Reptiles have long fascinated people. In recent years, biologists have recognized that the class Reptilia should actually include all of the birds, if it is to include all descendents of a particular ancestral form. This is because crocodiles and alligators are more closely related to birds than to lizards. While this makes sense from a scientific standpoint, in common English usage, the term reptile is still reserved for the alligators and crocodiles (crocodilians), turtles, tortoises, lizards, snakes, and the tuatara, a lizard-like animal found only on several tiny islands off the coast of New Zealand. It is not a lizard, but rather the last representative of a group of reptiles that flourished about 200 million years ago.

Ohio’s wealth of natural resources includes some 47 types of reptiles. As with so many of our wild species, the demands we have placed upon the land have greatly reduced their numbers. All of us must keep in mind that being good stewards of the land requires that we take care of not just some, but all of our natural resources – even the box turtle lumbering across the highway and the harmless garter snake in the backyard.
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If we could travel back some 200 million years to the Triassic Period – the early part of the “Age of Reptiles” – we would discover an animal similar to our present day turtles. Unlike most ancient species of wildlife, which have either become extinct or evolved greatly in form, turtles have remained relatively unchanged through the ages.

In Europe, these reptiles were originally classified as tortoises (land turtles), terrapins (hard-shelled freshwater turtles), or turtles (sea turtles). Since many turtles in the New World did not fall neatly into these categories, the meanings have been changed. The term “turtle” now encompasses all aquatic forms. Tortoise is usually applied to the land turtles and terrapin to any of the various edible turtles living in fresh or brackish water, particularly those of the genus *Malaclemys*, the diamondback terrapins. All, however, may be correctly referred to as turtles.

The reproductive biology of turtles is fascinating. With the exception of softshell turtles, the sex of all species of Ohio turtles is dependent on the temperature at which the eggs develop. For instance, snapping turtle eggs that develop at about 77 degrees Fahrenheit will all hatch out as males, while eggs that develop at much higher or lower temperatures will all hatch out as females. In the wild, warmer eggs at the top of a nest may all hatch out as females, while cooler eggs below them hatch out as males.
Musk turtles, also known as “stinkpots,” seem to prefer deep, still water in lakes, ponds, and sluggish streams with muddy bottoms and an abundance of plant life. Their most distinctive marks of identification are the two-bright yellow stripes on each side of the head. These turtles get their name from the foul odor they expel when first caught or teased. This odor comes from a yellowish fluid secreted by two gland openings on either side of the carapace (the upper shell). Like snapping turtles, musk turtles are strongly aquatic and are seldom observed out of water except to lay eggs, or occasionally during early spring to bask in the sun. Unlike most turtles, the female musk turtle is not particular about where she lays her eggs. She may place them on a rotted stump, in a muskrat house, or just about anywhere else above or below ground, as long as water is nearby.
Snapping Turtle
FAMILY CHELYDRIDAE
Chelydra serpentina

The snapping turtle is the largest turtle in Ohio. Large specimens may weigh more than 35 pounds and have a carapace more than 14 inches long. Snappers seldom bask in the sun except in early spring; therefore, though they are very abundant they are not seen as frequently as most other turtles. From May through June, females may be seen crossing roads in search of sites to lay their eggs. Snapping turtles usually provide the meat for turtle soup.

Although the snapping turtle’s powerful, keen-edged jaws are capable of doing great damage to a carelessly placed finger, stories of their snapping broom handles in half are greatly exaggerated. However, great caution should be exercised when handling these exceptionally bold and aggressive reptiles. They should always be carried by the base of the tail, with the plastron (lower shell) toward your body, and well away from your legs.
SPOTTED TURTLE
FAMILY EMYDIDAE Clemmys guttata

This handsome turtle shows a marked preference for the shallow, sluggish waters of wet prairies and meadows, fens, bogs, marshes, small streams, ditches, and pond edges, especially where vegetation is abundant. It occasionally wanders away from water and lives in wet woods. The spotted turtle is most frequently observed in early spring, basking along stream or pond banks, or on objects protruding from the water. When disturbed, it may quickly dive for safety; or it may leisurely walk into the water and swim to the bottom where it may remain motionless, burrow into the muck, or crawl beneath some sheltering object such as a submerged log.

This little reptile should be vigorously protected. Because people have destroyed its natural habitat by altering wetlands, spotted turtle populations have declined greatly throughout Ohio.
The high-domed carapace of the box turtle may carry a wide variety of markings. Usually it is dark brown or black, accented with some combination of yellow streaks or blotches. The box turtle gets its name from its centrally hinged plastron (lower shell), which enables both front and rear portions of the plastron to be drawn up tightly against the carapace (upper shell). This “boxes in” the turtle for protection. Found in woodlands throughout Ohio, the box turtle is our most terrestrial turtle. During the heat of summer, this docile animal spends the day hidden beneath rotting logs, decaying leaves, and other plant debris, venturing out only during early morning or evening. A sudden shower after a dry spell will usually bring out box turtles in large numbers.

Aside from the loss of habitat, a significant threat to Ohio’s box turtles is being run over as they lumber across roadways.
Ohio’s Blanding’s turtles are limited primarily to the northern counties along Lake Erie, where they inhabit the marshy shorelines, inland streams, wet meadows, and swamp forests. Although essentially aquatic, the Blanding’s turtle often travels overland as it moves among different wetlands throughout the year.

