

Introduction to Woodland Pools



Photo by L Heady

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Hudson River Estuary Program and
Cornell University Dept. of Natural Resources



Cornell University

Hudson River Estuary Program

Core Mission

- Ensure **clean water**
- Protect and restore fish, wildlife, and their **habitats**
- Provide water recreation and river **access**
- Adapt to **climate change**
- Conserve world-famous **scenery**



Photo by L Heady



vernal pool

spring pool

woodland
pool

seasonally
ponded
isolated
wetland

underdogs of
the wetland
world

hogwallow

wicked
big
puddles

disappearing ponds

What's the difference between a *vernal* pool and a *woodland* pool?

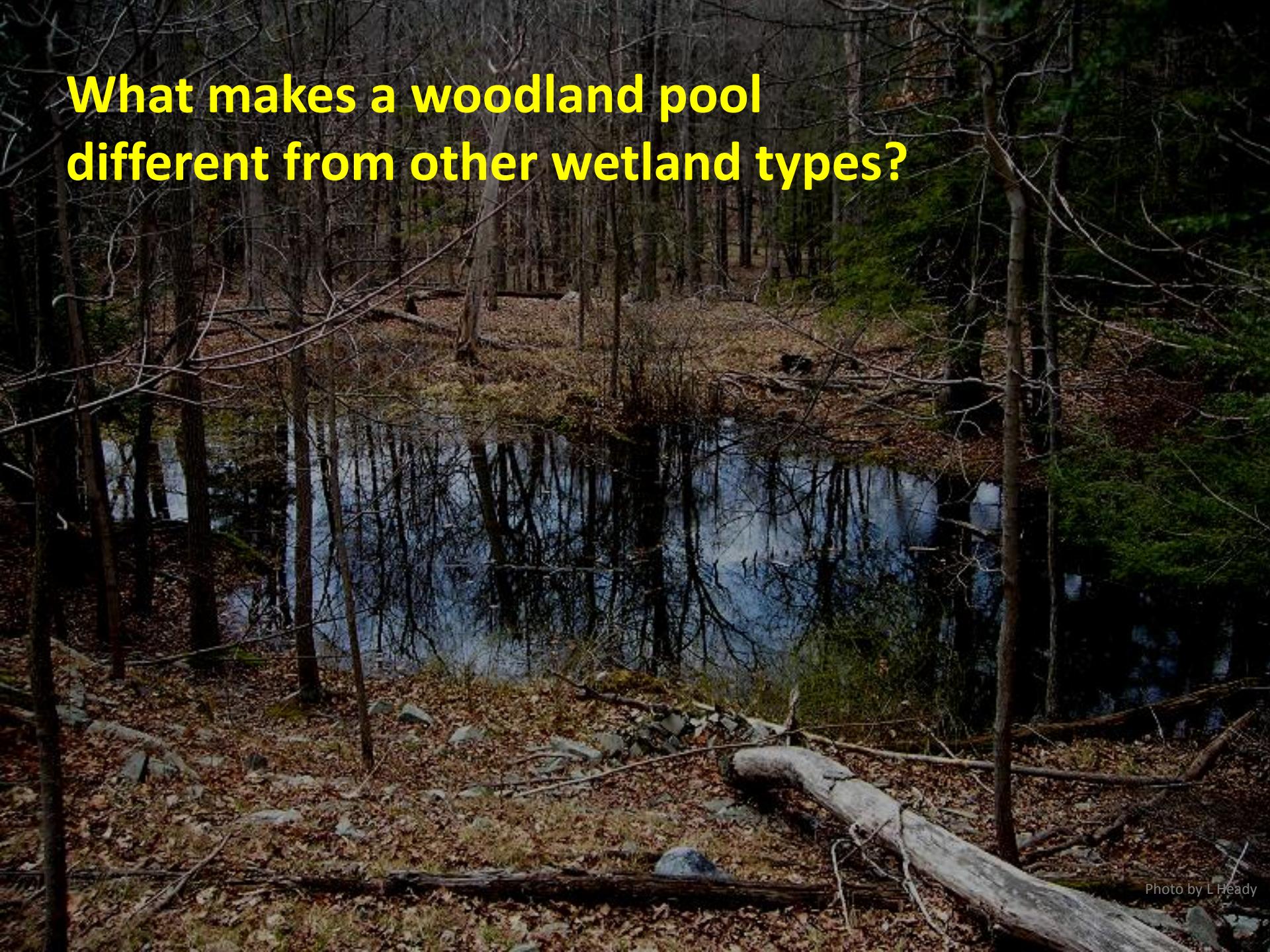
vernal pool:
seasonally flooded basin



woodland pool:
seasonally flooded basin
in *forested* habitat
(maximum depth in spring *and* fall)



Photo by L Heady



What makes a woodland pool different from other wetland types?

Defining a woodland pool...

Three components:

- setting
- water
- wildlife



Photo by L Heady

Definition of a “woodland pool”

setting

- small basin (<1-2 acres)
- surrounded by forest*



Photo by L Heady



photo by L Heady

Definition of a “woodland pool”

water

- typically has no permanent inlet or outlet, “isolated”
 - shallow (max. depth ~ 1m)
 - wet-dry cycle
 - fills in spring from rain, snowmelt (some from groundwater)
 - typically dries by summer
 - may fill again from fall rains, rising water table
- = temporary abundance of water



Photo by L. Heady



winter



spring

seasonal appearances of
the same woodland pool



summer

Definition of a “woodland pool”

wildlife

- does not support predatory fish populations
- provides breeding habitat for amphibian and invertebrate species (but it's a “race against dryness”)
- provides foraging habitat for a variety of other species



Photo by L Heady



Spotted salamander spermatophores, developing eggs, and larva (L to R). Photos from vernalpool.org.

