Timber Rattlesnake

Crotalus horridus

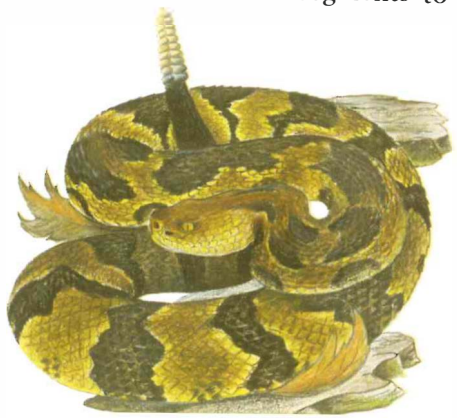
Candidate Species

General characteristics. Though not the largest snake found in Pennsylvania, the timber rattlesnake has the distinction of being the largest of our three venomous species. It may reach adult sizes of 36 to 54 inches. It is sometimes called the "banded" rattlesnake or "velvet-tail" rattler.

Like the copperhead and other snakes, the timber rattlesnake would just as soon be left alone. It is not an aggressive creature. The timber rattler is prone to lie quietly or crawl away to safety if given the chance.

The timber rattler stands its ground (like many other animals) if it feels threatened and unable to escape. When striking, venom may be released from glands located in the head and injected into the victim through modified front teeth referred to as fangs. It should be noted that a defensive strike does not always include a release of venom. Venom primarily is used to disable prey.

Contrary to popular belief, the timber rattlesnake does not always sound its familiar alarm before striking. In fact, when striking because of fear or the need to defend itself, more often than not the snake strikes without an audible warning. The "rattle," from which this snake obviously gets its name, is an organ of loosely attached, hollow horny segments fastened to the tail. Rapidly vibrating the tail causes these button-like segments to strike one another, producing an unmistakable buzzing sound. The rattle may grow by two to four segments annually, because new segments are added each time the skin is shed. Thus, the number of segments on the rattle, or "cloche," as it is called, cannot be used to determine the age of the snake. However, the larger the snake, the louder the buzzing.

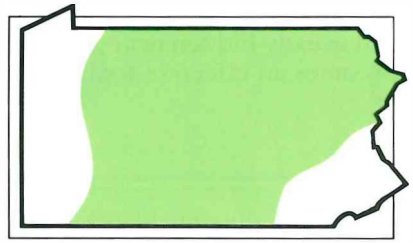


Identification. Timber rattlesnakes are found in two different color phases, black and the less common yellow phase. Each phase is perma-

from one phase to the other on any individual snake. On a yellow specimen, black or dark-brown crossbands contrast against a yellow background that might range from dull to a deep lemon. In some cases, the "yellow" tends to be brownish or grayish, but always lighter than the black phase. The crossbands are often V-shaped and tend to break up toward the rear of the body to form a row of dark spots down the back and along each side.

The more common black phase timber rattlers have a heavy stipling or flecking of very dark browns or blacks that covers most of the lighter or yellowish pigments. Completely black specimens are not all that rare in some areas.

The unmarked head of the timber rattlesnake is covered with numerous small, keeled scales. The facial pit is located as usual between the eye and nostril, confirming the timber rattlesnake to be one of the pit vipers (See Figure VI-14). The pupil of the eye is elliptical, not rounded as it is on Pennsylvania's nonvenomous snakes (See Figure VI-14). The tail is black regardless of the color phase of the body. Unlike our nonvenomous species, which have two rows of scales on the underside of the tail, the venomous snakes have one row. The timber rattlesnake is no exception to this rule.



Range. The range of this reptile begins in the north in New Hampshire, extending southward to Georgia. It appears from Illinois to Arkansas and northeast Texas. The timber rattlesnake is found in the central two-thirds of Pennsylvania. Its range does not extend into the counties bordering Ohio or into the extreme southeast. The range follows roughly the major mountain ranges that move diagonally across the state.

Habitat. This snake is at home in timber-covered terrain, especially that of second-growth woodland where an abundance of rodents may be found. It likes wooded hillsides accented with rock outcrops where ledges of stone might provide opportunities for basking (See Figure VI-20). When winter sets in, fissures in these places provide passage to deep dens for hibernation. Slopes with a southern exposure are preferred.

The timber rattlesnake seeks winter protection below the frost line, preferably in dens that maintain a temperature of around 50 degrees. In the spring, as daytime temperatures approach 60 degrees, the rattlers begin to emerge to bask near the den site. Although later they may travel some distance from the den to take up residence in more open areas, shaded areas will always be nearby to provide protection as summer temperatures turn hot. Each fall the timber rattlesnake returns to its original den, even though it may have wandered several miles during the summer months.

Figure VI-20

Warm temperatures entice this timber rattle-

Basking in the warm rays of the sun is an important and nec-

body temperature to increase, the snake ensures proper functioning of several organs while ridding the body of disease and parasites. The female's basking also allows for full, proper development of eggs and embryos.

Reproduction. Breeding takes place in July, August or September with the female giving birth to live young in August or September of the following year. Five to 17 young are born, reaching 10 to 13 inches in length. The brood may include individuals of both yellow and black color phases.

The female matures in four to five years and breeds for the first time at five or six years of age. The female breeds only every two to three years and thus may bear a litter perhaps 10 to 15 times in her lifespan of 30 to 50 years. The intervening years are needed to store sufficient body fat to sustain her during the second summer the progeny are developing. It is believed she does not feed during the summer of her year-long gestation period. While carrying her young, she consumes only rainfall, gathering the precious liquid from small deposits caught by leaves or depressions in rocks. Decreasing populations have made it a candidate species.

Food. Mice and other rodents make up the majority of the food eaten by the timber rattlesnake. Squirrels, rabbits, chipmunks and even small birds add variety to the diet, as do frogs or lizards on rare occasions. The prey is captured as it wanders into striking range of the hunter, coiled and ready and usually hidden near a log or other object. Venom injected into the prey becomes an effective tool in satisfying the need for food.

Eastern Massasauga

Sistrurus catenatus catenatus

Endangered Species

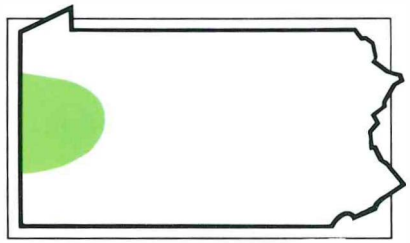
General characteristics. The eastern massasauga is a rattlesnake. It is the smallest of Pennsylvania's three venomous snakes, but the one with the biggest problem. Reflecting concern for its dwindling numbers, this reptile has been placed on Pennsylvania's List of Endangered Species. It is illegal to possess, kill, sell or offer for sale this or any other animal on the endangered list.

The biggest problem facing this small rattlesnake is loss of habitat. A resident of swampy areas, much of its habitat has been drained or dried up. In some cases, new or widened highways encroached into its wet domain and with each new lane of traffic, acres of vital habitat were lost.

Indian word meaning *great river mouth*. It alludes to what was typical Chippewa country, which often included swampland surrounding the mouths of rivers.

Identification. Reflecting its preferred habitat, the massasauga rattlesnake sometimes is referred to as the "swamp" rattler. It does not grow much larger than 20 to 30 inches.

The massasauga is brownish gray to almost black on its back and sides with a row of rounded, dark-brown or black blotches running down the middle of the back. Usually three rows of smaller and lighter blotches or spots stretch along each side. A dark bar, bordered with a lighter color, extends from the eye to the rear of the jaw, and several dark bars start at the top of the head and flow onto the neck. The facial pit is in its usual position between the eye and nostril. The belly is black with scattered white or yellowish markings. Nine plates (actually large scales) cover the crown of the head, compared to the timber rattlesnake's numerous small scales. The tail is stocky or stout, ending in a moderately developed rattle. The underside of the tail has a single row of scales, similar to the other venomous snakes in Pennsylvania. The anal plate is single; the scales over the back are keeled.



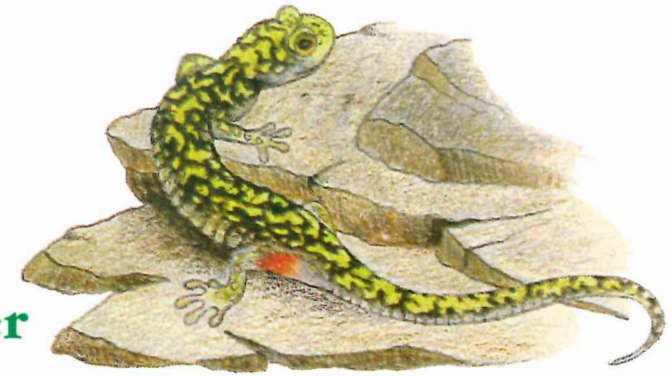
Range. In Pennsylvania, the eastern massasauga is found in portions of only five or six counties in the westcentral section of the state. It extends into Ohio and as far as Illinois and Iowa. It runs northward to Wisconsin and Michigan.

Habitat. It shows a distinct preference for marshy areas with swampland, flood plains and other wet areas adjacent to drier old-field uplands providing favorite haunts. Even so, there are occasions when the massasauga may stray from these areas and be found in dry woodlands.