The most distinctive field mark is the bright yellow throat and chin which can easily be seen from some distance away. Like the box turtle, the Blanding’s has a hinged plastron, but it is not as functional as the box turtle’s because the front lobe of the plastron cannot be closed tightly. Unlike other species of pond turtles, this large but timid turtle has no difficulty in swallowing food out of water. This turtle is named for William Blanding, the early Philadelphia naturalist who first described it.
The female of this species attains a carapace length of about 10 inches, while the male seldom exceeds five inches. The map turtle’s name is derived from the network of fine yellow lines that crisscross the carapace and vaguely resemble the contour lines on a topographic map. These lines are very noticeable on young specimens but they fade with age.

Map turtles are extremely wary and show a marked preference for sizable bodies of deep water, such as large rivers and lakes, where they can dive to the safety of the depths. The broad, flat crushing surfaces of the powerful jaws are well suited for consuming snails, crayfish, and clams, which form the bulk of the diet. Map turtles may be active year-round, and have even been observed walking around under the ice.
The Ouachita map turtle appears to have a very limited distribution in Ohio, being found only in the Scioto River and associated oxbows. Differentiating between a Ouachita and common map turtle can be very difficult, especially if the turtle is not in hand. Pay close attention to the yellow spot behind the eye. On an Ouachita map turtle the spot is shaped like a sickle or hockey stick and extends to the top of the head. Also note the two yellow spots below the eye of a Ouachita map turtle, one on the upper jaw and one on the lower.
Midland Painted Turtle

**FAMILY EMYDIDAE**  *Chrysemys picta marginata*

Midland painted turtles are among the most abundant and certainly the most conspicuous turtles in Ohio. They are particularly fond of basking and can be seen by the dozens on logs and along the banks of most bodies of water through the summer and even during warm winter days. The deep green carapace is brightly patterned with red and black along the underside of the marginal plates. The patterns look as if they were painted on by hand. There are several subspecies of painted turtles in the United States, but only the midland painted turtle occurs in Ohio.

Although an occasional individual may attempt to bite when first captured, these turtles usually become very tame. Like most highly aquatic turtles, they usually will not swallow food unless they are at or beneath the surface of the water.

With the coming of winter, midland painted turtles seek deep water and burrow into the mud or debris at the bottom. The small amount of oxygen they need is absorbed from the water through the inner lining of the mouth and cloaca.
This is the little green turtle that has been sold by the thousands in pet and variety stores. Perhaps the most distinctive marking is the broad reddish patch behind each eye. In rare instances, the red is replaced by yellow or may be so dark as to not be visible at all.

Although these turtles are common in areas far south of Ohio, isolated communities have been discovered in some northern states. Whether released captives or remnants of an ancient population from a warmer age, they manage to hold their own. Outside of a few southern Ohio counties, most populations of red-eared sliders in the state are probably the result of discarded pets. Releasing pets into the wild is illegal and may endanger our native wildlife.
The spiny softshell’s body, instead of being protected by bony plates, has a tough, rubbery covering. At the front of the carapace is a row of small, conical spines that account for the name “spiny.” What this turtle lacks in heavy protective armor, it makes up for in speed and disposition. It is every bit as aggressive as the snapping turtle and its swimming ability far surpasses that of other turtles.

Although it can be found in lakes and smaller streams, the Eastern spiny softshell is essentially a river turtle. It prefers relatively shallow water with a sand or soft mud bottom. A common habit of the softshell is to settle on the bottom by rocking from side to side, while flipping sand and mud up onto its back, completely burying itself. Usually it lies just deep enough for its long, pointed snout to reach the surface for air with the help of its extremely long neck. However, the softshell does not have to get air from the surface. While it is submerged, it pumps water in and out of its mouth and pharynx. The highly vascular lining of the pharynx removes oxygen from the water and expels carbon dioxide.
Unlike its Eastern spiny relative, the midland smooth softshell has no spines or other projections on its carapace. Also unlike the spiny softshell, its nostrils are not ridged and its feet are not strongly spotted or streaked. Marks on the carapace of the midland smooth softshell consist of irregular small dots and dashes, unlike the much larger dark circular spots found on the Eastern spiny softshell. The midland smooth softshell is limited primarily to southern and southeastern Ohio where it inhabits the larger tributaries of the Ohio River, particularly the Scioto River. They are especially fond of shallow water areas along sandbars.

As with the spiny softshell, the females of the smooth softshell are much larger than the males.
Lizards are closely related to snakes and belong to the same order (Squamata). Unlike snakes, lizards usually have four legs, external ear openings, and movable eyelids. Instead of the snake’s single row of ventral scales, lizards have several rows of scales on their undersides.

Male lizards and snakes are unique among vertebrates in having two copulatory organs. The structures are stored in the base of the tail. One or the other of these structures is used during breeding. The gender of some species of lizards and snakes can be determined by noting the presence, in males, or absence, in females of the “hemipenes.”

