**SUMMARY**

**Water Moccasin/Cottonmouth (Venomous)**

Do not occur naturally in most of northern Georgia. They bask on land or on logs and stumps near the water surface, and swim with their heads elevated above the water and their bodies riding on the water surface. They may vibrate their tails and gape their mouths when threatened. If banded, the bands are widest on the sides and narrow on top. They have a single row of scales on the underside of their tails, elliptical eye pupils, and a heat-sensing pit.

**Water Snakes (Non-venomous)**

Occur in aquatic habitats throughout Georgia. They bask in limbs overhanging water and typically swim below the water surface. If banded, the bands are widest on top and narrow on the sides. They have round eye pupils, and a double row of scales on the underside of their tails.

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**Is It a WATER MOCCASIN?**

Some people ask this question when they see a snake in the water. Unfortunately, many people assume all snakes in the water are water moccasins and kill them "just in case." Yes, some species of snakes, including the water moccasin (Agkistrodon piscivorus), also known as the cottonmouth, are venomous and therefore potentially dangerous. However, of the 45 snake species native to Georgia, only six are venomous—all others are harmless. Among the 39 harmless non-venomous snakes, five species of water snakes (Nerodia spp.) are often unfortunate victims of mistaken identity: People think they are water moccasins. This brochure was developed to highlight the differences between water snakes and water moccasins with the hope that familiarity with these snakes will prevent further unnecessary killing of non-venomous snakes (which is illegal by state law) commonly found in aquatic habitats in Georgia.

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**WATER MOCCASINS (COTTONMOUTHS)**

Five species of large water snakes are native to Georgia—eastern green water snake (Nerodia floridana), brown water snake (Nerodia taxispilota), red-bellied water snake (Nerodia erythrogaster), banded water snake (Nerodia fasciata) and northern water snake (Nerodia sipedon).

**RANGE AND HABITAT**

The first step in answering “Is it a water moccasin?” should be to refer to the distribution map that illustrates that species’ range. Collectively, water snakes can be found in every county of Georgia, unlike the water moccasin, which does not occur in most of the northern half of the state. Although it is difficult to summarize the habitat preferences of these two snakes, in general water moccasins shy away from large, open reservoirs, whereas some water snake species thrive in them. Water moccasins tend to inhabit slow-moving streams, swamps and backwaters.
**BASKING BEHAVIOR**

Stories of water moccasins falling from overhanging limbs into boats are most likely based on misidentification. Water moccasins typically bask on land, stumps or logs near the water surface, and only occasionally climb to low limbs when access is afforded by vines or gradually sloping branches. Water snakes, however, are very agile climbers and spend a great deal of time basking on the limbs of shrubs and trees overhanging the water.

**SWIMMING BEHAVIOR**

When disturbed, water moccasins either hold their ground or swim away. When swimming, their head is usually elevated above the water and their body appears overly buoyant, riding on, or nearly on, the water surface. Water snakes, on the other hand, do not swim high on the water and their head is not elevated. When water snakes are disturbed, they almost always flee by diving beneath the water.

**HEAD POSITIONING AND MOUTH-GAPING BEHAVIOR**

Water moccasins typically keep their head cocked at an approximately 45-degree angle, and when threatened will gape their mouth, revealing the whitish inner lining. Although water snakes do not display either of these behaviors they, too, may have whitish coloration in the mouth lining. Therefore, dead water moccasins cannot be positively identified based solely on the color of their inner-mouth lining.

(Caution: Venom may remain fully toxic in dead snakes. It is best to leave dead snakes of uncertain identification alone.)

**UNDERSIDE OF TAIL**

Water moccasins have a single row of scales (similar to the belly scales) on the underside of their tail. Water snakes have a double row of scales. (Caution: If uncertain as to the species, scale characteristics should only be examined on dead snakes and shed skins.)

**TAIL VIBRATION**

In addition to mouth-gapping, water moccasins will often rapidly vibrate their tail when agitated or threatened. Although several other non-venomous snakes also exhibit this behavior (black racers, for example), water snakes do not.

**PATTERN**

The two most common water snakes in Georgia, banded and northern, have bands that are widest on top. Juvenile and patterned adult water moccasins have “hollow” bands that are widest on the sides and appear to be hourglass-shaped when viewed from above. Also, most water moccasins have a very well-defined dark stripe on the side of the head that runs from the back of the eye toward the corner of the jaw. The only water snake species with any semblance of a dark stripe on the side of the head is the banded water snake, and the stripe is a poorly-defined one, at best.

**HEAD SHAPE AND FEATURES**

The shape of the head is not a reliable way to differentiate these species since water snakes can flare out their head when they feel threatened, making it look triangular. However, the elliptical shape of the pupil (the pupil of water snakes is round) and the presence of a pit between the eye and nostril (absent in water snakes) are reliable characteristics of water moccasins.