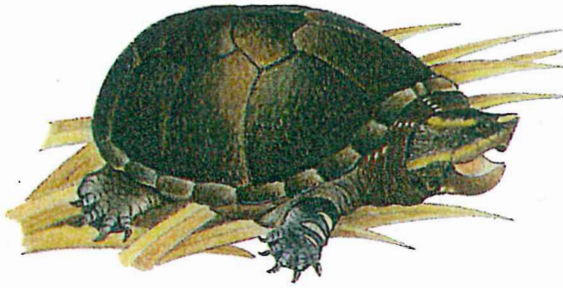


## Stinkpot Turtle

*Sternotherus odoratus*

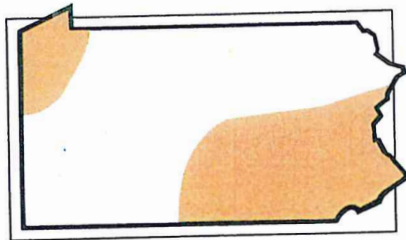


**General characteristics.** The stinkpot is the only musk turtle inhabiting Pennsylvania. Although abundant in many waters within its range, it often is not seen because it is primarily an aquatic animal. Nonetheless, it likes to leave the water to bask in the sun, and quite mobile, often climbs slanted trees or logs to find a resting place. An apparent ability over other turtles to climb steeper surfaces is provided by a smaller plastron, which allows greater movement of the legs. The carapace measures three inches to just over four inches in adults. In clear water the stinkpot might be observed walking across the bottom in search of food. It often is caught by a surprised angler. When disturbed, it is liable to secrete a foul-smelling yellowish fluid. This fluid, which acts in many cases as a deterrent to would-be attackers, is discharged from two pairs of musk glands located under the border of the upper shell. Some have described the stinkpot as pugnacious, almost vicious. It is said to have a short temper and strong jaws.

**Identification.** The stinkpot's carapace is smooth, highly domed and elongated. It is normally olive-brown to dark gray and may be marked with irregular streaks or spots of a darker color.

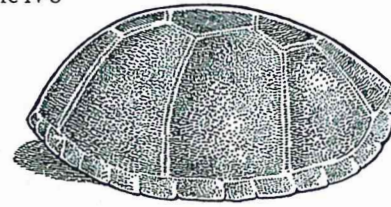
**Habitat.** The stinkpot prefers quiet, slow-moving, shallow streams and rivers, preferably with a mud bottom. In early spring the stinkpot seeks out waters shallow enough so that it can bask with the center of its carapace exposed to the warm sun.

**Range.** Although thought at one time to be distributed statewide, recent studies show that the stinkpot does not inhabit the Allegheny Mountains.

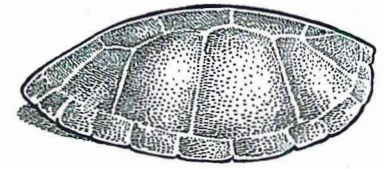


It also is found in a larger area of southeastern Pennsylvania and particularly in the more centrally located counties where prosperous populations of stinkpots have been discovered in the limestone streams. The stinkpot is distributed from New England, southern Ontario and Wisconsin, south to Texas and Florida.

Figure IV-8

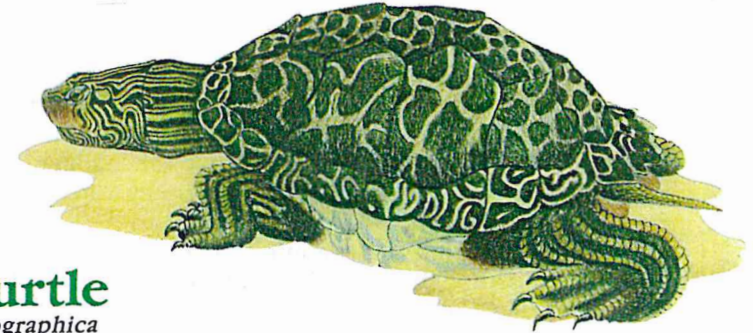


Stinkpot Turtle



Other Turtles

The upper shell of the stinkpot is raised in the shape of a high dome. Others tend to be only slightly raised or rounded.