There should be no confusion between salamanders (which are amphibians) and lizards – salamanders have smooth, slimy skin and their toes have no claws. Lizards have rough, dry, scaly skin and claws on their toes. There are about 90 species of lizards in America, most of which are native to the Southwest. Including the coal skink, there are five species native to Ohio, and one exotic species has become established. They are very beneficial, feeding largely on insects such as grasshoppers, crickets, beetles, and various insect larvae.
Unlike skinks, fence lizards belong to a group of rough-scaled reptiles called spiny lizards. They are tree climbers. When encountered on the ground, fence lizards will usually dart to the nearest tree, climb up the side opposite their pursuer, and remain motionless. If they are approached closely, they will continue up the trunk, making sure always to stay on the side opposite the pursuer.

Although found in a variety of habitats, fence lizards seem to prefer the dry, wooded hillsides and rocky cliffs that characterize most of unglaciated Ohio.

Males can be distinguished from females by the dark blue band, outlined in black, across their throat and an iridescent patch of blue on each side of the belly. The male’s back is less distinctly patterned than the female’s.
This very small skink is limited to the extreme southern part of the state where it seems to prefer open areas in or adjacent to woods. It may be found by turning over large stones and by sifting through fallen leaves. Although it is one of the least common lizards encountered in Ohio, it may be abundant where it is found. The best field mark is the dark brown stripe, bordered by dark brown or black, running down the length of the back.
Skinks are among the fastest reptiles in the world, and when encountered they dart quickly for cover. Individuals almost always bite when first captured, but their extremely small teeth cannot penetrate the skin. The tail of the five-lined skink, which is blue in young animals, serves as a most unusual defense mechanism. If a skink is grabbed by the tail, the tail breaks off. While the would-be captor’s attention is held momentarily by the vigorously wiggling tail, the skink makes a speedy getaway. In time, the skink will grow a new tail, although it will not be as long or as brightly colored as the original one.

Five-lined skinks occur throughout Ohio. They can often be located under the bark of decaying logs, in stumps, rock piles, and decaying plant material.
The broad-headed skink, which grows from six to 12 inches long, is the largest lizard in Ohio. The female and young closely resemble the female and young of the five-lined skink. Young specimens even have a bright blue tail. Large males become a uniform olive-brown and have considerable red coloration on the head. The back of the head is greatly enlarged.

This skink is essentially a woodland inhabitant. It is found only in several counties in the southern half of the state and is rare even there. Occasionally, broad-headed skinks can be observed high in the branches of dead trees. It has the distinction of being the most arboreal of our four species of skinks.
Common (European) Wall Lizard
FAMILY LACERTIDAE  Podarcis muralis

This exotic species was introduced into Cincinnati in 1951 and has become well established. Sometimes referred to locally as “Lazarus lizards,” the common wall lizards were brought to eastern Cincinnati from northern Italy by a local resident after a vacation near Milan and were released in a backyard. The lizards can now be found in several areas in Hamilton County and have established themselves in neighboring Kentucky and Indiana, with population densities of 1,500 per acre in good habitat.

The lizards are primarily found along old rock walls, railroad tracks, refuse piles, or occasionally in rocky ravines. Because they have persisted for many years and survived through record-setting severe winters, they are considered permanent residents. It is unknown what effects the common wall lizard will have on native species, but their spread should be discouraged. It is illegal to release this or other animals into the wild in Ohio.
Probably no animals on earth have suffered more from human ignorance and superstition than snakes. This is a misapprehension, since most snakes are both docile and fascinating.

Without arms or legs, snakes can move swiftly across the ground, through water, and along tree branches. They are near-sighted and therefore depend heavily on their sense of smell. Contrary to popular belief, the snake’s forked tongue does not carry a stinger, but instead is a smelling device. Each time it is flicked out, it gathers minute particles from the air. In the roof of the mouth are two small cavities called Jacobson’s organs. The tongue deposits the particles here and the sensory cells of these cavities help the brain interpret them as odors. Pit vipers, in addition to their organs of smell, have heat sensitive pits resembling an extra pair of nostrils near the front and sides of their head. These pits can detect the body heat of small, warm-blooded animals.

Snakes have a specialized mouth construction which enables them to swallow their prey whole. The lower jaw bone is in two parts, joined together at the chin by highly elastic tissue. In addition, the upper and lower jaws can be disengaged to further enlarge the mouth opening so prey larger than the snake’s head can be swallowed. Unlike most animals, which cannot digest bones, fur, and feathers, the snake has exceptionally powerful digestive juices that are even capable of digesting teeth.
The decidedly aquatic queensnake prefers slow moving or shallow rocky creeks and rivers where it feeds primarily upon soft-shelled crayfish.

These snakes are frequently seen and captured by overturning large flat stones, boards, or other debris along streams. When first captured, some attempt to bite. However, their teeth are so small they can barely pierce the skin. Others make no attempt to bite. All use their musk glands freely and struggle violently to escape. Although they become gentle with handling, they seldom eat in captivity. For this reason, they do not make hardy captives.
Although encountered only occasionally, Kirtland’s snake ranges throughout the glaciated western half of Ohio and into a few glacial outwash-filled valleys in southwestern Ohio. Its secretive nature and marked preference for wet meadows make it difficult to find. It is most common in the vicinity of Lucas and Hamilton counties, wherever wet fields remain. Kirtland’s snakes can easily be identified by the bright red belly conspicuously marked with a row of black spots along each side. When first encountered, the little Kirtland’s snake usually flattens its body – making it appear larger – and strikes repeatedly. This is merely an act to frighten off intruders. Its strikes are ineffectual and, when handled, it makes no attempt to bite.

