



What is a Frog

Frogs are amphibians. Amphibians have two parts to their life cycle (amphibian means 'both life') - the first in water during the egg and larva stage and the second on land during the adult stage.

Frogs are the only Amphibians that are native to Australia.

The ancestors of frogs and other amphibians were fish that had fleshy fins and sometimes breathed air. They evolved about 350 million years ago. Having legs and breathing air allowed early amphibians to live on land but they had to return to water to breed. Some of the most primitive amphibians were called labyrinthodonts but these may not be direct ancestors of modern amphibians. Today's amphibians lie on an ancient branch of the amphibian tree and not on the evolutionary line that led to reptiles.

There are 3 orders of amphibians:

- Anurans (or tailless) frogs. These usually begin life as tadpoles (small fishlike larvae with tails and gills) but, as they grow, they absorb their tails and gills and develop long hind legs suitable for jumping. There are about 4000 living species of anuran in the world.
- Urodela (or tailed) salamanders. These usually start life as gilled larvae, have smooth moist skin, long tails and small, weak legs. They were probably the first vertebrates to spend any length of time on land.
- Apoda (or legless) caecilians. These are worm-like, poor sighted amphibians with short tentacles. They can burrow into moist soil hunting for earthworms to eat; or they can live and feed in water. They are rarely seen and their biology is not well known.

Frogs are amphibians that:

- have a backbone and an internal skeleton (vertebrates)
- have four limbs. Their hind legs are usually much longer than their forelegs. They have hands with four fingers and feet with five toes.
- have simple sac-like lungs to breathe air.
- have soft, moist skin that allows water and oxygen to pass into and out of the body.
- are ectothermic or depend on the temperature of the environment for their warmth because they cannot make their own body heat.
- undergo metamorphosis or transformation from a swimming tadpole larva into an air-breathing adult.
- lay unshelled eggs covered with jelly. The eggs can dry out easily, so they are often laid in water or damp places.

Frogs and toads

Frogs which have short legs and dry, warty skin are often called toads. True toads, which belong to the family Bufonidae, have a different bone structure from most other families of frogs. The introduced Cane Toad is the only toad in Australia.

Frog types

There are five families of frogs in Australia:

- Tree Frogs, the Hylidae, can be divided into climbing frogs, ground-living frogs and water-holding frogs.
- Ground Frogs, the Myobatrachidae, also live in a variety of different habitats.
- Narrow-mouthed Frogs, the Microhylidae, live on the ground. Some of them have toe discs for climbing and most are walkers rather than leapers.
- True Frogs, the Ranidae, have long hind legs which allow them to swim and leap well. There is only one species of True Frog in Australia.
- Toads, the Bufonidae, have a different bone structure from other families of frogs. The introduced Cane Toad is the only toad in Australia.

Frog habitats

Frogs live on all the large landmasses of the world, except Antarctica and Greenland. They are most common in the warm, wet tropics, but they also live:

- in rainforests to deserts,
- in alpine to coastal areas,
- in treetops to under the ground,
- cliff faces to sphagnum moss bogs,
- still water to running streams.



They always require moisture to survive and to breed.

Frogs are especially adapted for the places they live in. Many frogs that live in forests and rainforests have sticky toe discs to help them climb and to keep them in place when they are resting on leaves or branches. Frogs that burrow to keep from drying out in arid areas have tough tubercles on their back feet to help them dig into the earth. Frogs that swim have webbed feet to make them more efficient in the water.

Desert frogs

Some frogs are adapted to live in dry deserts. When conditions become dry the frogs:

- burrow down into the earth to a depth of up to a metre by shovelling the sand or mud from under them with their back feet.
- make a small chamber in the earth.
- form a cocoon made from many layers of dead skin, encasing their entire body.

When rain falls again, frogs emerge; find mates, lay eggs and feed – all in a short space of time. The tadpoles have to develop very quickly into adults before the puddle they live in dries up.

