Amphibians of Florida
Amphibians

- Moist permeable skin (NO SCALES!)
- Aquatic larval stage as young
- Complex life history characteristics
  - Amphibios – Greek meaning “living a double life”
- Toes without claws
- Made up of three Orders:
  - Anura (frogs & toads)
  - Caudata (salamanders)
  - Gymnophiona (caecilians)
Order Anura

- FROGS
- Thick head and body with long, strong legs
- Often advertise presence (especially during the breeding season) with wide range of calls
Family Bufonidae

- Toads
- Have dry, glandular (warty) skin
- Hop
Bufo marinus

- EXOTIC!
  - Native to SA
- Huge size
- Skin gland secretions can be highly toxic

- Marine Toad / Giant Toad / Cane Toad
Bufo quercicus

- Tiny size
  - smallest toad in NA
- Conspicuous, light middorsal stripe
- 4-5 pairs of dark blotches on back
- Diurnal

- Oak Toad
Bufo terrestris

- Large knobs & high cranial crests
- Extremely abundant and widespread
- Nocturnal, likes urban habitats
- Southern Toad

Photo By: J. Jensen

Photo By: T. Blunden
Family Hylidae

• Cricket Frogs, Treefrogs & Chorus Frogs
  \[ Acris \quad Hyla \quad Pseudacris \]
• Many spp. have enlarged, round toepads
• Mostly (relatively) small-sized
• Known for their wide variety of vocalizations
Acris gryllus

- Small size with slightly warty skin
- Often bright green Y between eyes extends down the back
- In Florida, back of thigh has two dark stripes
- Very common
Hyla chrysoscelis

- Greyish overall coloration w/ white spot under eye
- Inner thighs w/ orange – yellow wash
- Rough skin w/ many large blotches
- Nocturnal

Photo By: W. Knapp
Hyla cineria

- Long body shape and large tow pads
- Well defined light lateral line
- Many have tiny golden spots on their backs

Photo By: T. Blunden

Green Treefrog
Hyla femoralis

- Bright yellow-orange spots on inside of thigh
- Very variable coloration (grey, green, brown, patterned, uniform etc)
- Nocturnal
- Pine Woods Treefrog

Photos By: W. Kapp
Hyla gratiosa

- Large round spots on back
- Rugose skin
- Large size, toe pads
- Nocturnal
- Dependent on fishless, ephemeral ponds for breeding
- Barking Treefrog
Hyla squirrela

- Rule out other frogs first!
- Extremely variable overall coloration
- No strong inner thigh markings
- Extremely common, even in urban areas
- Squirrel Treefrog

Photo By: J. Jensen
**Osteopilus septentrionalis**

- Introduced species
- Large and voracious
- Forehead skin fused to bone
- Often found in urban areas, but also invades natural areas
- Range is still expanding northward.

**Cuban Treefrog**
**Pseudacris crucifer**

- Dark imperfect “X” marking on back
- Pinkish, yellowish, brown or grey background color
- Early winter breeder, nocturnal
- Very common and widespread

Photo By: J. Jensen
Pseudacris nigrita

- Three dorsal stripes (tend to break up near groin)
- Black stripe runs through eye
- Tiny toe pads limit climbing ability

Southern Chorus Frog

Photo By: W. Kapp
Pseudacris ocularis

- Smallest Frog in NA
- True treefrog perches low to ground
- Tan to gray-green, prominent dark line through eye
- Usually found in grassy wetlands

• Little Grass Frog
Family Microhylidae

- Narrow-mouthed frogs
  - Also known as Sheep frogs
- Specialize on beetles, ants & ant lions
- Characterized by skin fold across back of head
Gastrophryne carolinensis

- Tiny, pointy head, fat round body, smooth skin (egg shaped)
- Skin fold on back of head, pointed snout
- Nocturnal, burrower
- Eastern Narrowmouth Toad

Photo By: W. Kapp
Family Pelobatidae

- American Spadefoot toads
- Use single, bladelike spade on back feet to burrow rapidly down in loose soil
- Explosive breeders after heavy rains
Scaphiopus holbrookii

- Horny black spade on hind foot
- Vertical pupil
- Pale lyre / hourglass shape on dark back
- Smooth skin w/ tiny tubercles
- Nocturnal, burrows