Like the Kirtland’s warbler, the Kirtland’s snake was named for Doctor Jared P. Kirtland, an early physician and nationally renowned naturalist from Lakewood, in Cuyahoga County, Ohio.
The common watersnake is one of the most widely distributed and certainly one of the most abundant snakes in Ohio. It may inhabit just about any permanent body of water.

This stout-bodied snake shows extreme variations in color and pattern and is unfortunately confused by many with the venomous water moccasin, or cottonmouth. The cottonmouth, however, does not occur in Ohio; it ranges no farther north than southeastern Virginia in the eastern portion of its range, and extreme southern Indiana and Illinois, in the western part of its range.

Common watersnakes are particularly fond of basking and can often be seen sunning upon logs, stumps, and rocks, or on low branches overhanging the water. They are very wary and when disturbed drop into the water and disappear quickly. Watersnakes usually flee from people, but when grabbed, they are quick to defend themselves. They bite viciously and large ones are capable of producing painful, deep lacerations. When picked up, they invariably secrete an obnoxious smelling substance from their musk glands.
A subspecies of the common watersnake, the Lake Erie watersnake is similar to its relative, except that the dark pattern of crossbands is very pale or completely missing. The general coloration is gray, greenish, or brownish. The belly is white or pale yellow, occasionally tinged with pink or orange down the center.

These snakes are limited to the islands of Lake Erie. The snake has benefited from the construction of docks and shoreline protection done in a snake-friendly manner demonstrating its ability to coexist with people. The favorite food of the Lake Erie watersnake is the round goby, an invasive aquatic nuisance species.
This stout-bodied watersnake is currently known to occur only in Williams County, although small, widely scattered remnant populations may occur elsewhere. The adult is a uniform black or brownish-black above, with a beautiful orange-red or scarlet belly. This snake is designated as federally threatened and state endangered.

Copper-bellied watersnakes spend a great deal of time on land, moving among temporary and permanent wetlands, including swampy woodlands and river bottoms. Agricultural development of its limited habitat has all but eliminated this snake from the state. Like their cousin the common watersnake, copper-bellied watersnakes are active and aggressive snakes.

The copper-bellied watersnake was first described from a former swamp forest east of Mt. Victory in Hardin County by Ohio herpetologist Roger Conant.
Ohio is inhabited by a mixed population of Northern and midland brownsnakes. They are almost identical in coloration. Both have two rows of dark spots running down the back. On the midland brownsnake, these spots are connected by dark crossbands forming a ladder-like pattern. The midland brownsnake has 176 or more ventral and subcaudal scales; the Northern brownsnake has 175 or fewer. Interbreeding between these subspecies occurs rather frequently, resulting in the intergrade brownsnake, *Storeria dekayi dekayi x wrightorum*, which may possess the combined characteristics of both parents.

Brown snakes never bite when captured. Their only real defense is the musk glands which they freely exercise when first captured. These common but secretive little snakes are often encountered hiding under stones, logs, old boards, and other such debris, where they feed extensively on snails, slugs, worms, and soft-bodied insects.
The Northern red-bellied is one of the smallest snakes in Ohio. A uniformly scarlet or red-orange belly and three usually well defined light blotches immediately behind the head are the most distinctive characteristics. Many specimens of this snake have a distinct purple tinge to the normal brown color and all black (melanistic) individuals are not uncommon in some populations. This snake may be found in sphagnum bogs, wet meadows, or swamp forests, as well as dry, open wooded areas in the eastern half of the state.

Very secretive, the Northern red-bellied snake spends most of its life hidden beneath boards, rotting logs, brush piles, and leaves, where it seeks out slugs, earthworms, and beetle larvae. Like its close relative the Northern brownsnake, it makes no attempt to bite, even when first captured. Some individuals may curl their upper “lip” outward showing off their tiny teeth, a behavior that is not fully understood by biologists.
A master of deceit, the completely harmless hog-nosed snake can put on an act that will frighten the bravest of people. When first alarmed, this bluffer coils, flattens its head and neck to form a cobra-like hood, inflates its body, hisses fiercely, and strikes violently. The strike – usually made with the mouth closed – almost always falls short of the target. This act is so convincing that it often leads to the snake being killed by people. These antics have earned the hog-nosed snake such names as puff adder, blow snake, and hissing viper. If this first phase of the act fails to frighten off the intruder, the hog-nosed snake resorts to “playing possum.” When struck or handled, the hog-nosed snake jerks convulsively, twists over on its back, and remains motionless. The open mouth, the tongue hanging out, and the apparent lack of breathing make a convincing picture – convincing, that is, until the snake is placed on its belly – whereupon it promptly rolls over on its back again. It just can’t be convinced that a dead snake shouldn’t be on its back! After danger passes, it will raise its head, look around, turn upright, and go on its way.