Typical of most cold-blooded animals, the massasauga suns itself on mild days, allowing the warming rays of the sun to raise the body temperature to levels beneficial to its functioning. During the hottest part of the summer, the massasauga becomes crepuscular, taking advantage of the cooler twilight hours to roam and feed.

Reproduction. The massasauga breeds primarily during July and August, giving birth to its young between July and early September. A typical litter contains two to nearly 20 youngsters measuring six to nine inches long. At birth, these young rattlers are well-patterned, although a bit paler than the adults. The juveniles have an unmistakable yellowish tail tip.

Food. As might be expected, given its favorite habitat, frogs and other amphibians top the massasauga's menu. Although amphibians may be preferred, lizards, small rodents and small birds are taken from time to time as well. This rattler uses much the same method as that used by the timber rattlesnake in capturing its prey. Venom is injected to immobilize the prey before it is swallowed. The only difference is that the venom produced by the massasauga is not quite as toxic as the venom of its larger cousin.



Green Salamander

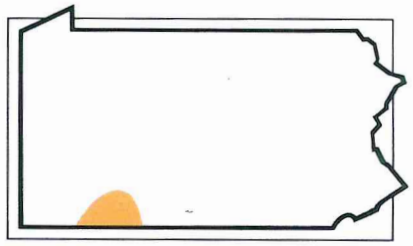
Aneides aeneus

Threatened Species

General characteristics. The green salamander belongs to the lungless salamander family. This salamander family has more known species than any other. As an individual species, however, the green salamander has been placed on Pennsylvania's List of Threatened Species. Found in only a small area of the state, its restricted habitat is such that concern has been expressed for its continued existence. Drastic changes to its restricted, preferred habitat will affect the ability of this attractive salamander to continue to maintain stable populations in Pennsylvania.

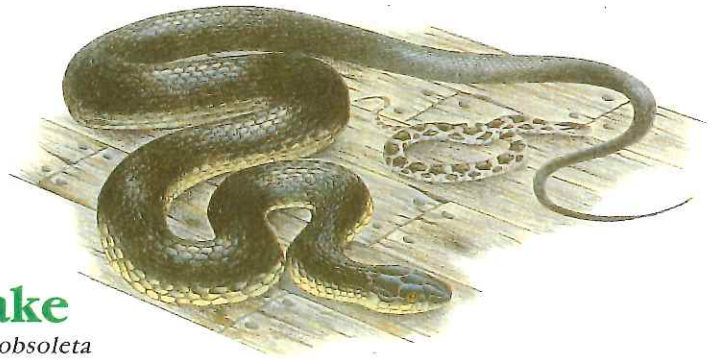
Reaching a length of just over three to about five inches, the green salamander spends most of its day in hiding, preferring to move about in the relative safety of the night.

Identification. The green salamander is aptly named and is considered our only truly green salamander. Its green or greenish-yellow irregular patches stand out boldly against an otherwise black body. It is a slender salamander with a somewhat flattened body. The head, however, appears to be swollen in the area just behind the eyes. The toes are square-tipped and expanded. As a lungless salamander, the green salamander breathes through thin, moist skin. Its costal grooves number 14 or 15.



Range. In Pennsylvania the green salamander is found in only a small portion of Fayette County in southwestern Pennsylvania. Its natural range, however, extends south into Alabama, making the lower part of Pennsylvania just about the northernmost extent of its range.

Habitat. The green salamander appears to prefer only sandstone outcroppings of a particular geological formation in Pennsylvania, in areas that are damp, but not necessarily wet. It takes refuge in the sheltered, narrow crevices typically found in these large faces of stone. It would not be unusual either to find the green salamander curled up under a stone or beneath the loose bark of a rotting tree or stump. Although it likes humid areas, it also seeks protection from the sun and rain. It occasionally climbs trees, but most often is seen at or near ground level.



Black Rat Snake

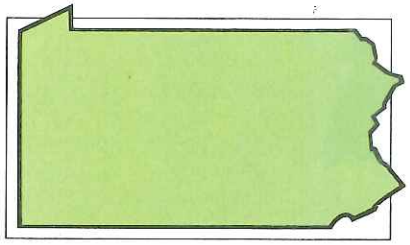
Elaphe obsoleta obsoleta

General characteristics. This is the familiar "black snake." The black rat snake is the largest of 21 species generally recognized to be indigenous to the state. Adult lengths of 42 to 100 inches have been recorded. The black rat snake is active during the day throughout the cooler months of spring and autumn. As the long days of summer grow hotter, it becomes more nocturnal in its movements, resting in a cool retreat as daytime temperatures climb. The black rat snake is a powerful constrictor. It uses this physical strength to subdue its prey by suffocation. Musk glands located in the vent can emit a foul-smelling fluid, a defensive trait common among snakes.

Identification. The black rat snake is plain, shiny black. The skin between its scales may be bluish white, yellow, red or orangish, although this coloration is not always evident. The belly of the black rat snake is an even shade of white or yellow with darker mottling of gray or brown. The belly becomes more slate gray as it approaches the tail. The chin and throat areas are a toneless white or cream. The head of the black rat snake is clearly defined in relation to the neck and body. A flattened snout seems to emphasize the head's squarish appearance. Also, the black rat snake does not have the rounded or tubular body common to most snakes. Its belly is flat, meeting the sides at an angle. If one could imagine it viewed from the end, it would resemble a loaf of bread rather than appear circular. The black rat snake has a divided anal plate. The scales are only weakly keeled.

The young black rat snake is deeply patterned down the back and onto the tail. The vivid dark-gray or brown blotches contrast strongly at first with the paler gray body tones, but as the snake grows the pattern darkens. By the time the snake approaches three feet in length (about two years old) these markings are often lost, and it has assumed the uniform black appearance of the adult black rat snake. The pattern, on close examination, can sometimes still be seen.

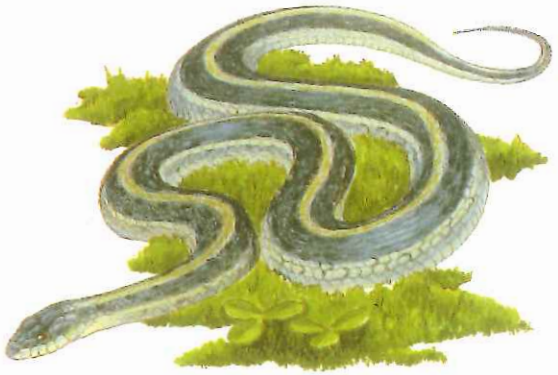
The black rat snake frequently is confused with the black racer, but several elements can be used to distinguish between the two. First, the head of the black racer is narrow. The black rat has a squarish head, more broad and with a flattened snout. Second, the scales of the black racer are smooth and unmarked with other colors. The scales on the middle of the back of the black rat snake are slightly keeled, and although its scales seem to be edged in bluish white or yellow, the skin between them is the lighter color.



Range. The black rat snake ranges from southern New England and Ontario south to Georgia, and from Wisconsin to Louisiana. The entire state has some population of black rat snakes, and it is seen quite frequently.

Habitat. The black rat snake occupies a variety of habitats. Anglers, hikers and farmers can expect to see one of these large snakes almost anywhere. It prefers hardwood forests, wooded valleys and hillsides, but the black rat snake might feel just as welcome in an old field, barnyard or active farmland.

Farms might be a favorite because they usually offer a good supply of mice and other small mammals. The black rat snake is an excellent climber and uses small angles protruding from the belly scales to grip the rough bark of a tree. This ability allows easy access to the hollow cavity of an old tree and possible relief from unbearably hot summer temperatures. As winter approaches, the black rat snake seeks shelter underground, sometimes denning with rattlesnakes or copperheads.



Eastern Garter Snake

Thamnopnis sirtalis sirtalis

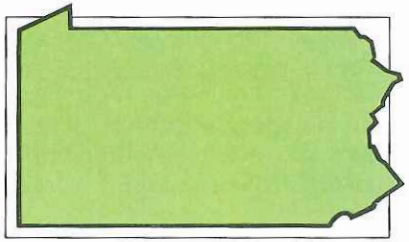
General characteristics. The chances are very good that anyone who has spent any time at all outdoors has seen an eastern garter snake at least once. It is the most widely distributed and familiar snake in North America. Adults attain lengths of 18 to 26 inches, a bit larger than the shorthead garter snake, but about equal to the ribbon snake, a close cousin.

Doing most of its traveling and foraging during the day, the eastern garter snake is active over a longer period than most other snakes. Able to tolerate colder temperatures, it leaves the den first in the spring and it's the last to hibernate in the fall.

A built-in defensive mechanism consisting of musk glands may cause potential attackers to have second thoughts. Discharge of a repugnant odor from the gland located in the vent would repel all but the most determined. The garter snake also may assume a defensive posture by flattening its body, hugging itself against the ground as do the water snakes, to which it is related.

