

Amphibia

Amphibian means “two lives,” and most have a life with gills and a life with lungs. Almost all amphibia lay eggs in water, and are ectothermic (cold blooded) and most have four limbs.

Clade – “Labyrinthodontia” † (possible ancestors of modern amphibians, reptiles, and mammals)

Order – Temnospondyli † Giant reptiles *Eryops* and *Mastodonsaurus*, large heads, look like modern reptiles, Carboniferous era

Subclass – Lepospondyli † Smallish (no more than a meter), resembling caecilians and reptiles.

Examples include *Diplocaulus* and others.

Subclass – Lissamphibia

Order – Anura (frogs and toads) (tailless)

Order – Caudata (salamanders)

Order – Gymnophiona (caecilians – legless amphibians)



Plains Spadefoot Toad

Anura – Frogs are long-legged and have smooth, mucus-covered skins, while toads are short-legged with rough “warty” skins. There are 15 native frogs and toads in Utah. Some frogs are poisonous. They range in size from the Goliath frog at about a foot to the Gold frog of Brazil that is less than half an inch. There is another small frog found in Cuba which is equally tiny. Frogs have been declining around the world. Some frogs, such as the cane toad, are invasive species.

Life cycle – Frogs reproduce externally. The female will lay eggs and the male release sperm over them. Sometimes you will see a male holding on to a female – this is called amplexus. Once the eggs are fertilized, they will develop into tadpoles. Once ready to swim, the tadpoles hatch, then develop legs. They then reabsorb their tails and move onto the land. Frogs have developed the ability to create sound, which is usually simple chirps or deep croaks. This is used to attract mates. Likewise, simple ears (behind the eye) that look like drums are present. Frogs may hibernate, or die out. They can reproduce several times a year in ideal climates.



Caudata – This order includes salamanders, newts, sirens, Congo eels, lungless salamanders, and mudpuppies. Salamanders are capable of regenerating limbs and tails. The sirens (sirenadae) are eel-like in appearance. They range from about an inch to the Chinese Giant Salamander at 5.9 feet. Many of this order retain their gills into adulthood. Some breathe through their skin. They also secrete mucus which keeps the animal moist and maintains homeostasis. Some are poisonous.

Gymnophiona – This group includes the living family of the caecilians. These are legless and look like eels. They live in tropical environments and have a ringed skin that looks like worm segments. The ancestors of caecilians had legs, much like snakes. These reproduce through internal fertilization, and about 25% are egg-baring while 75% give live birth. Some feed their young with their own outer-skin layer.