The coloration of this essentially spotted snake is extremely variable, with color phases ranging from yellow and brown to black and gray. The most reliable field mark is the turned-up, hog-like snout which is used for digging out the toads that are its primary food. Dry, sandy areas are preferred, especially the Oak Openings Region of northwestern Ohio where this generally uncommon snake is most abundant. In southern Ohio, it occurs in most of the hill counties.
Although similar to the Northern brownsnake, the Eastern smooth earthsnake lacks the pattern of the Northern and is more stout-bodied. It is a small, plain gray or brownish snake with a plain white or yellowish belly. Many are marked with a number of small black dots on the back. The distinctly small head and lack of distinctive body markings are good identifiers. Although rare over much of its range, the Eastern smooth earthsnake is often common locally. In Ohio, it occurs only in the southern quarter of the state, especially in the forested area of Shawnee and Pike state forests. Like the wormsnake, this reptile is very secretive and spends most of its time hiding beneath flat stones and similar objects. Unlike the wormsnake, the Eastern smooth earthsnake gives birth to live young.
As the name implies, these little snakes have a ring around the neck that is yellow or yellowish orange. Ring-necked snakes occur throughout Ohio except for the west-central and extreme northwest counties. They prefer rocky, wooded hillsides and cutover wooded areas such as those in southeastern Ohio, where they abound. Ring-necked snakes are basically nocturnal and spend most of the day concealed beneath logs, stones, boards, and similar objects.

Unlike most egg laying snakes, ring-necked snakes tend to deposit their eggs in a community nest, frequently in rotted logs exposed to the sun.

When routed from a hiding place, ring-necked snakes usually seek cover under the nearest available object. They are normally mild-tempered when first caught, but discharge a pungent substance from their musk glands and wiggle violently to escape.
Probably no snake more closely resembles an earthworm than the wormsnake. They have a small, pinkish brown body, shiny iridescent scales, and a small, narrow head which is not distinct from the translucent body.

Wormsnakes range throughout the southern third of the state, particularly southeastern Ohio. These reptile versions of the nightcrawler are rarely encountered in the open, but can be discovered under large, flat slabs of rock, logs, and other debris. They show a marked preference for moist earth, such as hillside seeps. During dry weather, wormsnakes work deep into the ground, seeking moisture.

Although wormsnakes do not bite, when handled they continually try to push between one’s fingers with both their head and tail – which has a spine-like tip. This tail spine has deceived some people into believing that snakes have stingers; however, no snake has a stinger. Worms and soft-bodied insects make up the bulk of the wormsnake’s diet. This snake is an egg layer.
Both the Northern black racer and its larger relative, the blue racer, occur in Ohio. The blue racer – may be a gunmetal gray with a distinct greenish or bluish cast – frequents western Ohio. The Northern black racer – a uniform medium or plain black throughout – occurs in eastern Ohio.

A diagonal line drawn across the state from Hamilton County to Ashtabula County would roughly mark the area where the populations overlap. Intergrading often occurs in this area of overlap, resulting in the blue and Northern black racer intergrade, *Coluber constrictor constrictor x foxii*. This intergrade may be indistinguishable from either parent or may possess their combined characteristics.

Although racers are among the swiftest and most graceful of all our snakes, their top speed is only eight to 10 miles an hour. They are extremely nervous and become very aggressive when an attempt is made to capture them. They strike viciously and can inflict a painful bite with their small, but numerous teeth. When alarmed, they rapidly vibrate the tip of their tail, as do many other species of snakes. Racers rely more on vision than other snake species, and will often approach a person or other potential predator. Should you accidentally place yourself between a racer and its underground retreat, you might interpret its rapid movement towards you as an attack, when in fact it is just the snake’s attempt to escape to safety. Racers have an extremely varied diet, including everything from rodents to grasshoppers, other snakes, birds and eggs, and even the occasional small turtle!
This is Ohio’s largest snake. Although it is typically four to six feet long, individuals have been known to exceed eight feet. An essentially forest-dwelling snake, the Eastern ratsnake occurs throughout most of Ohio. It is an accomplished climber and is often found high in trees, frequently taking shelter in woodpecker holes and other cavities.

The Eastern ratsnake differs from the black racer in its dorsal pattern. The adult black racer has no dorsal pattern at all. Most Eastern ratsnakes have at least a semblance of a pattern, and many have a very significant pattern, produced by coloration of the skin between the scales.

When first encountered, most Eastern ratsnakes freeze in position, blending in with their surroundings. They remain motionless until grasped. Although some offer little or no resistance when first captured, many will vibrate their tail rapidly and strike repeatedly. When picked up, they usually coil tightly about the arm and discharge a foul-smelling substance from the anal scent glands (musk glands). After being handled for a short time, they usually calm down.

Eastern ratsnakes often hibernate in rock crevices in the company of other snakes, such as copperheads and rattlesnakes. This habit gave rise to the fallacy that rat snakes “pilot” these venomous snakes to safety in time of danger; thus they are often called pilot black snakes.

