Phylum Chordata

Chapter 14 - 3
Reptiles & Amphibians

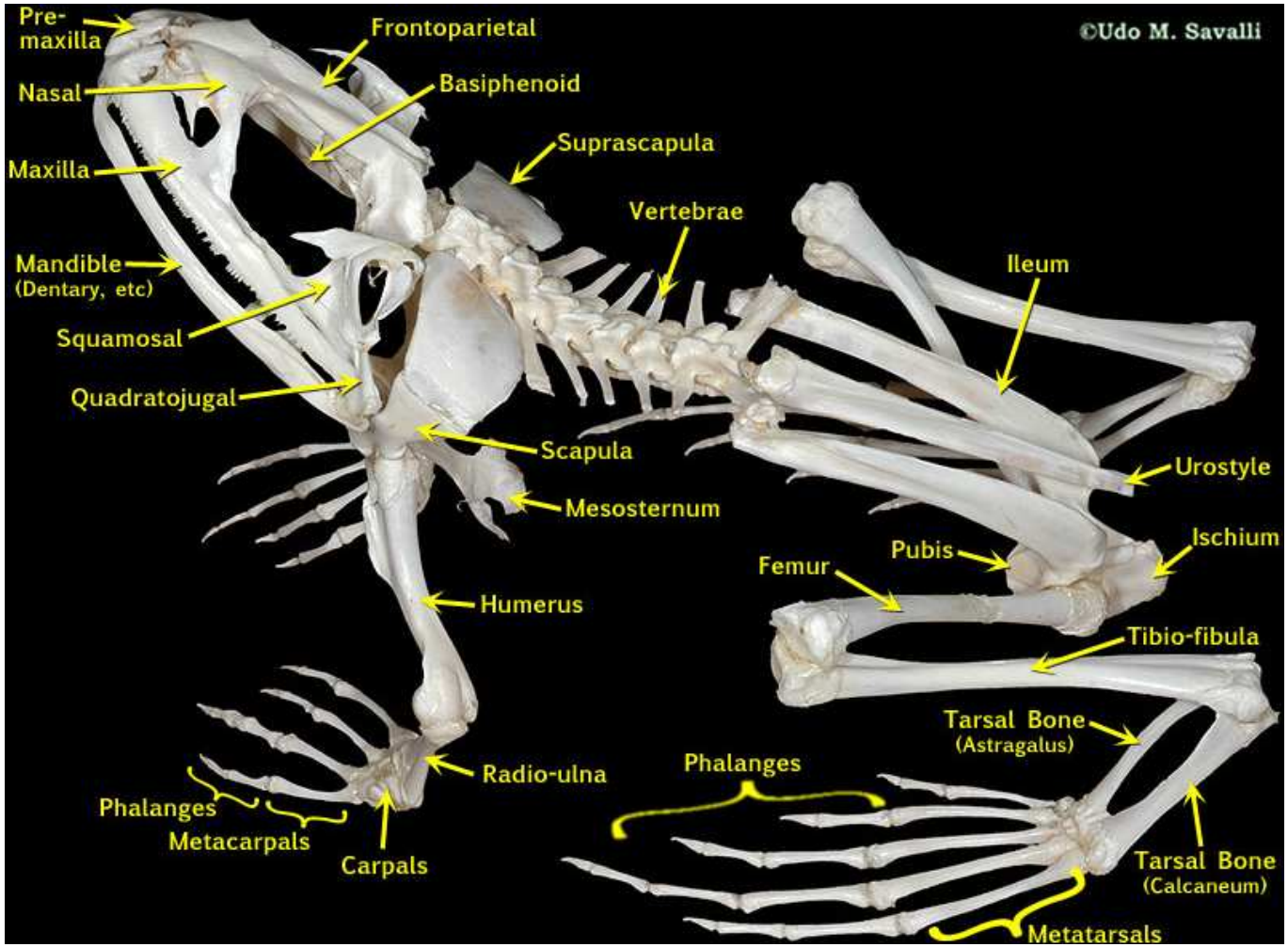
Amphibi

- Frogs, toads, newts and salamanders
- Both aquatic & terrestrial – Gills & lungs used for respiration
  - Gas exchange also through the skin
- Eggs are soft, jelly-like most must return to water to breed
- Cold-blooded
- Keystone species – populations are dropping drastically due to environmental pollutants
- Some w/ unique ability among vertebrates to regenerate limbs
- Order Anura (“an” without, “oura” tail (greek))– Frogs & Toads
- Order Caudata – (“tail” latin) Newts & Salamanders

