



American Toad

Bufo americanus

The American toad, the largest species in the state, is one of about 175 species of toads found worldwide. Toads resemble frogs, and together they make up the order Salientia, or Anura. But only toads belong to the family Bufonidae. Toads prefer uplands to the watery habitats of frogs. And they hop rather than leap like frogs, giving them the nickname “hoppy toads.”

History and Status

Toads have been prolific in North Carolina for centuries. State archaeologists have unearthed toad bones from Native American burial sites dating as far back as the 1600s. The exact usage of toads back then is not known, but it is believed that Indians and settlers in the Southeast may have used toxins from toad skins on arrow tips and other weapons.

Populations of the American toad remain relatively healthy. Yet evidence of declines can be seen for the small oak toad and big toads like the American, Fowler’s and Southern toads. Habitat changes and increased highway construction have contributed to these declines.

Description

The American toad has a short, broad body and a rounded snout. It grows from 2 to 4 inches long, with females becoming larger than males. Its back, or dorsum, may be brown, gray, olive, red or tan, and it often has a light stripe down the middle. Dark spots with one or two large warts

dot this toad’s back. The number of warts in each spot helps distinguish it from the Fowler’s toad, which looks similar but has three or more small warts in each spot. Its belly is pale, but the male’s throat appears darker, especially during breeding season.

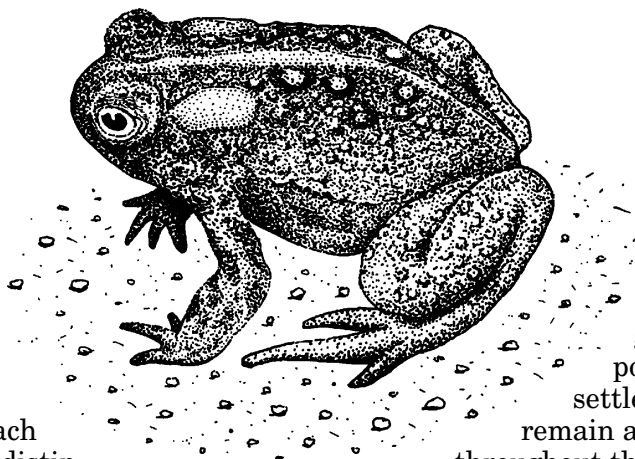
Typically, male American toads have larger front legs than females, and dark projections called tubercles on their first and second toes that help in grasping a partner during breeding. Males and females have tubercles on their hind feet to aid in digging burrows.

Habitat and Habits

The American toad prefers cool woodland and edge areas with plenty of moisture and insects. Gardens, meadows and fields with adequate cover make suitable habitats, as well.

The American toad primarily leads a terrestrial life but moves to ponds and pools to mate and lay eggs. This toad is not dependent solely on temporary, or ephemeral, pools but can survive in permanent ponds with fish as long as hiding places exist in leaf litter and vegetation.

This toad is the first to breed in North Carolina, with males moving toward the breeding ponds as early as January. They may travel as little as a few yards or as far as

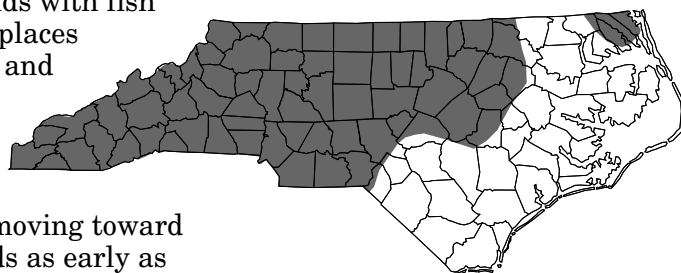


a mile to get to a pond. Once settled, males remain at the pond throughout the season, which normally runs from February to early April. A male selects a station near shallow waters for prime egg laying. He sits in the water with his head out, often perching on a clump of grass or a log.

Rains and cool weather bring females to the ponds. The male’s mating call, distinctive to the species, also helps females locate a pond. As the male sings, his dark vocal sac protrudes like a balloon.

Once paired, the male clasps his mate around the back and squeezes her. The female releases her eggs at the same time the male releases his sperm in the water to fertilize them. Each female American toad lays between 4,000 and 7,000 eggs in two long strips, then leaves the breeding site after a few days. In less than a week the eggs hatch into aquatic larvae called “tadpoles.” These tiny tailed creatures eat mainly algae and detritus.

In about two months, around mid-April or mid-May, the tad-



Range Map:
Occupied range ■

poles transform into toads less than half an inch long. The juveniles migrate to land, where they remain until returning to the ponds to breed as adults. Male American toads reach sexual maturity in about two years, females in three years.

Away from the ponds, these toads burrow in moist soils. In winter, they use the burrows to hibernate. The rest of the year, they emerge at night to forage for food. They may scan the entrance for insects during the day if the burrow is protected by cover.

American toads feed primarily on insects and other arthropods, but they also eat earthworms and snails. They capture their prey by snapping it up with their long, sticky tongues.

Raccoons, weasels, minks, and snakes such as the Eastern hognose snake and garter snakes prey on the American toad. But many other predators avoid these toads because of toxins found in the parotoid glands and skin. Squirts of water stored in the toad's bladder serve as another effective deterrent to hungry predators.

Range and Distribution

American toads range throughout the mountains and Piedmont of North Carolina, and can be found in fewer numbers in the northern Coastal Plain and Sandhills.

They cover parts of Canada and the United States from southeast Manitoba to James Bay and Labrador; south through the Maritime Provinces, New England and the Appalachian mountains; west from central Georgia to eastern Oklahoma and Kansas; and north to Wisconsin.

People Interactions

Farmers and gardeners, especially, welcome American toads because of their ravenous appetite for insects. People sometimes keep these toads as pets, too,



tadpole

since they easily adapt to terrariums. Some commercial trade of American toads from North Carolina exists with countries such as Japan and Europe where the species is considered exotic.

Woodland and edge habitat is becoming more scarce with increased development. Insecticides and water pollution also contribute to the decline of American toads. Yet increased highway and roadway construction has led to the most mortalities in recent years. In search of food, the toads seem drawn to the open spaces and bright lights on the roads.

References

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

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

Zim, Herbert S. and Hobart M. Smith. *Reptiles and Amphibians* (New York, N.Y.: Golden Press, 1956).

Credits

Written by Sarah Friday.

Illustrated by J. T. Newman.

Produced January 1995 by the Division of Conservation Education, N.C. Wildlife Resources Commission.

The Wildlife Resources Commission is an Equal Opportunity Employer and all wildlife programs are administered for the benefit of all North Carolina citizens without prejudice toward age, sex, race, religion or national origin. Violations of this pledge may be reported to the Equal Employment Officer, N.C. Wildlife Resources Commission, 512 N. Salisbury St., Raleigh, N.C. 27604-1188. (919) 733-2241.

WILD Facts

AMERICAN TOAD

Classification

Class: Amphibia

Order: Salientia, or Anura

Average Size

2 to 4 in. long

Food

Eats primarily insects and other invertebrates, and occasionally small vertebrates.

Breeding

Mates February to April.

Male stays throughout season, mating with several females. Female lays 4,000 to 7,000 eggs.

Young

Eggs hatch within one week into aquatic larvae called "tadpoles." Tadpoles transform in about two months. These tiny juveniles, ½-inch long, mature to adults in two to three years.

Life Expectancy

Five to seven years in the wild.