

FROGWATCH U.S.A.

by Diana Strnisa
photos by Susan L. Shafer

Although the Chinese calendar considers 2008 the Year of the Rat, the World Conservation Union recently announced 2008 is the “Year of the Frog.” The launch of this new amphibian awareness campaign makes this year a perfect time to begin frogwatching. Frogwatch USA is a citizen science program managed by the United States Geological Survey and the National Wildlife Federation. As scientists estimate that half of all amphibian species may be threatened with extinction, this frog- and toad-monitoring program helps herpetologists track populations throughout the United States. By collecting data on local frogs, you too can help conserve these incredible animals.

Anyone can frogwatch, as participating only requires living near a frog breeding site. An ideal habitat consists of a wetland, such as a marsh, swamp, or pond that is quiet, safe at night and convenient for you to visit a few times a week.

Before you begin, check the Frogwatch USA website for information that will improve your watching experience. First, register a habitat at www.nwf.org/frogwatchUSA. If you need to find which species live in your area, search the site for “New York State frogs” or search DEC’s website for “herp atlas.” If you lack confidence in your identification skills, the Frogwatch website provides links to online frog call identification guides. Also, if you wish to join a group effort, the site lists nature centers and other groups conducting frogwatches. For example, DEC has sponsored a number of Frogwatch events at the Five Rivers



bullfrog (*Rana catesbeiana*)

Environmental Education Center and Dr. Victor Reinstein Woods Nature Preserve.

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Once you are ready to frogwatch, visit the habitat site 30 minutes after dusk and listen to the frogs call for three minutes. You must wait quietly, as too much noise will stop the frogs from calling and distort your data. Also, be sure not to sit too close to the frogs, as you may disturb their breeding process.

Males call during the breeding season to attract females, although species breed at different times. During the course of the year, calling starts with the quacking sound of wood frogs, sometimes even before the snow has disappeared. A few weeks later, fingernail-sized spring peepers, trilling gray treefrogs,

western chorus frogs and warty toads join the chorus in turn. These spring breeders head to the water en masse, where they lay eggs in fishless, temporary ponds called vernal pools. After the spring breeders have finished their courtship rituals, the green frogs’ banjo “plunk” and bullfrogs’ “jug-o-rum” echo throughout our ponds in late spring and early summer.



DEC has sponsored a number of Frogwatch events at its environmental centers in Delmar and Cheektowaga.

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As you focus on their sound, try to watch a frog's throat as it sings. The throat actually balloons with each call to amplify the volume. Watching frogs may also help you identify which call belongs to which species. You may be amazed to learn how loud a sound a half-inch male spring peeper perched on a blade of grass can make.

Once you have listened to the calls for three minutes, you must complete a data collection sheet. The frogwatcher records the types of frogs they heard and the call intensity (the interval between calls). This information allows scientists to estimate both the species present and the approximate population. If you have difficulty quickly identifying calls, you can record them and listen to them later at home. In addition,



American toad (*Bufo americanus*)

observers record the habitat location, start and end time, and the weather. Even if you do not hear any calls, recording the information is still important, as scientists need to know if there are no frogs in the area.

If you have time, you may want to observe the frogs' behavior, which can include territorial displays. For example, males may wrestle for a superior position from which to advertise their presence. Although the females choose a mate based on location and singing ability, younger and smaller "satellite" males may lay in wait near a good singer and try to intercept the ladies.

Frogs play an essential role in our ecosystems. They eat many insects, including pesky mosquitoes and gnats, and serve as prey for many predators. And what would spring



spring peeper (*Pseudacris crucifer*)

be like without those wonderful calls on a warm night? The frogs' natural music reminds us that winter has gone, spring has come and the earth is awakening. Being a frogwatcher is an ideal way to appreciate frogs while helping preserve these amazing amphibians for future generations.

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How do frogs hibernate?

Frogs and toads employ a variety of strategies to survive the cold winter nights. Many spring breeders hibernate by freezing themselves! Some toads hibernate below the frost line, often by using an abandoned animal's den. Some species, like the spadefoot toad, even dig down through the soil. Wood frogs, spring peepers and gray treefrogs spend the winter under leaf litter. As the frogs cool down in their

chosen locale, water in their cells binds with glucose, creating an antifreeze that keeps the cell from dehydrating or rupturing. The water in the extra-cellular spaces freezes and the frog's breathing and heartbeat stop. During the winter, the frog's temperature is below the freezing point, ranging from 21-30°F. When spring arrives, the frog thaws and its breathing and heartbeat return to normal.

Other frogs employ tactics to maintain a higher body temperature. Bullfrogs retreat to organic litter on the pond bottom, where the temperature remains above freezing. They completely shut down, and look as if they are dead.

Regardless of the amphibians' hibernation approach, frogwatchers are glad to see them finally emerge with the arrival of spring.