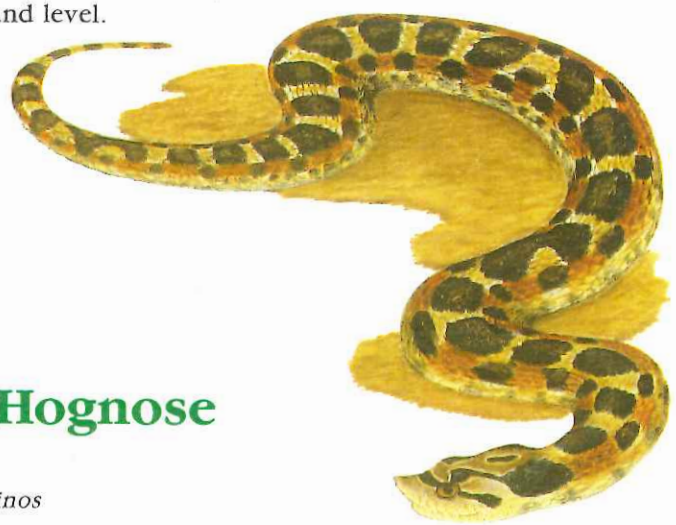
Identification. The eastern garter snake is dark greenish to black across the body. Stripes, normally three, trail down the back and sides. They can be yellowish to brown or greenish, but regardless, usually are well-defined. A double row of spots commonly appears between the stripes. The belly of the eastern garter snake varies from greenish to shades of yellow and includes two rows of indistinct black spots. Like the shorthead garter snake, the eastern garter snake displays keeled scales and a single anal plate.

Range. The eastern garter snake appears over a wide range. It is found from Florida and the Gulf Coast north to well inside Canada. It goes as far west as eastern Texas and Minnesota. A statewide resident, the eastern garter snake has been found in all of Pennsylvania's 67 counties.



Habitat. This snake is often seen near water, where it locates some of its favorite food. The eastern garter snake also likes wet meadows, marshes and damp woodlands. It is a frequent visitor to farms and parks where it might be seen hunting food in the midst of moist vegetation. Even an urban area, especially where moisture or damp ground is found, could be a host to this well-known reptile.

restricted to ground level.



Eastern Hognose Snake

Heterodon platyrhinos

General characteristics. The hognose snake has been pegged with several formidable-sounding nicknames: puff adder, hissing adder and spreading adder. All arise from a behavior contrived to scare off would-be attackers. When disturbed, the hognose snake widens its neck to take on a hood-like appearance (See Figure VI-17). It does this by flattening the head and neck, spreading long rib bones outward. Then, inflating the body with air, hissing and striking out, the hognose snake suddenly resembles a fearsome-looking creature, but it is harmless.

If awards in various categories were given to snakes, the eastern hognose snake would win hands down for "most dramatic performance." It alternates between playing dead and performing a series of aggressive-looking maneuvers that ultimately prove to be more of a decoy than anything else.

If approached, the hognose snake may attempt to fool the intruder by rolling over and "playing dead." A few convulsive jerks may first set the stage and then with mouth agape and tongue hanging out, the performance ends with the body frozen in place. If picked up, the snake suddenly goes limp. But returned upright to the ground it again quickly rolls over on its back, apparently forgetting it is "dead."

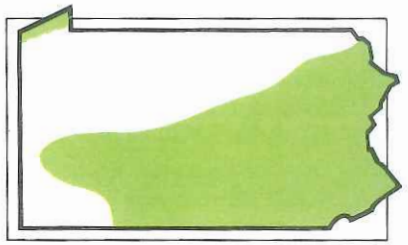
Figure VI-17

Spreading its neck hood-like is only one ploy used by the eastern hognose snake to scare off an intruder.

In Pennsylvania, the eastern hognose snake resides in a major portion of the state, although it is not found in abundant numbers. Adult sizes vary from 18 to 45 inches.

Identification. A pointed and slightly upturned snout gives the hognose snake its name. It has a wide neck leading to a stout body. The body color varies and may be yellow, tan, brown, gray or reddish-hued. More or less square blotches appear on the back, alternating on their edges with round dark spots. Some specimens have been observed on which there are no discernible blotches. Instead, they are a uniform black, brown or greenish. The belly is yellow, light gray or pinkish and is mottled with gray or shades of green. The underside of the tail is lighter than the belly. A divided anal plate and scales that are keeled complete the description.

Range. The eastern hognose snake, though limited in numbers, inhabits roughly the eastern two-thirds of the state. Its range arcs from Somerset County in the southwest to Wayne County in the northeast. It also dwells in a portion of the Lake Erie Drainage. Outside of Pennsylvania, its range extends from New England to Florida and west to Minnesota and Texas.



Habitat. The hognose snake likes dry terrain, preferring open areas, thinly wooded uplands or rock-strewn hillsides. Sandy and other dry soil that is easily crumbled attracts the hognose snake, and it occasionally is seen by farmers working their cultivated fields. During the winter months, the hognose snake seeks relief by burrowing deeply into the soil.

Reproduction. Mating can occur in either the spring or fall. The hognose snake lays eggs usually in June or July, but sometimes as late as August. The female deposits from six to 61 eggs in a shallow cavity of loose or sandy

Eastern Milk Snake

Lampropeltis triangulum triangulum

General characteristics. In Pennsylvania at least, the eastern milk snake is the subject of more tales and is more often mistakenly identified than any other snake. It is among the state's most beneficial snakes, but sadly, is also the most often killed in mistake for a copperhead. Actually, there is only a superficial resemblance between these two snakes. The head of the copperhead is an easily recognized coppery color without any marks. The head of the milk snake is light with brownish marks. The belly of the copperhead is unmarked and a uniform cream or off-white. The belly of the milk snake is white with dark splotches resembling a checkerboard pattern (See Figure VI-18).

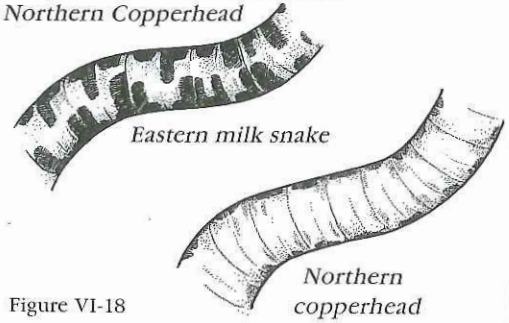


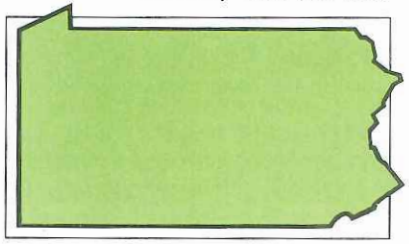
Figure VI-18

Other snakes confused with the milk snake include the northern water snake with its keeled scales, compared to the milk snake's smooth scales. The northern water snake also has a divided anal plate. The milk snake's anal plate is single. The juvenile northern black racer and black rat snake, which unlike their adult counterparts are patterned, can be told by the anal plate. Both have divided anal plates compared to the single plate of the milk snake.

The milk snake, contrary to popular belief, does not milk cows. Thus, this alleged habit hardly contributed to its name. Rather, the name probably originated from its habit of spending a lot of time around barns, not a bad idea considering its fondness for mice.

The eastern milk snake, although considered to be more secretive than many other snakes, still is seen quite often. It appears in numbers throughout its range. Adults attain lengths of two to over four feet when fully grown.

Identification. The most important identifying characteristic of the eastern milk snake is its belly. The belly is white or cream-colored with dark more or less square splotches that create a checkerboard effect. This definitive pattern separates the milk snake from the copperhead, which has a uniformly colored white to grayish belly with sometimes mottled markings or cloudy blotches (See Figure VI-18). The body of the eastern milk snake is gray or tan. This color is interrupted with chocolate-brown to reddish-brown blotches or saddles that cross over the back and down each side. These darker saddles are bordered with black. They are widest across the back, nearly rectangular but may become narrower as they continue down the sides. This, too, can be used to distinguish the milk snake from the copperhead, which has dark bands that are at their narrowest across the back, wider at the bottom. Smaller, dark blotches also appear low on the side, near the belly. They fall in place between the bottoms of the larger saddles. A Y-shaped or V-shaped dark mark appears on the nape of the neck, extending onto the head. Smooth scales shield the body and the anal plate is single.



Range. You are likely to run into the eastern milk snake nearly anywhere in the state because it is distributed in all 67 counties. It occurs over much of the Northeast, extending well into Canada and west to Minnesota.

Habitat. The milk snake does not prefer any particular type of habitat and is apt to reside in suburban as well as rural areas. Damp bottomland, meadows and farmland harbor the milk snake. But pine forests, open deciduous forests and rocky hillsides also are acceptable to the milk snake in which to make its home and forage for food. Rotting logs and damp trash offer convenient places for the milk snake to take refuge.

