

## Bullfrog

*Rana catesbeiana*

“Jug o’ rum! Jug o’ rum!”

The loud, bass croak of the bullfrog can rarely be mistaken. During late spring and early summer, male bullfrogs sing their nightly solos in ponds, lakes and streams across the state. People hear and see this large, green frog in waters from Buxton Woods in Dare County to man-made ponds in Buncombe County. Rich habitat in the state continues to foster an abundance of bullfrogs, as it has for centuries.

### History and Status

Long before European settlers came to what is now North Carolina, bullfrogs thrived in its fresh waters. Bullfrogs remained plentiful into the 1800s. Then, with the advent of farm ponds in the early 1900s, and bulldozers to dig them in the 1930s and 1940s, bullfrog populations boomed. The new-found habitats throughout the state enabled this hearty, hefty frog to flourish, even on mountain tops more than 2,500 feet high. Today bullfrogs live in all parts of the state.

### Description

The largest frog species in North America, the bullfrog usually grows 6 to 8 inches long and weighs 2 to 3 pounds. Males typically outweigh females, but both sexes look much the same with a heavy build, big head, bright eyes and strong limbs. Their skin is smooth and olive green with dark, mottled patterns on their sides and bellies. A bullfrog’s color may vary with its habitat.

Bullfrogs at the coast, for instance, will be darker green and have darker markings than those in the mountains.

It takes a close look to determine the sex of a bullfrog. Males sport a yellow throat during breeding season that they protrude when making their low-pitched calls. A female’s throat looks cream-colored.

### Habitat and Habits

Bullfrogs, like other amphibians, are equally at home on land and water. They may breed on almost any body of water, but prefer wet habitats such as sunny ponds, lakes and slow-moving streams. Bullfrogs like open ponds shallow enough for the sun to keep the water warm and to produce food for the young.

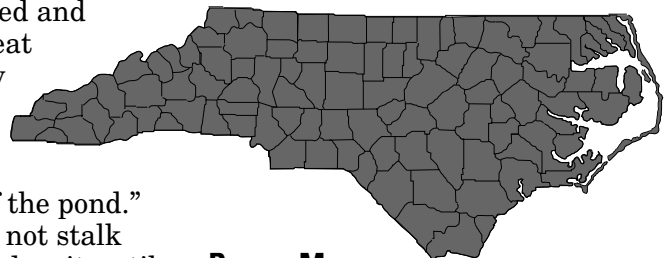
The best ponds host plenty of vegetation for food and cover, and few fish. Tadpoles feed on algae surrounding submerged vegetation such as pondweed and water lilies. Adults eat almost any food they can get in their mouths, giving them the nickname the “green dragon of the pond.” Usually bullfrogs do not stalk their prey, but sit and wait until their victim appears. They flick

out their sticky tongues, then eat their dinner whole.

Their hefty back legs help them jump on land and swim powerfully in the water. Bullfrogs can jump 2 or 3 feet—many times their length.

The big bullfrog prefers to be on its own rather than in large groups. Bullfrogs do not sing in chorus, as many believe, but several males may croak their familiar call at the same time across a pond, especially after a heavy rain. Most often they sing solo, anytime day or night, from late spring into the summer. Their call resembles the sound of a distant bull, giving them their name. The distinct “jug o’ rum” or “knee-deep” call can be heard for more than a quarter mile. Males use the low-pitched croak to attract a mate, call to another male or stake out a territory. The female’s call sounds like a high-pitched scream.

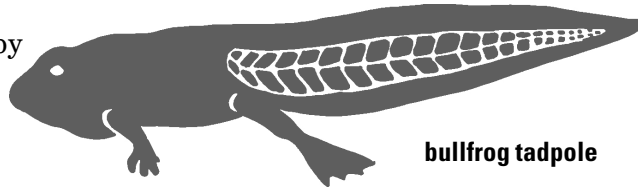
A male will mate with any



#### Range Map:

Found statewide

female that enters his territory. He does this by holding the female, fat with eggs, and squeezing her. He fertilizes the eggs as the female squirts them into the water.



bullfrog tadpole

Female bullfrogs may lay up to 12,000 tiny black eggs covered in a protective jelly, creating a film of eggs one layer thick across a section of the pond. At first, tadpoles live on food stored in the jelly. In four to five days, the eggs hatch and the young tadpoles begin to eat algae. Surviving tadpoles grow quickly in warm weather. But bullfrog tadpoles take much longer than other frogs to develop, keeping their tails, and soft and slippery skin for up to three years. Most bullfrog tadpoles in North Carolina overwinter once, with an egg laid in June transforming into a young frog the following summer. A bullfrog reaches adult size in two to three years.

When night temperatures drop toward freezing, usually in October, bullfrogs and large tadpoles seek out their winter quarters. Their body processes slow and they enter a light sleep.

They snuggle in layers of leaves and vegetation on the bottom of the pond. The frog's moist skin works like a large gill stretched over its body, allowing it to live underwater for long periods of time.

As weather warms around early March, adult bullfrogs and large tadpoles will emerge from their winter hideout. Tadpoles start their feasting and, soon, breeding begins again.

## Range and Distribution

Bullfrogs inhabit much of the United States. In the Eastern and Central regions, their range includes the southern provinces of Canada through mid-Florida, and reaches west to Texas, Oklahoma and parts of Mexico. In the West, bullfrogs inhabit California, Washington and Oregon, with sporadic

populations in other states such as Arizona, Colorado and New Mexico. Bullfrogs can be found on almost any body of water in North Carolina. They have been sighted in ponds up to 4,000 feet high in the mountains, and on the Outer Banks, where their range has recently expanded.

## People Interactions

Over the years, the bullfrog has adapted to man. If development or agricultural or forestry practices drain a pond, bullfrogs will be lost or displaced in that area. Water pollution, too, poses problems with frog habitats in certain sites. But this hearty frog exists in such great numbers in the state that the population as a whole is not affected. People hunt frogs in North Carolina to eat. But no known commercial harvest exists.

## References

*The Audubon Society Field Guide to North American Reptiles and Amphibians* (New York, N.Y.: Alfred A. Knopf, 1992).

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Martof, Bernard S. and others. *Amphibians and Reptiles of the Carolinas and Virginia* (Chapel Hill, N.C.: University of North Carolina Press, 1980).

## Credits

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# WILD Facts

## BULLFROG

### Classification

Class: Amphibia

Order: Salientia

### Average Size

Weight: 2 to 3 pounds

Length: 6 to 8 inches

### Food

Crayfish, minnows, snakes, bats, worms, frogs, small birds, and insects such as moths, beetles and spiders.

### Breeding

Mate April through August in freshwater locations, with peak months June, July and August. Male mates with females that enter his claimed territory, and fertilizes the eggs as the female sends them into the water.

### Young

Called tadpoles. Clutch size can be up to 12,000 eggs. Tadpoles hatch after four or five days. A female may produce two or three successful clutches per breeding season. Bullfrog tadpoles take two to three years to develop into adult frogs.

### Life Expectancy

A bullfrog that survives predators and the elements can live for 7 to 10 years.