Whose Track is That? What About Scat!? Other Signs of Reptiles and Amphibians!

When it comes to animal tracks, scat, and other signs besides the finding or sighting of the actual animal(s) themselves, most books, field guides, and other resources still focus on, and emphasize to a large degree on mammals and sometimes birds. Each species of mammal has their own unique set of tracks or footprints, as well as other signs which can become relatively easy to learn and identify. Even many different species, or groups of birds, depending on their habits and lifestyles and natural history, can be relatively unique and easy to identify under most circumstances with a bit of training, knowledge, and experience.

But what about herptiles such as reptiles and amphibians? Do they leave tracks and/or any other signs? And if so, how and where can one look for them? As it turns out, they do! When searching for reptiles and amphibians out in the field, which is commonly known as "field herping", most of the time we are searching for the actual animals themselves through the many different means or methods of finding them. But if one takes the time to become even more observant, there might be other clues around which can be used to locate them, or at least indicate that they have been active in the area!

Unlike mammals and even many birds, however, which oftentimes have their own unique signs and sets of tracks which they leave behind, it can oftentimes be more difficult to identify or pinpoint with certainty the exact species of reptile or amphibian which left them behind, which perhaps might be one reason why herptiles have traditionally received less emphasis in books and guides. Sometimes, however, one can make a good educated guess as to which species likely left them based on other factors or observations such as time of year, the overall habitat, geographic area, and a general knowledge of which species may occur in the area, amongst other factors!

Most reptile and amphibian tracks are easiest to see and observe in somewhat moist mud, or dry to moist sand. While it would be difficult to go through each and every reptile and amphibian species here when it comes to their tracks or other signs, this educational article presents together, at least generally in most cases, what the tracks of each group of reptiles and amphibians can be expected to look like, as well as what other signs or evidence each group may leave behind!

Salamanders and Newts

When it comes to salamanders (and newts), most species have four (4) toes on their front feet and five (5) toes on their hind feet, with the toes usually being symmetrically arranged and generally all about the same length. The forefeet and hindfeet are also generally about the same size. Both of these above identifications can help distinguish salamander tracks from those of lizards, most species of which generally have a visibly longer fourth (4th) toe on the hind feet, as well as the hind feet being larger than the front feet. Many salamanders may also leave a tail drag in-between their tracks as well.



© Maureen, Flickr.



© Linda J. Spielman.

Unlike frogs and toads, which are also amphibians, salamanders and newts tend not to make any other calls or sounds, and are much more secretive and fossorial, being found underneath or within moist, damp rotten logs, fallen bark, leaves, rocks, or other ground debris, and as a result, this often leads to many being less aware of their presence. However, in the right habitats early in the spring, one may also observe their gelatinous or string-like egg masses in shallow ponds, or other wetlands, often in forested habitats. Each species leaves their own unique egg masses, which one can learn with some additional practice and skill. Salamander scat tends to be less commonly found, but usually tends to be less concentrated and grayish or stringy in appearance. Sperm plugs, or spermatophores, which are whitish capsules deposited in their breeding wetlands during breeding and reproduction, can also sometimes be found alongside their egg masses usually attached to submerged twigs, sticks, or other submerged foliage. These spermatophores are deposited by the male salamanders to prevent rival males from successfully fertilizing the female's egg masses.



Salamander Egg Mass © Ryan Wagner.



leaf. © Music of Nature.

Salamander Spermatophores on a submerged

Note: Slug, snail, and other gastropod eggs can commonly be confused for salamander eggs; however, slugs and other gastropod eggs are usually laid individually or in looser clumps, are whitish or yellowish,

other forest floor debris. © Lee Wallender.

spherical, and laid on land underneath moist, rotten logs, rocks, leaf litter, or

Some groups of Plethodontid salamanders, such as our four-toed and redback salamanders in Wisconsin, however, may also lay their eggs on land in moist, humid areas underneath rocks, logs, or leaf litter but tend to be more clustered and are guarded by the adult females, unlike snail or slug eggs described above. © AmphibianFact.

Frogs and Toads

Different species of frogs and toads can have different tracks, also depending on the methods of locomotion they are using. Most species of frogs and toads have four (4) toes on their front feet, and five toes (5) on their hind feet, and when hopping or leaping, their front feet tracks are often in-between the much larger hind feet tracks. They may also be in small groupings at regular intervals. The feet of most frogs and toads tend to point inwards, and form somewhat of a "K" shape, and the four inner toes of the hind feet tend to form a line sloping upwards and outwards. Their bellies may also leave scrape marks in-between their tracks.