## Map Turtle

*Graptemys geographica*

**General characteristics.** A moderately large turtle, though certainly not the largest found in Pennsylvania, the map turtle reaches an average seven to 11 inches in shell length. It is fairly common throughout its Pennsylvania range. Perhaps due to limited basking sites, individual turtles often pile on top of one another while basking on rocks or logs, which is a favorite pastime. But it also is a shy animal and if disturbed will slip quickly into the water to avoid a potential predator.

**Identification.** The carapace of the map turtle is greenish to olive-brown. Its irregular pattern of thin, yellow-orange lines networking randomly across the upper shell like roads on a map give this turtle its name. The carapace is somewhat flattened and marked with a distinct keel. The plastron is yellowish and bears no markings of any significance. Its head, neck and tail are accented with narrow yellow lines. A yellow, somewhat triangular spot appears behind each eye.

**Range.** The distribution of the map turtle in Pennsylvania is scattered into one larger and two smaller portions of the state. It is found along Lake Erie and in a small portion of the Ohio River Drainage. Its largest range encompasses a major portion of the Susquehanna River Basin and the lower Delaware River Basin.

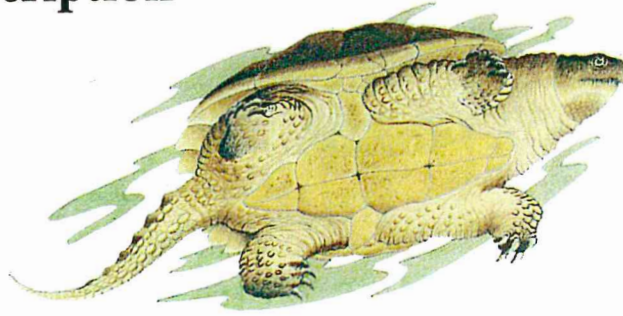
**Habitat.** The map turtle prefers slow-moving, large rivers over smaller, faster waters. Lakes, rather than ponds, are considered choice habitat. Mud bottoms with profuse stands of vegetation top its list of preferred habitat. It is not in any hurry to hibernate and comes out of hibernation sooner than other species of turtles.



# Species Description

## Common Snapping Turtle

*Chelydra serpentina serpentina*

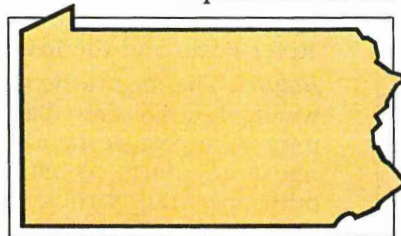


**General characteristics.** The common snapping turtle is sometimes referred to as the freshwater “loggerhead,” and is the only turtle in Pennsylvania with any economic value. This turtle is commonly sought for its meat, which is considered a delicacy and a base for snapper soup. In Pennsylvania a fishing license is required to take snapping turtles and traps or set lines may be used.

Many people think the snapping turtle is ugly, both in appearance and disposition. Although on land it may lash out viciously, it is generally inoffensive when submerged in water where it spends most of its time. It does not bask in the sun nearly as much as many other turtles do. The snapping turtle is a good swimmer but more often than not prefers to walk across the bottom of its watery habitat, which it does quite well. Confronted on land, the common snapping turtle is quick to assume its offensive stance, in which the hind quarters are elevated above the rest of the body, and the jaw is opened wide, at which time the turtle may lunge forward repeatedly. During such shows of strength, the snapper may emit a loud hissing sound to discourage further any would-be adversary. The common snapping turtle is one of our largest turtles. Its carapace may measure up to 12 inches in length.

