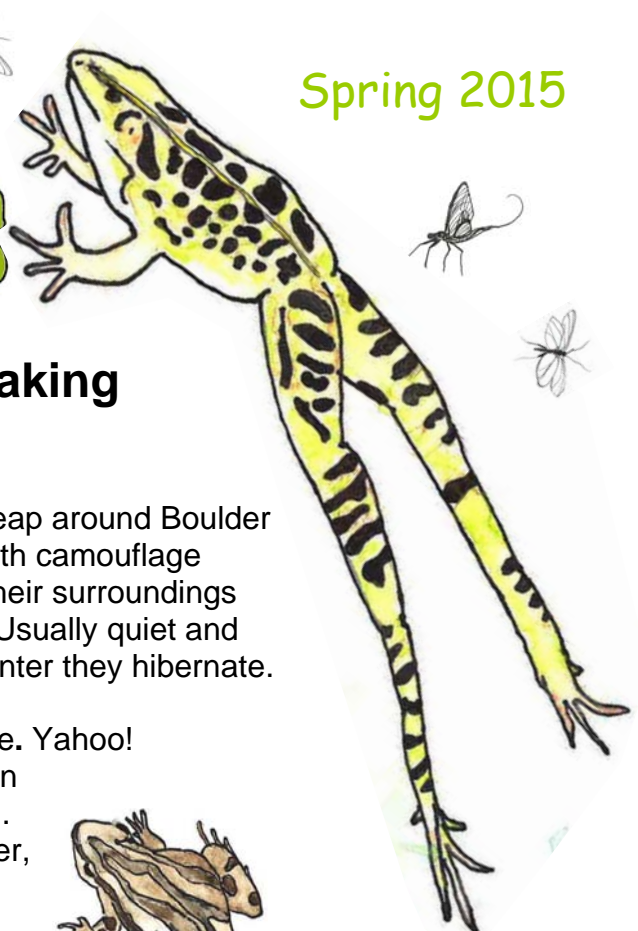


NATURE DETECTIVES

Spring 2015



Leaping Leopard Frogs & Croaking Chorus Frogs

Leopard frogs and chorus frogs hop, jump and leap around Boulder County during the warm seasons of the year. With camouflage coloring of greens and browns, they blend into their surroundings and try to avoid getting snatched up and eaten. Usually quiet and alone, they hop and hide and look for food. In winter they hibernate.

Spring is special because now is frog-calling time. Yahoo! Warm spring days prompt the male frogs to begin to sing. On the plains, that means March or April. Up in the mountains where warm days arrive later, frogs won't call for another month or more.

Frog Went a Courting...A Hum

When winter is over, male frogs leave their hibernation shelters and group together in calm, shallow water. It is time for frog dudes to belt out their frog songs. Leopard frogs make leopard frog calls and chorus frogs make chorus frog calls. Loudly!

Leopard frog guys have an air sack on their throat in front of each front leg. The much smaller chorus frog guys have just one air sack under their chin. It takes a lot of energy to make such loud sounds. The air sacks are inflated through holes in the frog's mouth. The frogs make the sounds with their mouths closed.

Frog calling jump-starts the frog life cycle. Female frogs hear the calls and instinctively hop toward the sounds made by males of their species. Leopard frogs are attracted to leopard frog calls and chorus frogs to chorus frog calls.

The female frogs will lay masses of eggs in the water where the males are waiting to fertilize them. Each frog's life cycle begins as an egg laid by a female frog.



Leopard Frog



Chorus Frogs



Pull Out and Save





Egg to Polliwog to Frog - Metamorphosis

Female frogs lay hundreds to thousands of eggs in clear, still water. Neither leopard frogs nor chorus frogs ever stick around to guard them. Egg survival is simply a matter of luck. Animals such as ducks and fish find slimy frogs' eggs tasty so out of hundreds of eggs very few will survive to hatch.

What hatches after a few days is not a four-legged frog but a wee tadpole. Tadpoles, or polliwogs as they are sometimes called, look more like fish than frogs. They breathe underwater with gills like fish. They have a long, sort of fish-like tail and no legs. They use teeny teeth to scrape food off rocks and other surfaces, and they also snap up minuscule food particles in the water.

They hide from bigger tadpoles, salamanders, ducks, snakes, turtles, fish and even large insects in the water, and all other predators hungry for baby tadpoles.



As the tadpoles get large, they start to change shape. Four tiny legs appear and lungs develop. As the legs grow, the tadpole's tail gets shorter, used up for energy by the frog's body. The almost-frogs start to gulp air at the surface and one day, they hop out of the water. The little animal has completely changed from a tadpole that had to live under water into a long-legged frog that can hop around on land or dive back into a pond. Frog metamorphosis is complete.

New Enemies and New Foods

Out of the water, there are new dangers. The frogs look and listen for snakes, raccoons, herons, jays, hawks and other predators. Frogs are great at sensing ground vibrations and seeing danger. Then they zig-zag jump and hide.

Like tadpoles, adult frogs will eat almost anything that fits into their mouth. Their sense of smell helps them find food. When they spot prey, their sticky tongue whips out in a flash to catch flying insects, ants, beetles, spiders, slugs, snails and worms.

Frogs gulp food whole without chewing. They can push their eyeballs down to their mouth when they swallow big prey to help cram the food down their throats.



Bodies Made for Life In and Out of the Water

Chorus frog adults are only about an inch long from nose to rear end. Leopard frog adults are about four inches, not counting their long legs. Both kinds of frogs can be found from the plains to the mountains. They like ponds, marshes, shallow areas of lakes, and even big puddles. Frogs are amphibians, animals that spend their lives both in and out of water. During mild rainy weather they sometimes roam far from water.