Aquatic frogs have webbed toes and feet, which may also leave an imprint in their tracks. Treefrogs have enlarged toe pads at the ends of their toes or digits which may also be left in their tracks. More terrestrial toads have tracks similar to other frogs, but also have wider feet, and tend to drag their feet more when they hop. Toads are also more likely to "walk" with alternating tracks than frogs. The second toes on the hind feet of most frogs are also usually much longer than the rest of their toes.



Treefrog Tracks showing enlarged toe pads at

the ends of the toes. © Kim A. Cabrera.

Aquatic Frog Tracks showing webbing in-between the toes

and feet. © Justin Sprecher.



Terrestrial Toad Tracks showing lack of

webbing and drag/scrape marks by the feet. © Kim. A. Cabrera.

Many frog and toad tracks are most often seen along the muddy banks of ponds, lakes, rivers, or other wetlands or waterbodies.

Frogs and toads are also perhaps the most audible group of animals among reptiles and amphibians, with most species producing calls. Different species call during different times of the year, typically through their use of a vocal sac in their throats, and through use of their tympanic membranes along the sides of their heads, which function as their "ears". In Wisconsin, for example, spring peepers, wood frogs, and chorus frogs begin calling early in the spring (oftentimes before even all of the snow and ice melts), while other species such as American toads, green frogs, and American bullfrogs, begin calling later in the spring or summer. Most frogs and toads call in order to attract a mate during their breeding seasons, or to signal and defend their territories, although many species can also emit alarm or distress calls when they are startled as well. There are many additional local guides and other resources one can look to for better learning the frog and toad calls in most geographical areas!

Like salamanders and newts, many species of frogs and toads also lay gelatinous or stringy masses or clumps of eggs in shallow wetlands or other bodies of water, which can also be seen during the right times prior to and during their breeding season, as well as spermatophores, also as with salamanders. Different frog and toad species can have different egg masses which can also be identified down to one to a few most likely species in the area to have deposited them.



String-like American Toad Egg Mass. © Prince

William Conservation Alliance. Most frog and toad eggs are about 1 to 2 millimeters in diameter, and the masses, which are typically attached to submerged sticks, twigs, leaves, or other debris, can be about one to six inches or more depending on the species that laid them. Unlike reptile eggs, an amphibian's (including frogs, toads, salamanders, and other amphibians) eggs do not have a leathery external shell, are typically laid in water or other areas with moisture, and among other differences, instead being surrounded by a clear gelatinous

external coat or covering.

Globular Wood Frog Egg Mass. © USRA. Most frog and toad eggs are small, spherical, clear, and jelly-like, usually being laid in masses that are translucent or semi-translucent. They are usually clear white or pale in

color, but can turn brownish or greenish as they mature.

Frog and toad droppings, or scat can vary in size and appearance depending on the size and species, but usually tend to be dark brown or shiny black, cylindrical, and varying from a few millimeters to about an inch in length. Frog and toad droppings tend to be moist and gel-like, and may contain undigested plant matter or insect parts.



Small, cylindrical frog or toad dropping. © Morning

Bray Farm.

Crocodilians (Alligators and Crocodiles)

If one resides in the Southeastern United States, or elsewhere in the world, one might expect to come across crocodile or alligator tracks, particularly the American Crocodile and American Alligator in North America. Because crocodilians can range considerably in size from hatchlings to large adult animals, there can be a sizeable variation in the track sizes of these animals depending on

how large and how old they are. Generally however, alligator and crocodile tracks have five (5) toes on the front feet, and only four toes (4) on the hind feet.

On the first three (3) toes of the front feet, there are claws which may be left in their tracks, with substantial webbing in-between toes 2 and 3 and toes 3 and 4, but no webbing in between toes 4 and 5. As with the front feet, an alligator's hind feet have claws on only the first 3 toes. Toes on all of their feet tend to point forward, with toe 4 protruding slightly outward to the side. On their hind feet, there is also substantial webbing between toes 3 and 4, but less so between other toes.



Alligator Track. © Winterberry Wildlife.

