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Image from: [The common frog \(Rana temporaria\) is just one of... in Philip's Encyclopedia](#)

Summary Article: **frog**

From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Any amphibian of the order Anura (Greek 'tailless'). There are about 24 different families of frog, containing more than 3,800 species. There are no clear rules for distinguishing between frogs and toads.

Frogs usually have squat bodies, with hind legs specialized for jumping, and webbed feet for swimming. Most live in or near water, though as adults they are air-breathing. A few live on land or even in trees. Their colour is usually greenish in the genus *Rana*, but other Ranidae are brightly coloured, for instance black and orange or yellow and white. Many use their long, extensible tongues to capture insects. The eyes are large and bulging. Frogs vary in size from the North American little grass frog *Limnaeodius ocularis*, 12 mm/0.5 in long, to the giant aquatic frog *Telmatobius culeus*, 50 cm/20 in long, of Lake Titicaca, South America. Frogs are widespread, inhabiting all continents except Antarctica, and they have adapted to a range of environments including deserts, forests, grasslands, and even high altitudes, with some species in the Andes and Himalayas existing above 5,000 m/19,600 ft.

Courtship and reproduction In many species the males attract the females in great gatherings, usually by croaking. In some tropical species, the male's inflated vocal sac may exceed the rest of his body in size. Other courtship 'lures' include thumping on the ground and 'dances'.

Some lay eggs in large masses (spawn) in water. The jelly surrounding the eggs provides support and protection and retains warmth. Some South American frogs build mud-pool 'nests', and African tree frogs make foam nests from secreted mucus. In other species, the eggs may be carried in pockets on the mother's back, brooded by the male in his vocal sac or, as with the Eurasian midwife toad *Alytes obstetricans*, wrapped round the male's hind legs until hatching.

Life cycle The tadpoles hatch from the eggs in about a fortnight. At first they are fishlike animals with external gills and a long swimming tail, but no limbs. The first change to take place is the disappearance of the external gills and the development of internal gills, which are still later supplanted by lungs. The hind legs appear before the front legs, and the last change to occur is the diminution and final disappearance of the tail. The tadpole stage lasts about three months. At the end of this time the animal leaves the water. Some species, such as the edible frog, are always aquatic. By autumn the frog grows big and sluggish. It stores fat in a special gland in the abdomen; it is this fat that it lives on during hibernation.

Species Certain species of frog have powerful skin poisons (alkaloids) to deter predators. 'True frogs' are placed in the worldwide family Ranidae, with 800 species, of which the genus *Rana* is the best known. The North American bullfrog *Rana catesbeiana*, with a croak that carries for miles, is able to jump nine times its own length. The flying frogs, genus *Rhacophorus*, of Malaysia, using webbed fore and hind feet, can achieve a 12 m/40 ft glide. The hairy frog *Astylosternus robustus* is found in West Africa; it has long outgrowths on its flanks, which seem to aid respiration. A four-year rainforest study in eastern Madagascar revealed 106 new frog species in 1995. Indian zoologists discovered the first

known leaf-eating frog in 1996, in Tamil Nadu, southern India. *R. hexadactyla* feeds mainly on leaves, flowers, and algae. New species are constantly being discovered. In 1997 a species *Eleutherodactylus pluvicanorus* was discovered in Bolivia; it is 4 cm long and ground-dwelling.

The **common frog** *Rana temporaria* is becoming rare in Britain as small ponds disappear. It hibernates in holes in the ground, and in the early spring it comes above ground to mate. At this season a horny cushion appears on the first finger of the male frog, which may help it to grasp the female during courtship. The eggs are laid in water, and are fertilized as they are laid.

The **marsh frog** *Rana ridibunda* is said to have been first introduced to England in 1935. Its ground colour is like weathered cement with a pattern of square dark brown spots on the legs that remains through all colour changes. When basking in the sun on a grassy bank it assumes a striking green hue. The marsh frog is the largest of all British frogs or toads.

Threat of extinction Fourteen species of frog have disappeared from Australian rainforest between 1979 and 1994. Frogs at higher altitudes have declined significantly worldwide. Australian biologists suggested in 1995 that a virus called iridovirus may be responsible.

US palaeontologists dated the earliest known fossil of a true frog in 1995; *Prosalirus bitis* is 190 million years old.

didyouknows

amphibian

frog: development

frog: lifespan

frog: new species

frog: poison

frog: survival at low temperatures

tadpole

weblinks

Frogland

South American Ornate Horned Frog

images

frog

frog

frog

frog, Wallace's flying

tomato frog

APA

Chicago

Harvard

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