



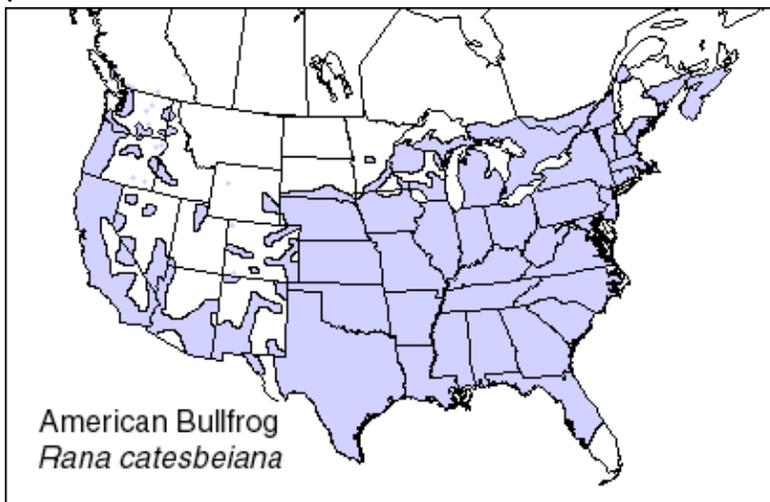
The North American Bullfrog Information Sheet

Where do North American bullfrogs live?

The North American Bullfrog (*Rana catesbeiana*) is an aquatic frog, a member of the family Ranidae, or "true frogs", native to much of North America. North American bullfrogs must live in water and are therefore usually found near some source of water, such as a lake, pond, river, or bog. Warm, still, shallow waters are preferred. Bullfrogs are becoming increasingly common in areas that have been modified by humans.

Increased water temperatures and increased aquatic vegetation, which are common factors of lakes polluted by humans, favor bullfrogs by providing suitable habitats for growth, reproduction, and escape from predators. On rainy nights, bullfrogs along with many other amphibians, go overland and may be seen in numbers on country roads.

North American bullfrogs live longer in warm weather. It is known that bullfrogs were introduced to areas of California and Colorado in the early 1900's. The species has also been introduced (accidentally or on purpose) into southern Europe, South America, and Asia.



How do North American bullfrogs have mate?

Fertilization is external in bullfrogs. In the mating grasp, or amplexus, the male rides on top of the female, grasping her with his forelimbs posterior to her forelimbs. The female bullfrog deposits her eggs in the water and the male simultaneously releases sperm.

Breeding begins in late spring or early summer.

How did the North American bullfrog get its name?

Males defend and call from territories, attracting females into a territory to mate. The call is reminiscent of the roar of a bull, hence the frog's common name.

How many eggs can a North American bullfrog female produce at one time?

A female may produce up to 20,000 eggs in one clutch.

How much time passes in each stage of a North American bullfrog's life?

Eggs hatch in 3–5 days. Time to metamorphosis ranges from a few months in the southern to 3 years in the northern parts of the geographic range. Maximum lifespan in the wild is estimated at 8–10 years, but one captive lived almost 16 years.

What do North American bullfrogs eat?

Stomach content studies going back to 1913 suggest the bullfrog preys on any animal it can overpower and stuff down its throat. Bullfrog stomachs have been found to contain rodents, small turtles, snakes, frogs including bullfrogs, birds, even a bat, terrestrial worms, as well as the many invertebrates, which are the usual food of bullfrogs. These studies furthermore reveal the bullfrog's diet to be unique among North American *Rana* in the inclusion of large percentages of aquatic animals, e.g., fish, tadpoles, snails, beetles, mollusks, aquatic crustaceans, and aquatic eggs of fish, frogs, insects, or salamanders. They are cannibalistic and will not hesitate to eat their own kind. Bullfrog tadpoles mostly graze on aquatic plants.

How do North American bullfrogs eat?

Prey motion elicits feeding behavior. First, if necessary, the frog performs a single orienting bodily rotation ending with the frog aimed towards the prey. This is followed by approaching leaps, if necessary. Once within striking distance, the bullfrog emits its feeding strike, which consists of a ballistic (eyes closed as during all leaps) lunge that ends with the mouth opening, extension of the fleshy and mucous-coated tongue upon the prey, often engulfing it, while the jaws continue their forward travel to close (bite) in close proximity to the prey's original location just as the tongue is retracted back into the mouth, prey attached. Large prey that do not travel entirely into the mouth are literally stuffed in with the forearms. In laboratory observations, bullfrogs taking mice usually dove underwater with prey in mouth, apparently with the advantageous result of altering the mouse's defense from counterattack to struggling for air. The tiny teeth of bullfrogs are useful only in grasping. Asphyxiation is the most likely cause of death of endothermic (warm-blooded) bullfrog prey.

How much do they weight on average?

1.1 lbs

How long are they on average?

18.11 in

Do people eat North American bullfrogs? How do they catch them?