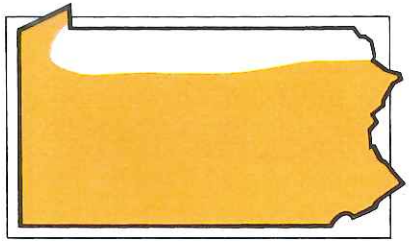
Eastern Box Turtle

Terrapene carolina carolina

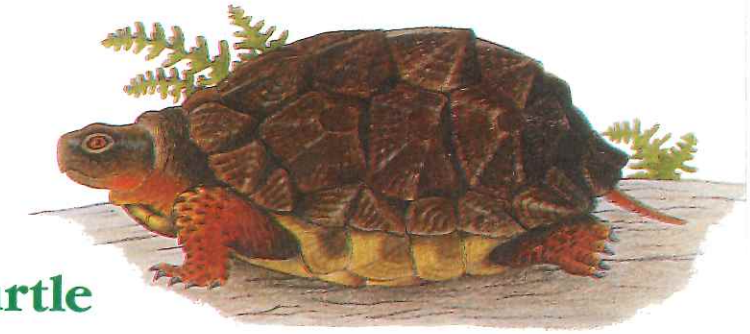
General characteristics. Because it is primarily a terrestrial animal, the box turtle is perhaps the one turtle species most often seen in its range. Many people have had the opportunity to identify a box turtle because it occurs in urban as well as suburban areas. It usually moves about in the early part of the day or soon after a summer rain. The eastern box turtle reaches an average shell length of just over four inches to as much as six inches as an adult.

Identification. The carapace of the eastern box turtle is high-domed and keeled. Color and patterns vary greatly, but black or brown are probably most often seen, with markings of yellow, orange or olive. The sharply rising dome-shaped upper shell is a good identifying characteristic. The colors on the plastron are quite varied. Markings may range from yellow-orange to olive, on a tan, brown or black background. The plastron has a single broad, movable hinge that allows the box turtle to close it tightly against the upper shell. It thus becomes effective protection from predators or other disturbances. The male usually has red eyes, and the eyes of the female are normally yellowish brown. The upper jaw ends in a down-turned beak (See Figure IV-1).

Range. The eastern box turtle inhabits an area encompassing a large segment of the eastern states. It extends from the lower New England states to Georgia and west to Tennessee and Illinois. It inhabits a large portion of Pennsylvania. It resides over most of the southern two-thirds of the Commonwealth. Its range in the west also reaches northward into the Lake Erie Basin.



Habitat. Although essentially a terrestrial animal, the box turtle enjoys soaking for hours at a time in wet mud or water. It likes moist, forested areas but does not insist on woodlands, and often can be seen in wet meadows or flood plains. During the hot, steamy months of summer, the box turtle actively seeks out a swampy area where it burrows in the cooling retreat of logs or rotting vegetation.



Wood Turtle

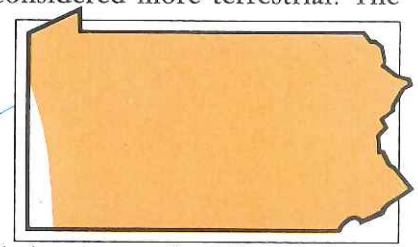
Clemmys insculpta

General characteristics. The wood turtle is often called the "sculptured turtle." Looking at its upper shell, it is easy to understand how it obtained this descriptive nickname. Its carapace appears as if an artist had taken a fine-edged knife and carefully carved an intricate, nearly symmetrical pattern from a piece of dark wood. Adults grow until the upper shell measures five to almost eight inches in length. Other than the box turtle, the wood turtle is Pennsylvania's most terrestrial turtle. During the late 1800s to early 1900s, this turtle was available at market for its meat.

Identification. The upper shell of the wood turtle is brown and keeled. Its scutes, or large scales, are pyramidal, a series of concentric growth ridges and grooves, larger on the bottom, becoming smaller as they approach the top. These exaggerated scales appear sculptured and are rough to the touch. The plastron, or lower shell, is yellow, and each of the scutes is margined on the outer edge with black blotches. The plastron is hingeless and can aid in distinguishing this turtle from the box and Blanding's turtles, which are considered "land" turtles like the wood turtle. The lower shell of the male is concave. The female's lower shell is flat or slightly convex. The skin on the neck and front legs is frequently reddish orange. The tail is moderately heavy and nearly as long as the carapace, or upper shell.

Range. The wood turtle's range extends from Nova Scotia south to Virginia. The wood turtle is found in most of the state's 67 counties but is missing from the western border.

Habitat. Although a terrestrial turtle, the wood turtle is very much at home in the water. In fact, it hibernates in water during the winter months. In Pennsylvania, only the box turtle is considered more terrestrial. The wood turtle wanders from home, ranging far afield if necessary to find its favorite habitat, which includes cool streams. It is especially fond of streams running through a hardwood forest. It can be found in marshy meadows and other farmland and is attracted to swampland with stands of red maple. It is an excellent climber, and even manmade barriers such as fences do not necessarily stop the wood turtle from going where it desires.

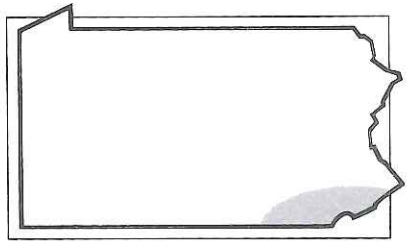


Broadhead Skink

Eumeces laticeps
Candidate Species

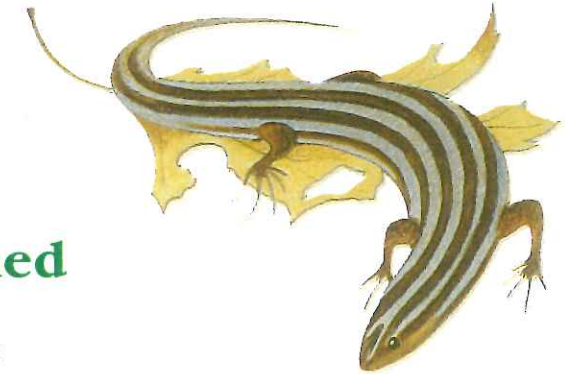
General characteristics. The broadhead skink is the largest of three skinks that inhabit Pennsylvania. Adult sizes range from just over six inches to a bit more than 12 inches, including the tail. The minimum length of an adult broadhead is barely less than the maximum size attained by Pennsylvania's other skinks. The broadhead skink is most active during the day, similar to others of the family. It has been placed on Pennsylvania's List of Candidate Species.

Identification. The outstanding characteristic of this skink is its head. On the male, it is large and gives the impression of having swollen cheeks. The body of this reptile is brown to olive-brown and the breeding males are striking with their orange-red heads. There may be five light stripes down the body of both sexes during their early adult life, but these usually fade with age to become indistinguishable in the fully adult male. The juveniles are black with a bright blue tail. Five to seven brilliant yellow stripes are quite evident on the young, but patterns and colors fade with age and length.



Range. Pennsylvania is on the extreme northern limit of this reptile's range. It is found only in the southeast corner of the state, and extends to central Florida. It ranges as far west as Kansas.

Habitat. Largely a woodland creature, the broadhead skink is the most arboreal of the state's skinks. It likes moist woods but also resides in open areas that provide adequate protection in the form of vegetative debris or other matter.

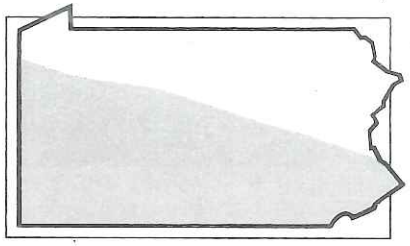


Five-lined Skink

Eumeces fasciatus

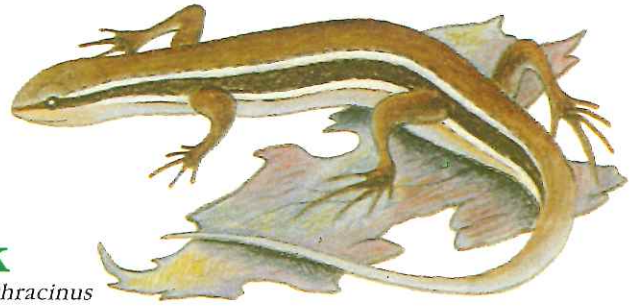
General characteristics. The five-lined skink is another of the state's smooth, shiny lizards. It is most comfortable in a temperature range of 78 to 85 degrees. These temperatures suit Pennsylvania's lizards and they are most active in this range. Like other skinks, the five-lined skink is diurnal and spends much of the day in search of food. It reaches an adult size that varies from five to just over seven inches.

Identification. This skink is brown to black with five broad, light stripes running the length of the body. In some adults, the pattern nearly fades completely with age. As the ground color becomes lighter, the stripes become darker. The tail of the juvenile is bright blue, turning gray as the skink grows older. During the breeding season, the head of the male is usually swollen and turns red-orange.



Range. This skink is found from New England to Florida and west to Wisconsin and Texas. The five-lined skink inhabits about two-thirds of the state, generally south of a line drawn from Crawford County in the west to Bucks County in the east.

Habitat. It occasionally is seen in gardens or around homes, especially in damp areas, but it prefers humid woodlands. Decaying matter, abundant in most forests and even small woodlots, attracts the five-lined skink.



