

## Master Gardener Corner: Spring Peepers

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*Spring Peeper- Pseudacris crucifer*  
Source: David Cappaert, Michigan State University, Bugwood.org

Signs of spring have been slow to emerge, but they are out there. Snowdrops, winter aconite and a few brave crocuses are showing some blooms. Daffodils and tulips are starting to poke through the soil. There have been days when the birds are singing and sightings of robins and redwing blackbirds are a good indication that the weather is changing. Normally by now though, we should have heard the joyous sound of spring peepers in the evening. Their deafening chorus is a welcome sign of warmer days to come.

The spring peeper is a tiny tree frog with a distinctive X-shaped cross on its back. The X isn't always perfect, but it will be present in some form. The peeper's Latin name, *Pseudacris crucifer*, indicates this as "crucifer" in Latin means "cross bearing." They have slightly webbed feet and noticeable disks on their fingers and toes.

Peepers range in color from shades of brown to gray or olive and sometimes yellow or reddish. Their color can vary with temperature and their surroundings. Peepers have cream white bellies and dark bands on their legs and a dark bar between their eyes. Females tend to be slightly larger and lighter in color. Their coloration is good camouflage as it makes them difficult to see on tree bark and leaf litter.

Often seen but not heard, the spring peeper gets its common name from its call, which is a single clear note or peep, occurring once a second. These little frogs (0.75 to 1.25 inches) are among the very first frogs to call and breed in the spring. Spring peepers have large vocal sacs under their chins, almost as big as its body. The males pump their vocal sacs full of air until it looks like a balloon, then discharge the air, emitting their loud "peep." Males may also have a flap beneath their throats where their vocal sacs are. This flap can become much darker than normal during breeding season.

Only males sing calling from shrubs and trees standing in or near water. Females choose a mate by the quality of his call. The faster and louder a male sings, the more likely he is to attract an interested female. If another male gets too close, a male peeper may also sound a trilled whistle. Though nocturnal, peepers often call during the day in cloudy weather or light rain. Calling may be louder on humid evenings or after a warm spring rain. A pond full of peeping peepers can sound like many sleigh bells jingling, only much, much louder.

Spring peepers are found in marshy woods, swamps, temporary and permanent ponds, marshes, flooded areas and ditches. Because they breed in permanent or temporary water, preferably without fish, pools are a habitat requirement. Even though they are a tree frog, peepers seem to prefer to be on the ground, hiding in leaf litter or burrowed into the soil. They usually do not climb too high, clinging 30 to 40 inches up on trees using their sticky toe pads. After the breeding season is over they move into woodlands, old fields or shrubby areas. Spring peepers have home ranges that are from 4 to 18 feet in diameter and they travel an average of 20 to 130 feet in a day. In some areas their populations have decreased significantly, due to loss of wetlands and habitat degradation.

Spring peepers breed from March until June when they migrate to breeding ponds. They do not lay eggs in strands or clumps like other frogs but lay their eggs singly, attached to submerged aquatic plants. Females lay between 200 and 1300 eggs. Eggs hatch in 4 to 15 days depending on the temperature. Tadpoles are able to breathe with gills and swim



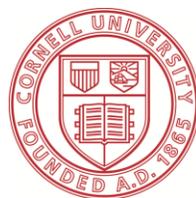
*Spring Peeper- Tadpole* Source: [fl.biology.usgs.gov](http://fl.biology.usgs.gov)

using a tail. The tail makes tadpoles larger than adult peepers. As they mature, tadpoles lose their tail and develop lungs for breathing. Within eight weeks, tadpoles are fully transformed into young frogs and leave the pond. Peepers grow to adult size by the end of the summer and reach maturity within one year. The lifespan of spring peepers is unknown, but it is unlikely that they live longer than 3 years.

Spring peepers catch their food with long, sticky tongues. They eat mainly small insects and other arthropods, including ants, beetles, flies, ticks, mites, pill bugs, caterpillars, springtails and spiders. They may help to control mosquitoes and other small insects. When they are tadpoles they eat algae or decaying plant material in the water. Many animals will eat tadpoles and adults, including large aquatic insects like dragonfly nymphs and diving beetles plus snakes, larger frogs, fish and birds.

As the days cool, peepers dig into the mud near ponds for the winter. They may also spend the winter burrowed in soil under logs and leaves. During the winter, peepers go into a type of partly-frozen hibernation. They survive freezing temperatures by producing glycerol in their tissues, which is an anti-freeze like substance. This prevents ice crystals from forming inside their cells which would kill the cell. When the weather warms, the peepers thaw and come out of hibernation. The loud, peeping chorus of Spring Peepers means winter is finally coming to an end.

*Resources for this article include: Maryland Department of Natural Resources, University of Michigan, Chesapeake Bay Program and University of Wisconsin Sea Grant Institute.*



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