Actual size!

The leopard frog and chorus frog's skin is moist and smooth. It isn't protected with hair or feathers or scales, but slick mucous helps shield and moisten the skin. The mucous is made in glands under the skin. The slippery skin makes it hard to hang onto a frog and just might keep a frog from becoming another critter's dinner.

Frog skin also allows oxygen to move through it. Oxygen goes directly into the frog's blood to aid the lungs in breathing. Frogs renew their outer skin by shedding it periodically. Shed skin is food not to be wasted so the frogs usually eat it.

Surviving Winter Ice

Chorus frogs shelter under logs, piles of leaves or in animal burrows when temperatures fall. Temperatures below freezing can put icicles in their blood. Their heart stops beating and they stop breathing, but a kind of antifreeze in their cells keeps the frogs alive.

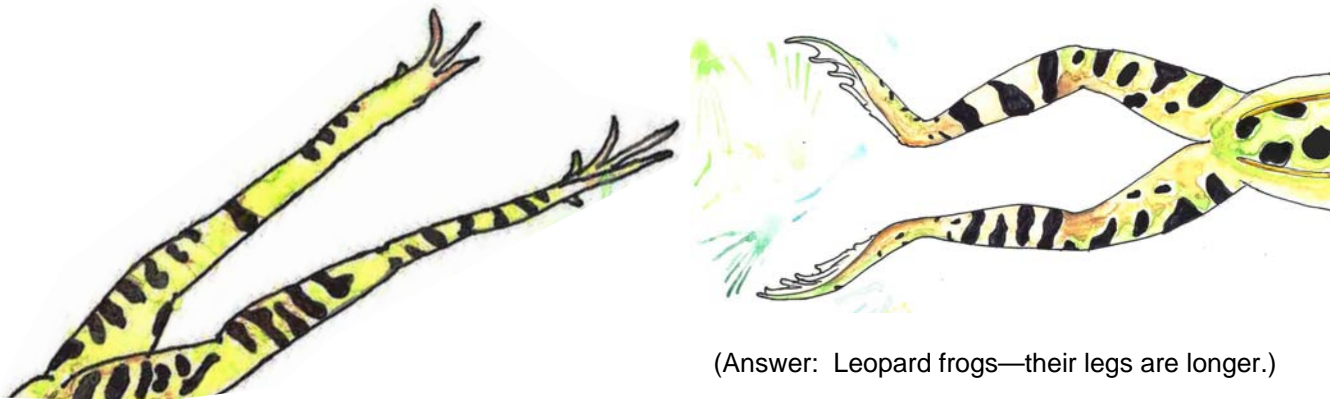
Leopard frogs cannot survive freezing temperatures so they winter under debris at the bottom of ponds or lakes where temps stay above freezing.

Frog Troubles

Frogs absorb moisture through their skin from wet grass, damp ground or in water. They absorb so much water in ponds, they have to urinate a lot. If frogs are in dry air too long, they dry out and suffocate.

Invasive bull frogs, water pollution and loss of clean wetland habitats are all hard on leopard frog and chorus frog populations. When conditions are favorable, the frogs can survive as long as five to nine years.

Trivia Question: Which frog jumps farther, a leopard frog or a chorus frog?



(Answer: Leopard frogs—their legs are longer.)

Ribbit and croak? It's more like creeeek, chuckle and snore!

Different frogs make different types of calls. Chorus frogs are very tiny—only about one inch long—but you can hear their calls from half a mile away.



To imitate a chorus frog, get a plastic comb and strum your fingernail across the tips. That's pretty much what chorus frogs sound like.

Leopard frogs aren't named for the sounds they make—they are named for how they look. Their spots made people think of the large wild cats that sport a spotted coat.

See if you can imitate the call of a leopard frog—it's kind of like a snore and a soft little chuckle!

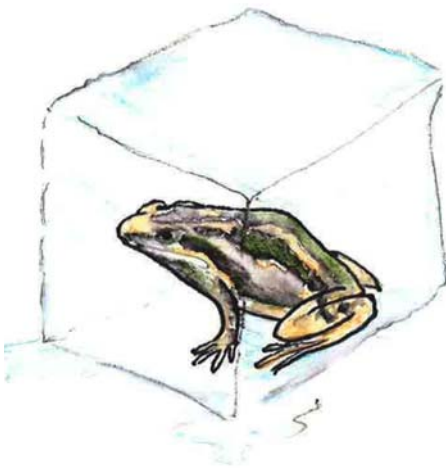
How do frogs stay warm?

People are mammals. The energy made inside our bodies keeps us at a constant temperature. Frogs are amphibians. They depend on outside temperatures to change their own body temperature. If a frog needs to get warm, it has to sit out in the sun to absorb the heat. If it gets too hot, it finds a cool, shady place to cool down.



Check Out Your Body's Temperature Control

Get a thermometer from your mom or dad. Have them show you how to use it. On a warm, sunny day, go outside and sit in the sun for about five minutes. Feel your skin—is it warm? Take your temperature and write it down. Now go inside an air-conditioned building. Stay there until you are nice and cool. Take your temperature again. Aren't you glad you're not a frog?



Frogsicle Freeze!

Since frogs can't stay warm in winter, it is hard to survive. Chorus frogs do something very "cool." They have a type of anti-freeze in their bodies that protects them. Their whole bodies become frozen like "frogsicles" and the antifreeze protects their organs.

In the spring, they thaw out and start jumping and calling. But don't try to freeze a frog yourself! They can only do this all by themselves.

Listen for Frogs – To learn more about leopard frogs and chorus frogs, see the **frog program** listed in the *calendar of events* near the end of this IMAGES spring issue.