Of all the snakes senselessly slaughtered out of ignorance and fear, the Eastern ratsnake is one of the most common victims. The Eastern ratsnakes are one of Ohio’s most beneficial and splendid reptile assets; they play an essential role in controlling destructive rodents.
Along the southwestern shores of Lake Erie, west of Sandusky, one may encounter the Eastern foxsnake. The handsomely marked Eastern foxsnake inhabits many Lake Erie islands as well as the extensive marshes of Lucas, Ottawa, Sandusky, and Erie counties.

Most are docile, even when first captured. Unfortunately, their coppery head often causes them to be killed – mistaken for copperheads. Their habit of vibrating their tail when alarmed, together with the bold black and yellow coloration, may lead to their being mistaken for rattlesnakes. Like their cousin the Eastern ratsnake, foxsnakes are true constrictors. While not as agile tree climbers as the Eastern ratsnake, foxsnakes are better swimmers.
The Eastern black kingsnake is a handsomely marked constrictor. This snake is limited in Ohio to Adams, Scioto, Jackson, and Lawrence counties, and even in this area it is relatively uncommon. It shows a marked preference for the Scioto and Ohio River bottomlands. Except in early spring and fall when they bask in the open, these snakes are very secretive, spending the day beneath logs, rocks, and the like, and emerging to hunt by night.

Their diet includes small mammals, lizards, birds, and small snakes – including venomous species. Kingsnakes are immune to normal quantities of venom from all of our native venomous snakes. Although often pugnacious when first encountered, with handling they soon become extremely gentle.
Eastern milksnakes are commonly encountered throughout Ohio in a variety of habitats, including woods, meadows, and river bottoms – even within cities, where they occasionally enter buildings in search of mice. Their frequent occurrence in rodent-infested barns led to the fallacy that they milk cows by night; hence the name milksnake. These secretive snakes usually move about at night and spend the day hiding beneath objects such as logs, rocks, and old boards.

When first encountered, the milksnake either remains motionless or attempts to crawl away. If thoroughly pestered, it may vibrate the tip of its tail rapidly and strike repeatedly. However, the teeth can barely puncture the skin.

The belly has a black and white checkerboard pattern. A Y-shaped or V-shaped light-colored blotch is usually present on the nape of the neck.

The milksnake is a true constrictor. It usually throws several loops of its muscular body around its prey. These coils do not crush but merely exert enough pressure to prevent breathing and stop the heart. The victim soon dies and is then swallowed whole. Like other members of the kingsnake group, milksnakes feed primarily upon mice and other small rodents, as well as smaller snakes. They should be considered an asset, worthy of protection on anyone’s property.
Gartersnakes – close relatives of the watersnake – are slender, medium-sized species which may attain a length of a yard or more, but are usually 18 to 26 inches long. Normally they have yellowish stripes on a dark background, but coloration and pattern are extremely variable.

These snakes occur in a wide variety of moist habitats – in wet woodlands, meadows, bogs, marshes, and along drainage ditches and streams. They feed primarily on frogs, toads, salamanders, earthworms, minnows, and mice.

Gartersnakes, sometimes called garden snakes, are probably the most widely known of all Ohio snakes. The name derives from the longitudinal stripes on the body which resemble the design on once-stylish sock garters. Including the Eastern ribbonsnake (a more aquatic type of gartersnake) and the short-headed gartersnake (not included in this booklet), Ohio is home to five species of gartersnakes.
This most common of Ohio’s gartersnakes is found across the state. Normally, it is marked with a pattern of three light stripes on a darker background. One stripe runs down the center of the back with a lateral stripe on the second and third rows of scales on each side. These stripes are usually yellow, but may be shades of green, brown, or blue. In some snakes, the lateral stripes are dominated or replaced by dark spots. The Eastern gartersnake is one of the most variably colored and patterned species in the world. Along the Western Basin of Lake Erie, up to 50 percent of individuals may be melanistic (completely black), with the exception of some white on the chin. The dark color helps the snake warm more quickly when basking in the sunlight.
Strange as it may seem, Ohio has an isolated colony of Plains gartersnakes. These brightly marked gartersnakes occur only in Wyandot County, in the vicinity of the Killdeer Plains Wildlife Area where they inhabit remnants of what was once the most extensive wet prairie in Ohio. A distinctive feature is the lateral stripes along the third and fourth rows of scales. Their dorsal stripe is more orange than their yellow lateral stripes.

This snake is designated as state endangered.
This is chiefly an inhabitant of flat, open fields. Although its range covers most of glaciated Ohio, the Butler’s gartersnake occurs only in isolated colonies. A lateral stripe covers the third row of scales as well as the adjacent halves of rows two and four. Unlike the more general diet of the Eastern gartersnake, Butler’s gartersnakes feed predominantly on earthworms and leeches. The noticeably smaller head of the Butler’s gartersnake is probably a result of this specialization. This snake was named for Amos Butler, an early Indiana naturalist.
Ribbon- and gartersnakes may easily be confused. The ribbonsnake has an exceptionally long tail that accounts for one-fourth to one-third of its total length. The gartersnakes have a relatively short tail, usually five inches or less. Unlike other members of the gartersnake group, ribbonsnakes prefer to feed upon aquatic creatures such as small fish, tadpoles, salamanders, small frogs, and toads.

These semi-aquatic snakes seldom venture far from water. As a rule, they frequent the margins of small lakes, ponds, swamps, wet prairies and meadows, and occasionally moist woods throughout Ohio.