Defining a “woodland pool”

- details may depend on your purpose for the definition

Example: naturally occurring, seasonal bodies of water free of predatory fish populations that provide breeding habitat for a group of species of conservation concern (or “indicator species”)



Photo by L. Heady



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What amphibians use woodland pools?



Photo by E. Kiviat



Photo by C. West

wood frog

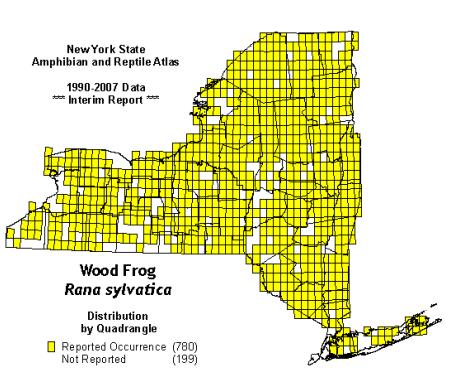


Photo by Kris McShane



Photos by L. Heady

spotted salamander

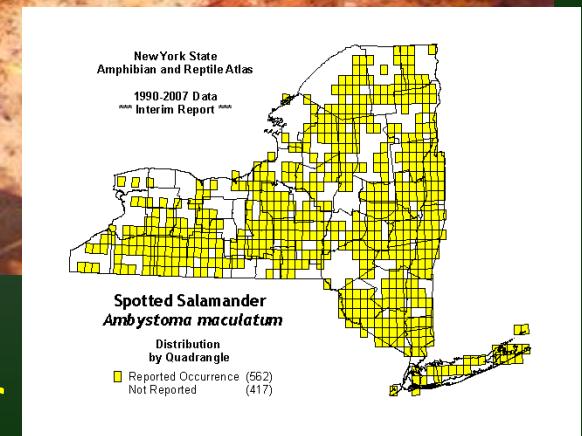




Photo by L.Heady



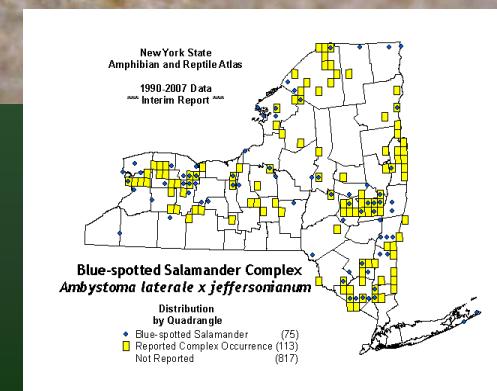
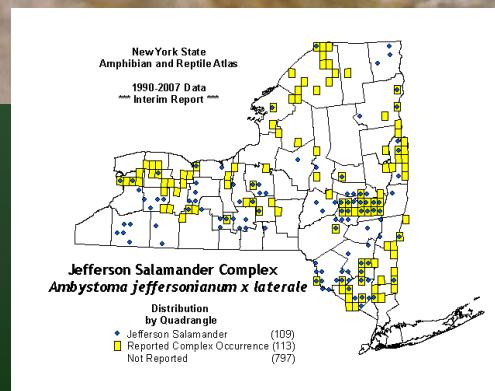
Photo by Erik Kiviat

Jefferson-blue spotted salamander complex



NYSDEC photo

Jefferson-blue spotted salamander complex



female



Photo by Chris Bowser

marbled salamander

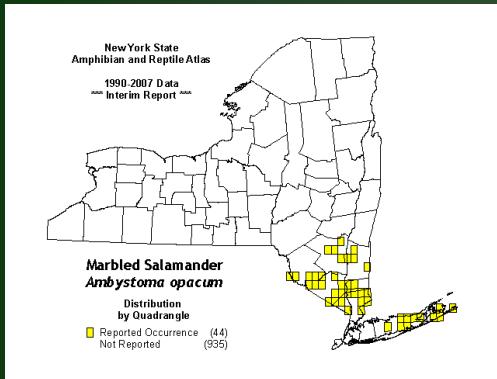


Photo by Brian Houser

male

WOODLAND POOL INVERTEBRATES



fairy shrimp
(good indicator species)



log cabin caddisfly



www.vernalpool.org

fingernail clam



four-toed
salamander



Photo by Laura Heady

Who else uses a woodland pool? “facultative” species



Photo by Laura Heady

frogs and toads (e.g. spring peeper)



www.vernalpool.org

turtles (e.g. spotted turtle)

eastern (red-spotted) newt

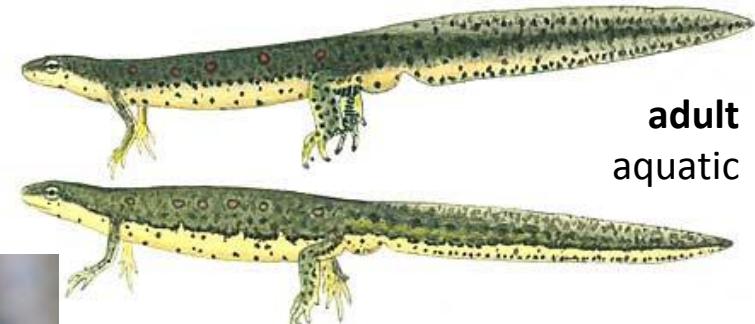


juvenile

Photos by Laura Heady



transitioning



adult
aquatic

juvenile
“red eft”
terrestrial stage

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