

Pennsylvania Amphibians & Reptiles

NORTHERN SP

by Andrew L. Shiels

Pennsylvania's 16 frog and toad species range in size from the tiny spring peeper to the bullfrog. Spring peepers weigh less than a quarter-ounce, while adult bullfrogs can easily weigh over a pound.

Habits range from the totally aquatic bullfrog, which never strays more than a few feet from the water's edge, to the gray tree frog, which spends much of its time in trees hunting for insects and invertebrates. The moist skin of most frogs restricts them to the water or wet environments and microhabitats where humidity is high and water loss through the skin is low. Toads, on the other hand, have dry, warty skin, which minimizes water loss and allows

them to occupy habitats far from water and high humidity. Still, even toads need some moisture.

Throughout each of their life stages, frogs and toads may be eaten by other animals. As eggs, they are prey for turtles. In the tadpole stage, fish and wading birds seek them out. After they metamorphose into juveniles (froglets or toadlets), they are prey for other frogs, fish, snakes, raccoons, mink, herons, egrets and many other organisms. The great numbers of eggs produced by frogs and toads are needed to ensure that at least a few will survive to reach adulthood and reproduce.

The wide diversity of frog and toad species leads to a long list of prey items that they consume. Insects, worms, slugs and spiders make up the diet of many species.

The Pennsylvania Fish & Boat Commission has regulations in place to limit the harvest of frogs and toads through the use of seasons and possession limits.

All of our frogs and toads use similar breeding strategies. Breeding takes place in water with males attracting females through the use of calling.

Several frog species native to Pennsylvania appear to have declined significantly in recent years. Pesticides, herbicides, and habitat loss and degradation singly and in combination threaten our populations of frogs and toads. It is essential that we find and address the causes of the decline to ensure their survival.

Pennsylvania's smallest frog, the spring peeper, *Pseudacris crucifer crucifer*, reaches lengths of between 3/4-inch and 1.25 inches. In addition to its minute size, an X-shaped dark mark on its back is the primary identifying characteristic. Peepers have dark bars on the legs, which when folded in the normal sitting position add to their camouflage. This frog's base color ranges from a light tan to reddish brown to chocolate brown, depending on the background or habitat in which it is found. Spring peepers are tree frogs, and they have suction discs on their toes to aid in climbing. Because of their under-chin vocal sacs, males have dark throats. Females have light-colored throats. Calling is a high-pitched sound described as a peep or chirp issued in about one-second segments.

Peepers prefer wetlands, wet meadows, bottomland timber, creek edges, swamps, areas around temporary ponds, lake edges, bogs and marshes. They are equally at home

State Wildlife Grants

The Pennsylvania Fish & Boat Commission administers the State Wildlife Grants Program funds from the U.S. Fish & Wildlife Service for the protection of our trust species including fish, amphibians, reptiles and mussels. This program is designed for the protection of rare or declining animals and their habitats. Guided by the Pennsylvania Wildlife Action Plan, this program benefits all Pennsylvanians because these animals are frequently valuable indicators of environmental conditions and important components of our quality of life. Thus, this program is an investment for future generations and may save precious dollars by protecting current populations and habitats...today. For more information on this program, see www.teaming.com, and to view Pennsylvania's Wildlife Action Plan, see http://sites.state.pa.us/PA_Exec/Fish_Boat/promo/grants/swg/00swg.htm.

Pennsylvania currently lists 15 amphibians and 22 reptiles in the State Wildlife Action Plan as "species of greatest conservation need." Amphibian and reptile species of greatest conservation need include the green salamander, hellbender, mountain chorus frog, eastern spadefoot toad, Blanding's turtle, bog turtle, eastern massasauga rattlesnake, and timber rattlesnake.

See Section 10.6 of the Pennsylvania Wildlife Action Plan: http://sites.state.pa.us/PA_Exec/Fish_Boat/promo/grants/swg/nongame_plan/pa_wap_sections/10priority_species.pdf.

RING-PEEPER

on the ground, in low bushes and on the lower portions of tree trunks.

This common species is found statewide.

Spring peepers are one of the first frogs to emerge in the spring and begin calling. Nighttime air temperatures of around 50 degrees and rain trigger emergence and calling. In southern Pennsylvania, these conditions can occur in early March if spring comes early. In northern Pennsylvania, peepers are almost always out at least once by April 1.

Although calling occurs reliably each night when the breeding season begins and temperatures stay warm, unseasonably warm temperatures exceeding 70 degrees will trigger day-long calling. Males travel to wetlands, temporary ponds, and roadside and drainage ditches and enter the chorus with other males. Females are attracted and mating occurs. Spring peepers deposit up to 1,000 eggs one at a time. The eggs are no larger than a pinhead.

The spring peeper is active through the warm months from March and April until October and November. Because of their small size and cryptic coloration, they aren't often seen outside of the breeding season when calling gives away their location. However, on warm fall evenings, particularly on rainy days, small numbers of individuals are often heard calling almost as if practicing for the following spring. Peepers eat small insects, mites, worms and other small invertebrates. ☐

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illustration-Tom Duran Jr.