



Bog Turtle

Clemmys muhlenbergii

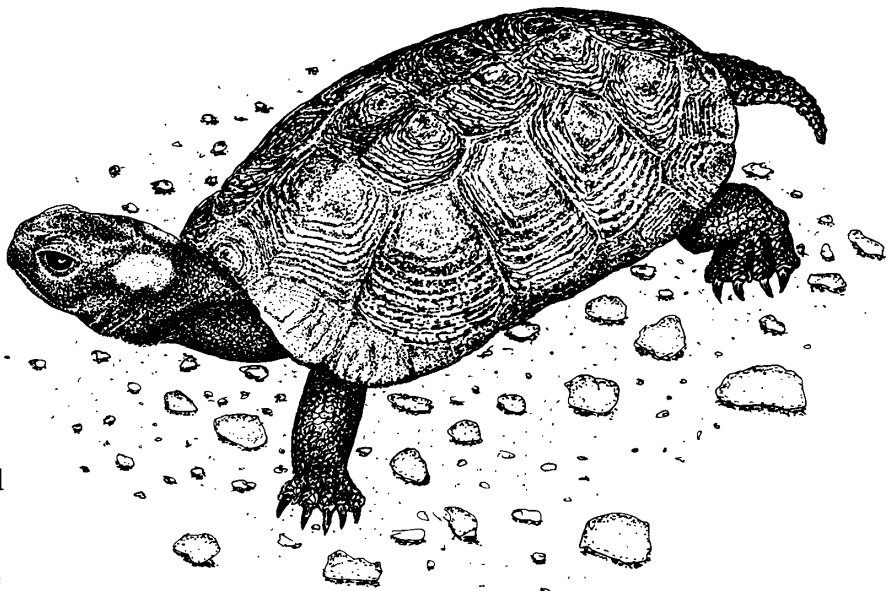
Most North Carolinians will see a bog turtle only when visiting a zoo, for this rare and secretive turtle lives in small, isolated wetlands in the western part of our state. It is one of our most beautiful turtles and can survive close to civilization as long as it has ample wetland habitat.

History and Status

Unfortunately this little turtle is disappearing from its North Carolina range. Two circumstances are causing its decline—loss of habitat and collection for the pet trade. Many of the turtle's wetland habitats have been drained over the years to grow crops like hay or corn, or they have been filled to construct roads, buildings and golf courses. In addition, bog turtles have a high market value and are avidly sought by collectors. The N.C. Wildlife Resources Commission outlawed all trade of bog turtles in 1989. The bog turtle is a threatened species under North Carolina law. It is also a candidate for special protection under the federal Endangered Species Act.

Description

One may easily recognize the diminutive bog turtle by the orange, yellow-orange or red-orange blotches on either side of its neck. The turtle reveals these colorful skin markings whenever it stretches its neck. Another characteristic that adds to the beauty of this turtle is its shell. Small ridges on each scale (scute) occur in geometric designs on the back shell (carapace) and give the turtle



a sculpted look. Adult bog turtles are small, often only 3 to 3 ½ inches long. Large specimens may grow over 4 inches long. Adult bog turtles weigh about 4 ounces.

Habitat and Habits

The bog turtle doesn't live in just any wetland, nor is it restricted to bogs as its name implies. It lives in sphagnum, or mossy, bogs and marshy meadows where springs create deep mineral or organic mud "soups." One can find the bog turtle in small wetlands because it will travel along creeks, or even over land, in search of a new home. This turtle spends much of its day in the mud, but it climbs out onto clumps of grass or moss to sit in the morning sun. One may see the bog turtle most readily in spring and early summer before wetland vegetation grows thick.

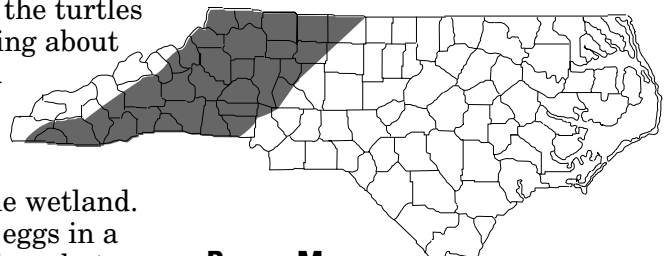
The bog turtle leaves its hibernation burrow in early spring. It may come to the surface in April on sunny and warm days. By late April and early May the turtles are very active, moving about in search of food and mates. Following mating, the female lays one to six eggs in an open area of the wetland. The turtle hides her eggs in a clump of moss or sedges, but close enough to the surface to

receive warmth from the sun. Raccoons like turtle eggs and will eat all they can find. The eggs hatch in about 50 days, usually in August. Young turtles often stay in or around the nest over the winter.

