

NIGHT NOISE



SPRING PEEPER/ Jeff Hajenga

By Celeste Good

For many people, the singing of birds returning from their winter migration signifies the start of spring. However, there are other animals who vocalize spring songs as they emerge from hibernation. Frog calls herald the arrival of spring, and learning them is an easy way to observe the changing of seasons.

Male frogs create their characteristic “song” through use of their vocal sac, located on the throat. They force air from their lungs through the larynx to emit a vocal sound. The vibrations from the larynx reverberate within the vocal sac, which amplifies the sound. This call alerts other male frogs that the territory is taken, and attracts females to the breeding area.

Depending on temperature, the call may vary slightly in speed and pitch.

Here are some descriptions of West Virginia’s frogs and toads, including the songs that they sing.

Songs Of the True Frogs

Before the final snows begin to melt, when we are eagerly awaiting spring, there are creatures who stir from their winter slumber to embark on an annual journey. These are the wood frogs who head for their breeding ponds, hoping to get there in time to find a mate. They are light tan to dark brown in color, and have a black stripe, sometimes referred to as a “lone-ranger” mask, across their eyes. Wood frogs have

been seen climbing over melting snow and are known to be philopatric — that is, returning to the same pond to breed each year. This is often the same pond from which they emerged. Their breeding season lasts only one to two weeks. Once at the pond, males call to the females, sounding similar to a large flock of ducks. These first songs of spring are generally heard between February and March near forest ponds which have no fish.

The Northern leopard frog gets its name from the leopard-like spots on its dorsal surface. It is gregarious, and groups of males often call together. The call consists of low gurgling or snoring sounds. These frogs begin calling early in March



and may continue through April. The leopard frog is listed as a species of concern in West Virginia, as it is considered rare and imperiled. Its habitat consists of wetlands, slow-moving streams and ephemeral pools.

The pickerel frog looks similar to the leopard frog, but its dorsal spots are squarish and appear somewhat stacked, while the leopard frog has smaller, rounded spots. An easy way to tell them apart is to examine the underside of the legs. Pickerel frog legs are yellow-orange in color, while the leopard frog's are white. They begin calling mid- to late-March, with a song that sounds like a low growl or purr.

The Northern green frog is sometimes referred to as the "banjo" frog because its call sounds like someone plucking a banjo string. Mating and calling begin in late April or early May. These frogs are dark green to brownish in color, and have two folds of skin that extend from the sides of the head to two thirds down their back. These are common statewide and most likely to be found near ponds and puddles.

The largest frog in West Virginia, the American bull frog, gets its name from its large size, up to 7 inches, and characteristic call. The male establishes territory and generally calls from a pond edge. The call is a deep, low series of three monotone notes. Though they emerge from hibernation in March, they do



American bullfrog

T. Johnson, Missouri Department of Conservation

not begin mating until May and can be heard throughout the summer. They have skin folds which extend over the tympanic membrane, an organ that provides the sense of hearing. This appears as a circular disc behind the eye, and is about the size of a dime.

Songs of the Tree Frogs

An early song of spring that is familiar to many folks is that of the Northern spring peeper. This is a high pitched, "Peep! Peep!" that can be heard near wet open fields, swamps, ponds, roadside ditches and seeps. Generally the song can be heard from early spring through mid-summer, especially after a rainfall. Sometimes these small, tan to brown frogs can be seen sticking to screen doors or homes with the use of their toe discs. A notable charac-

