

Lounging Lizards



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Lizards. They're a part of our popular culture. They are used to sell beer during the Super Bowl, they appear in advertisements for hand lotion, and they have been employed to market sunglasses. There is even a line of camouflage outdoor clothing that uses a lizard as its trademark. Shady types who hang around bars are often called "lounging lizards," and even Little Orphan Annie was heard to say "leapin' lizards" a time or two. We all know what one looks like, but what else do we really know about them?

We tend to think of them as critters of hot or dry places. Yet, how many people realize that we have lizards living here in Pennsylvania? Sure, we expect them in tropical areas of the world and in the deserts of the American Southwest, but in Pennsylvania? In fact, there are four lizard species found in the Keystone State. They belong to two families. The Iguanidae family includes the northern fence lizard (*Sceloporus undulatus hyacinthus*) and the Scincidae family is represented by the northern coal skink (*Eumeces anthracinus anthracinus*), broadhead skink (*Eumeces laticeps*) and five-lined skink (*Eumeces fasciatus*). At around 3,000 species, there are more kinds of lizards in the world than any other type of reptile. Lizards are more abundant in warmer climates. For example, as you go north in the U.S., the number of species diminishes from as many as 20 native lizard species found in Florida to a single species, the five-lined skink, which reaches into southern New England. Considering our climate and geographic location, Pennsylvania has an excellent diversity of native lizards.

Identification

Telling the northern fence lizard apart from the skinks is easy. Fence lizards have scales with ridges, or keels, which give them a very rough, scaly, dry appearance. These keeled scales provide texture to the skin. In combination with a mottled pattern of tan, gray and white, plus chevron-like darker bands, this texture creates very effective camouflage. In addition to old wooden and stone fencerows, which are ideal habitat for this species, they also prefer natural rocky slopes in exposed sunny areas. Typically, these rocks are a neutral gray color, often with white or black speckling, and they may contain grayish-green lichens. The northern fence lizard is perfectly adapted to blend in to this environment. Such cryptic coloration is essential to their survival especially because they need to bask in the sun for extended periods. Full-grown fence lizards can reach nearly 8 inches in length, including the tail. Sex can be easily determined since mature males often have a vivid blue throat patch.

Pennsylvania's skinks can be tricky to identify because they share some similar characteristics. All have smooth scales, which give them a very shiny, almost wet-looking appearance. Their bodies appear snakelike and indeed could be described as looking somewhat like a snake with legs. However, unlike snakes, skinks and lizards have the ability to close their eyes. Skinks prefer to use the cover of fallen trees, slabs of bark, and other objects near the ground. A medium-brown to dark-brown base color accented by varying numbers of light longitudinal stripes helps them blend in to their environment. All of the skinks display a bright-blue tail as

This juvenile lizard, seen here in late September, was born earlier in the fall.



Typical fence lizard habitat contains rocks, downed timber, and open sunny areas for basking.



Adult Northern Fence Lizard

juveniles. The purpose of a brightly colored tail on an otherwise camouflaged animal is to draw a predator's attention to the tail. If a predator catches a skink by the tail, it can easily break off and a new one will grow to take its place. The idea here is that the loss of a tail is a small price to pay to stay alive. It has also been theorized that a blue tail, because it is only associated with juveniles, may help to protect the young from the aggressive attacks of adult males. Females typically retain their lengthwise stripes, while the males develop red-orange coloration on the head and neck during the breeding season.

The coal skink has two light stripes on each side of the body, which are separated by a dark, usually black band. With a total of four stripes on the sides and none on the back or head, observers should be able to separate this species from the broadhead or five-lined skink.

Distinguishing between the five-lined and broadhead skink is a little more difficult because both can have five broad, light stripes. However, both species can also lose their stripes, as they grow older. There are three features that can be used to identify these species. First, the overall size of the adults is significantly different. Five-lined skinks reach a maximum length of about 8 inches.

Broadhead skinks are much larger and can achieve lengths of approximately 12 inches. Second, the broadhead skink, as its name implies, has a relatively wide head. The five-lined skink's head is more proportional to the width of its body just behind the head. Finally, a more definite identification involves careful inspection of the precise placement of the dorsolateral stripe. This is the middle stripe between the back stripe and the stripe along the side of the belly. On a five-lined skink, the dorsolateral stripe is on the third and fourth scales counting from the middle of the back. The broadhead skink's dorsolateral stripe occurs on the fourth scale counting from the middle of the back.

Obviously, scale counting is not something that can be done at a distance. It requires close-up, in-the-hand observation. Also, a good reptile and amphibian field guide is essential to proper field identification of the skinks. Unfortunately, skinks have been known to bite when picked up. Although they do not possess venom, one should use caution when handling them.