Within an alligator's or other crocodilian's tracks, there is also a large, visible central trough in-between the tracks where their tails were dragged, with their prints on both sides. The front prints have five toes (as previously mentioned), and are wide in the heels, while the rear prints have four toes and are longer, with a narrower heel.



© Danny Gilliam.

Amongst reptiles, crocodilians can have many other signs of their presence,

including vocalizations, and physical alterations on the landscape or their environments in ways most other reptiles do not. During their breeding season, adult male American alligators can be heard from considerable distances away with their "bellowing" in order to attract a mate and to signal their territory, while hatchling and juvenile alligators will make a higher pitched "yelp" distress call. Alligator and crocodilian scat and droppings have a unique consistency which can be hard to confuse for any other animal droppings. As with other reptiles, crocodilians do not "urinate" per say, but rather both their urine/nitrogenous wastes and feces are consolidated. Because crocodilians have some of the strongest digestive capabilities in the animal kingdom, there usually are no hair, bones, or other recognizable features in their scat, which is instead rather uniform and clay-like. When fresh, their scat tends to be brown, and fades to beige, buff, or olive when it dries and becomes more hardened. When completely dry, it may appear white and crumbly. The size of their droppings will also depend on the size and age of the animal. Unlike mammals, crocodilians do not use their scat or droppings to signify their territories, but rather simply deposit it wherever they happen to most frequently be (i.e. near basking areas).



Examples of Wet and Dry Alligator Scat. © Janet Pesaturo.

Slide, or push-marks are another sign of an alligator's or other crocodilian's presence, particularly leading to or from their frequently used basking areas. Slider marks can most easily be seen on the muddy or clay banks of their aquatic environments, and depending on their size and width, can help give an approximate idea of the size of the animal. These marks are typically left by their tails and/or bellies as they drag them over the dry land.



Example of slide, or push marks made by a crocodilian to and from the water. © Florida Paddle Notes. These "trails" or "runs" are a conspicuous sign of crocodilians utilizing a basking area frequently.

Eggs and nest mounds are another conspicuous sign of crocodilians, particularly when it comes to American alligators in the Southeastern United States, although other crocodilians may also build these nest mounds. These mounds are constructed by the nesting female alligators or crocodilians, and are comprised of mud, sticks, leaves, and other vegetative debris, where their clutches of eggs are laid and where the hatchlings hatch and emerge from. Depending on the age and the size of the alligator, these nest mounds can be quite large, ranging anywhere from 5 to 10 feet or more in diameter, and approximately 2 to 3 feet in height and can be located within surrounded by water, or on land nearby to water.



Example of an Alligator Nest Mound.

© Science Museum of Minnesota.



Crocodilian eggs. An alligator or crocodile's eggs can vary somewhat in size depending on the age, size, and species of crocodilian which laid them, but are usually roughly the size of a chicken's egg, and are more oblong. They have a harder, leathery outer layer, and a softer leather-like inner layer. © Babcock Rance Eco Tour. The outer layer of a crocodilian's egg is initially hard, but becomes more leathery over time after they are laid.

"Gator holes" are another conspicuous alteration to the landscape in which alligators, and sometimes other crocodilian species will create during times of drought and other dry conditions. These holes are constructed by alligators using their snouts, feet, and tails in excavating and clearing out burrows or depressions, while clearing away the vegetation, mud, and other debris in order to create a reservoir of water which accumulates until the rains or other wet periods return. These holes can be anywhere from 10 to 20 feet or more in diameter, and up to several feet deep, and provide habitat and shelter not only for the alligators, but for many other plants and animals that will also use and take advantage of them during these times. These "gator holes" are one of the most significant alterations to the environment and landscape which any reptiles or amphibians, or other animals for that matter, create to their wetland environments.



Example of a "Gator Hole", which can provide shelter and other resources for many other wildlife in addition to the alligators. © Janet Pesaturo. Many different species of fish, birds, turtles and other reptiles, and mammals will also utilize these gator holes, making American alligators a keystone species.



During times of drought or cold weather, crocodilians may also seek shelter in burrows in the banks of wetlands, which they may use the burrows of other animals by enlarging them, or by excavating their own using their snouts and feet. © Janet Pesaturo.