The small, trim ribbonsnake is more at home on shore than in the water. When encountered it invariably retreats to the water. But, instead of diving to the bottom as a watersnake would, it swims rapidly along the shore and may disappear quickly into the vegetation.

Ribbonsnakes are very high strung and, even after being in captivity for a long time, will dart about nervously at the slightest movement.
Two species of greensnake occur in Ohio. As the name implies, these snakes are a beautiful grass green. The underbody is a yellowish cream color. Greensnakes can be found in a variety of places, including blackberry bushes, grapevines, shrubs, roadside ditches, open grassy meadows, and marshy grass. Because they are small and secretive, blend in well with their surroundings, and are comparatively rare throughout their range, greensnakes are only occasionally encountered.

Insects – particularly crickets, grasshoppers, butterflies, small caterpillars, and ants – plus spiders make up the bulk of their diet. Except for struggling violently when handled, even after being in captivity for some time, the greensnakes are gentle and never bite. Unfortunately, they often cannot be induced to eat in captivity and therefore do not make hardy captives.
Rough Greensnake
Family Colubridae
*Opheodrys aestivus*

The rough greensnake lives in the extreme southern quarter of the state. Much longer than the smooth greensnake, it is more arboreal and has rough instead of smooth scales. They are more likely to be encountered along willow-lined streams. Females lay the eggs in communal nests often in hollow trees on upland sites.
This dainty little snake is found in southwest, central, and northeast Ohio. It has smooth scales. It is also more terrestrial than its cousin the rough greensnake. However, it does not hesitate to climb small shrubs, where it handles itself remarkably well. The smooth greensnake is very rare in southwest Ohio, and is only commonly encountered in the largest prairie remnants of the state.
Ohio has only three species of venomous snakes, two of which have rattles at the end of the tail. The third species is the Northern copperhead. Many mistakenly believe the water moccasin occurs in Ohio. It ranges no farther north than the Dismal Swamp in southeastern Virginia in the eastern portion of its range, and extreme southern Kentucky, Indiana and Illinois, in the western part of its range. Water moccasins are not native to Ohio.

The heat sensitive pits in front of and below each eye of Ohio’s three venomous snakes are capable of detecting extremely small increases in air temperature some distance from the snake’s face. For that reason, one must exercise caution when climbing rocks or slopes in areas where venomous snakes occur.

An average of five to 15 people die of snakebites annually in the United States. Considerably more people are killed by dog bites and lightning.

Anyone bitten by a venomous snake will soon know it. Moderate symptoms will include mild swelling, discoloration, and pain at the wound site, and may also include general tingling, weakness, rapid pulse, dimness of vision, nausea, vomiting, and shortness of breath. Severe symptoms include rapid swelling and numbness, followed by severe pain at the wound site; there may also be pinpoint-size pupils, facial twitching, slurred speech, convulsions, paralysis, and loss of consciousness.

Begin first aid treatment by keeping the victim calm and immobile, preferably lying down. Immobilize the bitten limb at or below heart level. Get the victim to a hospital immediately! Most people die of snakebite because they didn’t seek medical help or delayed too long in going to the hospital.

Preventive medicine is the best method for dealing with snakebites. Learn how to distinguish venomous from nonvenomous snakes and learn where to find – and therefore how to avoid – the venomous ones. The following five characteristics can be checked to determine whether any snake found in Ohio is venomous.
Nonvenomous Snakes

1. Head usually oval when viewed from above, but may be somewhat triangular.
2. Pupils round.
3. No pits – only nostrils present.
4. Divided scales on underside of tail.
5. Although many snakes vibrate their tail when upset, nonvenomous snakes never have rattles.

Venomous Snakes

1. Head distinctly triangular, when viewed from above.
2. Pupils elliptical.
3. Pits(a) as well as nostrils(b) present.
4. Undivided scales on underside of tail.
5. Except for the Northern copperhead, tail ends in a rattle.
Northern Copperhead
Family Viperidae
Agkistrodon contortrix mokasen

Copperheads have the dubious distinction of having bitten more people in the United States than any other venomous snake, yet fewer snakebite deaths are attributed to the copperhead. Since the amount of venom injected during a bite is not enough to seriously hurt a healthy adult, the bite is rarely fatal. However, it is extremely painful, and, like a honeybee sting, has the potential to produce a life-threatening allergic reaction.

Copperheads are widely scattered throughout most of unglaciated Ohio. Although they occupy a variety of habitats from floodplains to ridge tops, they show a marked preference for the rocky, wooded hillsides of southeastern Ohio. They are not as averse to civilization as the timber rattlesnake, but copperheads tend to stay away from well-settled areas.

Their coloration not only serves as excellent camouflage, but also makes them one of Ohio’s most beautiful reptiles. When encountered, copperheads are usually content to lie motionless or retreat if given the chance. But if aroused, they will vibrate their tail rapidly and strike wildly.

