

Conservation International
Search for the Lost Frogs
2010

Amphibian fun facts:

1. Toads use their eyeballs to help them swallow their prey.
2. Amphibians live on all continents except Antarctica.
3. The Spring peeper (*Pseudacris crucifer*) can survive the winter season with 65% of its body water as ice.
4. Slimy salamanders (*Plethodon glutinosus*) produce one of the stickiest substances known to man – it effectively glues shut the mouths of most would-be predators.
5. The Goliath Frog of West Africa is the worlds biggest frog – its body alone can reach almost a foot (12 inches) in length, and it weighs up to 7 lb - and also has the longest leap – easily clearing 10 feet in a single hop.
6. The Chinese giant salamander is the world’s biggest amphibian weighing in at well over 100 pounds and reaching up to two meters in length.
7. The toxin in one individual of the most toxic poison dart frog, *Phyllobates terribilis*, could kill over 90 humans.
8. Female grey treefrogs pick their mates based on how few predators are in the pool of water he is calling from.
9. Male tungara frogs with the most attractive calls (to female tungara frogs, that is) also are most easily detected (and thereby eaten) by frog eating bats.
10. The “tail” of the Tailed Frog (*Ascaphus trueii*) in the Pacific Northwest is actually a copulatory organ. It is very unique in that almost all other frogs can only perform external fertilization.
11. Males of some European water frogs increase their fitness by clasping and releasing sperm on already deposited egg masses – this is an effective strategy because males that do things the proper way usually don’t fertilize the thousands of eggs that a female deposits during amplexus (the process in which a male frog grasps a female with his front legs while she lays eggs).
12. A male African Bullfrog builds pools, canals, and dams in an effort to keep eggs and larvae that he has sired from drying up. Incredibly aggressive, he will also charge a biologist and inflict a nasty bite as high up as he can hop.
13. Male gladiator frogs of Latin America use spikes on their forearms to mortally wound competing males during courtship rituals.
14. In Brazil, the world’s only fruit eating frog leaps with its mouth wide open at ripe fruit hanging in trees.

15. The larvae of some caecilian species have special mouthparts for scraping away and swallowing the inside of their mother's oviduct as a sole source of nutrition.
16. Many salamanders can regenerate an entire leg (or tail).
17. Thanks to cryoprotectant chemicals that act as "antifreeze" in and around their cells, wood frogs (*Rana sylvatica*) can freeze solid and hop away after thawing out.
18. The eggs of marbled salamanders (*Ambystoma opacum*) are deposited under cover in dry ponds where they can sit in stasis for over 8 months while waiting for the pond to fill. Hypoxic conditions occur within the eggs when the nest is inundated with water, triggering for the larvae to hatch out of their eggs.
19. Amphiumas, eel-like aquatic salamanders of the southeastern US, have incredibly strong jaws that permit them to crush crayfish, their primary prey, with a single chomp. They also do a number on the fingers of biologists.
20. Water-holding frogs that inhabit deserts down under store water in their bladder and in pockets of skin. Their "pee" is an important source of hydration for Aborigines crossing the arid outback.
21. Waxy treefrogs of South America live up to their name by producing a wax-like cocoon around their bodies during dry periods.
22. Depending on environmental conditions, tiger salamanders can reach sexual maturity as oversized aquatic, gilled larvae or metamorphose into the typical land-dwelling, air breathing adult form.
23. Possession of Colorado River Toads is illegal in California due to the popularity of "toad licking". These toads produce a powerful hallucinogen called bufotoxin.
24. Tailed frog tadpoles have mouths that function like powerful suction cups. They depend on these mouths to hang on to rocks in the fast moving streams in which they live.
25. The gliding frogs of Southeast Asia can "hang-glide" between trees thanks to the extensive webbing between their toes.
26. Spadefoot toads smell like peanut butter.
27. Before the widespread use of crop fumigation, treefrogs used to commonly hitch rides among bananas being shipped from South America to US and European grocery stores.
28. The Gastric Brooding Frog from Australia, now sadly thought to be extinct, incubates tadpoles inside it's tummy until the develop into frogs, which then come hopping out of the mouth.
29. Tadpoles of some frogs change shape when they detect predators in their water – the new shape allows them to swim faster and avoid being eaten. The changes happen over the course of a few weeks.
30. The Chilean Four-eyed frog (*Pleurodema thaul*) has a pair of eyespot marks on its rear end. When the frog feels threatened it will expose the eyespots and cause them to swell up a bit, making it seem bigger than it really is!
31. Suriname toads (*Pipa pipa*) mate in the water, and as the eggs are released the male fertilizes them and presses them to the back of the female. Over the next several hours, the skin grows around the eggs to

enclose them in a cyst with a horny lid. After about 80 days, the eggs develop, and the young emerge out of the back of this toad as a bunch of tiny froglets.