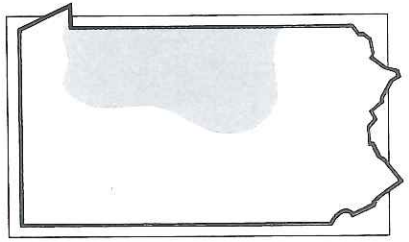
Northern Coal Skink

Eumeces anthracinus anthracinus

General characteristics. A member of a single, very large family of skinks, the northern coal skink is difficult to distinguish from others of its genus. The coal skink does most of its foraging during daylight hours, as do other skinks. Adult sizes range from five to seven inches.

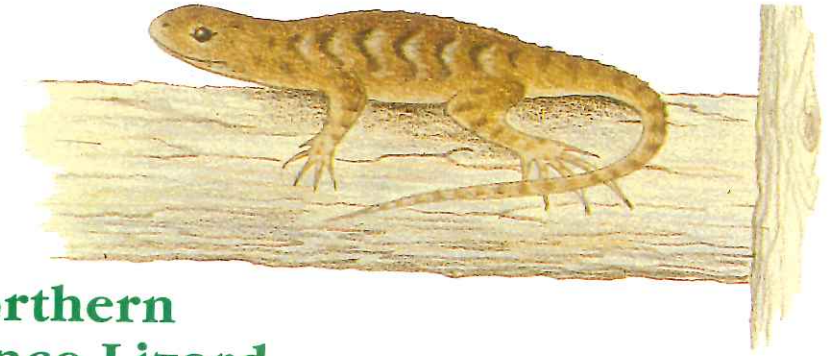
Identification. The body of the northern coal skink is brown. Two pairs of light stripes, each enclosing a dark band, extend from the neck onto the tail. There are no light lines on the head of the coal skink, which helps distinguish this skink from the two others found in the state. The breeding male might have a reddish head. The young have a blue tail, but otherwise are marked identically to the parents.

Figure V-6 *Its bluish tail marks this northern coal skink as a juvenile.*



Range. In Pennsylvania, the northern coal skink is known from the northcentral, a portion of the northwest, and one southwestern county. Its population is scattered and does not occur in large numbers anywhere in its range. It is also found in portions of New York, the Virginias and Kentucky.

Habitat. It prefers damp, moist woods, especially those with an abundance of leaf matter or loose stones. Springs, with their welcome supply of cool water, are favorite spots. Even so, this animal often occupies drier, more rocky open areas. When frightened, the coal skink quickly dives into water where it finds shelter beneath a convenient rock.

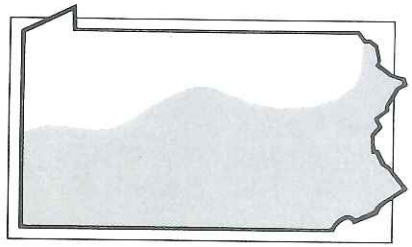


Northern Fence Lizard

Sceloporus undulatus hyacinthinus

General characteristics. The northern fence lizard belongs to a group of lizards commonly known as "spiny lizards." It is the only one of its genus in Pennsylvania. The northern fence lizard is not a large lizard. Adults range in size from four to seven inches, even though other members of its family in other parts of the world may reach 72 inches in length. It is diurnal and can be seen sunning itself, like many other reptiles. It spends a great amount of its time in trees where it hunts, rests and finds safety when frightened.

Identification. The northern fence lizard varies from gray to brown. Colors on the belly range from whitish to greenish blue to pale blue. There may be dark, wavy crossbars on the back, which are most evident normally on the female. The male has a blue patch near the base of the throat. The scales on the back of this lizard are keeled and pointed. They are jagged and rough to the touch, which explains its nickname, "spiny" lizard.



Range. This reptile, territorial by nature, is located in roughly the southern two-thirds of Pennsylvania. Its range might extend a bit farther north within the Delaware River Basin. It can be found from New York to Georgia and west to Kansas and central Texas.

Habitat. The fence lizard defends its territory with an elaborate physical display that includes head-bobbing and open-mouthed gestures. Then, while appearing to do push-ups from its two front legs, the northern fence lizard inflates its chest and throat in an all-out effort to threaten an intruder.

Generally, the preferred habitat that it so vigorously defends is a sunny area of grassy or open woodland. It likes rotting logs and outcrops of rocks from where it can survey its domain. It often sits on a tree stump or fence, but usually is not far from a tree or wall where it can flee quickly to safety. When frightened, it scampers up a tree skirting to the opposite side where it remains motionless until it again feels safe. If caught from behind, the lizard quickly parts with its fragile tail. In time the broken appendage is replaced.

Eastern American Toad

Bufo americanus americanus

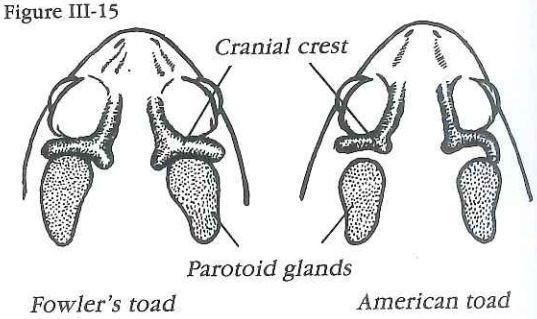
General characteristics. The eastern American toad, closely related to Fowler's toad, is more widely distributed in Pennsylvania. It can be confused with Fowler's toad, although there are several characteristics separating the two. They are noted here and in the description of Fowler's toad. Average adult size of the eastern American toad is two to 3½ inches, about the same as Fowler's.

The eastern American toad, however, can tolerate colder temperatures and thus goes into hibernation a bit later than Fowler's and emerges a few weeks earlier in the spring. The eastern American toad is primarily nocturnal and spends most of its day sheltered among piles of leaves or burrowed under loose rocks. So even though it is an abundant toad throughout most of its range, its nighttime habits prevent it from being seen very often.

This is the common "hoptoad," so-called because of its "hopping" in moving from one area to another, rather than "leaping," as frogs do. Characteristic of other toads, toxic secretions from skin glands can irritate mucuous membranes. People do not, however, get skin warts from this or any other toad.

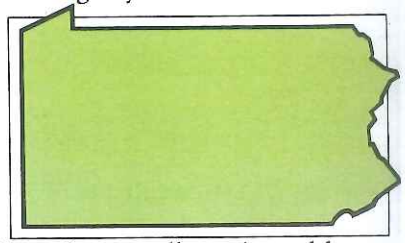
Identification. Various patterns or patches in light colors, usually buff or yellowish, mark the eastern American toad. These patterns occur over a background color that usually is brown, but that also can be olive to brick red. In some specimens, a light stripe runs down the center of the back. The forward part of the belly, or abdomen, and the chest are spotted, compared to the plain underparts on Fowler's toad. Dark spots in brown or black range over the back. Each of these larger spots contains only one or two warts; Fowler's has three warts in each. These warts are red, yellow, orange or sometimes dark brown. The warts on each thigh are enlarged, bigger than on Fowler's toad. The parotoid gland (located behind the eye) is more kidney-shaped than the elongated gland of the Fowler's toad (See Figure III-15). On the eastern American toad, this gland does not touch the cranial crest (a bony ridge) behind the eye, or if it does, it is connected only with a slight spur. On the other hand, the gland on Fowler's toad comes in direct and full contact with this crest (See Figure III-12).

Figure III-15



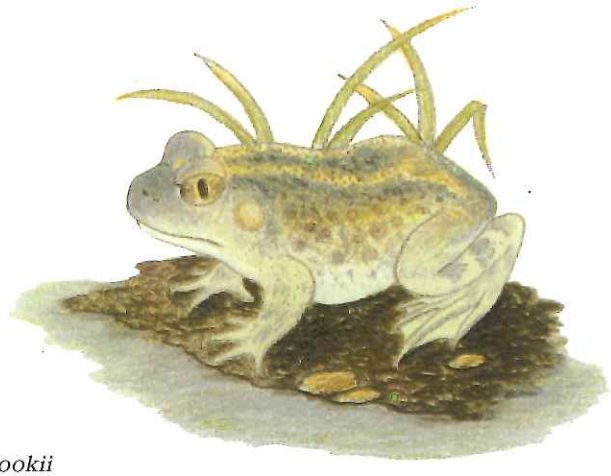
The eyes of the eastern American toad are elevated well above the head. The pupils are horizontally shaped and black; the iris is golden on this toad, compared to Fowler's bright yellow.

Range. Distributed statewide in Pennsylvania, the eastern American toad is a wide-ranging amphibian residing east of the Rocky Mountains. It is found from the warm climes of Louisiana to the cold of the Labrador Peninsula in Canada.



Habitat. This amphibian has adapted to a variety of habitats and can be found in populated areas to remote wilderness regions, from well-manicured lawns to grassy fields and heavily forested, often rocky mountains. It has two requisites for suitable habitat over most anything else: The area must be moist and include an area of shallow water for breeding, and the area must have an abundance of insects. It is often seen foraging over plowed fields

Eastern Spadefoot Toad



Scaphiopus holbrookii holbrookii

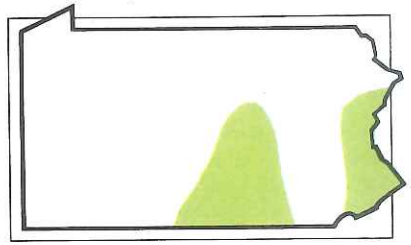
General characteristics. The eastern spadefoot toad is similar in appearance to the true toads. However, its skin is smooth and covered with minute tubercles, unlike true toads, which have rough, warty skin. It is the only spadefoot east of the Mississippi River. The adult size of the spadefoot is 1¾ to 2¼ inches, averaging a little less than the American and Fowler's toads.