**Identification.** The snapping turtle is easily recognized by its large head, a plastron smaller in relation to the rest of the body compared to other turtles, and a tail proportionately longer than on other turtles. The tail is at least as long as the carapace and supports a series of large saw-toothed keels on its upper side. The neck is covered with loose, warty skin. The strong jaws end in a distinct hook. The carapace of the common snapping turtle is tan to dark brown, sometimes nearly black. The carapace is quite rough, serrated along its rear margin, and has three rows of keels running its length. These keels may be difficult to discern in older specimens. The unpatterned plastron is yellow to tan and it is cross-shaped and relatively small. It does not cover nearly as much of the underside as plastrons do on most other turtles.

**Range.** This large turtle resides in a broad area of the country. Its natural range extends from southern Canada to the Gulf of Mexico, and from the east coast to the Rocky Mountains. Thus, the common snapping turtle is distributed throughout Pennsylvania.



**Habitat.** An aquatic reptile, the snapping turtle has little preference for the type of water in which it resides. Snappers have been found in small streams as well as large rivers, in the smallest ponds to the largest lakes. It likes soft mud bottoms, especially if abundant vegetation is convenient. Rarely seen basking, the snapper prefers to rest in shallow water with just the eyes and nostrils exposed. The snapping turtle hibernates beneath the water. It ends its hibernation in April, emerging from an overhanging mud bank, muskrat hole or from under a collection of vegetative debris.

**Reproduction.** For the snapping turtle, the peak time for laying eggs is June. A usual clutch includes 25 to 50 eggs. The eggs are round and just over one inch in diameter. The nest, a cavity four to seven inches deep, might be dug some distance from the water (See Figure IV-7). Depending on the weather and locale, nine to 16 weeks could be needed to incubate the eggs. When the eggs finally break open, young snappers barely more than an inch long emerge.



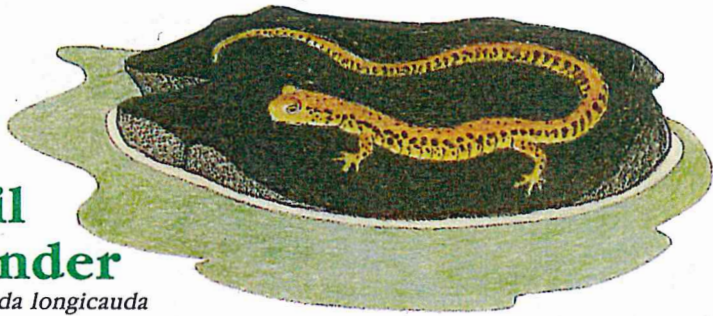
Figure IV-7

**Food.** To some extent, the snapping turtle is considered a scavenger because it feeds on a certain amount of carrion. But the snapper does not limit itself to that. It eats a variety of invertebrates as well as fish, small mammals and even birds. Ducklings, for instance, have been known to fall prey to a snapping turtle. Walking casually along the bottom of a lake, eyes alert, the snapping turtle could surface quickly to snatch a feathery meal. Omnivorous in its feeding habits, the snapping turtle also consumes a variety of aquatic plants.

The round eggs of the common snapping turtle are laid in a cavity four to seven inches deep.

## Longtail Salamander

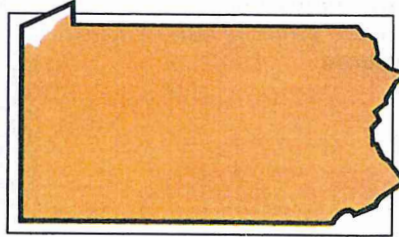
*Eurycea longicauda longicauda*



**General characteristics.** The longtail salamander is one of the so-called "brook" salamanders, usually residing in or near small waters where fish are at a minimum at best. This lungless salamander attains adult sizes of four to just over six inches. Most of this length is "tail," because it accounts for much more than half the total length. The longtail salamander is nocturnal, although it may be seen moving about during the day following a heavy rainfall.