Except in early spring and late fall, most of their day is spent in hiding. They hunt small mammals, birds, and amphibians by night. One of the best ways to see copperheads is to go for a drive at night, especially after a warm rain has broken a long hot, dry spell. Copperheads can often be found crossing the wet, steaming roads.
“Swamp rattler” and “black snapper” are other names given to this small rattlesnake. The name massasauga is from the Chippewa Indian language and refers to the marshy areas associated with the mouth of a river. Historically recorded in more than 30 Ohio counties, the secretive massasauga swamp rattlers are widely scattered and rarely seen. Originally, these rattlers probably inhabited all the scattered prairies of glaciated Ohio, but extensive farming has drastically reduced their numbers. Colonies still persist in bogs, swamps, and wet prairies within glaciated Ohio. Few, if any, are found in the Lake Erie marshes. During summer, these rattlers range upland into nearby drier areas in search of small rodents. This snake is designated as state endangered.

Massasaugas typically are very sluggish and make little or no attempt to bite unless thoroughly aroused. The bite is seldom, if ever, fatal to a healthy adult. Although the venom is highly toxic, a typical bite does not deliver large enough quantities to be lethal. This is still a venomous snake, however, and should be treated with utmost caution and respect. As with any venom (including that from a honeybee sting), it is possible for a victim to experience a life-threatening allergic reaction.

Its color varies from gray to brownish gray – and some specimens are almost entirely black. The stout-bodied massasauga can easily be identified by its small but conspicuous rattle.
By virtue of their large size, timber rattlesnakes are the most dangerous snakes in northeastern America. They may attain a length in excess of six feet, but average 40 inches in length. Fortunately, when encountered most timber rattlesnakes are mild in disposition unless aroused and make little attempt to rattle or strike. Most remain coiled or quickly crawl away if given the opportunity. However, if thoroughly provoked, they can be aggressive.

The first part of the scientific name, *Crotalus*, is derived from the Greek word *krotalon*, which means a “rattle.” The second part, *horridus*, is the Latin word for “standing on end.” Combined, they provide an excellent description of the rattler’s striking pose.

Their numbers have been drastically reduced by development and direct persecution. Remnant colonies persist in widely scattered areas in southern unglaciated Ohio. Timber rattlesnakes are most numerous in the more remote areas of Zaleski, Pike, Shawnee, and Tar Hollow state forests. They prefer dry, wooded hill country where they prey on a variety of small warm-blooded animals.

Timber rattlesnakes have two basic color phases. The yellow phase has a series of dark brown or black chevron-shaped crossbands on a ground color of brownish yellow and a yellow or brown head. The black phase has the crossbands on a ground color of blackish brown and a black head.

Contrary to popular belief, it is difficult to estimate the age of a rattlesnake by counting the number of rattles at the end of its tail. A new segment develops every time the skin is shed. Timber rattlesnakes usually shed eight times during their first four years and then usually shed once a year thereafter. In addition, old segments are occasionally lost.
Ohio Administrative Code (O.A.C.) Section 1501:31-25-04, regulates the possession, purchase, sale, or trade of reptiles and amphibians native to our state. The purpose of this regulation is to protect and conserve native reptiles and amphibians while maintaining the educational and economic benefits derived from them. A permit is required to possess any native Ohio reptile or amphibian. Contact your district wildlife office for further information.

The U.S. Food and Drug Administration under Section 1240.62(b) of Title 21 CFR, Chapter 1, Subpart D, specifically prohibits the distribution of viable turtle eggs and/or live turtles with a carapace (shell) measuring less than four inches in length. This is an attempt to stem the spread of salmonella bacteria from turtles to children. After handling a reptile always wash your hands thoroughly with soap and water.

Division of Wildlife District Offices

**Central**
(614) 644-3925

**Northwest**
(419) 424-5000

**Northeast**
(330) 644-2293

**Southeast**
(740) 589-9930

**Southwest**
(937) 372-9261
Bringing wild animals into the classroom is a great way to connect students to the natural world. However, before bringing these animals into the classroom, it is important to understand that there are regulations and laws (Ohio Revised Code 1532.02 and 1533.08), as well as certain permits required for possessing any native wild animal in Ohio.

Wild Animal Permits are for scientific study, research or educational purposes and the person collecting must be affiliated with an educational or scientific institution. This permit is issued by the Division of Wildlife Law Enforcement Section’s permit coordinator. The Wild Animal Permit is separated into two sections: an education permit, and a scientific permit. If you are seeking an education permit please note that any animal taken from the wild may not be returned after 30 days of possession. You must also keep track of dates of possession and relinquishment, where the animal was taken from and, if not returned to the wild, the date of death or name of person to whom the animal was given. If you are seeking a scientific permit, please note that this permit is primarily used for surveys and inventories of wildlife species. A letter permit and a wild animal permit are to be obtained if you wish to take possession of any state-listed endangered, threatened, or aquatic nuisance species. This requires a letter from the chief of the Division of Wildlife. A noncommercial propagating license is required if seeking to permanently possess any native reptiles, with the exception of snapping and softshell turtles which can be harvested with a fishing license.

For further information on this please contact the Division of Wildlife’s Permit Office at 1-800-WILDLIFE.


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To purchase a plate visit your local registrar’s office or call the BMV at 1-888-PLATES3.

For more information about Ohio’s native wildlife, please contact the Division of Wildlife at:

1-800-WILDLIFE
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www.WildOhio.com

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Columbus, OH 43229-6693
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