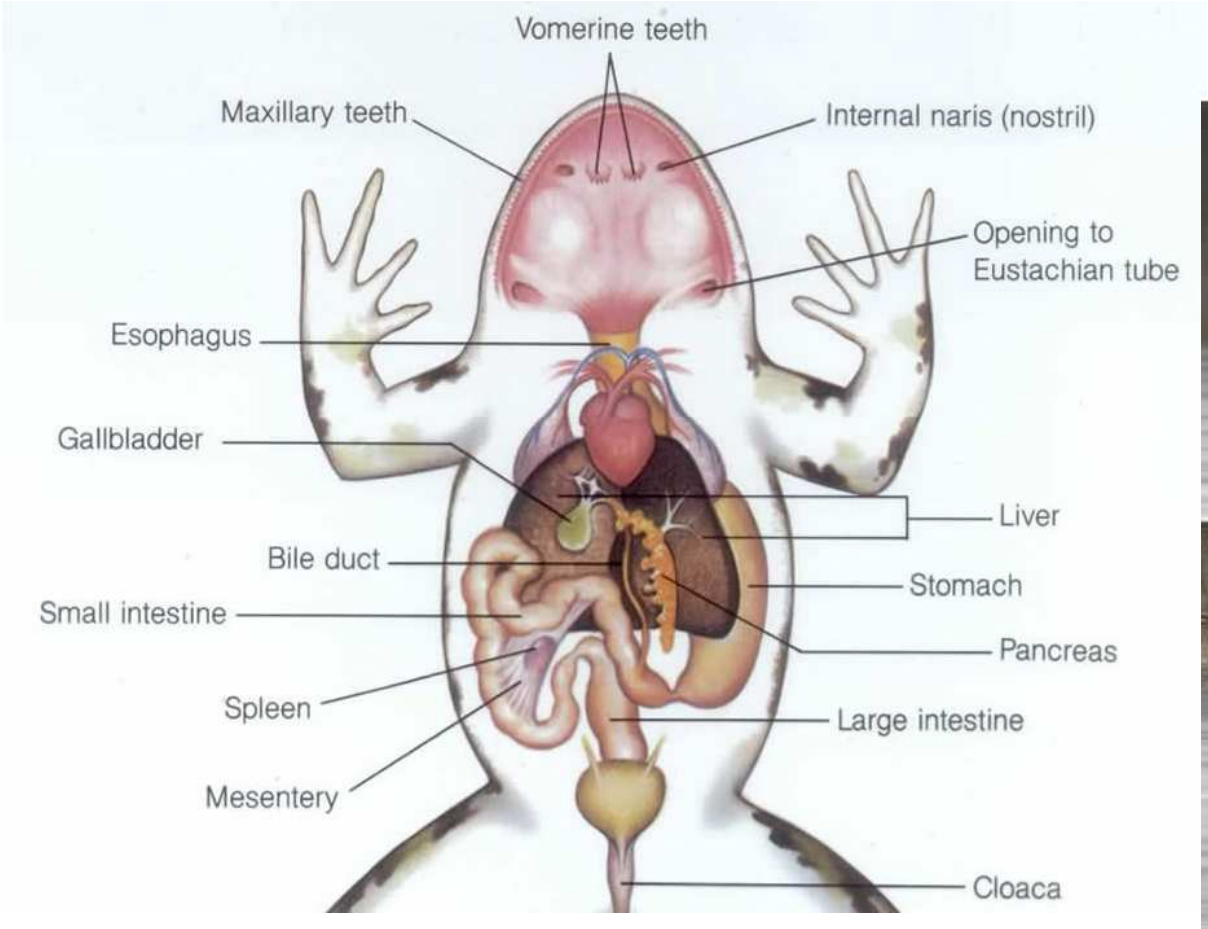
Order Anura

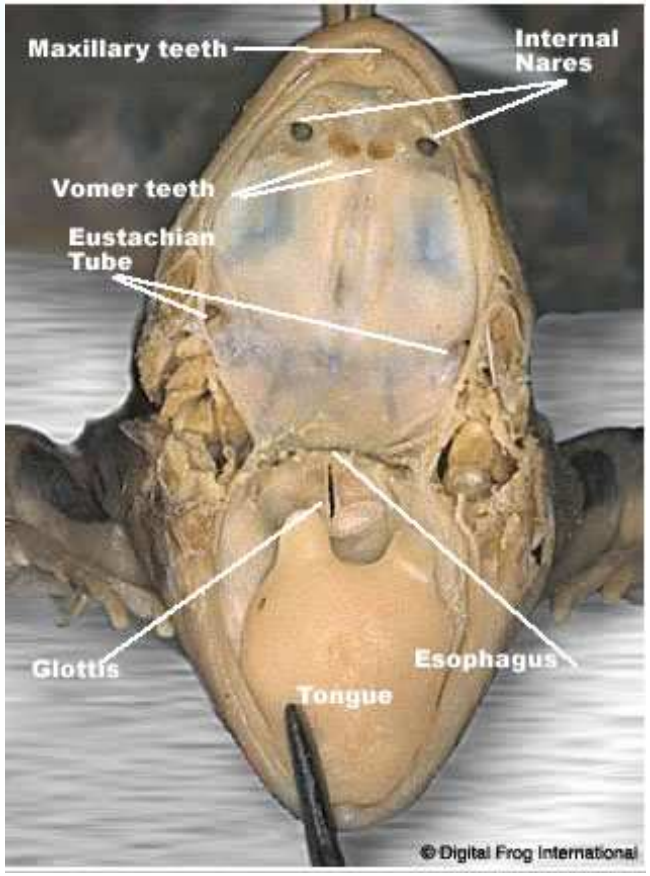
- "An" without, "oura" tail (greek)
- Frogs & Toads
- No true scientific distinction between frogs & toads; however,
  - Toads are generally considered more terrestrial w/ rough warty skin
  - Frogs generally are more aquatic w/ smooth thin skin that is highly vascular (lots of blood vessels) used to assist in respiratory gas exchange
- Lack tails as adults but during juvenile "tadpole" stage tails are present
- Adults are predatory, juveniles are vegetarians
- External fertilization