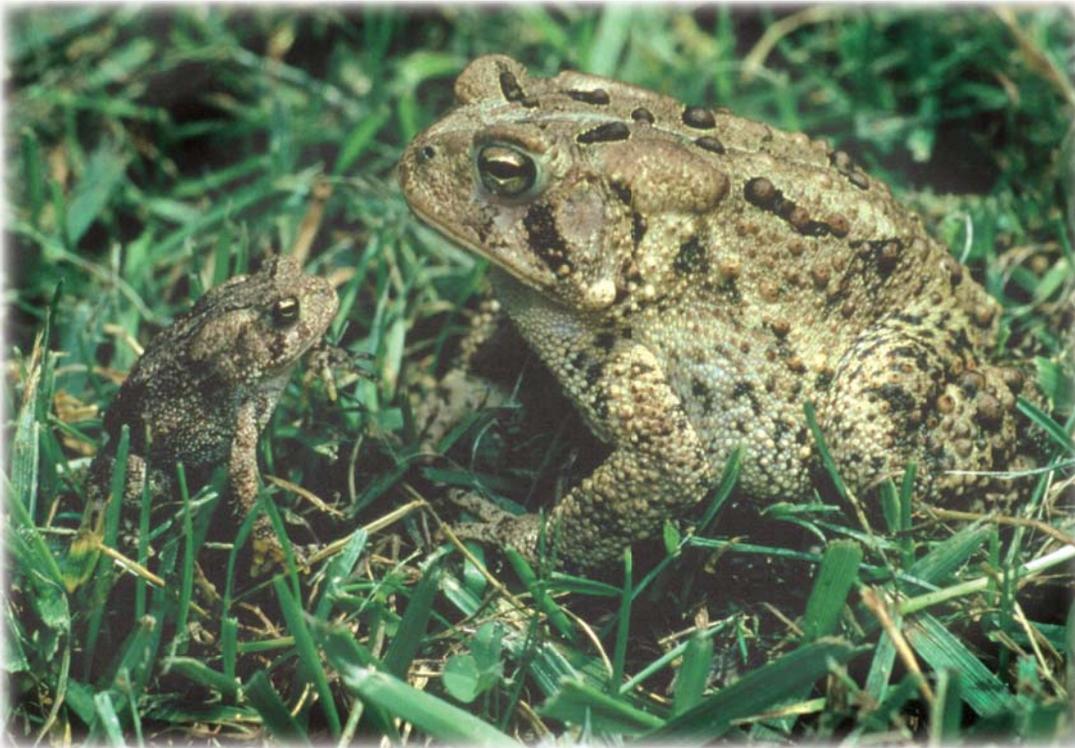
teristic to help identify them is the dark colored X on their back.

The mountain chorus frog and the upland chorus frog are similar in size and appearance. However, the mountain chorus frog has two dark crescent-shaped lines curving inward on its back, while the upland chorus frog has three dark lines on its back. The call of the mountain chorus frog is an even, continuous "rick-rake." The upland chorus frog's call sounds like someone running his finger over the prongs of a fine-toothed comb. Populations of the upland chorus frog have been declining in recent years, and it is listed as a species of concern in West Virginia. Generally, they can be found in the eastern counties.

There are two species of gray

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Bruce Felton

Eastern American toads

treefrogs in West Virginia. They have very similar songs consisting of a long trill, and are difficult to differentiate. It is said that the Cope's gray treefrog has a faster speed of trill than the other gray treefrog. They are also almost identical in appearance, and both can adjust the pigment of their skin to camouflage with the background. Generally, the former is found west of the Allegheny Front, and the latter is found to the east. They breed beginning in April, possibly extending through July and often call late into the summer on humid, warm evenings.

The last two frogs in this family are the Eastern cricket frog and

Blanchard's cricket frog. Cricket frogs are very tiny, growing to a potential size of one and a half inches from front to back. Unlike the chorus frogs, which have smooth skin, the cricket frogs have rough, bumpy skin. Their call sounds similar to someone striking two glass marbles together. They do not begin calling until later in the summer, between May and July.

Cricket frogs prefer shallow or muddy places near ponds. Populations of the Blanchard's cricket frog have not been heard from in several years, and it is believed that they may no longer be found in the state. Blanchard's cricket frog inhabited the western counties of the

state bordering the Ohio and Kanawha rivers. The Eastern cricket frog continues to be found at a few sites in counties in the Eastern Panhandle and is believed to be declining in numbers. Both frogs are listed as a species of concern for West Virginia.

