

Amphibians of Connecticut



Announcements

- List of project ideas has been posted to the eebedia page - reference these!
- Lecture notes from yesterday have also been posted (with project proposal guidelines)
- There's only one field guide left at the CO-OP, Amazon is your friend (thanks Kelly!)
- Measuring SVL - handy rulers inside some notebooks and field guides
 - Measuring guides also on eebedia



Frank
2015

(38)
May 11

Location: Off Haskins Hill Road, Red Trail, UConn-forest
41.82107, 72.24803

Events: Hiked at 10am, 73°F, partly cloudy.
One Hyla versicolor call in the distance. Two Rana clamitans (one small, one large), one adult Thamnophis sirtalis. All in the trail in the mud.
One R. sylvatica in the mud. Under log with partial shade and moist ground, one redback Plethodon cinereus. Under rock with cool moist soil, adult Ambystoma maculatum. In nearby leaf litter, another R. sylvatica. One Pseudacris crucifer in leaf litter near a drying stream. Also in leaf litter, another R. sylvatica and B. americanus. One Eurycea bislineata, two clutches nearby. About 36 eggs.

Frank
2015

(39)
May 11

In leaf litter, one more R. sylvatica and two more P. crucifer. Still on red trail, one P. cinereus lead-back morph under log (slightly $\frac{1}{2}$ more dorsal sun). Three P. cinereus leadbacks under log, 2 small juveniles (?), around 2 cm each.



What kind of herp is this?

Amphibians

- Class Lissamphibia
- Three Major Groups
 - Frogs
 - Salamanders
 - Caecilians
- Shared Characteristics
 - Pedicellate Teeth
 - Amphibian papillae
 - Sensory organ in ear
 - Moist skin with many glands



Frogs

- Anura
 - “Without tail”
- Elongated hind limbs
- ~ 6000 species worldwide
- **10 species** in Connecticut



Eastern Spadefoot Toad

- *Scaphiopus holbrooki*
- DEEP Status: **HIGHLY ENDANGERED**
 - “The species was only seen 8 times at various locations throughout the state from 1970 to 1989.”
- Nocturnal, burrowing toad (spend the year underground)
 - Prefers sandy / loose soil
- Vertical pupils
- Digging structures on back legs
- Single day explosive breeder, triggered by first major fall in barometric pressure in the spring

[Calling Video](#)



American Toad



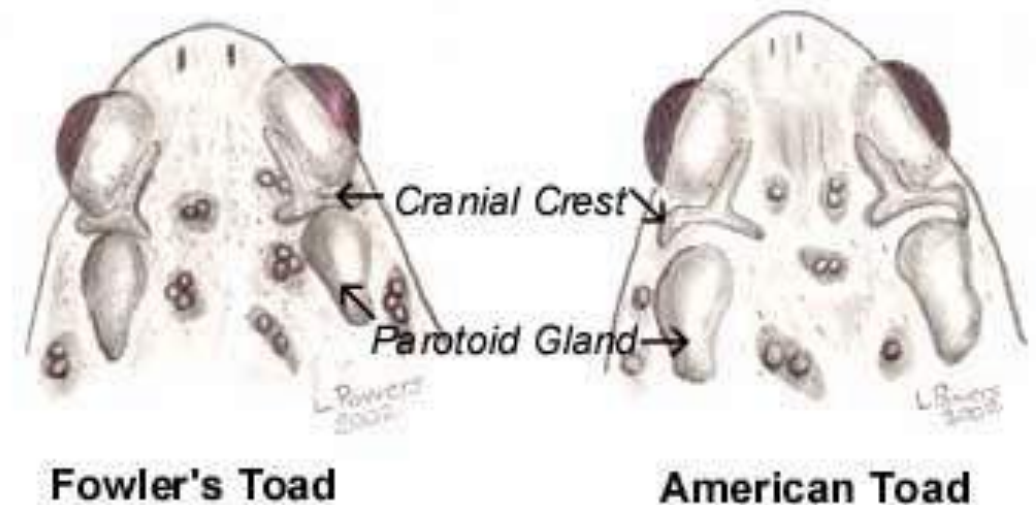
- ***Bufo (Anaxyrus) americanus***
- Large, warted frog
- Large parotoid glands behind the eyes
- Common in CT
 - Found in forests and fields
- Explosive breeder in temporary ponds in late April

