

# WV DNR Wildlife Diversity Program INFORMATION SHEET



## Identifying Venomous and Nonvenomous Snakes

Nonvenomous snakes are often erroneously identified as venomous. There are three reliable characteristics, in addition to the rattlesnake's rattle, which may be used to separate West Virginia's harmless snakes from the venomous copperhead and rattlesnake: the shape of the pupil in the eye; presence or absence of the sensory pits; and scale patterns on the underside of the tail. In addition, our venomous snakes have broad, flattened, arrow-shaped heads, with narrow necks. The rattlesnake's rattle is an obvious characteristic, but the tail shape of a copperhead is not really different than the tail of a nonvenomous snake.

It is also useful to be able to distinguish copperheads from other snakes that have similar patterns, such as hog-nosed snakes, milksnakes and watersnakes and young black racers and black ratsnakes. Bands across the back of copperheads are hour-glass or saddlebag shaped, being narrowest along the top of the back. Bands across the back of other West Virginia snakes are the same width, or wider across the top of the back (see illustration). Knowing this difference in patterns will allow you to distinguish a copperhead from snakes with a similar pattern if you only catch a glimpse of a snake as it is crawling under a rock or building. Although you may not be able to determine the species, at least you will know whether or not it is a copperhead (and consequently whether you need to be concerned about the presence of a venomous snake in your yard or barn).

Illustrations by Sam Norris

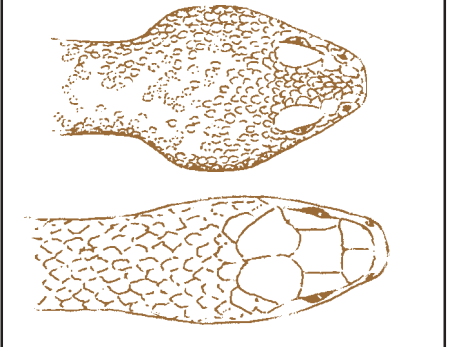


*Bands across the back of copperheads (left) are hour-glass or saddlebag shaped, being narrowest along the top of the back. Bands across the back of other West Virginia snakes (right) are often the same width, or wider across the top of the back.*

The eyes of copperheads and rattlesnakes are also a quick and obvious way to separate these species from the nonvenomous snakes in West Virginia. Pupils are elliptically shaped, like a cat's eye. West Virginia nonvenomous snakes have round pupils. A dark background makes it difficult to determine whether pupils are round on some snakes, but the copperhead's and rattlesnake's elliptical pupils are obvious. Both milksnakes and copperheads have eyes with dark pupils against an orange background. However, milksnakes, which are often confused with copperheads, have round pupils.

Most people believe they cannot get close enough to a snake to determine the shape or color of the eyes; however, you can easily see the eyes of a snake from several feet away. This is a safe distance for observation because snakes can only strike, at most, one-half of their body length.

*Venomous snakes (top) have broad, arrow-shaped heads with narrow necks. Nonvenomous snakes (below) have more slender heads.*



*Venomous snakes in West Virginia (top) have an elliptical pupil and a pit or opening (A) close to the nostril. Nonvenomous snakes (below) have a round pupil and no pit opening.*