The eastern spadefoot has a built-in repellent, as do all other amphibians, including toads. Skin secretions emitted from glands can cause irritation, especially to mucous membranes, even on humans. The secretions can be fatal to certain predators.

Identification. The primary key to identifying the eastern spadefoot toad is the hard sickle-shaped spade on each hind foot. This horny, sharp-edged tubercle can be found at the base of the shortest toe; there is only one spade. On the true toads, each foot has two enlarged tubercles, only one of which is sometimes hardened and spade-like (See Figure III-13). Also, unlike true toads, the spadefoot toad has teeth on the upper jaw.

The skin of the spadefoot toad is relatively smooth and covered on the back and sides with tiny, scattered tubercles. The body color can range through various shades of brown to yellowish or grayish to nearly black. The lighter shades frequently are mottled with darker pigments. There may be two light lines starting at the eye and continuing down the back. These lines, if present, are irregularly shaped and yellowish. Sometimes a light line also runs along each side of the body. The underside of the eastern spadefoot is white to grayish and unmarked.

The tympanum, or external eardrum, is distinct and obvious. The parotoid glands, on the other hand, are inconspicuous and appear to be absent. The eyes are prominent, elevated well above the upper surface of the head; the iris is golden. The pupil is black and vertically shaped, not horizontal as in the case of the toads.



Range. In Pennsylvania, the eastern spadefoot toad resides in a split range. Populations are found in southcentral Pennsylvania in the Susquehanna River Valley from the Maryland border to the northcentral part of the state. The range becomes more narrow as it moves northward. The spadefoot also occurs along the extreme eastern edge of the state, beginning in the southeast corner where it follows the Delaware River Valley north to Monroe County. Its range extends into parts of New England and as far south as central Florida. Its western boundary is Missouri.

Habitat. The eastern spadefoot toad especially likes sand, gravel or loose loam into which it can quickly burrow for protection. In the eastern United States, this species may be at home in forested or brushy areas, even cultivated land. However, other species of the spadefoot in more arid areas of this country usually are restricted to the preferred sandy soils more common to those areas.

The spadefoot seeks protection from adverse weather and predators by digging furiously into the loose soil. Using a backward digging movement and the spade on its hind legs as a digging tool, the spadefoot can be inches underground in a very short time. The burrow is dug nearly vertically five to 10 inches deep. The spadefoot can spend weeks, even months, underground, coming out only on warm, damp evenings to survey its surroundings or seek a meal. If it has time only to dig a very shallow hole, or if it wants to sit near the mouth of a deeper burrow, the spadefoot is able to assume a position that fills the opening. Facing outward, the spadefoot rests its chin on the front feet with the head bent downward. Tucking its feet in close and with eyes shut, the spadefoot expands its lungs to cause its sides to puff out, filling the passageway. Under these circumstances, the spadefoot is difficult to detect or grab, and closing off the entrance, it prevents any intruder from getting in behind.

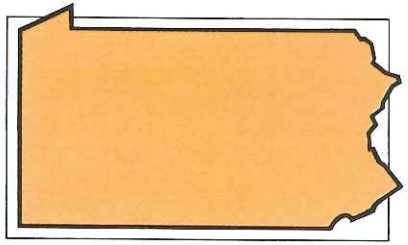
Four-toed Salamander

Hemidactylium scutatum

General characteristics. The four-toed salamander is a secretive amphibian in its adult terrestrial life as well as during its aquatic larval stage. It has a novel defensive mechanism that enables it to flee from an attacker, with some sacrifice. If grabbed by a predator, the tail easily breaks from the body, the four-toed salamander slips away, and the hunter is left holding the small, twitching appendage. After escaping to a safe retreat, this delicate creature bides its time, waiting for a new tail to be regenerated. The four-toed salamander is small, with adult lengths reaching only two to 3½ inches.

Identification. There are two distinguishing characteristics that help identify the four-toed salamander. One is the basis for its common name; only four toes appear on each hind foot, where most other salamanders have five toes. The other important and distinctive feature is the belly. It is marked with large, bold, black spots that stand out predominately against an almost pure white. The back of the four-toed salamander is reddish brown to yellowish tan; its sides tend to be gray. The thick tail is marked near its base with a constrictive ring, indicating the point at which it would separate. The number of costal grooves varies from 12 to 14.

Range. Although scattered populations occur in many states, the basic range of this salamander extends from Nova Scotia to Wisconsin and south to Alabama. The four-toed salamander may range statewide in Pennsylvania although its numbers are spotty.



Habitat. The sparse population of this interesting creature no doubt reflects its special habitat requirements. It prefers boggy areas with an abundance of sphagnum mosses, and in Pennsylvania that somewhat restricts its range. Leaf litter in damp, forested areas might also be acceptable habitat, but a woodland pond would have to be close by. This small amphibian, with its special needs, has quickly felt the negative impact of agriculture and expanding urbanization.

Fowler's Toad

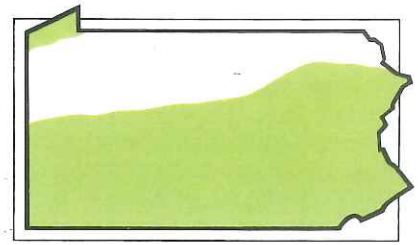
Bufo woodhousii fowleri

General characteristics. One of only two true toads in Pennsylvania, Fowler's toad is abundant throughout most of its range. It does most of its foraging at night, preferring to rest during the day when it burrows into the ground or hides among clumps of grasses. It is more slender and more agile than our other toad, the eastern American, but it cannot tolerate temperatures as low as the American toad can withstand. As an adult, Fowler's toad averages two to three inches in length, nearly identical to the eastern American toad.

Identification. The skin of Fowler's toad is dry, a common trait among toads. Its general coloration is brown or gray with an occasional greenish specimen showing up in the population. A light, nearly white stripe runs down the middle of the back. Large dark spots or blotches, more or less arranged in pairs, cover the back. Each of the largest spots contains at least three warts. On the underside of this toad, the belly is white and unmarked, although a dark spot sometimes is found on the chest. Warts cover the thighs, but they are small compared to those found on the eastern American toad.

The parotoid, or shoulder, glands are elongated (compared to kidney-shaped ones on the American toad). They come in contact with the cranial crests just behind each eye (See Figure III-12). The throat of the male is black; the female's throat is a very light shade. The underside of each hind foot of the Fowler's toad bears two tubercles. These tubercles should not be confused with the single, stiff spade protruding from each hind foot of the spadefoot toad (See Figure III-13). The eyes of the Fowler's toad have horizontally oval pupils with bright yellow irises.

Range. Except for populations in the Lake Erie Watershed in the northwest, Fowler's toad in Pennsylvania is restricted to the southern two-thirds of the state. From there it extends along the Atlantic Coastal Plain to North Carolina and westward to Missouri.



Habitat. Fowler's toad likes low-lying areas, especially where it can find sandy soils along the water. But marshes and even slight depressions temporarily filled with rainwater are accepted by Fowler's toad as suitable—though perhaps not permanent—habitat. It frequently forages among landscaped flower or vegetable gardens usually at night. It spends most of the day burrowed beneath the ground.

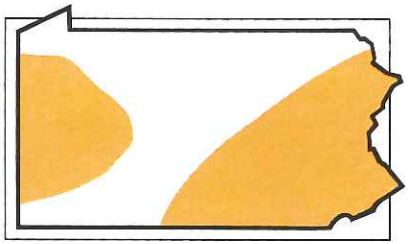
Marbled Salamander

Ambystoma opacum

General characteristics. Another of the so-called mole salamanders, the marbled salamander is a secretive creature, not often seen even by people who regularly spend time in the outdoors. Most of the reported sightings occur during the breeding season when the male and female leave their well-hidden shelter to mate. This amphibian reaches adult lengths that range from 3½ to just over four inches.

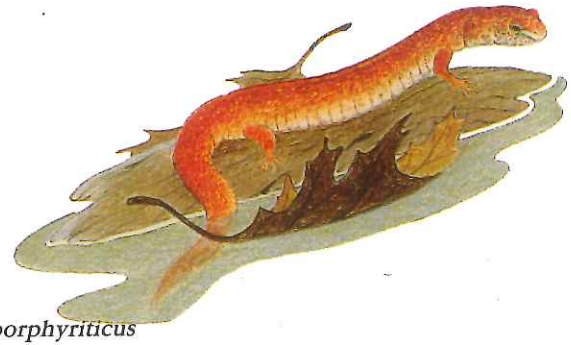
Identification. The marbling effect that sets off this chunky salamander is a study in strong contrast. The body is dark gray to black, with bold white or silvery crossbands. On the female, these bands tend to be a bit more gray. Occasionally the crossbands run together on the sides, encasing a black area within a striking outline of white. The belly is black and unmarked. The marbled salamander has 11 or 12 costal grooves.