While occasionally kept as pets, the North American Bullfrog provides a minor food source, especially in the Southern United States and in some areas of the Midwestern United States. In a few locations they are commercially cultured in ponds, but the traditional way of hunting them is to paddle or pole silently by canoe or flatboat in streams or swamps at night; when the frog call is heard, a light is shined on the frog to temporarily inhibit it. The frog will not jump into deeper water as long as movement is slow and steady. When close enough, the frog is giggered and brought into the boat. In some states, breaking the skin while catching them is illegal and either grasping giggers or hand capture are used. The only parts eaten are the rear legs, which resemble small chicken drumsticks and, sometimes, the backs, which are usually fried for consumption. The North American Bullfrog is also used as a specimen for dissection in many schools across the world.

Can you describe the North American bullfrog further?

Sure! North American bullfrogs are the largest true frog found in North America, weighing up to 0.5 kg and 203 mm in length. Typical length ranges from 90 to 152 mm. Color varies from brownish to shades of green, often with spots or blotches of a darker color about the back. The hind feet are fully webbed. The sex of an adult bullfrog can be easily determined by examining the size of the tympanum (the external ear of the frog) relative to that of the eye. The tympanum is a round circle located on the side of the head near the eye, and in males it is much larger than the eye. In females the tympanum is as large or smaller than the eye. Also, during the breeding season the throat of the male bullfrog is yellow, whereas the female's is white.

What are some key behavior patterns of North American bullfrogs?

North American bullfrogs prefer warm weather and will hibernate during cold weather. A bullfrog may bury itself in mud and construct a small cave-like structure for the winter. Their hunting style is 'sit and wait.' Bullfrogs can wait for a long time for some type of prey to come by, then, with a flash of the tongue, they grab it and bring it back into their mouths. Bullfrogs are active both during the day and at night; they are most active when the weather is moist and warm. Adult males are very aggressive and defend their territories, which can range from 3 to 25 meters of shoreline, by physically wrestling with others.

How do North American bullfrogs communicate?

The call of a male bullfrog has a low frequency and can be heard for over one kilometer. The sound is often described as a low rumbling "jug-o-rum". Bullfrogs also have a good sense of vision and sense vibrations.

When do North American bullfrogs breed?

May to July in the north and February to October in the south

When do they reach sexual maturity?

3 to 5 years

How long do North American bullfrogs live on average?

16 years in captivity and 8 years in the wild

Who are the known predators of North American bullfrogs?

Humans hunt bullfrogs for frog legs, but they have a limited hunting season in most states. Bullfrogs are also eaten by a wide variety of other animals, depending on the region. These include herons, such as great blue herons and great egrets, turtles, water snakes, raccoons, and belted kingfishers. Most fish are averse to eating bullfrog tadpoles because of their undesirable taste.

Are North American bullfrogs bad?

Kind of. Introduced bullfrogs may be driving native frogs to extinction in some areas. Colorado, among many other places, is experiencing problems due to the introduced bullfrog population. Bullfrogs may have been introduced accidentally to trout streams and lakes during the Colorado Divisions of Wildlife fish stocking operations. Bullfrogs occasionally invade fish hatchery ponds and their larvae are caught along with the fishes that are routinely stocked in ponds.

Are North American bullfrogs good?

Sure! North American bullfrogs help to control insect pests. They are important for medical research because their skeletal, muscle, digestive, and nervous systems are similar to those of other animals. They are often hunted for meat (frog legs).
Ways that people benefit from these animals: food ; research and education; controls pest population.

What is the conservation status of the North American bullfrog?

Bullfrogs do well with changes in the environment that have occurred due to human modification, and are becoming increasingly common in areas modified by humans. Bullfrogs have a much higher critical thermal maximum than most other frogs, meaning that they are able to thrive in higher water temperatures. Bullfrogs have a longer breeding season and a higher rate of pre-metamorphic survivorship, which also allows them to be more successful than other frogs. In some areas, such as California, bullfrogs are driving other frog populations to extinction. One possible reason to explain why bullfrogs in California might have an advantage over other species native to that state is that bullfrogs evolved with a diverse predatory fish fauna in eastern North America. In California there have been attempts to control bullfrog populations by introducing new fish species that are their predators. Bullfrogs have evolved mechanisms to avoid predation by fish, such as less palatable eggs and tadpoles, and tadpoles that are not active much of the time, which reduces their exposure to predators. Native frog species of California are also suffering a decline because bullfrogs are efficient predators of frogs and tadpoles.

What are some North American bullfrog fun facts?

1. North American bullfrogs are capable of leaping 1 to 2 m (3-6 ft).
2. North American bullfrogs are territorial and protect their territories by calls, displays, chases, jump attacks, and even wrestling. Females are attracted to males with territories that provide the most food.
3. Hearing is one of the most important senses to a frog. Male North American bullfrogs chorus at breeding ponds; females also give aggressive and reciprocation calls.
4. North American bullfrogs have teeth in the roof of their mouth and a muscular tongue capable of flipping prey into their mouth.
5. North American bullfrogs may remain at the tadpole stage for up to 2 years. A longer tadpole stage means a larger frog after metamorphosis, which usually means a better chance of survival.

Do North American bullfrogs live in Utah?

UTAH GAP ANALYSIS - PREDICTED HABITAT American Bullfrog