Range

Pennsylvania's lizards can be found in appropriate habitat throughout much of the state. The five-lined skink is the most widely distributed. It is found in central

and eastern counties that lie in the Appalachian range and in the far northwest corner of the state. The coal skink occurs in the western northcentral counties and appears to occupy areas where the five-lined skink is absent. The broadhead skink is limited in distribution to a few areas in southeast Pennsylvania near the Mason-Dixon Line. The extremely limited distribution of this species is a primary reason why it is currently listed as a candidate species on the state endangered, threatened and candidate reptiles and amphibians list. Pennsylvania represents the northern edge of this species' range in the eastern United States. The northern fence lizard is distributed in a wide range of counties in the southern two-thirds of the state. There are no records of fence lizards found in any of Pennsylvania's northern tier counties.

photo: Joe McDonald



Coal Skink

Habitat

These species have similar but not identical ecological needs. All are carnivores and rely on a diet of insects, spiders, beetles, worms and other small invertebrates. Yet, there are differences in the habitats they prefer. Fence lizards like open grassy areas, powerline rights of way, previously farmed old-field habitat and other open, sunny areas where there are sufficient rocks or logs for cover, foraging and basking opportunities. These areas tend to be dry, and fence lizards do not need to be near standing or flowing water.

The coal and five-lined skinks share similar habitat requirements. They prefer humid woodlands with springs, wetlands or streams nearby. These conditions in association with rocky areas are even more attractive to

Broadhead Skink

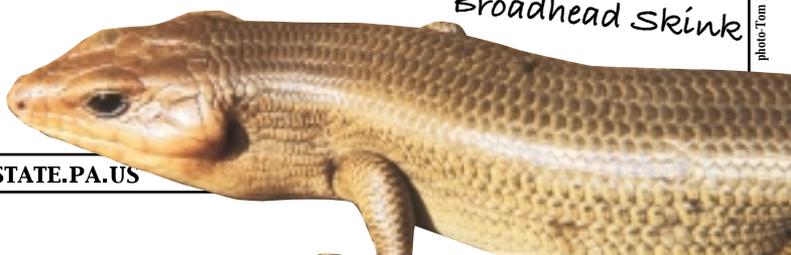


photo: Tom Diz

skinks. Fallen trees, decayed logs, tree slashings, slab wood or bark piles left over from logging operations can all serve as habitat. Leaf matter is especially important because it provides habitat for many of their prey items like small invertebrates. Skinks also like to frequent areas around houses and buildings, which have been built in wooded areas. Bark mulch, rock gardens and wood-piles provide locations for these species to hunt and live. Most Pennsylvanians who have seen a skink have probably done so under such conditions. The broadhead skink is the most arboreal species and prefers to hunt for its meals well off the ground in old snags and other trees. It also prefers humid woodlands, but rocky habitat is much less important.

Reproduction

Pennsylvania's lizards and skinks lay eggs in clutches of from three to 16 eggs, depending on the species. For the northern fence lizard, mating takes place in May or June followed by egg-laying in early July. Fence lizards have been observed digging shallow nests in loose soil, sawdust or decaying wood. After the eggs are laid, they are covered with the nest material. Typically, eggs hatch between mid-August and early September. The hatchlings are about 1.5 inches long at birth. There is evidence that older females may produce at least one additional clutch of eggs per year.

Male skinks develop red-orange coloration on the head and neck during the breeding season. The males can become very aggressive toward other males, driving off interlopers when necessary. Courtship behavior in the skinks is apparently limited, and consists primarily of males pursuing females via scent trailing. Breeding takes place in May.

Basking

Lizards don't actually "loung," but they do bask. Basking, or sunning, is essential to the health and survival of lizards and skinks. Lizards are ectotherms, which are animals whose body temperature is largely regulated by environmental conditions. Therefore, they must elevate or lower their body temperatures by seeking sun or shade, respectively. Body temperatures must be elevated to increase metabolic rates to levels needed for fighting infections, digesting food, development of eggs, growth and general overall health. During spring and fall when air temperatures are cooler, basking occurs more

frequently than in the summer. Thus, skinks and lizards are often more visible to people and predators during the cooler portions of the year.

Like all of our reptiles, these species overwinter underground where they are protected from freezing. Basking is so important to fence lizards that they become very territorial and will vigorously defend their basking sites. The males enlarge themselves and perform head-bobbing movements in addition to what looks like push-ups in an effort to intimidate and drive off intruders.

Living with lizards

The prospects of Pennsylvanians continuing to see most of our native lizards in the future are good. Woodlands and certain habitat features need to be maintained. However, some species are relatively adaptable to human activities. The large tracts of state forests, state gamelands, state parks and currently undeveloped private land throughout much of the range of the northern coal skink, five-lined skink and northern fence lizard suggest that there will be sufficient habitat to sustain these species into the future. The broadhead skink does have us concerned, however. Because it occurs only in a few areas in southeast Pennsylvania, we need to identify all of its habitats and record them so that their presence and survival can be considered during land-use planning.

Up-to-date, accurate species distribution information is always important in developing appropriate management strategies to protect and conserve species.

Pennsylvanians with an interest in herpetology can help by participating in the PA Herpetological Atlas project. Supported with money from the Wild Resource Conservation Fund, this project aims to increase our knowledge of the distribution of Pennsylvania's native reptiles and amphibians. Such information adds to our knowledge of species and leads to improved conservation efforts. Interested persons can find out about this project by writing to the PA Herpetological Atlas, Department of Biology, Indiana University of Pennsylvania, Indiana, PA 15705. Visit the Atlas at www.nsm.iup.edu/pha.

Lizards—whether they're leaping, lounging, basking or bobbing—are part of Pennsylvania's wild heritage and they're here to stay. It's up to all of us to ensure that these unique creatures and their habitats remain intact into the future. ☐