32. A group of frogs is called an 'army' of frogs, and a group of toads is a 'knot' of toads.
33. A rare Chinese frog - the concave-eared torrent frog (*Amolops tormotus*) - is the first amphibian known to communicate using ultrasound. Reaching a pitch in the ultrasonic range, these frogs perform arias to be heard over the rushing waters of their habitat, the Huangshan Hot Springs in China.
34. Frogs produce a number of chemicals in their skin, including hallucinogens, glues and anti-microbials, to ward off infection and stop other animals from trying to eat them.
35. Some Australian frogs create their own insect repellent, resembling the smell of rotten meat and others roasted cashew nuts or thyme leaves
36. The Ornate horned frog (*Ceratophrys ornate*) uses its powerful jaws and sharp teeth to capture rodents, birds, and other small animals. A large frog can eat an entire mouse with one swallow.
37. The spatulate-nosed tree frog of Central America has a head like that of a small alligator. When the weather is too hot and dry it crawls into a hole and plugs up the entrance with its nose.
38. The water-holding frog survives in the dry Australian outback by taking in so much rainwater that it blows up like a balloon
39. The eggs of the marsupial frog (*Gastrotheca riobambae*) from Australia are laid in a brood pouch on the mothers back and the young hatch out in a zipper-like fashion from the pouch.
40. Some poison arrow frogs lay their eggs under leaves in the forest. They stand guard over the eggs. When the tadpoles hatch, they wriggle onto a parent's back and are transported to a pool of water. A special gooey glue secreted by the parent helps the tadpole to cling tightly.
41. The young of the turtle frog (*Myobatrachus gouldi*) of western Australia bypass the tadpole stage - the adults burrow in the sand about three feet down - their nests are at the bottom of the holes - and they lay and fertilize eggs that develop directly into little froglets.
42. Most species of frogs have an external fertilization mode known as amplexus. The male grabs the female from behind, waits until she extrudes her eggs, and then fertilizes them. In some species, if a male accidentally grabs another male, he will make a "release call" to indicate that he's the wrong sex. If you float an orange or an apple by a little frog that's in breeding condition and he grabs on-he'll stay on hours, maybe days, until something happens that makes him realize his mistake
43. It's a dangerous world out there for most frogs – but for Panama's red-eyed tree frogs, the trouble starts before they have even hatched. That's because hungry snakes are rather partial to their eggs, which are laid on leaves overhanging water. Encapsulated frog embryos sense impending doom when they detect the vibrations from a snake's attack on the egg cluster. Once warned, the developing frogs prematurely hatch from their eggs, drop into the water below and swim to safety as nascent tadpoles. The embryos are able to distinguish vibrations caused by snakes from 'friendly' vibrations cause by raindrops.
44. Fire-bellied toads (*Bombina* spp.) are so-called because their underbellies are painted bright red, orange or yellow. When threatened, these toads will exhibit the so-called Unken Reflex in which the animal stiffens and curves its spine inward to expose the brightly colored underbelly as a warning. It will even flip over on its back to maximize this unmistakable display.

45. Male Midwife toads (*Alytes* spp.) from Spain, following mating, wrap the eggs around their legs and carry them around for safe keeping until the hatch (several weeks later). Upon hatching, they release the tadpoles into a pool of water to complete their development.
46. Dull colors and pointed flaps of skin make the Asian horned frog look like the leaves it sits on. This frog also has tough spades on its feet for digging out a home in the dirt.
47. Frogs shed their skin, typically about once a week – and usually eat it afterwards
48. American Bullfrogs – the largest North American frog - are territorial and protect their territories by calls, displays, chases, jump attacks, and even wrestling. Male bullfrogs chorus at breeding ponds. Females also give aggressive calls and they respond to the breeding calls of the male frogs.

Learn more at <http://www.conservation.org/lostfrogs>