**Identification.** The descriptive common name provides a clue to identifying this colorful amphibian. Much longer than the body, the tail is slender but continues the coloration and pattern that begin on the head. This salamander is yellow to bright red-orange and is marked with contrasting black spots. The spots are heavier on the sides than they are across the back, and on the tail the spots may combine to form vertical bars. The salamander has 13 or 14 costal grooves.

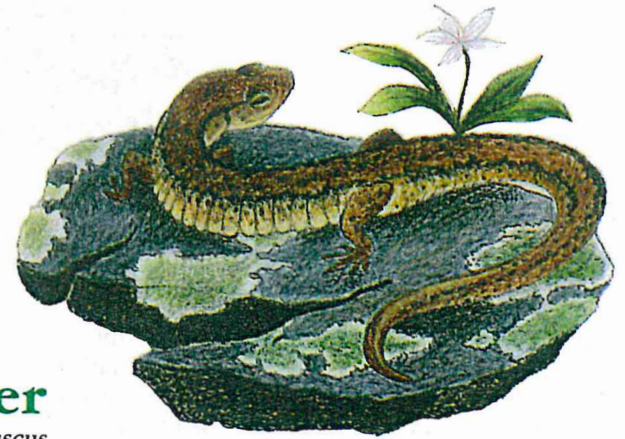
**Range.** The longtail salamander is a statewide resident except for the small area of the Commonwealth that drains into Lake Erie. There have been no reported sightings of the longtail salamander from Pennsylvania's 42 miles of Lake Erie shoreline or the inland Lake Erie Plain. Its range includes southern New York to northern Alabama and west to the southern tip of Illinois.



**Habitat.** This amphibian is known to inhabit caves and abandoned mine tunnels, but more often is at home near small streams, seeps and springs. The longtail salamander waits for nightfall, hidden under rotting logs, stones and streamside boulders. It is also known to reside in banks of shale that overlook a watery environment, where it darts among the numerous cracks and crannies in search of food.

## Northern Dusky Salamander

*Desmognathus fuscus fuscus*

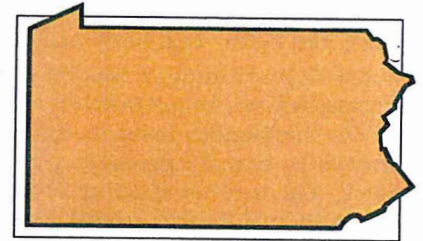


**General characteristics.** The northern dusky salamander is a member of a large group of salamanders, the lungless salamanders, and as an individual species is found in abundance in Pennsylvania. The northern dusky salamander also is the more common of our three dusky salamanders. Its average adult size ranges from 2½ inches to 4½ inches.

**Identification.** The northern dusky salamander is gray to tan or dark brown on the back becoming a bit lighter on each side. Although usually plain, a close inspection may sometimes show mottling not much darker than the background color. Larvae and juvenile specimens have pairs of oval blotches on each side that often fuse together to form streaks running the length of the body. Even then, this pattern may be obscured or disappear as the salamander gets older. The underside is pinkish with blue-gray speckles. The tail is triangular and less than one-half the total length of the salamander. It has 14 costal grooves.

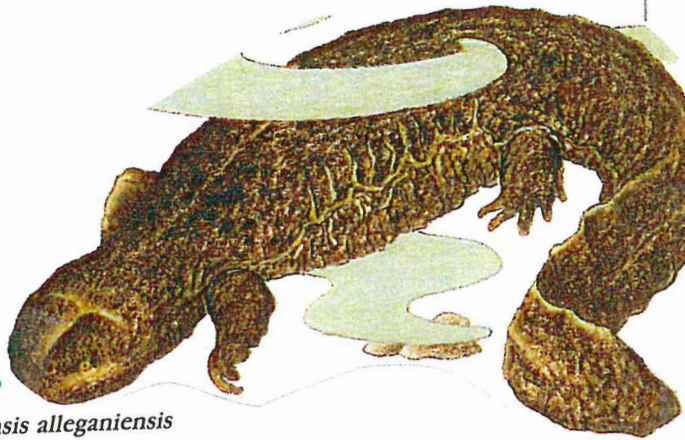
**Range.** The northern dusky salamander lives statewide and is an abundant amphibian in most counties. It stretches from New England to the Carolinas and westward to Indiana.