Lizards

Lizards are perhaps the largest and most diverse group of reptiles on Earth, with their being over 3,500 or more recognized species in nearly every shape, size, and biology. They are also perhaps the most difficult group of reptiles to generalize upon when it comes to their tracks, scat, or other signs due to their tremendous diversity found throughout the world. Most lizards, however, have five (5) toes on their front feet, with the second and third toes being the longest, and five toes (5) on their hind feet, the second toes often being the longest in many groups. The hind feet of many groups of lizards are also disproportionately longer and/or

narrower than their front feet, and their front and hind feet are not similarly sized in most, which distinguish them from salamander or newt tracks.

Since most lizards are built to be relatively lightweight animals, their tracks can oftentimes be lighter or more difficult to see unless under the right soil and lighting conditions. Most lizard tracks are easiest to see in dry, sandy areas. Many lizards will also leave drag marks in-between their tracks from their tails, which tend to be heavier and more apparent than the tracks themselves. Oftentimes, the tracks themselves may appear just as scratch marks on either side of the tail drag.



Example of Lizard Tracks with Tail Drag.



[©] Kim A. Cabrera</sup> Anoles, fence lizards, racerunners,

whiptails, skinks, alligator lizards, and other small lizards are some of the most well known groups of North American lizards to leave tracks similar to the above. © Kim A. Cabrera.

Lizard scat or their droppings can vary in size depending on the species, but usually tends to be tubular or cylindrical, or pelleted in shape, with a whitish or yellowish tip. This lighter tip is crystalized uric acid. Like other reptiles, most lizards excrete uric acid as their nitrogenous waste rather than urine, as mammals do, and so this is one way of determining whether a scat was from a squamate reptile. Lizard droppings are also softer when they are fresh, but harder over

time, and are most likely to be found near and around the areas in which they frequent.



Example of a Lizard Scat or Dropping.

Most lizards are oviparous, meaning they lay eggs. Lizard eggs can be difficult to generalize when it comes to identification, other than having to know which species occur in the area, and can vary in size depending on the species. Most, however, tend to be hard-shelled when first laid, but become softer and more leathery, and have a second softer inner layer. Most lizard eggs are somewhat oblong, and may be laid in humid or moist microhabitats underneath rocks, under or within rotting logs or stumps, piles of mulch, or other ground debris which acts as a suitable incubation medium for them. The eggs of many lizards may also be guarded in small self-excavated chambers or cavities by the adults, making identification usually easy.



Example of a Clutch of Lizard eggs, from a Skink.

All lizards also shed their skin periodically as they grow and become larger. However, lizards typically shed their skin in pieces, which are usually ingested and not left behind for us to find, and so lizard shed skins are typically not found afterwards. Some lizards will also dig burrows as well or use the burrows of other animals.

© Minden Pictures. Some larger, heavier lizards such as iguanas, monitor lizards, and tegus, albeit not native to North America, can have more pronounced tracks and deeper tail drag. However, the track patterning is for the most part the same as in most other lizards. Sometimes, "trail runs" or "basking slides" may also be observed, similar to those of crocodilians described above, in areas where a large lizard may be frequently basking or occupying.

Turtles and Tortoises

Turtles and tortoises, which are sometimes collectively known as the chelonians, are another group of surprisingly diverse reptiles. Most species of turtles have five toes on their front and hind feet, with the first (1st) and fifth (5th) toes often being the smallest or shortest. Many species of pond or aquatic turtles, such as map turtles, painted turtles, sliders, and others, have fully to partially webbed toes and feet and are strong swimmers. More terrestrial species, such as box turtles and true tortoises, tend to have shorter toes and more blocky, "elephantine" like feet. Claw marks and scuffs from their plastrons (bottom portions of their shells) may also be evident in their tracks. Turtle tracks are most commonly seen near and along sandy or muddy riverbanks or other areas near water when they come out of the water and onto land in late spring or early summer in search of sandy nesting locations, or to travel to new areas.



An Example of Turtle Scat. Most species of aquatic to semi-aquatic turtles deposit their scat in the water, where it can be easily washed away or disintegrated, making it usually difficult to locate or come across. But they are, however, usually tubular, soft, and grayish or dark brownish and about 1 inch or so.



Example of a more terrestrial turtle or tortoise scat.

Scat from the more terrestrial turtle or tortoise species may be found, however, and are usually a brown to greenish brown in color, solid, and firm. Some of the more terrestrial chelonians may also produce a whitish or yellowish substance along with their scat and feces known as urates, which are their nitrogenous wastes, as they do not urinate in the way most mammals do. As with other reptiles, turtles and tortoises usually simply deposit their scat around the areas wherever they most happen to frequent.

