

The Eastern Cottonmouth

(*Agkistrodon piscivorus*)

Myth and legend have magnified the fury of this native pit viper. Few Southerners are without tales of the snake also known as the water moccasin.

The cottonmouth is a semi aquatic freshwater snake, closely related to the terrestrial copperhead (*A. contortrix*).

Identification

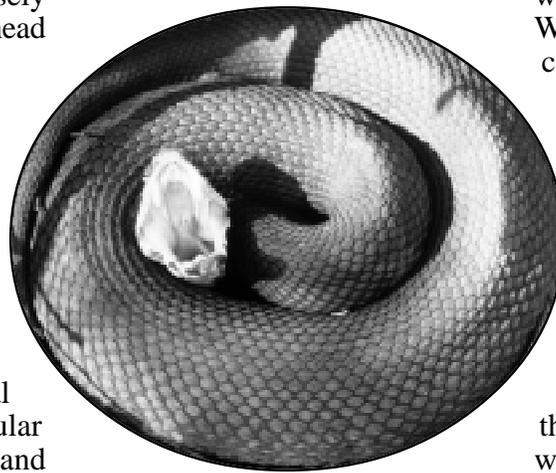
Cottonmouths are often difficult for the lay person to identify because the snakes exhibit so many variations in color and pattern. They are generally dull-colored with broad, thick heads. The dorsal pattern may appear in irregular diamonds or irregular bands and the color varies from dark brownish-green to copper to almost black. The background color varies from tan to olive. It is not uncommon to find solid-colored, unpatterned cotton-mouths. Age also makes a difference in coloration; the juveniles may be a vivid copper and old cottonmouths may be a gray-black.

Features

Cottonmouths have an opening located about half-way between the nostril and the eye, which is typical of pit vipers. This "pit" helps the snake detect warm-blooded prey. Cottonmouths have elongated, triangular-shaped heads with broad, thick snouts. The eyes are located on the side of the head and the pupil is vertically elliptical, rather than round as are those of

nonpoisonous water snakes.

The ridges above the eyes protrude outward and nearly shield the eyes from above, which prevent an observer above the snake from seeing its eyes.



The Eastern Cottonmouth

The fangs of a cottonmouth are truly a wonder. They are located in the upper jaw and are twice the length of the teeth and separate from them. The fangs are hollow tubes through which venom can be injected into prey. These weapons fold against the roof of the mouth when closed. Cottonmouths actually shed their fangs periodically, so they always have new ones developing.

Full-grown cottonmouths can approach six feet in length but many are smaller, usually three-to-four feet. The snake characteristically holds its head at an angle of 45 degrees and can detect movement for a distance of at least fifty feet.

Habitat

Often found basking in the sun, the cottonmouth may also be found under boards or in the bark of rotting trees or stumps near the water, especially in cold weather. While it has been thought that the cold keeps the cottonmouth inactive, researchers at the University of Georgia's Savannah River Ecology Laboratory have observed very active specimens all year long.

Defense

A cottonmouth that feels threatened will coil and open its whitish mouth, exposing its fangs in a threatening display, but usually will not strike unless provoked. Another defensive move of the species is to flick their tails about to indicate their displeasure. Some will also squirt musk from glands located on either side of the snake's tail.

Diet

Cottonmouths eat fish, amphibians, birds, rodents and other snakes and use their powerful venom to kill their prey. The cottonmouth is not a picky eater and will eat carrion without hesitation. Moccasins are also cannibalistic.

Most cottonmouths feed whenever prey is available. Cottonmouths shed their skins in accordance with how much they eat, usually several times a year.

Avoiding Snakebite



Reproduction

Reproduction occurs mainly, but not exclusively, in the spring. In many areas, cottonmouths do not breed every year, but only every two or three years, depending on food availability. Litters vary in size and typically juveniles display more aggressive behavior than older snakes.

Enemies

The cottonmouth is not invincible and has enemies all around including such predators as owls, hawks, eagles snapping turtles and alligators. They are also prone to parasites and diseases, as well as other problems such as infections and ulcers.

Man, too, is an enemy. Ignorance makes many people kill any snake, even if it is attempting to flee. In a complex ecosystem, all creatures play important roles.

According to research performed at SREL, cottonmouths did not bite when gently nudged by a booted foot but occasionally did bite when stepped upon and frequently bit when picked up. But even when the snake does bite, it does not always inject venom. The venom that is so deadly to the water moccasin's prey is usually reserved for the hunt and not always released during defensive strikes against larger predators, such as man. This preserves the snake's ability to hunt and kill prey.

The cottonmouth looks, smells and sounds dangerous. Usually that is enough to avoid confrontation and the pit viper will slither away, given the chance. Many bites occur when the defensive pose is presumed to be a precursor to biting and the person so threatened attempts to either kill or approach the snake. In a pitched battle, the snake's survival instinct will enable it to move quickly and it will not hesitate to bite.

If you see a cottonmouth, admire it from a distance. Do not attempt to pick it up. Do not prod it or otherwise annoy it. Do not attempt to kill it.

If you should be bitten, do not attempt first aid yourself. The best thing to do is to get to an emergency room quickly. Often people do more harm trying to treat a bite at the scene. See our fact sheet on snake bite for more information.

This information is provided as a public service by the Environmental Outreach and Education Division of The University of Georgia's Savannah River Ecology Laboratory located on the Savannah River Site near Aiken, S.C.