**Habitat.** It seldom is found far from running water and seems to have a special fondness for spring seeps and small rivulets. It likes woodland streams where rock-strewn banks provide ample shelter. More often than not, the summer months find the northern dusky salamander submerged, taking advantage of the cooling waters. It also hibernates under water, escaping the worst of winter's rigorous cold.



## Eastern Hellbender

*Cryptobranchus alleganiensis alleganiensis*



**General characteristics.** The hellbender, a member of the Giant Salamander family, is one of two large salamanders inhabiting Pennsylvania. The other is the mudpuppy, although it belongs to a different family than the hellbender. Hellbenders attain adult sizes of just over 11 inches to as much as 20 inches in length. The hellbender is a harmless amphibian; it does not inflict a poisonous bite as many people believe. In fact, this bizarre-looking creature is seldom seen except by anglers who might catch a hellbender while bottom fishing. It can easily and safely be removed from the hook. It is a completely aquatic animal, nocturnal in its habits and hides under rocks or submerged logs where, again, anglers searching for bait may encounter this large salamander.

Although something less than attractive in appearance—some would say downright ugly—Indians once used the hellbender for food. Even though it is no longer a food source for man, the hellbender nonetheless continues to fill an important niche in the aquatic ecosystem.

**Identification.** The hellbender is more commonly gray, but some specimens could be an olive brown to almost black above. Some dark mottling over the back and upper sides also is possible. The belly is lighter. Though not always present, irregular, scattered black spots sometimes pepper the back and sides. The body and head of the hellbender are flattened. Several loose flaps of thick, wrinkled skin hang along the lower sides. Tiny eyes are almost missed in proportion to the large, broad head.

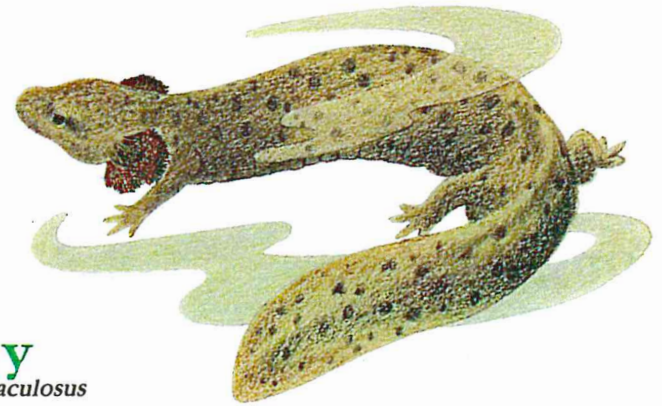
The hellbender loses its external gills by the time it reaches four or five inches in length, although gill openings may be seen on each side of the neck. The legs are short and stout with four toes on the hindlegs. The tail is flat and rudderlike, useful in navigating around the hellbender's aquatic environment.

**Range.** The eastern hellbender is found in Pennsylvania's Susquehanna and Ohio River watersheds; it does not reside in the Delaware River drainage.

**Habitat.** The hellbender favors fast-moving, mid-sized streams and the channels of rivers with clear water. The hellbender prefers habitat with plenty of bottom shelter in the form of boulders, large stones, snags and other large, loose debris. It takes refuge beneath this cover by day, coming out to forage for food at night.

