

Classification of Amphibia

Dr Anita Kumari

Dept. Of zoology

L.S.College,

Class Amphibia

The characteristics of the organisms present in class amphibia are as follows:

1. These can live both on land and in water.
2. They are ectothermic animals, found in a warm environment.
3. Their body is divided into head and trunk. The tail may or may not be present.
4. The skin is smooth and rough without any scales, but with glands that make it moist.
5. They have no paired fins. Unpaired fins might be present.
6. They have two pairs of limbs for locomotion.
7. They respire through the lungs and skin. Gills might be present externally in some adults.
8. The heart is three chambered.
9. The kidneys are mesonephric. The excretory material includes ammonia and urea.
10. They possess ten pairs of cranial nerves.
11. The lateral line is present during their development.
12. The sexes are separate and fertilization is usually external. However, in salamanders, the fertilization is internal.
13. Development is indirect with metamorphosis.
14. Breeding occurs in water. The copulatory organs are absent in males.

Classification of Amphibia

The Amphibians are divided into three orders. These are living orders. The classification of Amphibia is given below:

Apoda (Gymnophiona or Caecilia)

- Apoda means “without legs”. These are limbless organisms with scales on their body.
- They are also known as “blind-worms” because their eyes are covered by skin or bone.
- The tentacles on their head are the chemosensory organs that help them to detect the underground prey. Eg., Caecilians
- They possess venom glands.
- They secrete mucus to reduce water loss.
- E.g. Ichthyophis, Siphonops.

Urodela (Caudata)

- These are the organisms with a tail.
- The body is elongated with four equally sized limbs.
- The skin is smooth with poison glands.
- Fertilization is internal.
- They feed on insects and worms. Eg., Salamanders
- They are found under leaf litter, in the soil, or in water.
- In the southern US, they reproduce primarily in winters.
- Very little differences between male and female.
- Spermatophores are utilized for internal fertilization.
- They possess hidden gills.
- Examples are Ambystoma, axolotl larva, salamandra, Proteus, Siren etc

Anura (Salientia)

- There are around 3400 species of Anura in the world.
- They have four limbs. The front limbs are elongated and modified to jump.
- The head and trunk are fused together.
- The tail is present only in the larval stage and is lost in the adults.
- Fertilization is external and the eggs are laid in water. Eg, frogs and toads.

THANKYOU