Most turtle tracks run parallel to each other on each side. Sometimes, the tail and/or shell will leave a distinctive tail drag in between the tracks, particularly in species with long tails such as snapping turtles. Most turtle tracks are ovular in shape, with the toes or claw marks showing on one side of the oval, although the feet themselves may or may not leave a distinct print.



Example of Turtle tracks with noticeable tail drag, from a snapping turtle. © Sleeping Bear Dunes National Lakeshore.



Set of typical aquatic or pond turtle tracks in sand. ©

Don Lewis.



Painted turtle tracks in sand. © Nature Inquiries.



Example of a more terrestrial tortoise set of tracks, having much more rounded and stumpy "elephantine" like feet. Track length is not much greater than the width, and appear parallel on each side.

Sometimes, an empty turtle or tortoise shell might be found while hiking in the forest, or out on the prairie. But do turtles really "leave" their shells, or is this myth and misunderstanding? It turns out, a turtle's shell is usually (in most species) comprised of a hard, bony material known as keratin which make up the scutes, and other different parts of their shells. If one were to peek inside an empty turtle shell, one might be able to still see their spinal column and/or rib cages or perhaps other bones still remaining. This means that their shells are fused to their overall skeletal structure, and by finding an empty turtle shell, these are simply the remains of a turtle which has died. Over time, their shells may also calcify, giving them a chalky white color while also losing their original colors and patterns.



An Empty Turtle Shell.

Turtle eggs and nests are another sure sign of evidence of turtle activity in an area. Most turtles lay their eggs in self-excavated cavities up to several inches deep, or in mulch piles or other piles of detritus using their hind feet and claws, and which may be up to a mile to mile and a half from any nearby water. Most turtle eggs, depending on the species that laid them, tend to be white, leathery

shelled, and spherical (resembling ping pong balls) or slightly oblong. Unfortunately, nest predation is a large issue facing many local turtle populations by skunks, raccoons, opossums, and other predators, and so the empty, dug up nests and discarded egg-shells can also be signs of turtle nesting in addition.

Raided Turtle Nest with Discarded Eggshells. There is usually no way to tell which species of turtle may have laid eggs or a nest, other than having to make an educated guess based on the surrounding habitat and which species are known to occur in the area. © The Paper Trail.



Example of Spherical Snapping Turtle Eggs. © River Stone Environmental Solutions.

A Gopher Tortoise Burrow. Some of the more terrestrial turtles and tortoises may also dig deep burrows, typically in sandy upland habitats. These burrows can provide shelter and other resources for many other animals as well, including the Eastern Diamondback Rattlesnake, Eastern Indigo Snake, Burrowing Owls, and many species of amphibians and even insects in the Southeastern United States. This makes the Gopher Tortoise another

keystone species. © The Nature Conservancy.

Snakes and Legless Lizards

When it comes to animals without legs or feet, we might initially think that snakes, and some legless lizards might not be able to make tracks. But this couldn't be further from the truth! Snakes do make tracks, which may be seen crossing sandy or dirt roads or trails through suitable habitat. Typical snake tracks appear as shallow furrows in the sand or soil at least ½" or more in width, depending on the species which has left them.

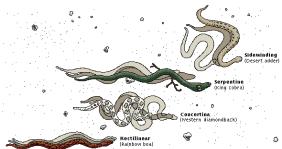


A Typical set of Snake Tracks in sand showing

"Lateral Undulation".

Different species of snakes can utilize different forms of locomotion under different conditions or circumstances which can provide us clues left behind by their tracks. "Lateral undulation" is the most common, typical serpentine form of locomotion used by most snakes, forming an "S" pattern as the anterior or forward parts of their bodies are pushed forward in an undulating side to side motion while the posterior or rear halves of their bodies following. Oftentimes, scuff marks might also appear along the edges of the track where the sides of the snake's body have touched.

"Sidewinding" is another form of locomotion used by some species of snakes, forming a series of characteristic "H" or "J" shapes. These tracks are created when only two points of the snake's body and underside touch the ground at any given time while they are being propelled forward.



"Rectilinear Locomotion" is a third form of locomotion used by some larger, heavier bodied species of snakes. This form of locomotion forms a track propelled forward by strong muscles which these snakes have, in what can best be described as a "caterpillar crawl". Another, fourth form of locomotion may be known as "Concertina" or "Slide Pushing", which may be utilized by snakes in more confined spaces or areas of limited movement where the forward third to half of the body is outstretched and pulled forward, subsequently then pulling the rear or posterior half following, best described in an "accordion" fashion.