## Mudpuppy

*Necturus maculosus maculosus*



**General characteristics.** Only one other salamander in Pennsylvania, the hellbender, grows to a larger size than the mudpuppy. As an adult salamander, the mudpuppy reaches an impressive eight to 13 inches. It is a large, permanent larva, using external gills through its entire life. The mudpuppy is thoroughly aquatic and nocturnal, although it may be active even during the day in muddy or turbid water.

In certain locales this amphibian is also known as the waterdog, a colloquial name that on the surface would appear to lend at least a certain amount of credibility to the mistaken belief that it barks; it does not. Nor is it poisonous as some people suppose. It often is caught on hook and line by anglers and is completely harmless.

**Identification.** The most striking characteristic of this salamander other than its size, or perhaps because of it, is the large, feathery set of reddish gills billowing out from behind each side of the head (See Figure II-9); the entire effect is almost incongruous.



Figure II-9

The mudpuppy retains its reddish gills for life.

**Habitat.** Mudpuppy populations are found in lakes, rivers and streams. Although it seems to prefer clear, swift water, it can be found in habitats ranging from water that is shallow, muddy, warm and congested with thick stands of aquatic plants, to cool, clear, deep pools and lakes. It likes to spend its day hidden beneath underwater structures, venturing out at night in search of prey.

## Queen Snake

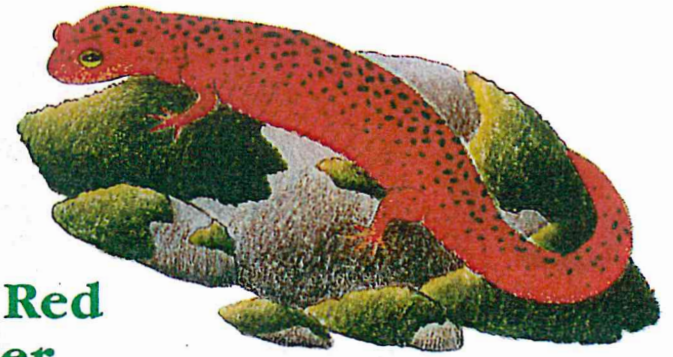
*Regina septemvittata*



**General characteristics.** Another of Pennsylvania's snakes categorized as "water" snakes, the queen snake in some local areas may be known as the "willow" snake or "leather" snake. It is very much an aquatic animal and an excellent swimmer. If disturbed by an intruder it does not hesitate to slip quickly into the water for safety. Adult queen snakes are 15 to 36 inches in length.

**Identification.** The queen snake is an attractive snake and a study in contrasts. The body color can be tan to shades of brown or almost black. A yellow stripe accents the lower side of the body and the belly is yellow with four well-defined brown stripes running its length. Two of these stripes are located near the center. Two larger stripes stretch along the sides of the belly. Some specimens may also have three faded stripes continuing down the back. The scales are keeled and the anal plate is divided.

**Habitat.** The queen snake prefers streams and small rivers as opposed to lakes or ponds, with a preference for those waterways amply strewn with rocks along their bottoms and sides. It does not emerge to bask as much as other water snakes. More often it can be seen swimming along the surface of the moving water or found under shoreline rocks.



## Northern Red Salamander

*Pseudotriton ruber ruber*

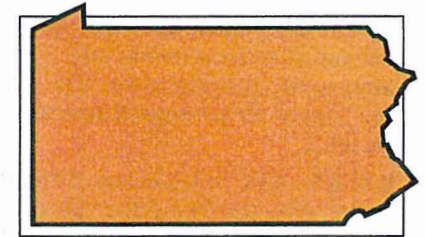
**General characteristics.** The northern red salamander is medium-sized and another of the lungless salamanders. Adults reach sizes ranging from  $4\frac{3}{4}$  inches to six inches. It is found only in the eastern portion of North America.

