

# BARBOUR'S MAP TURTLE

By Libby Hopkins



The Barbour's Map Turtle is the largest species of map turtle. Shell length for the species differs by sex. Female shells can grow up to 11 inches, while male shells can grow up to six inches. This species has a gray oval-shaped shell with two to four individual spikes along the vertical center of the upper shell. These spikes become worn down to knobs on female shells. The large head is used to crush mollusks. This species also has black-and-green striped skin with a yellow mark on or below the chin.

Barbour's Map Turtles can be found in the Gulf Coastal Plain in the Apalachicola and Choctawhatchee River systems. This limited range includes parts of southeast Alabama, southwest Georgia, and the Florida Panhandle. The Chattahoochee, Flint, and Chipola Rivers, where these turtles reside, are clear flowing with limestone rock and cobble bottoms. They are also rich in mollusks and contain many fallen trees and exposed rocks for basking.

The nesting season for Barbour's Map Turtles is from June to August. The only reports of mating have been during the winter months from captive turtles. Nests are laid on sandbars or riverbanks as far away as 656 ft. from the water. They typically contain 4-11 eggs that hatch in late August and September. The temperature during incubation determines the sex ratio of hatchlings as with many turtle species; warmer temperatures result in a higher number of females. Males become sexually mature at four years, while females reach maturity at 15-20 years.

Basking is a common occurrence in this species of map turtle and usually takes place on rocks, tree branches, or tree stumps at a safe distance from shore. They have been recorded to bask at temperatures as low as 10°C, but in general, there is not much activity in colder months.

Barbour's Map Turtles will dive into the water at the slightest disturbance. Due to their powerful jaws, females maintain a diet of primarily aquatic snails and freshwater mussels. Females have also been known to scrape freshwater sponges off hard substratum. Males and juveniles tend to ingest softer-bodied invertebrates such as caddisflies and dragonfly nymphs. Raccoons and other mammals cause the most harm to eggs and hatchlings but introduced fire ants have also become a major problem. Fire ants are likely to pose a



problem for many egg-laying reptiles, but we have few data quantifying those impacts.

Because rivers in Florida are relatively stable and persistent, riverine species like the Barbour's Map Turtle are less profoundly threatened by habitat destruction than much of the state's herpetofauna. Nonetheless, various human-generated threats to the integrity of lotic systems, including their floodplains, affect Florida's riverine turtles.

The threat of chemical pollution (from industry, cities, boats, or highways) is especially dangerous to a species such as the Barbour's Map Turtle that is confined to very few river systems, with but a single system harboring most individuals.

The problem is compounded by the Apalachicola River receiving pollutants from Georgia and Alabama. In non-impounded sections of the Apalachicola River, channel maintenance operations for shipping have altered the river bottom profile, removed preferred basking sites essential to Barbour's Map Turtle, covered nesting sites with sediment, though incidentally creating new sites, and altered natural hydrological regimes in the floodplain.

Barbour's Map Turtles also face the natural threat of the destruction of their nests by boat strikes, though difficult to detect, may be a significant source of mortality in some areas more heavily used by man; large females are particularly vulnerable.

Barbour's Map Turtles were hunted in the past; however, rule 68A-27.005 of the Florida Administrative Code makes it illegal to take, possess, or sell the Barbour's Map Turtle. They are still on the Florida Endangered Species list.

