



# American Bullfrog

## North Carolina Wildlife Profiles



Jeff Hall

## American 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-and-brown frog across the state — from fresh water depressions on barrier islands on the coast to man-made ponds in the mountains.

### 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 with webbed feet. 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. Sometimes confused with North Carolina’s other “true frog” species, bullfrogs can be distinguished by their lack of a distinct skin fold, called a dorsolateral fold, running down either side of its body.

### 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. Today bullfrogs live in all parts of the state, aided in part by the increase in golf course ponds, parking lot retention drainages and other man-made areas. Learn more at [ncwildlife.org/bullfrog](http://ncwildlife.org/bullfrog).

### Habitats & Habits

Bullfrogs, like most other amphibians, require aquatic habitats. They may breed on almost any body of water, but prefer areas such as ponds, lakes and slow-moving streams. Bullfrogs like open areas shallow enough for the sun to keep the water warm and to produce food for the young. Unlike many other frog species, bullfrogs can flourish in waters where fish are found because bullfrog tadpoles are apparently toxic or distasteful to fish and other predators. Bullfrog tadpoles also become quite large and have large muscular tails that can help them evade any potential predators. The ideal habitats host plenty of vegetation for food and cover. 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

The American bullfrog is the largest frog species in North America.



American Bullfrog (Photo: Jeff Hall)

### Range and Distribution

Bullfrogs inhabit much of the United States. In the Eastern and Central regions, their native range includes the southern provinces of Canada through mid-Florida, and reaches west 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. In many areas of the western US, they are not native and considered a nuisance, where they compete with native species. 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.

### Range Map



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## Habitats & Habits (continued)

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 to 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 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 female, call to another male or stake out territory.

Female bullfrogs may lay up to 12,000 tiny black eggs covered in 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 tadpoles begin to eat algae. Surviving tadpoles grow quickly in warm weather. Bullfrog tadpoles take much longer than other frogs to develop, keeping their tails, and soft 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 2 to 3 years.

When night temperatures drop toward freezing, usually in October, bullfrogs and larger tadpoles seek out their winter quarters. Their body functions slow and they enter a light sleep. As weather warms around early March, adult bullfrogs and large tadpoles will emerge from their winter hideouts. Tadpoles start feasting and, soon, breeding begins again.

## Human Interactions

Although hunted for human consumption, the N.C. Wildlife Resources Commission limits the number of bullfrogs that can be collected from the wild. Currently, individuals without a permit may collect and possess only 24 native amphibians. Bullfrogs are known potential carriers of an amphibian disease called chytridiomycosis. In conjunction with habitat destruction, chytrid fungus is one of the leading causes of worldwide amphibian population declines. Disease transmission is one of many reasons why the N.C. Wildlife Resources Commission recommends never relocating bullfrogs, or any other wildlife, from their native habitat.

## References

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### Credits

Originally written by Sarah Friday; updated by Kim Burge, Mike Campbell, Jeff Hall NCWRC 2018

## Wild Facts

### Classification

Class: Amphibia

Order: Anura

Family: Ranidae

### Average Size

Weight: 2 to 3 pounds; Length: 6 to 8 inches

### Food

Tadpoles: algae, vegetation

Adults: crayfish, minnows, small birds and snakes, worms, frogs, salamanders and insects

### Breeding/Young

Most breeding takes place between April and August. The male grasps the female and externally fertilizes eggs produced by female as she deposits them in water. Clutch size can be up to 12,000 eggs. Females may produce up to three clutches per breeding season. Tadpoles hatch in four to five days. Tadpoles take one to three years to transform into adults.

### Life Expectancy

Bullfrogs can live seven to 10 years.



American bullfrog tadpole (Photo: Jeff Hall)



Juvenile American bullfrog (Photo: Jeff Hall)