Frog Anatomy - Skeletal



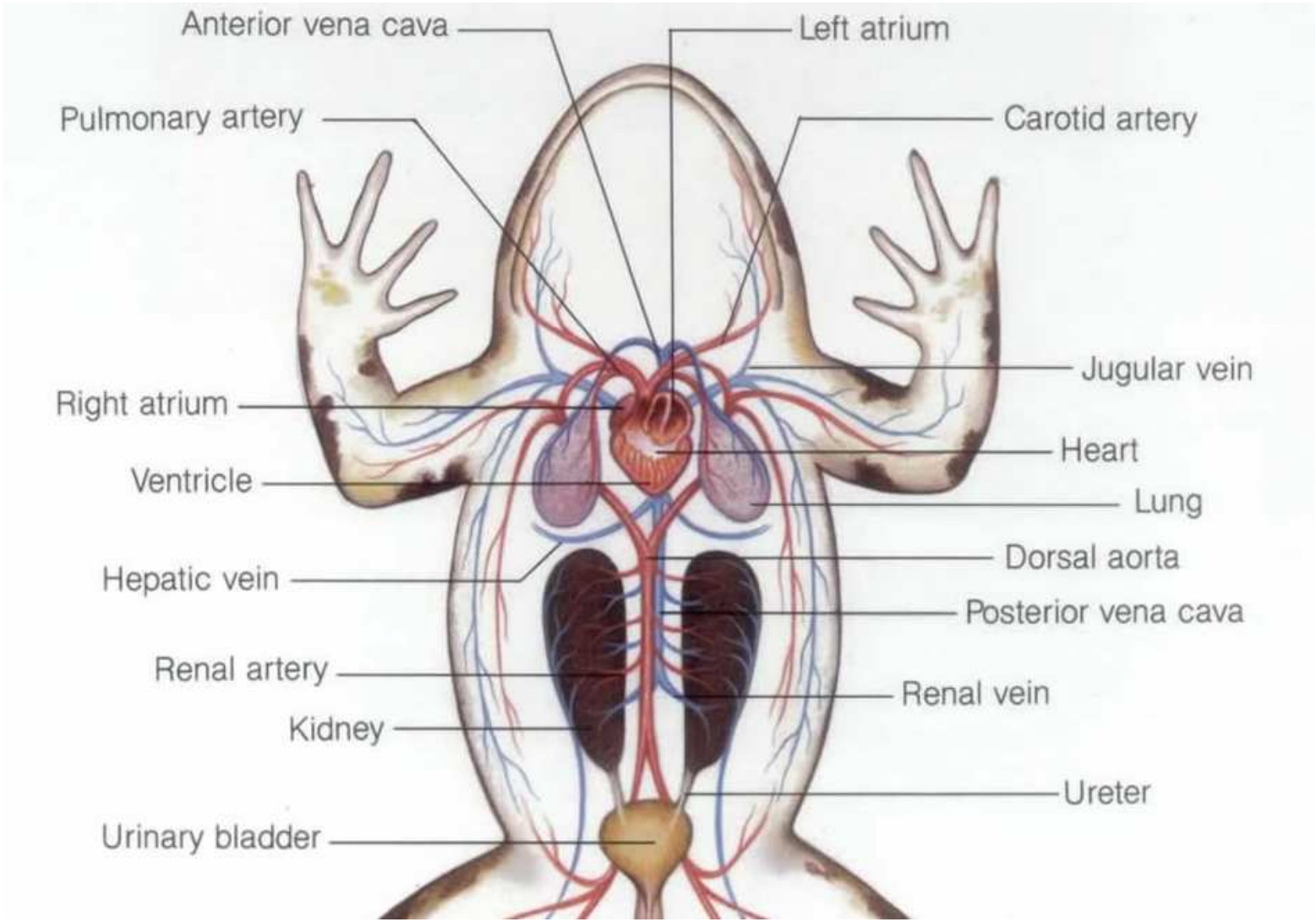
Frog Anatomy - Internal



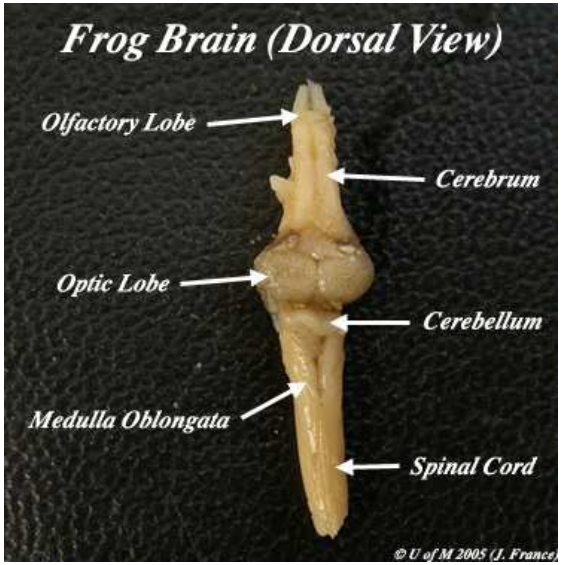


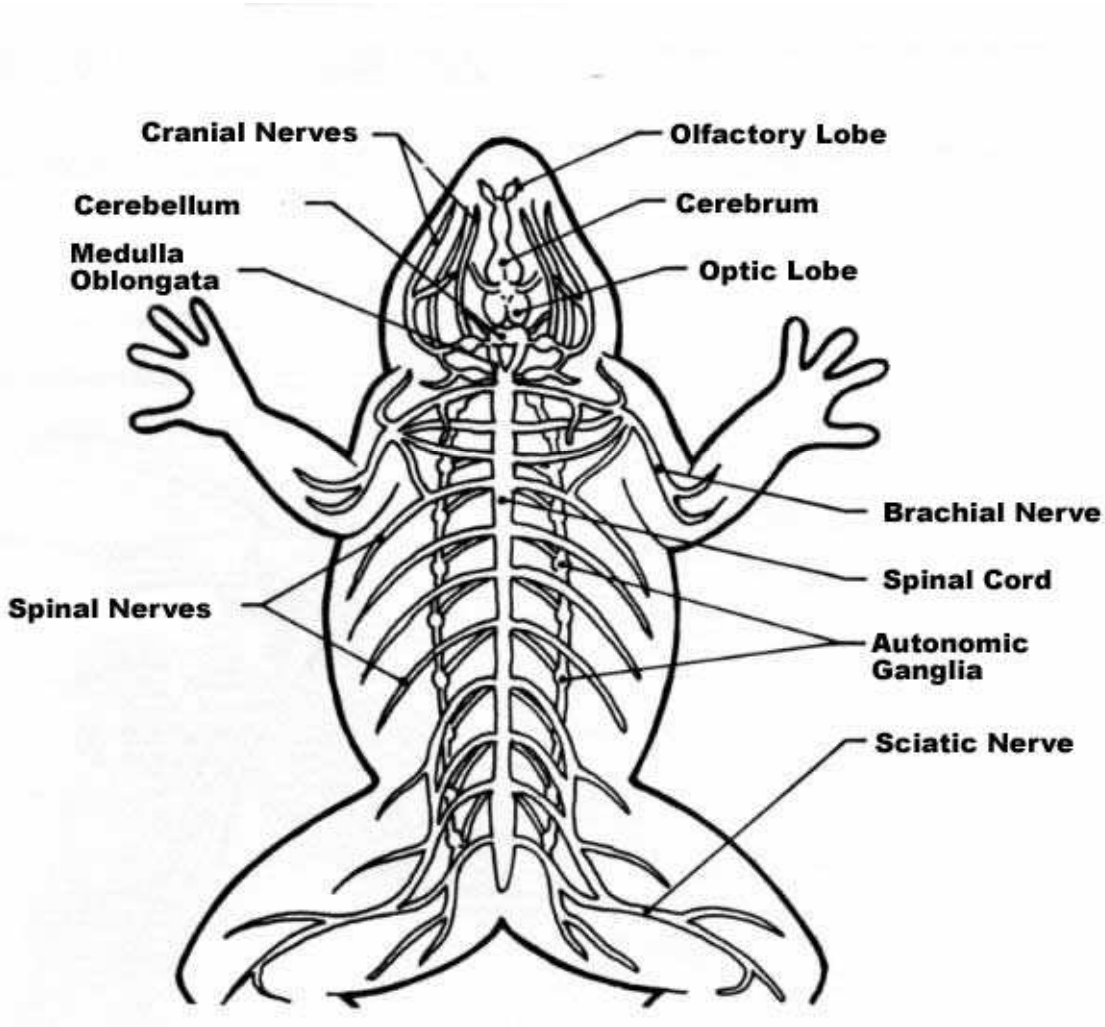
Frog Anatomy - Internal

Circulatory & Excretory Systems



Frog Anatomy - Nervous

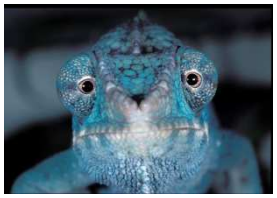




Order Caudata

- Newts & Salamanders
- Most have tails
- Most are 8 to 20 cm, Giant Japanese Salamander 5 feet long!
- Predatory and feed on bugs, worms and small fish
- No real scientific distinction between newts & salamanders (same order) ; however,
  - Salamanders are generally smooth skinned and can be more terrestrial
  - Newts are generally warty rough skin, smaller and more "full-time" aquatic

Reptiles

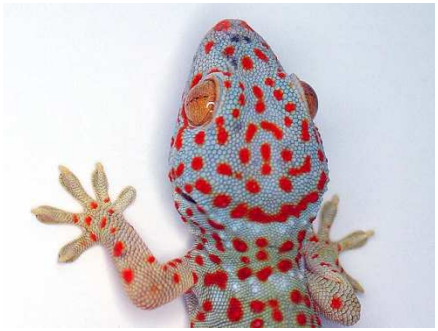


- Crocodiles, Alligators, Turtles, Tortoises, lizards and snakes
- Well adapted to life on land
- Don’t need to return to water to breed
