



WILDLIFE NOTES

Balcones barking frog

(*Eleutherodactylus augusti latrans*)

If you happen to spend an evening in barking frog habitat during a rainy season, you may think you are hearing a neighboring dog. Listen closely; the noise may actually be a male frog! This amphibian is named for its unusually boisterous mating call. It sounds somewhat like a barking dog and can be heard from considerable distances. Some regard this frog to be one of the scarcest and strangest frogs in the Southwest.

GEOGRAPHIC RANGE

The barking frog of North America is a member of a tropical frog family. It occurs in three southwestern states and Mexico. Its range south of the border ex-

tends throughout central and western Mexico. In the United States, this frog species comprises two closely related subspecies, the Balcones barking frog (*E. a. latrans*) of New Mexico and Texas, and the Western barking frog (*E. a. cactorum*) of Arizona. The Balcones barking frog is distributed in isolated populations from southeastern New Mexico's Chihuahuan Desert region and the lower Pecos River area, eastward to the Edwards Plateau region of Texas, and southward into Mexico. The Western barking frog is found in scattered locations in southern Arizona and down into Mexico.

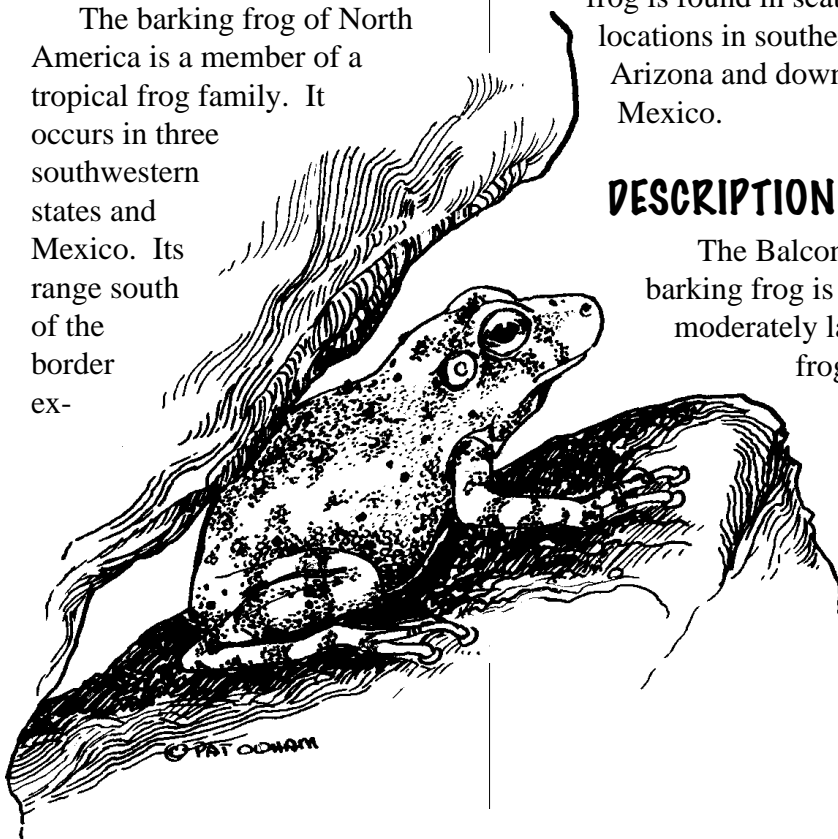
DESCRIPTION

The Balcones barking frog is a moderately large frog,

ranging from about 2 1/2 to 3 3/4 inches in length. Its appearance is almost toad-like minus the warts. It has a stout body shape, a broad head, and short, bulky legs. Its color varies from light brown to dusky green with vague dark markings. It has skin folds across the back of its head. There is a disk-shaped fold across its belly. It has long, slender toes with no webbing.

HABITAT

In New Mexico, the barking frog is located in arid regions of Chihuahuan desert scrub and creosote bush desert flats. This frog commonly dwells within the deep crevices and cavities in limestone escarpments or igneous rock outcrops. Moisture is crucial to survival for the barking frog. Cracks and gaps in limestone and other rock offer the moist, damp places required. They often extend deep into the ground and can provide tiny chambers of consistent dampness. If the surrounding geology includes a high water table, permanent microhabitats may be present below the rock. In areas without such rock, the frog may frequent rodent burrows, caves, and abandoned mines.



BEHAVIOR

The barking frog walks and climbs rocky terrain with its entire body held above the ground. It can be a remarkable jumper as well. This frog is rarely seen out in the open and is difficult to observe. The male usually calls from deep within the crevice of a rock outcrop and the sound may resonate in several directions as it bounces off rock walls. Although its distinctive call can be easily heard, it is often difficult to pin down the exact location of the frog.

This rather elusive frog is active at night and by day hides within its subterranean shelters. When approached, it can rapidly retreat into an underground refuge. Most frog encounters in the open have occurred during a rainy season. Perhaps the frog had been flooded from its burrow or was a female seeking a calling male.

When threatened, this frog will puff up with air to perhaps 1 1/2 times its body size. This is likely a defense against being swallowed by predators. Its predators include snakes, owls, skunks and coyotes.

The barking frog is also a predator. In New Mexico it will consume camel crickets, land snails and possibly other invertebrates such as grasshoppers, scorpions, silverfish, centipedes, and spiders. Its hunting practice is simple; it waits in a crevice or a small hole for its prey to amble by.

REPRODUCTION

The rainy season determines when reproduction will take place for the barking Frog. In New Mexico the frog is dependent upon the summer monsoons. Reproduction activity heightens during and immediately after a rainfall.

The male will carry on periods of intense calling to draw a female into its underground cavity. Approximately 20-80 eggs are laid in a cluster in a moist soil pocket within the cavity. The male and

perhaps the female remain with the underground eggs, protecting them from predators and keeping them moist by urinating on them.

Unlike most North American frogs, development is direct. Tadpoles transform inside the eggs and hatch as miniature frogs about a month later. The barking frog is the only frog in New Mexico with this capability.

ECOSYSTEM ROLES

In New Mexico the barking frog has been little studied and there are many gaps in our knowledge of its natural history. We do know this frog plays an important role within its desert habitat. As a predator, the barking frog helps control insects. It also serves as prey to other desert species, furthering their survival. In addition, amphibians are sensitive to changes in the environment and are considered "indicator species." Therefore, changes in barking frog populations may indicate changes or problems within the desert habitat.

CONCERN FOR THE FUTURE

The Balcones barking frog is not thought to be abundant anywhere within its range. Although there are concerns regarding its restricted distribution, New Mexico laws do not provide special protection for it. This amphibian depends upon groundwater for its moist habitat and is likely threatened by overuse and contamination of existing water. Additional threats to this species include over-collecting by humans, excessive pumping of the water table, road expansion, development of off road recreation sites, and cattle guards. The Balcones barking frog of New Mexico may be protected by discouraging unnecessary collecting and protecting the habitats of any known populations.

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