Highlights

Flopping Frogs!

Have scientists discovered why the tailed frog belly-flops?

By Pamela Brunskill

You probably know that frogs hop. But did you know that there's a tiny frog in the Pacific Northwest that belly-flops? It's called a tailed frog.

Dr. Rick Essner is a biologist who has been studying tailed frogs for the past few years. "I've looked at thousands of jumps with high-speed video and have never seen them land on their feet like other frogs," Essner says. Most of the time, tailed frogs land on their stomachs and then bring their back legs in to prepare for another jump.

Not like Other Froqs

Essner first noticed these frogs because of the way they swim. Other frogs kick both of their back legs at the same time. But when a tailed frog swims, it moves

The Pacific Northwest tailed frog.

more like a trotting horse. It pushes first with one leg and then the other.

To try to figure out why tailed frogs belly-flop, Essner and other scientists collected and filmed different kinds of frogs. By putting their fingers behind the frogs, they were able to make each frog jump. The scientists found that all of the frogs start their jumps the same way: they stretch out their legs. The change comes in midair and in the landing.

While in the air, tailed frogs keep their legs stretched out. As a result, they come in for a landing at an angle with their legs still out. They belly-flop.

The way the tailed frogs jump might explain why they are not graceful swimmers. They cannot move their hind legs as quickly as other frogs do.



A high-speed camera helped Dr. Essner see how the tailed frog flops.

The coloring of the tailed frog allows it to blend in with the moss on the side of rocky streams, where it can catch bugs and flies at night.

Maybe they don't need to move as quickly. Tailed frogs live around water and swiftly jump into the water to escape danger. They don't need to hop around as much as other kinds of frogs.

An Ancient Animal

Early frogs developed around watery areas and could jump quickly into water to escape from predators. They didn't need to hop around. The water provided both food and protection.

Scientists think those frogs blended in with the moss on the side of the rocky streams, just like today's tailed frogs. "The streams are very loud and the frogs sit very still and blend in," explains Essner. "I would guess that predators would have problems detecting them."

This frog is only a jump away from water. You can see the tiny "tail" that gives it its name.

hopping.



When predators did find those early frogs, the frogs could leap into the stream. They didn't need to continue

Tailed frogs and other kinds of frogs went their separate ways about 200 million years ago. Tailed frogs stayed by streams. Other kinds of frogs moved to places where new hopping skills allowed them to survive.

Tailed frogs have been around for millions of years, and they're still making a splash!