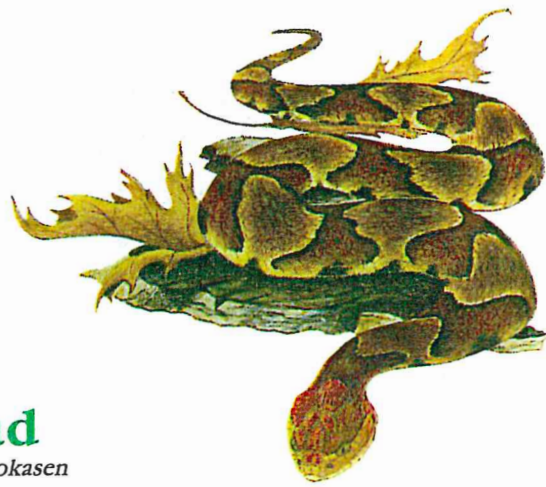
**Identification.** For the most part, this amphibian remains true to its name—red is the primary body color. Even so, variations occur and it can be reddish brown to orange-brown. The adults tend to be darker than the young. The sides shade toward a lighter tone as they approach an even lighter belly. The back and the upper portion of the sides are dotted with numerous and irregularly shaped jet-black spots. Small dark spots may appear on the belly. The body is stocky and the legs and tail are proportionately shorter in comparison with other salamanders. Sixteen to 17 costal grooves mark the sides.

**Range.** The northern red salamander can be found in all of the state's 67 counties. It extends from southern New York and Ohio to northern Alabama.

**Habitat.** Preferring small streams and spring runs with bottoms of sand or gravel and rock, the northern red salamander likes water that is clear and cool.

It avoids stagnant ponds or pools while seeking out bubbly springs and seepages. In part a terrestrial animal, the adult northern red salamander may roam some distance from the water. Woodlands, swamps and meadows offer refuge to this amphibian. It likes to dwell beneath logs, stones and clumps of moss.





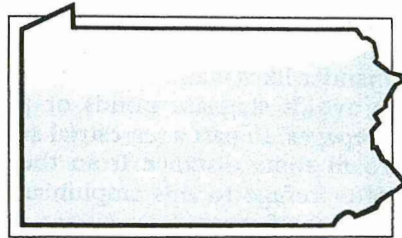
## Northern Copperhead

*Agkistrodon contortrix mokasen*

**General characteristics.** One of only three venomous snakes common to Pennsylvania, the northern copperhead is a close cousin of the cottonmouth or water moccasin found in more southerly aquatic environments. Reflecting its preferred habitat, the copperhead sometimes is referred to as the "upland" or "highland" moccasin. However, the cottonmouth is not indigenous to Pennsylvania.

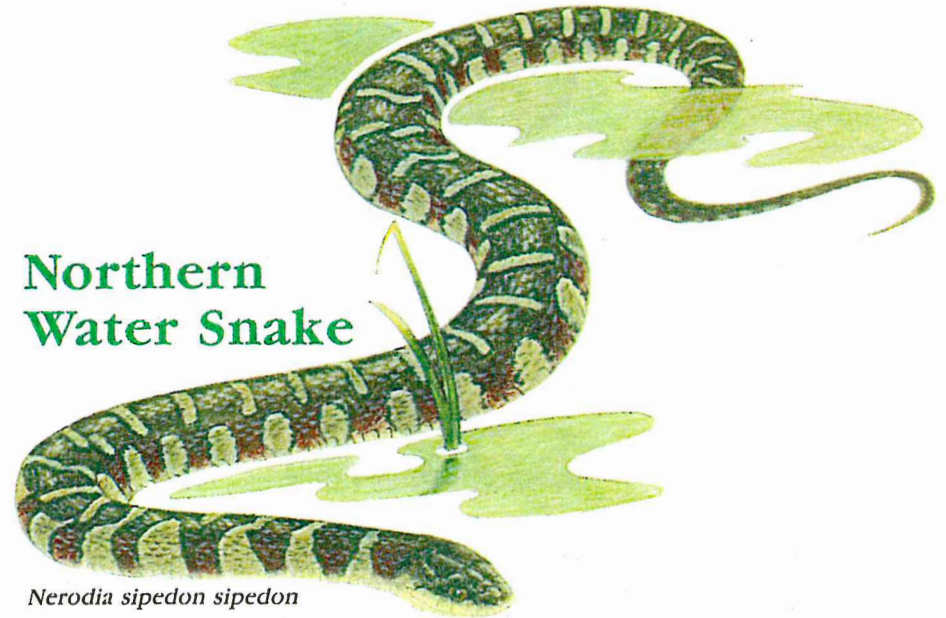
The copperhead is a quiet creature—some would say almost lethargic—and usually does its best to avoid trouble, quietly stealing to a safe retreat whenever it can. If threatened, and it feels the need to protect itself, the copperhead is capable of striking out most vigorously. If the strike hits its intended victim, poison may be injected through two hollow fangs connected to glands located on each side and toward the rear of the head (See Figure VI-15). The venom-injecting apparatus is similar to that found in the rattlesnake, although the copperhead's fangs tend to be a bit shorter. The venom is a hemotoxin, but with a trace of neurotoxin and as such primarily affects the bloodstream. The bite and resultant injection of venom is painful. But with prompt medical attention, it seldom poses any serious threat to life.