Range. The marbled salamander inhabits the entire East Coast of the United States from New England to Florida. In Pennsylvania, two populations have been identified, with the smaller one in the western part of the state from Westmoreland and Indiana counties to Crawford County. For the most part, the Allegheny Mountains appear to form a western barrier to the species. Residing also in southeastern Pennsylvania, the range extends up to Centre County, then takes a swing to the northeast entering Wyoming and Pike counties. It is more numerous in this southeastern range than in the northwest.



Habitat. The marbled salamander adapts to a variety of habitats encompassing woodlands and low, swampy areas to relatively dry hillsides. Sandy, even gravel-laden terrain supports the marbled salamander, which prefers a drier habitat than other members of its genus.

Worms and grubs are a favorite prey of marbled salamanders.



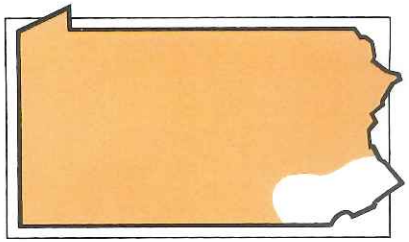
Northern Spring Salamander

Gyrinophilus porphyriticus porphyriticus

General characteristics. The northern spring salamander is the largest of several lungless salamanders that occur in Pennsylvania. Adult lengths range from nearly five inches to 7½ inches. It is sturdily built and nimble. This amphibian is at least partly nocturnal.

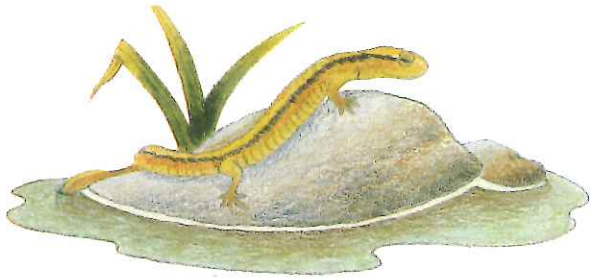
Identification. The basic coloration of the northern spring salamander is salmon although variations occur through tints of reddish brown, yellowish brown or light orange. The back and sides sometimes have markings, and even then are often nearly obscured, appearing as a very subdued mottling. These spots also are scattered about the throat. The belly is lighter. A light line edged with black begins at the eye and extends downward to the nostril and can help identify this colorful creature. There are 17 to 19 costal grooves.

Range. The northern spring salamander extends from most of New England southwestward to Alabama. It is found statewide except for portions of the extreme southeast. It apparently has not made its presence known at least in Philadelphia County and parts of Delaware, Chester, Bucks and Montgomery counties.



Habitat. As could be expected, the northern spring salamander is found in and along areas where water suddenly springs from the earth, but it also lives along fast-moving streams and even in wet caves. Mountain streams of the type that might hold wild brook trout could also contain populations of this amphibian. However, moving water appears not to be a strict requirement because it also is found in wet depressions beneath logs or stones. Forested areas seem to be a favorite.

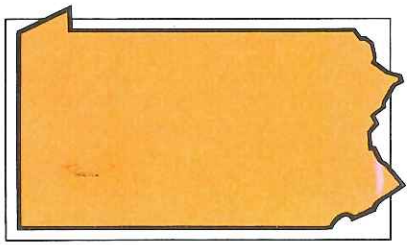
Northern Two-lined Salamander



Eurycea bislineata bislineata

General characteristics. The northern two-lined salamander is one of the brook salamanders, preferring wet, moist areas close to small streams or rivulets. It is not a large salamander, reaching adult lengths of 2½ inches to just under four inches.

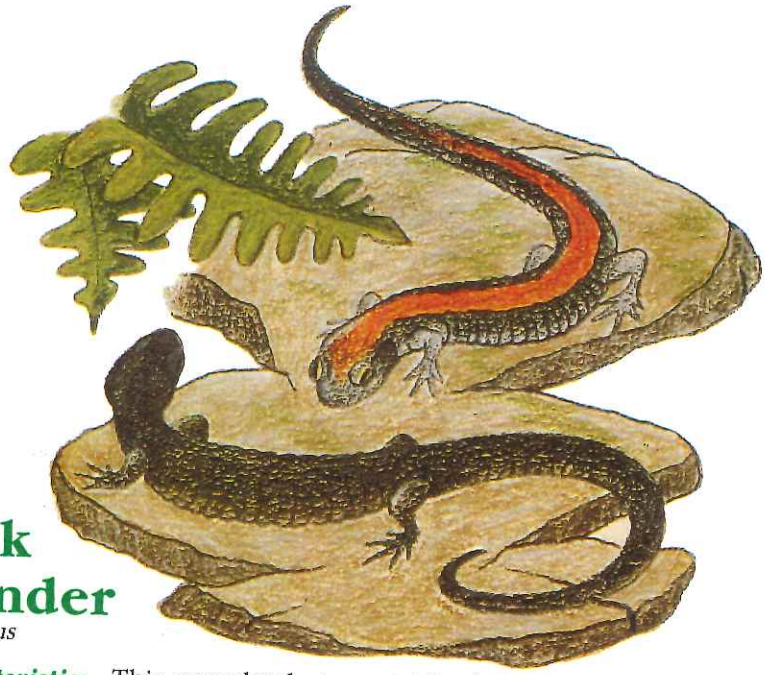
Identification. The primary color of the northern two-lined salamander is yellow, although it may be tinged with brown, green or an orange-bronze. The back is nearly covered with a lighter stripe that runs the length of the body. This broad stripe is bordered with narrower black or dark brown stripes that begin at the eyes and end on the tail where occasionally they break up into small spots. The sides are mottled, and although they may tend to be tan, they still show the characteristic yellow. The belly is bright yellow. There are 13 to 16 costal grooves.



Range. The northern two-lined salamander is distributed statewide. Its range extends from Quebec to Virginia and the Tennessee River Valley, westward to Illinois.

Habitat. The northern two-lined salamander is often found in abundant numbers, depending to a large extent on the habitat. It likes rock-bottomed brooks, preferring small streams to larger waters, although swampland and flood plains have their share of this colorful creature as well. When not in the water, this amphibian takes refuge among the rocks and tree roots lining the water's edge. During wet weather, the northern two-lined salamander may strike out, heading well into the damp forest surrounding its home, exploring, foraging, but always returning to its small, rock-strewn brook.

Reproduction. Courting by the northern two-lined salamander commences



Redback Salamander

Plethodon cinereus

General characteristics. This completely terrestrial salamander occurs in three different color phases; they are described later. Other than in color, however, they are identical. The redback or "lead-backed" salamander is probably observed more frequently than any of the other salamanders within its range.

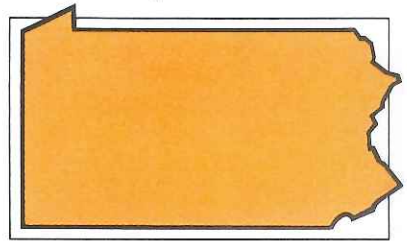
Regardless of color phase, this amphibian grows to adult sizes of just over two to 3⅝ inches.

Identification. This lungless salamander is long and slender. The redback is marked with a broad stripe that begins at the head and flows down the back and over the upper part of the tail, where the stripe shrinks in width. The stripe is usually red, although it sometimes may appear orangish, yellow, pink or light gray. The sides of the redback salamander are black, and this color extends upward to form a straight-edged border on each side of the stripe.

The lead-backed color phase ranges from a light gray to almost black. The solid color is shaded uniformly and it does not have the colorful stripe along the back.

A third color phase is found only occasionally. Marked with an unusual redness, it is referred to as an erythristic phase. The entire body, except for the belly, is red.

Regardless of the color phase the belly is always mottled in a distinctive pattern of black and white. Costal grooves vary a bit through this salamander's range and could number from 18 to 20 depending on the area.



Range. The redback salamander inhabits a large chunk of the northeastern United States, extending west to Minnesota and into Quebec. This amphibian is found statewide in Pennsylvania and could show up in places far from water.

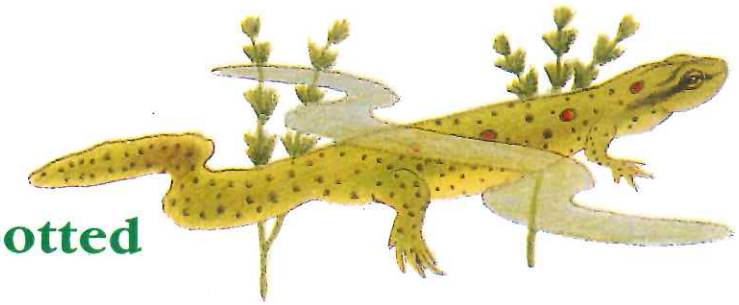
Habitat. It favors cool, moist forests that could include timber stands of hardwoods or conifers or a combination of the two. The redback salamander is fond of hiding under stones, old logs and other objects where it remains sheltered during the daytime hours. In dry weather, this amphibian seeks even more protection by burrowing underground and only emerges after a rainfall. Beneath ground level is also where it seeks relief from the strongest winters. An unusually warm spell during the winter could bring the redback salamander temporarily from the protection of its den. The various color phases could establish residence in the same habitat, although one phase may predominate. In some areas, the entire population may be made up of all-red specimens.