Legless lizard, such as the Australian

Burton's Legless Lizard and our North American Glass Lizards, have tracks which also can appear similar to those of snakes. They, however, have more limited

forms of locomotion due to their differing and more rigid muscular and skeletal structures, and typically utilize mainly a lateral undulation form of locomotion.



Not snake tracks: Sometimes, other

"squiggles" in the sand or soil created by burrowing beetles or other insects can be confused for snake tracks due to their similar serpentine fashion, but are too narrow in width and lack a decided direction and coordination/orientation in a forward direction, which set them apart from any snake tracks.

Sometimes, very large and heavy bodied snakes such as some boas, pythons, and anacondas may also leave behind other slide or push marks or trails through the areas they frequent or are traveling through simply due to their sheer weight and size.



Example of a shed snake skin.

Shed skins are one of the most recognizable and commonly found forms of evidence which are also left behind by snakes aside from their tracks. As with all reptiles, snakes periodically will shed their skin, the frequency of which can depend on the species, age, and health of the snake. A snake's shed skin is typically soft and wet or moist due to the humidity snakes need to shed their skin, but dries out and becomes more brittle over time. By looking at a snake's skin, it can often be possible to determine the species which left it behind using certain

features on the shed such as any residual patterning, structure of their scales (whether keeled or smooth/unkeeled), divided or single anal plate, and other scale row counts. One might find a snake skin left behind intertwined amongst rocks, fallen branches or tree roots, logs or stumps, or other places where snakes can gain leverage in order to be able to rub on and push against in order to shed their skin.

© Wildlife Thailand. All snakes lack eyelids, instead having a clear transparent scale covering their eyes called a spectacle. This spectacle can often be seen left behind on a snake shed.



Example of Snake Scat. A snake's feces

are usually dark brown, greenish brown, or blackish, and wet when first laid, but harden over time. Most snake scat is tubular, and is also interspersed with a whitish or yellowish ovular deposit known as urates. As with other squamate reptiles, these urates are the snake's nitrogenous waste, as snakes do not produce urine as mammals do. Snake droppings or scat might be found along trails or paths, near water sources, underneath rocks or logs, or underneath or around anywhere else the snakes may happen to be frequenting or passing through by.

A clutch of snake eggs. Some snakes lay external eggs, which is known as being Oviparous. Snake eggs may vary in size and number in a clutch depending on the species, age, and size of the snake which laid them, but generally have white, leathery outer surfaces, and are slightly oblong. Snakes such as kingsnakes, milk snakes, bullsnakes or gopher snakes, racers, hognose snakes, and rat snakes are some examples of oviparous snakes. Other snakes, however, give birth to "live" young, where the eggs develop and hatch internally and is known as Ovoviviparous. Natricine snakes such as garter snakes, water snakes, and pit vipers such as rattlesnakes, cottonmouths, and copperheads of North America are ovoviviparous. Snake eggs usually are laid in somewhat moist, humid microclimates underneath or within mulch piles or other piles of rotting vegetative debris, rotting stumps or logs, underneath rocks, or in similar places.

Eastern Hognose Snake digging a nest chamber in which to lay eggs. © Jacob Korbel. Most snakes do not dig or create their own holes or burrows, but may use the burrows of other animals or other cracks and crevices. Hognose snakes, however, are one of the few snakes which do dig their own holes, specifically when ready to create a nest chamber in which to lay their eggs. Look for the distinctive excavated holes and slide or push marks leading into or from the hole in sandy soil habitats!



Not snake holes. Sometimes, one might find

numerous, scattered "holes" around their lawn or yard one day, and erroneously attribute them to snakes if they happen to also coincide with snake sightings in and around the yard. Most snakes do not dig their own holes or burrows, and even the few species which do, do not create numerous, scattered holes like these. These holes are made by rodents, or other animals such as skunks or raccoons searching for food.

To learn much more about reptile and amphibian tracks and other signs, also check out: Tracks & Signs of Reptiles & Amphibians: A Gude to North American Species by Filip Tkaczyk:

https://www.amazon.com/Tracks-Sign-Reptiles-Amphibians-American/dp/0811711862