



Great Basin Spadefoot. Copyright Dick Bartlett.

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JUNE 2012

Greetings FrogWatch USA™ Volunteers

We are reaching the final third of the 2012 FrogWatch USA season, but it's not time to call it quits on monitoring yet. As tempting as it may be to forgo frog and toad listening for vacations, barbecues, and fireworks, FrogWatch USA monitoring lasts through the summer.

The FrogWatch USA monitoring season of 1 February through 31 August is standardized nationwide. Our aim is to collect data in a standard and repeated way in order to understand trends across time and space. Moreover, there are still frogs and toads calling. Some species only call during the summer months, after the "early risers" have finished their breeding and young have metamorphosed. Keep listening and report what you hear - there should be enough different noises (frog, bird, insect, and otherwise) to keep it interesting.

Thank you for your continued participation and have a beautiful summer.

Finishing out the 2012 FrogWatch USA Season

The sounds of cicadas and crickets may seem like over-powering voices in the nighttime chorus, but it is important to listen closely for species of frogs and toads that you can only hear calling from June through August. This includes some widespread and fairly common species such as green frog (*Lithobates clamitans*), American bullfrog (*L. catesbeianus*), and cricket frogs (*Acris* spp.), but also rarely-encountered species whose breeding is carefully synced with heavy monsoon rains in the arid regions of the United States (See: Summer Rains... Make Frogs Feel Fine).

As you continue to monitor through August, remember to turn in your completed datasheets electronically to frogwatch@aza.org or mail them to: FrogWatch USA National Coordinator, Association of Zoos and Aquariums, 8403 Colesville Road, Suite 710, Silver Spring, Maryland, 20910. Datasheets are available for download on the FrogWatch USA website: www.aza.org/current-frogwatch-volunteers/.



Green Frog. Copyright Rachel Gauza.

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FrogWatch USA Chapter Coordinator Training Workshops

In-person chapter coordinator training workshops are being scheduled for **late summer 2012 through early winter 2013** with the support of National Science Foundation grant funding.

Zoos, aquariums, government agencies, conservation groups, nature or environmental education centers, and like-minded organizations are welcomed to apply. If you are part of an organization that would be interested in forming a FrogWatch USA Chapter and/or hosting a training workshop, please contact frogwatch@aza.org. Details on requirements for hosting a chapter and information on upcoming training opportunities are available online: www.aza.org/host-a-frogwatch-chapter/.

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Summer Rains... Make Frogs Feel Fine

One thing that makes amphibians unique among the animal world is that they breathe through their skin and are thereby dependent upon the moisture in their environment. The vast majority of frogs and toads in the United States start as an egg in a wetland, transforming into an aquatic tadpole before emerging as an adult. Adults return to wetlands to continue this cycle during breeding seasons, but will also remain close to wetlands, hide under rocks, logs, and vegetation, or bury in soil to keep their skin moist.

A summer storm can ruin people's plans, but is more-than-welcomed by frogs and toads. A surge in frog and toad activity accompanies a soaking summer rain. Many individuals will come out of hiding to move away from dried areas to wetlands and can be seen crossing roads and foraging for prey such as worms and insects. Heavy rains can even trigger some species to call and breed. Following a summer soaker, you may hear mating calls of:

• Atlantic/Eastern Species

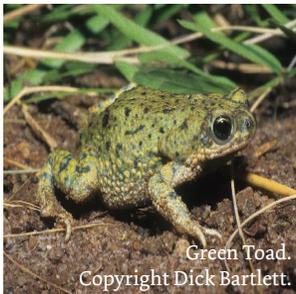
- Little grass frog (*Pseudacris ocularis*)
- Pine Barrens treefrog (*Hyla andersonii*)
- Squirrel treefrog (*Hyla squirella*)
- Pine Woods treefrog (*Hyla femoralis*)
- Oak toad (*Anaxyrus quercicus*)
- Sheep frog (*Hypopachus variolosus*)
- Eastern narrow-mouthed toad (*Gastrophryne carolinensis*)
- Cane toad (*Rhinella marina*) - Invasive species in Florida
- Cuban treefrog (*Osteopilus septentrionalis*) - Invasive species in Florida



Pine Barrens Treefrog.
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• Midland/Central Species

- Woodhouse's toad (*Anaxyrus woodhousii*)
- Texas toad (*Anaxyrus speciosus*)
- Great Plains toad (*Anaxyrus cognatus*)
- Green toad (*Anaxyrus debilis*)
- Gulf Coast (Coastal Plain) toad (*Incilius nebulifer*)
- Western narrow-mouthed toad (*Gastrophryne olivacea*)



Green Toad.
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• Pacific/Western Species

- Arizona treefrog (*Hyla wrightorum*)
- Red-spotted toad (*Anaxyrus punctatus*)
- Sonoran green toad (*Anaxyrus retiformis*)
- Sonoran Desert toad (*Ollotis alvarius*)

Some species also produce an alternate vocalization known as a "rain call." Rain calls are weaker versions of the persistent advertisement calls made during breeding season. All of the sudden, you may be treated to an unexpected "peep" of the spring peeper (*Pseudacris crucifer*) or trill of a gray treefrog (*Hyla versicolor*). So, watch that weather. If your initial plans for the evening get washed out, perhaps a night of FrogWatch USA data collection is in order. Just stay safe and make sure it is not too rainy or windy for monitoring (www.aza.org/frogwatch-monitoring-protocols/). You can review species in your state by visiting www.aza.org/states-and-territories/.

Creature Feature: Great Basin Spadefoot



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The Great Basin Spadefoot (*Spea intermontana*) is one of seven species in the family Scaphiopodidae (North American Spadefoots). Species in this anuran family can be identified by their stout appearance and prominent eyes with vertical pupils. Upon closer inspection, you will find a spade-shaped tubercle on the inside of their hind feet for which these animals are named. This adaptation allows them to dig backwards and bury themselves in the ground when conditions are dry and rain is scarce.

The Great Basin Spadefoot is found in Utah, Nevada, Idaho, and neighboring states. Its call is a punctuated, grunt-like "Whank" that, when given in succession, has been likened to the sound of squeaky shoes walking down a linoleum hallway. Utah's Hogle Zoo's Chapter Coordinator Suzanne Zraggen was the first to coin that description, and it must have worked for Volunteer Pat Meekins, who recorded this species at her monitoring site following heavy rains in May. Pat's observation of Great Basin Spadefoot was the first ever for Utah in the over 10 years of FrogWatch USA data. The species has only been heard at six other FrogWatch USA monitoring sites in Washington, Oregon, and Idaho.

The Sounds and Songs of Summer: What Species Are You Hearing?

Keep these links handy and share what you have been hearing or seeing with other FrogWatch USA Volunteers.

Email the National Coordinator: frogwatch@aza.org
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