Reproduction. The redback salamander mates from October through April following the rituals of courtship common to the lungless salamanders. By June or July, the female, which lays eggs only every other year, selects a site in which six to 12 eggs are deposited. Formed in a cluster, the eggs hang from the "ceiling" of a cavity that is likely a depression dug out directly beneath a stone or other stable, relatively flat object (See Figure II-12). Sometimes, forsaking the protection of a sheltered cavity, a decaying log may be used as a nesting site. The eggs take about two months to hatch, during which time the female, her body often curled protectively around them, waits for the inch-long juveniles to emerge. There is no aquatic larval stage, and the juvenile redback salamander is a replica in miniature of the adult. Two years pass before maturity is reached.

Figure II-12

A cluster of eggs deposited by a redback salamander clings from the overhang of a cavity.

Food. The redback salamander is a nighttime forager. Leaving its favorite hideaway where it spent the daylight hours, the redback salamander prowls among the leafy debris of its forest home for very small invertebrates. Minute insects and their larvae are the mainstay of this amphibian's diet.



Red-spotted Newt

Notophthalmus viridescens viridescens

General characteristics. The red-spotted newt is actually the adult stage of an amphibian that progresses through three different stages of life: the aquatic larval stage, which immediately follows hatching from the egg; the terrestrial sub-adult stage known as the red eft; and finally, the mature adult, the aquatic red-spotted newt. Each stage has its own coloration and patterns and consumes somewhat different prey, although each retains the usual salamander preference for a carnivorous diet.

The adults remain moderately active all year long. Even during the winter months, red-spotted newts can be seen prowling the stream bottom even though ice may cover the surface.

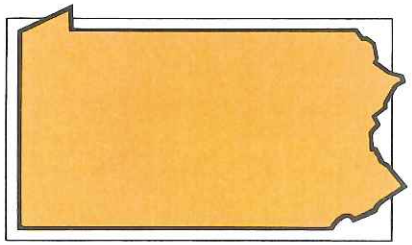
The newts have a built-in protective device, effective in keeping predators at a distance. Even fish avoid the newt, which secretes a toxic substance from glands in its skin. This poisonous matter can at least irritate mucous membranes and is sufficient to discourage would-be predators from making a meal of the newt.

On the average, the red eft is slightly smaller than the newt. The red eft can be 1⅜ inches to 3⅜ inches long, compared to the adult newt's length of 2⅞ up to four inches.

Identification. This amphibian is greenish yellow in its larval stage. It has two grayish lines, located just off center on either side of the back; the lines run the length of the body. At hatching, the larva has gills and just a hint of forelegs.

Two to three months into the larval stage, the forelegs and hindlegs have been developed, the gills are lost and the skin becomes granular and textured to the touch. At this point metamorphosis takes place, the land-dwelling red eft stage is entered and the body becomes a brilliant red to orange-red. A row of black-bordered, round red spots appears on either side of the back; the belly is yellow during this sub-adult stage. Not yet an adult but no longer a larva, the red eft remains terrestrial for one to three years before transforming to become a red-spotted newt.

At the end of the eft stage and within a week of entering the water to live out its life as an adult, the skin of the newly transformed red-spotted newt becomes smooth, and the tail fin develops, becoming compressed vertically to look rudder-like. Its color now is drab olive to yellowish brown or dark brown. The belly remains yellow and is sprinkled with numerous small black spots. A row of red spots, bordered with black, also covers the newt's back on each side. In neither the eft nor newt stages are the costal grooves distinguishable.



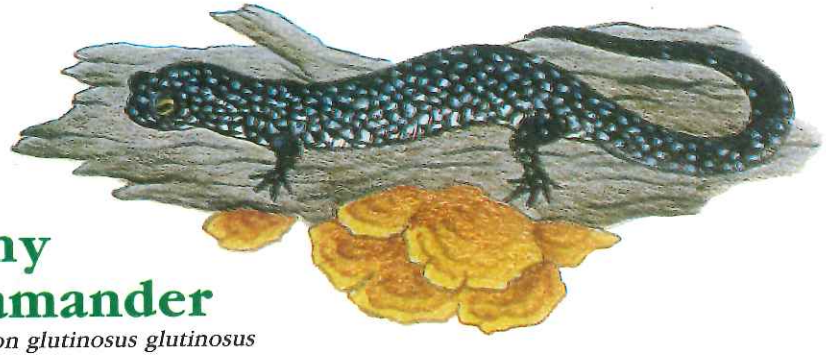
Range. Its range extends from central Georgia and Alabama, northward to southern Canada, and as far west as the Great Lakes. Each one of the state's 67 counties probably has some population of red-spotted newts.

Habitat. Considering its broad distribution, the newt is able to select from a variety of water in or near which to make its home. It prefers water that is more or less still—ponds, shallow lakes, marshland and quiet stretches of streams. Clean water is required and if it is covered with a dense stand of submerged vegetation, that's a plus. The newt alternately can be seen scrambling among the stems of aquatic plants in search of food and crawling methodically across the bottom where sometimes it pauses to rest before swimming away to some other rendezvous.

The newt lives in water, but the land-based eft takes up residence in neighboring damp woods. Preferring forested areas, the red eft likes to avoid exposure to direct sunlight. Even so, it may casually, and with an almost fearless air, stroll across the open floor of its forest home, seemingly oblivious to anything else around it. The red eft is especially active on a rainy day.

Like the adult newt, the sub-adult terrestrial eft may remain mobile all year and only occasionally seek relief from the rigors of winter. When it does decide to hibernate, it does so underground where a more moderate and stable temperature is available.

Reproduction. The red-spotted newt is a spring breeder when the hind legs

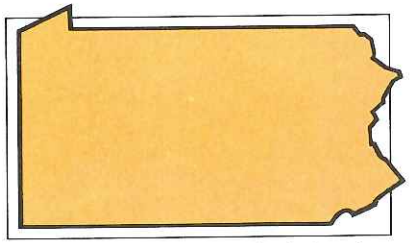


Slimy Salamander

Plethodon glutinosus glutinosus

General characteristics. The slimy salamander is a medium-sized creature of the forest and considered one of the woodland salamanders. Adult sizes range from barely five to nearly seven inches. This amphibian has skin glands that secrete a thick, gluey substance. Extremely sticky, it is very difficult to remove. In the event it gets on your skin, it probably will have to wear off. The slimy salamander wanders about mostly at night, spending its days in hiding.

Identification. The slimy salamander is black, sporting a shiny coat that is marked with whitish or silver-colored spots. The spots are larger on the sides, smaller and scattered over the back and tail. The belly is slate-colored and unmarked. The chin and throat areas are dark gray. There are 16 costal grooves.



Range. The slimy salamander resides along the entire eastern seaboard from New York to central Florida. It ranges as far west as Missouri and Oklahoma. In Pennsylvania, this member of the lungless salamander family is indigenous to the entire state.

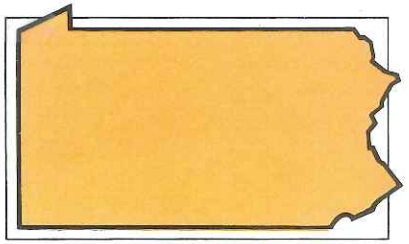
Habitat. Its favorite habitat consists of deep, moist and shaded ravines. Wooded slopes and banks of shale also offer refuge, and it is common to find the slimy salamander beneath large, flat rocks or rotting logs. During the hottest days of summer and in dry weather, it finds a cool retreat beneath a pile of damp leaves. The slimy salamander remains active until autumn's subfreezing temperatures force it to find shelter for the winter. It is among the first salamanders to appear at or near the surface in early spring.

Spotted Salamander

Ambystoma maculatum

General characteristics. The spotted salamander is one of our more common salamanders, although it is not often seen because it prefers to live underground. It generally is considered nocturnal. It reaches adult sizes that range from six to nearly eight inches, equaling or slightly exceeding the Jefferson salamander in average size.

Identification. As might be imagined, large spots are a predominant means by which to identify this salamander. Two rows of yellow or orange spots run somewhat erratically the length of the body. Beginning on the head and near the eyes, the spots end at the tip of the tail. The spots on the head usually are orange even though the spots on the rest of the body could be yellow. The ground color ranges from black, to blue-black, to dark gray or dark brown. The belly is slate gray. A stout body begins with a round snout that is blunt and punctuated with large, dark eyes. There are 12 costal grooves.



Range. In Pennsylvania the range of the spotted salamander extends from border to border in all directions. Except for Florida, southern New Jersey and the Delmarva Peninsula, it extends over the eastern one-third of the country.

Habitat. The state's numerous hardwood forests offer a potential home to this amphibian, providing a pond (which could be temporary) or other wetland is nearby. Hillsides and other areas around woodland ponds seem almost irresistible. The spotted salamander spends most of its time beneath ground level, but also conceals itself in moist areas beneath moss-covered rocks or stones and among piles of leaves or other debris.