

Native Vermont Amphibians

Part 1 Frogs

Vermont has eleven known breeding species of frogs. Their exact distributions are still being determined. In order for these species to survive and flourish, they need our help. One way you can help is to report the frogs that you come across in the state. Include in your report as much detail as you can on the appearance and location of the animal; also include the date of the sighting, your name, and how to contact you. Photographs are ideal, but not necessary. When attempting to identify a particular species, check at least three different field markings so that you can be sure of what it is. To contribute a report, you may use our website (www.vtherpatlas.org) or contact Jim Andrews directly at jandrews@vtherpatlas.org.

American Bullfrog (*Lithobates catesbeianus*)



The American Bullfrog is our largest frog and can reach 7 inches long. The Bullfrog is one of the three green-faced frogs in Vermont. It has a green and brown mottled body with dark stripes across its legs. The Bullfrog does not have dorsolateral ridges, but it does have a ridge that starts at the eye and goes around the eardrum (tympana) and down. The Bullfrog's call is a deep low jum-a-rum. Like the Green Frog, the throat of the breeding male is yellow. Also similar to the Green Frog, the Bullfrog's eggs form a film on the surface of the water, but both the eggs and the masses of the Bullfrog are larger. The American Bullfrog remains a tadpole through one or two winters. They are generally found in or near large permanent bodies of water with emergent vegetation along the shoreline. They are locally common in the Lake Champlain Basin and the Connecticut River Valley.



American Toad (*Anaxyrus americanus*)

The American Toad is one of Vermont's two toad species. Toads can be distinguished from other frogs in Vermont by their dry and bumpy skin, and the long oval parotoid glands on each side of their necks. The American Toad has at least one large wart in each of the large black spots found along its back. The underside of the toad is white with black specks. Adults are 2-3 1/2 inches long. The American Toad's call is a long trill that lasts up to 15 seconds. They lay their eggs in long strings, the females produce thousands of eggs that can be found from early May to mid August. American Toads are found throughout Vermont and are one of our most common amphibian species.



Fowler's Toad (*Anaxyrus fowleri*)



The Fowler's Toad is very similar to the American Toad, but instead of having a black and white speckled belly it has a pure white belly with at most, one central spot. It measures 2-3 inches long. The Fowler's Toad has only small warts in the black spots along its back. Like the American Toad, the Fowler's eggs are laid in long strings. The Fowler's Toad's call is an unmusical "waaa" that has been likened to the sound of a sheep in distress. The Fowler's Toad is very rare and has been found only in the southern Connecticut River Valley. It prefers naturally disturbed shorelines. The Fowler's Toad is endangered in Vermont.



Gray Treefrog (*Hyla versicolor*)

The Gray Treefrog measures from 1-2 inches. Adult Gray Treefrogs have a gray lichen-like pattern on their skin with a light patch under the eyes, and no dorsolateral ridges. The Gray Treefrog has larger adhesive toe pads than the Spring Peeper and is an excellent climber. Recently metamorphosed Gray Treefrogs are bright emerald green with smooth skin. Gray Treefrogs have a loud short trill and often call from the trees where they feed. They deposit 1,000-2,000 eggs in clusters of 10-40. Tadpoles are distinguishable by their reddish-orange tails. Gray Treefrogs breed in slow moving or standing water with abundant vegetation. They are widely distributed in Vermont but they are most common in lowlands and missing from our highest elevations.



Green Frog (*Lithobates clamitans*)



The Green Frog is one of the three green-faced frogs in Vermont. It is quite variable in color and pattern. Its body is a mottled green and brown with a green upper lip, dorsolateral ridges, and stripes across its legs. They can grow to between 2 1/2-3 1/2 inches long. Adult breeding males have a yellow throat, swollen thumbs, and eardrums (tympana) that are larger than their eyes. The Green Frog's call is often described as a "gulp" or the plucking of a loose banjo string. They lay their eggs in permanent still water with emergent vegetation. The eggs are laid in a film that spreads up to one foot in diameter over the water's surface. Tadpoles spend one or two winters under the ice before metamorphosing. The Green Frog is a very common frog that has been found in almost every town in Vermont.



Mink Frog (*Lithobates septentrionalis*)

The Mink Frog is one of the three green-faced frogs in Vermont and measures 2-2 3/4 inches long. In Vermont this species generally has dorsolateral ridges. The Mink Frog has dark oval spots oriented along the axis of its legs, unlike the Green Frog and the Bullfrog, which have stripes perpendicular to the axis of their legs. The Mink Frog's call sounds like horse's hooves on cobblestones or two sticks being tapped together. Females lay eggs in round masses that can be as much as 3 feet below the surface. The masses are brownish in color and have between 500-4,000 eggs. Tadpoles can spend more than one winter in the water before metamorphosing. The Mink Frog is a northern frog, and Vermont is at the southern tip of its range. They are only found in the north central and northeast portions of Vermont and even there they are unusual.



