crustaceans are often seen swimming around on their backs in the sunny shallows of a pool



Fairy Shrimp

Up to an inch in length, and often orange to tan in color, these animals may blend in with leaf litter on the bottom of pools



Mosquitoes



Up to half an inch in length, pupating mosquitoes are sometimes mistaken for fairy shrimp



Additional information is available at:
www.umaine.edu/vernalpools

Funding provided by the Penobscot Valley Chapter of Maine Audubon
Photos provided by Dawn Morgan, Aram Calhoun, and Kevin Ryan
Cards compiled by Dawn Morgan, University of Maine