- Eastern Spadefoot Toad
Family Ranidae

- “True frogs”
- Typical frogs with long legs, narrow waists and smooth, moist skin
- Many have dorsolateral folds
- Leap
- Found on all continents except Antarctica
- Source of culinary frog legs
Rana capito

- Short body, pointy snout
- Light background color with large dark spots
- Found in xeric uplands
- Usually uses Gopher Tortoise burrows as refugia

Photo By: T. Blunden
**Rana catesbiana**

- Largest NA frog
- Mostly plain green or brown above
- No dorsolateral ridges
- Large external eardrum
- Webbing on 4th hind toes does not fully extend to tip
- Very common and widespread

Photo By: J. Jensen
Rana clamitans

- Plain brown/bronzy back
- Incomplete dorsolateral ridges
- Center of tympanum elevated
- Fairly common
**Rana grylio**

- Large, plain frog, very sim. to *R. catesbiana*
- Webbing on 4\(^{th}\) hind toes extends fully to tip
- No dorsolateral ridges
- Nocturnal, feeds on crayfish

Photo By: T. Lamb
**Rana sphenoecephala**

- Green or brown frog with dark spots
- Strong dorsolateral light colored ridges
- Light spot in center of tympanum
- Southern Leopard Frog
- (Called *Rana utricularia* in Peterson’s Field Guide)

Photo By: D. Stevenson
Order Caudata

- SALAMANDERS
- The Americas have more salamanders than the rest of the world combined, and the southeastern US has more salamanders than anywhere else in North America.
Family Sirenidae

- Highly aquatic
- Eel-like, but with substantial front legs
- No hind legs
- External, bushy gills
Siren lacertina

- Eel-like with bushy gills
- NO HIND LEGS
- Large, well developed front limbs
- Large size
- Highly aquatic
- Greater Siren

Photo By: J. Jensen
Family Amphiumidae

• Eel-like
• Tiny front AND back legs
  • Thought to be vestigial
• No external gills
Amphiuma means

- Eel-like and LARGE
- Four tiny legs with two toes each
- Almost completely aquatic, but may move overland on extremely wet nights in flooded areas
- Two-toed Amphiuma
Family Ambystomatidae

- Mole salamanders
- Fossorial
- Tend to be stout with large heads
- Most spp. Not usually seen
Ambystoma talpoidium

- Chunky body with large head
- Dark overall coloration with bluish-grey flecks
- Rarely seen

Photos By: J. Jensen

Mole Salamander
Family Salamandridae

- NEWTS
- Terrestrial stage with rough, glandular skin
- Many vulnerable spp.
- Complex life history characteristics:
  Egg $\rightarrow$ Larva $\rightarrow$ Eft $\rightarrow$ Adult
  AQUATIC $\rightarrow$ AQUATIC $\rightarrow$ TERRESTRIAL
Notophthalmus perstriatus

- Small w/ rough skin
- Light colored w/ dark spots
- Red dorsolateral stripes
- Dependent on fishless ponds to breed

- Striped Newt
**Notopthalmus viridiscens**

- Small w/ rough skin
- Dusky colored w/ lighter orange, yellow, or red spots
- Pale belly with many dark flecks
- Eastern Newt
Family Plethodontidae

- Lungless salamanders!
- Breathe through the skin
- Tend to be slender with long tails
- Have a nasolabial groove
- Usually found in moist areas (streams, seeps, springs, moist woodlands, etc)
Desmognathus auriculatus

- Dark overall
- Series of “portholes” along sides of body and tail
- Associated with cypress ponds and stagnant pools

Southern Dusky Salamander

Photo by: B. Means
Plethodon grobmani

- Long, skinny, mostly black salamander with light flecks
- Distinct costal grooves
- Southeastern Slimy Salamander
Eurycea cirrigera

- Two dark lines bordering yellowish middorsal stripe
- Tail longer than body
- Five toes on hind feet
- Southern Two-lined Salamander
**Eurycea guttolineata**

- Yellow to bronze
- 3 well defined black lines
- Tail b/w half and 2/3rds of length
- Panhandle spp.

- Three lines salamander
Eurycea quadridigittata

- Very tiny size
- Four toes on hind feet
- Three dark stripes on lighter background

- Dwarf Salamander
Questions?