**Range.** The copperhead inhabits the lower two-thirds of the state. Its range generally follows the southern limits of huge glaciers that eons ago scraped and ground their way into the northern hemisphere. Its range extends somewhat southwesterly through the Carolinas into Georgia, Tennessee, Kentucky and southern Illinois.



**Habitat.** The northern copperhead likes wooded hillsides, especially those that feature rocky outcrops standing guard above a stream or swampy area. The copperhead is attracted to stone walls, piles of rock and other similar debris and is a frequent visitor around farms and abandoned lumber operations. It is fond of curling up in sawdust or rotting logs, and it likes the protection offered by large, flat stones, especially those located near water.

The copperhead, like so many other reptiles and amphibians, enjoys a day in the sun and often basks on a favorite rock, especially on a warm day in the spring or fall.



## Northern Water Snake

*Nerodia sipedon sipedon*

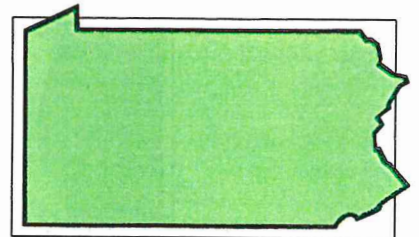
**General characteristics.** This is the largest of Pennsylvania's three water snakes, reaching an adult size that may range from 24 to over 50 inches. The male is usually smaller than the female.

Often killed by people out of fear, the northern water snake is not a water moccasin and it is not poisonous. The water moccasin, or cottonmouth, common to the South, is not found naturally in Pennsylvania and does not appear farther north than extreme southern Virginia.

The northern water snake has a tendency to display a nasty disposition and becomes quite formidable when angered. It flattens its head and heavy body when striking, and although it flees if it can, it strikes repeatedly if cornered. It has strong jaws, powerful enough to inflict a severe bite. Bites by the northern water snake also may bleed profusely due to an anticoagulant quality of the snake's saliva. It does not inject a poisonous venom.

The northern water snake is active both day and night and appears in sufficient numbers to be seen on a regular basis.

**Range.** The northern water snake can be found from Maine, across Quebec, reaching down to Colorado in the west. It extends south to North Carolina. All of the state's 67 counties are host to the northern water snake.



**Habitat.** Scattered statewide, it is possible to encounter one of these aquatic-loving animals when hiking near a stream or lake, or fishing or boating. It prefers quiet water. Still, the northern water snake is found in fast-moving streams as well as lakes, ponds, bogs and swamps and rivers or slower streams. Submerging, it swims underwater seeking protection among the pondweeds and other aquatic plants. When basking, it likes to drape itself over the branches of a nearby shrub or gather the warmth from a sun-baked rock near the water's edge.