As winter approaches, the turtles become less active. Eventually they choose a hibernation burrow that receives a constant supply of fresh water from underground springs. This hibernation site may be up to 20 inches down in the mud. The turtles' metabolism slows, but they still require oxygen which they absorb through their cloaca.

Range and Distribution

The bog turtle inhabits only eastern North America and is most abundant in areas with muddy wetlands. Eastern Pennsylvania, northeastern Maryland, northern Delaware and New Jersey have the largest undivided area of range. Connecticut, Massachusetts, Rhode Island, New York



Range Map:

Rare ■

**WILD
Facts**

and western Pennsylvania contain smaller areas of range. The bog turtle's range in the southern Appalachian mountains and foothills is much restricted compared to its northern range. The largest southern populations occur in western North Carolina and southwestern Virginia. South Carolina, Georgia and Tennessee also have small bog turtle populations.

In North Carolina, the bog turtle may live in small wetlands west of Stokes, Forsyth, Davidson, Rowan, Iredell, Lincoln and Gaston counties. Some of these wetlands are bogs with sphagnum moss. Saturated sphagnum moss forms a perfect organic "soup" for this turtle.

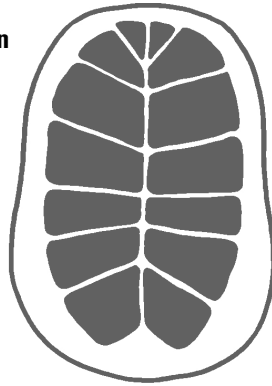
People Interactions

Wetlands in the mountains and foothills of North Carolina were rare even before settlers first began to farm. Thus the bog turtle has had a restricted range here for many years. Now the draining or filling of these scarce wetlands has reduced habitat even further for bog turtles.

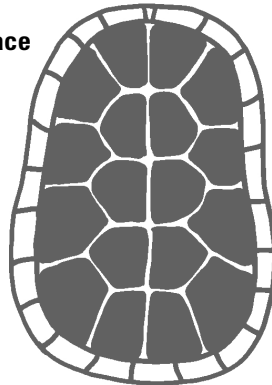
Not all farming activities are detrimental to bog turtles. Some meadow wetlands that are grazed have thriving populations of bog turtles. Livestock grazing retards the growth of trees. Growing trees tend to dry wetlands because they transpire a lot of water. Trees also shade wetlands and eliminate bog turtle nest sites.

By illegally collecting bog turtles, poachers put further pressures on turtle populations already declining because of loss of habitat. Fortunately, every state harboring bog turtle populations has outlawed their commercial use. Animal dealers who carry illegally obtained bog turtles across state lines violate the Lacey Act, which may result in a fine of \$20,000, a prison sentence of 5 years, or both.

plastron



carapace



References

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Conant, Roger and Joseph Collins. *A Field Guide to Reptiles And Amphibians of Eastern and Central North America* (Boston: Houghton Mifflin Co., 1991).

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Credits

Written by Allen Boynton.

Illustrated by J.T. Newman.

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BOG TURTLE

Classification

Class: Reptilia

Order: Testudines

Average Size

Length: 3 to 3 ½ inches

Weight: 4 ounces

Food

Insects, worms, slugs, crayfish, amphibian larvae, snails and other small invertebrates; also fruits.

Breeding

Lays clutch of 3 or 4 (1 to 6) eggs in June or early July. Eggs hatch in 7 to 9 weeks, late July to early September. Sexually mature in 5 to 8 years.

Young

The young are 1 in. to 1 ¼ in. long at hatching. Hatchlings may over winter in nest in north.

Life Expectancy

Bog turtles often live well past 20 years. It surprises many people to learn that these little turtles are so long-lived. Scientists are able to count growth rings on the bottom shell (plastron) of a turtle. Each ring represents growth during one year. These rings are hard to see on turtles after they reach about 20 years old. This is because mud wears away the growth rings as the turtle moves from place to place.