[Calling Video](#)



Fowler's Toad

- *Bufo (Anaxyrus) fowleri*
- DEEP Status: **SECURED**
- Very similar to *B. americanus*, but rarer in CT
 - Species hybridize as *B. fowleri* move northward
- Also prefers sandy / loose soil
- No “spur” connecting crests to parotoid glands



[Calling Video](#)

Spring Peeper



- ***Pseudacris crucifer***
- Small frog
- One of the first to call every spring (from first warm spring night until ~end of April)
- Dark “X” on the back is prominent

[Calling Video](#)

Gray Treefrog

- *Hyla versicolor*
- DEEP Status: **DECLINING**
- Only **true** tree frog in CT
 - Enlarged toepads for climbing
- Undersides of legs are very yellow
- Can change color, gray to light green
- Long breeding season, slowly descend trees through April-May, breed from June-July

[Calling Video](#)



Leopard Frog



- *Rana (Lithobates) pipiens*
- **DEEP Status: SPECIAL CONCERN**
- One of the most common frogs in the US, but in decline
- Uncommon in eastern CT
 - Found in floodplain forests and meadows in CT River Valley
- Similar to *Rana palustris*
- Spots on back arranged in no particular pattern
- Legs have spots, not stripes

[Calling Video](#)

Pickereel Frog

- *Rana palustris*
- Similar in appearance to *Rana pipiens*
 - More squarish spots
 - Spots in distinct rows
- Found in a variety of temporary and permanent ponds and streams
- Breeds in late spring early summer



[Calling Video](#)

Wood Frog



- ***Rana (Lithobates) sylvatica***
- One of the first frogs to emerge after winter (as soon as surface ice on ponds melt)
 - Explosive early spring breeding (first warm night in April)
- Freeze tolerant
- Light tan, with a brown “mask”
- After breeding, distributed widely in forests



Bullfrog

- *Rana catesbeiana*
- Largest frog in CT
- Ridges end after tympanum
- Male tympanum larger than female tympanum (typically larger than the eye)
- Tadpoles may overwinter, spend several years as tadpoles before metamorphosing



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Green Frog



- *Rana (Lithobates) clamitans*
- Similar to *Rana catesbeiana*, but smaller, and not always green
- Male tympanum larger than female tympanum (typically larger than the eye)
- Common in CT
- Dorsal ridges run the whole length of the body.

[Calling Video](#)

Salamanders

- Caudata or Urodela (“with tail”)
- 600 species worldwide (most are Plethodontidae)
- 12 species in CT



Mudpuppy



- *Necturus maculosus*
- Completely aquatic
- Retains external gills
- Collections exist from the 1870s, but possibly reintroduced in the 1950s from biology labs
- Most are found in CT River and tributaries, and other larger permanent bodies of water

Where
am I
from
?!?!?



Red-spotted newt

- *Notophthalmus viridescens*
- Only member of Salamandridae in CT
- Common throughout the state
- Three stage life cycle.
 - Aquatic larva, terrestrial eft, aquatic adult
 - Good luck finding eggs!
- Toxic