Songs of the True Toads

The Eastern American toad begins to call in early spring. This song is a soft high-pitched trill which lasts for a few seconds. The best time to listen for American toads is in early spring on rainy nights. These amphibians

are found statewide, from high to low elevations, and are often seen in backyards. Females lay their eggs in long brown to black strands in shallow puddles or ponds.

The Fowler's toad generally emerges a couple of weeks after the American toad. Normally warm early spring temperatures can contribute to overlapping mating seasons. Though these toads are different species, they sometimes cross-breed, but their offspring are usually sterile. Normally cross-breeding is prevented because Fowler's toads emerge a few weeks later than American toads. The call of the Fowler's toad is wailing one-note bleat ("waaaah!") repeat-



ing every few seconds. Their eggs appear similar to those of American toads, except the long strands appear partitioned or dented between eggs, while strands of American toad eggs appear smooth.

Song of the Spadefoot Toad

Only one species of spadefoot toad exists in West Virginia. Eastern spadefoot toads prefer loose, sandy soils in wet areas, where they burrow using the spur found on the inside of their back feet to dig.

The range of these toads in West Virginia includes the western counties that border the Ohio River

drainage, and in Hardy County along the Potomac River drainage. Many historically known habitat sites have been destroyed to make way for development. Due to decreasing populations, the eastern spadefoot toad is listed as a species of concern in West Virginia. Their call is nasal, low-pitched, and sounds similar to the cry of a young crow (“burr” or “wahr”). It can also be described as someone playing the mouthpiece of a trumpet. Breeding usually occurs at night, is triggered by heavy rainfall, and can occur from March to October.

Celeste Good works with the DNR Natural Heritage program in Elkins.



Showing the small black spur that is used to dig burrows.

Craig Stihler

How You Can Help

Many frog species have been declining over the past several years due to the loss of habitat from development, as well as degradation and fragmentation of existing habitat.

Degradation of habitat includes pollution, increased exposure to sunlight from forest clearing, and alteration of hydrology. Fragmentation occurs when trails or roads are built, cutting through existing habitat. Migration is important for amphibian survival and the roadways become a death trap for crossing amphibians.

Amphibians are also sensitive to environmental changes due to their permeable skin and eggs. Chemical pollution can be absorbed, hindering development or causing deformities. Monitoring frog species helps scientists learn about and conserve amphibian populations, and it alerts us to environmental changes that could impact humans, much like the canary in the coal mine.

Annually, the *North American Amphibian Monitoring Program* (NAAMP) organizes volunteers to listen for frog calls. In West Virginia this is led by the Marshall University Herpetology Lab, under the direction of Dr. Thomas K. Pauley.



Marilyn Aikman

This program provides scientists with data to help monitor and target species which may be in peril. Anyone can volunteer to take on a NAAMP route. You can visit <http://www.pwrc.usgs.gov/naamp/> for more information or email wv-naamp@yahoo.com.

The Amphibian Cooperative Science Project

for students (grades 1-12) is a great way for teachers and schools to get involved. This is a program involving the

cooperation of Dr. Pauley and the DNR Wildlife Diversity Program. Information can be found at <http://www.wvdnr.gov/Wildlife/AmphCoop-Proj.shtm>.

Another great resource for volunteers to help monitor frogs is Frog Watch, <http://www.nwf.org/frog-watchUSA/> sponsored by the National Wildlife Federation.



A Northern leopard frog with an abnormal spine (see hump) and a missing right eye, two of the significant malformations observed in frog populations.

S. Aulismus, USDA, www.forestry/images.org

To hear frog and toad calls, check out the DNR Web site at www.wvdnr.gov/wildlife/sounds_of_spring.shtm.



American toad calling

Craig Stihler