- Leathery shelled eggs or live birth
- Internal fertilization
- Well developed lungs with a protective rib cage
- No metamorphosis of juveniles to adults like amphibia
- Order Squamates – Snakes & Lizards
  - (Latin *squama* for scale)
- Order Crocodylia - Crocodilians,
- Order Chelonia - Turtles &Tortoises





Order Squamates

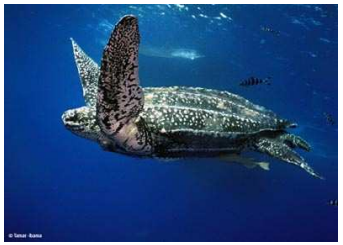


- Snakes & Lizards
- Lizards with movable eyelids snakes without
- Shed skin for growth
- Thick protective overlapping scales
- Legless lizards and snakes with legs are present!
- Largest lizard: Komodo Dragon
- Largest Heaviest snake: Anaconda
- Lizards generally are not poisonous except:
  - Gila Monster & Beaded Lizard
- 2500 species of snakes only 200 are poisonous

Order Crocodylia

- The Crocodilians: Alligators & Crocodiles, Gharials & Caiman
- Largest living reptiles > 7 meters
- Alligators w/ broad wide rounded snout, and lower teeth are generally hidden when mouth is closed
- Crocodiles have pointed snout & both lower & upper teeth exposed when jaw is shut.
- Female protective of the nest & offspring
- Cold blooded

Order Chelonia



- Turtles, Tortoises & Terrapins
- Shells are boney developments from ribs with bone plates called scutes
  - Top shell – carapace
  - Bottom shell - plastron
- No real scientific distinction between turtles & tortoises; however, generally speaking:
  - Turtles are more aquatic, usually have webbed feet, live in or near the water, often predator
  - Tortoises are usually more terrestrial, feet adapted (round & stumpy) for walking on land, found in warm even arid (deserts) dig burrows to escape heat, usually strict vegetarians
  - Terrapin are kind of “mixture” of turtles & tortoises live on both land & comfortable in the water

Crikey, mate…. I think we're all done with
reptiles & amphibians