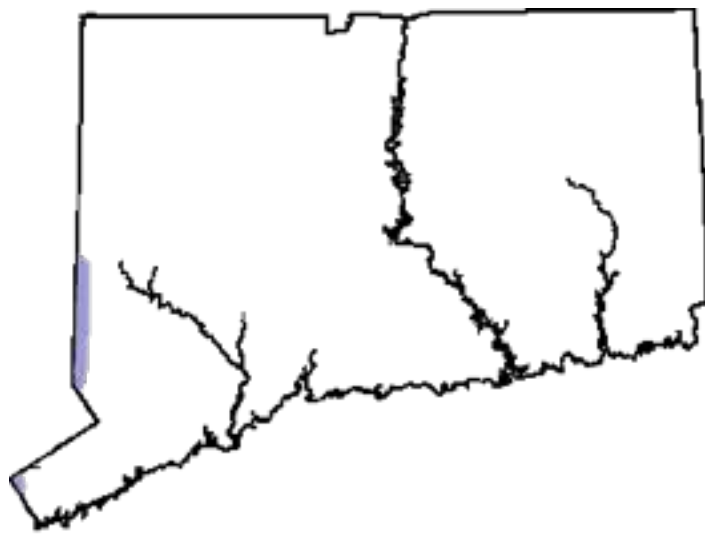
Red-backed salamander

- *Plethodon cinereus*
- Most common salamander in this region
- Completely terrestrial
- Coloring can be quite variable
 - Red-stripe morph
 - “Lead” morph
 - Red erythristic morph (mimic of *N. viridescens* ?)



Slimy salamander

- *Plethodon glutinosus*
- DEEP Status: **THREATENED**
- Terrestrial
- Larger than *P. cinereus*
- Main defense mechanism is create large amounts of slime



Northern Dusky Salamander

- *Desmognathus fuscus*
- Shorter and stouter than other Plethodontids
- Almost entirely aquatic
- Common, but only in the right habitat
 - Rocky streams with plenty of leaf litter
 - Adults under flat rocks in the stream
 - Larvae and juveniles in the litter itself
- Eggs laid in damp mud nests, females guard eggs.



Two-lined Salamander

- *Eurycea bislineata*
- Slender body, yellow colored
- Mostly an in-stream or stream-side salamander
- Eggs are laid on the underside of stones in the stream.



TODD PIERSON 2010

Four-toed Salamander

- ***Hemidactylium scutatum***
- Dorsal appearance similar to *P. cinereus*, the underside is white with black flecks
 - Also, if you look closely, only have four toes on hind limb
- Usually found under sphagnum mats in bogs and marshes.
 - From experience: can find them under logs just as often
- Females guard their eggs



Spring Salamander

- *Gyrinophilus porphyriticus*
- **DEEP Status: THREATENED**
- Large, predator of smaller salamanders
- Uncommon, but typically found in cold, seepage areas
- Breeds mid-October, female guards eggs in the water under submerged rocks & logs, eggs hatch in the spring



Spotted Salamander

- *Ambystoma maculatum*
- Largest salamander of the state, heavy-bodied
- Spends much of the year underground
- Comes out to breed early in the spring, migrates en masse to vernal pools
- May see some in the flooded field by the Fenton



Marbled Salamander

- *Ambystoma opacum*
- Prefers drier, almost sandy-like soil
- Common in CT
- Black and white
 - Males are bright white and smaller
 - Females are silver and larger
- Breeds in the fall, larva overwinter in ponds



Blue Spotted Salamander

- *Ambystoma laterale*
- DEEP Status: **SPECIAL CONCERN**
- Mostly found west of the CT river
- Smaller than *A. maculatum* and *A. opacum*
- Non-hybridized salamanders are extinct from CT
 - Hybridizes extensively with *A. jeffersonianum*
- Thought to prefer more swamp and marsh-like habitat



Jefferson's Salamander



- *Ambystoma jeffersonianum*
- **DEEP Status: SPECIAL CONCERN**
- Only found west of the Connecticut River
- Rarely seen outside of the breeding season
 - Tend to be found more in vernal pools
 - Breed **VERY** early in the spring
- Regularly hybridizes with *A. laterale*
 - Difficult to tell the two apart beyond size
 - *A. jeffersonianum* is larger