Northern Leopard Frog (*Lithobates pipiens*)



The Northern Leopard Frog is 2-3 1/2 inches long and has randomly distributed black spots on its back, sides, and legs. Each spot is surrounded by a light halo. The background colors of the frog can range from gold to green. Its gold or brown dorsolateral ridges often stand out in contrast. Its belly is white with no other markings. The Northern Leopard Frog's call is two-parted, consisting of a series of taps followed by a sound similar to someone rubbing a balloon. Egg masses are softball-sized and filled with densely packed eggs. Often, many females lay their eggs in the same area. The Northern Leopard Frog is a three habitat species, it needs permanent water for overwintering, floodplains and marshes for breeding, and wet meadows and fields for foraging. It is fairly common in the Lake Champlain Basin.



Pickerel Frog (*Lithobates palustris*)

The Pickerel Frog is most similar to the Northern Leopard Frog; however the spots on the Pickerel Frog's back are somewhat rectangular, outlined in black, and tend to be organized in two rows. It measures 1 1/2-3 inches long. They have prominent dorsolateral ridges, a white chest and belly, but a yellow "waistcoat" and yellow down the insides of their rear legs. Pickerel Frogs call in Vermont from mid-April to mid-June. The Pickerel's call is described as a short snore. The Pickerel Frog is generally found state-wide, but it is usually absent from extensive lowlands. It is often found near beaver ponds and reservoirs in upland meadows or old log landings with dense annual vegetation. It is a fairly common species in Vermont.



Spring Peeper (*Pseudacris crucifer*)



The Spring Peeper is one of Vermont's smallest frogs. Adults are generally 1-1 1/2 inches long. The Spring Peeper has no dorsolateral ridges. It has dark markings on its back that usually form an "X", and small adhesive discs on its toes. Spring Peepers vary in color from light to dark brown. Adult males are generally smaller than the adult females, and breeding males have black throats and swollen thumbs. Its call can either be a short ascending whistle or it may be broken into a series of ascending peeps. After mating they lay hundreds of eggs singly or in packages of 2-3 eggs attached to vegetation. Tadpoles metamorphose within 2-3 months. Adults can be found in herbaceous vegetation or woods next to heavily vegetated swamps and marshes of all sizes. They are very common in Vermont.



Boreal Chorus Frog (*Pseudacris maculata*)

The Boreal Chorus Frog is brown with three dark stripes or rows of spots along its back, in contrast to the Spring Peeper's dark "X". Boreal Chorus Frogs have a slight black mask, a white upper lip, and they do not have dorsolateral ridges. They only measure about 1 inch long. Their ascending call sounds similar to someone running their fingers over the teeth of a comb. It is sometimes confused with the broken call of a Spring Peeper but it sounds tinny and mechanical as opposed to the musical whistle of a Spring Peeper. The females lay 500-1,500 eggs in groups of 20-300 in loose gelatinous clusters. They are found in herbaceous vegetation near heavily-vegetated bodies of water. They also need a shallow open breeding area. They were historically found in Grand Isle and Franklin Counties, but have not been seen or heard since 1999. The Boreal Chorus Frog is endangered in Vermont.



Wood Frog (*Lithobates sylvaticus*)

The Wood Frog is a medium-sized frog that measures about 2-2 3/4 inches long. It is brown with dorsolateral ridges and a black mask behind its eyes. Like the Spring Peeper, its colors vary with temperature and gender; female Wood Frogs are often larger and redder. Wood Frogs are one of the first frogs to call in the spring. They are very sensitive to fish and other aquatic predators and are usually associated with vernal pools, but their duck-like quack can also be heard from the margins of semi-permanent pools or other small bodies of water. Egg masses are softball-sized with an average of 700 eggs. Females often lay eggs in the same area of a pool as other females and large mats of egg masses can be found. Wood Frogs are very common in Vermont and have been found in almost every town.



The presence or absence of a **dorsolateral ridge** can be very helpful in the identification of a frog. The ridge is a fold of skin beginning behind the eye and extending part or all of the way to the rear legs on both sides. The dorsolateral ridge can be seen very clearly in the Wood Frog and the Northern Leopard Frog shown below.



The **tympanum** is the eardrum of a frog and in some species it can be seen very clearly. In the green-faced frogs the size of the tympanum relative to the eye can be used to determine the sex of the animal. The males have tympana that are noticeably larger than their eyes. The female's tympana are about the same size as their eyes.

