

Rocky Mountain Tailed Frog

(*Ascaphus montanus*)



Species Description

Tailed frogs belong to a small family of frogs native to the Pacific Northwest highly adapted to life in cool, fast-flowing mountain streams. Their bodies are flattened, and they have long back legs with powerful back feet. There are two members of this group, both found in Oregon: Rocky Mountain tailed frogs (described here) and coastal tailed frogs. Geographic location is an important thing to note when trying to distinguish between the two tailed frog species. Rocky Mountain tailed frogs are found in the Blue Mountains in the northeastern corner of the state, while coastal tailed frogs are found in the Coast and Cascade mountains. Tailed frogs can be identified by their vertical pupils and lack of external ear drums.

Rocky Mountain tailed frogs have rough, grainy skin that is variable in color. Their backs range in color from tan, brown, reddish-brown, green, gray or mottled gray in color with patches of yellow. They have vertical pupils and a dark eye stripe. Males have a small tail, for which the species is named. Males grow to an average of 1.75 inches snout to vent, and females grow to an average of 2 inches. The larvae have a round, sucker-like mouth that they use to graze for food and can use them to hold on to rocks in fast flowing water. Tadpoles can be anywhere from cream to black in color.

Range and Distribution

The range of Rocky Mountain tailed frog includes the southeast corner of British Columbia to western Montana, north and central Idaho, southeast Washington, and northeastern Oregon at mid- to high elevations. In Oregon, Rocky Mountain tailed frogs occur only in the Blue Mountains in the northeastern corner of the state.

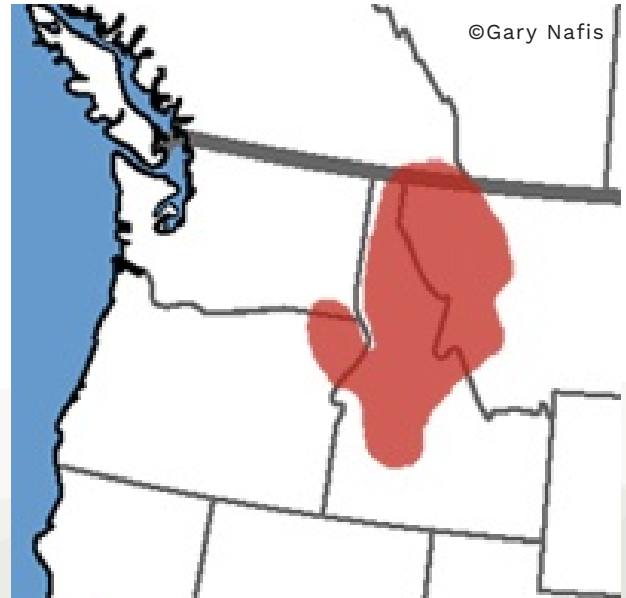
Habitat Characteristics

Rocky Mountain tailed frogs live in or near permanent mountain streams in moist forests. Streams that they occupy are fast flowing with clear, cool water and have rocky stream bottoms. The Rocky Mountain tailed frog is very restricted to streams, more so than the closely related coastal tailed frog. They are often found in or near headwater streams, seeps, and springs.

The large rocks and cobbles that make up the stream bottoms are important habitat components. The spaces between these rocks can provide protection from flooding, debris flows, predators, and from warm waters.

Diet and Foraging

Adults feed mainly from stream banks, eating insects including spiders, beetles, flies, and a wide variety of other insects. They have a reduced tongue, so they hunt by lunging at prey with their whole body. Tadpoles eat algae, diatoms, and tiny insect larvae. The tadpoles can use their sucker-like mouth to graze algae off of rocks.



● Approximate range of Rocky Mountain Tailed Frog, *Ascaphus montanus*

Life History and Ecology

Rocky Mountain tailed frogs are nocturnal, long-lived, stream-breeding frogs that are closely associated with cold, fast-flowing water. Like all frogs, they are *ectothermic*, or “cold-blooded,” meaning they rely on environmental temperature to maintain their body at the optimal temperature for metabolism. Rocky Mountain tailed frogs are adapted to cool water, and have a very narrow range of temperatures that they can tolerate. Individuals may move within the stream body to stay in water that is the right temperature to behaviorally regulate their body temperature.

Tailed frogs have distinct immature and mature body forms and undergo complete metamorphosis. Metamorphosis is when they transform from tadpoles, their juvenile form, into their adult form. Tadpoles are entirely aquatic, do not have legs, have a tail fin, gills, and a modified mouthpart on the bottom surface of their head. When they metamorphose, they grow legs, their lungs develop, and they lose their tails. The Rocky Mountain tailed frog has an extremely slow developmental rate; in Oregon, metamorphosis occurs from July to September of the tadpole’s third year. Juveniles may take up to eight years after hatching from eggs to reach maturity! Individuals can live from 15 to 20 years in total in the wild.

Different age classes of tailed frogs can be found using different parts of their habitat. Young, small tadpoles are more common in pools, while older, larger tadpoles are often found in riffles (fast flowing, shallow water). Metamorphosed adults leave the stream bed to hunt for food, and are capable of some overland dispersal, though overland movement is highly limited. Some adults may overwinter on land.

These frogs breed in streams in late summer and fall, with delayed fertilization of eggs until the following spring. Females breed every other year to every three years. Clutches of 45 to 70 eggs are attached to stream rocks in a single gelatinous strand in spring or early summer after stream flow volume goes down. Females sometimes lay their eggs in communal masses. Tadpoles emerge from the eggs after about six weeks, usually between mid-July and mid-August.

Predators of Rocky Mountain tailed frogs include American dippers, garter snakes, and trout. Larvae are eaten by sculpins and giant salamanders. They escape predation by folding in their limbs and floating downstream.

Fun Facts

- Tailed frogs have one of the narrowest ranges of water temperature they can tolerate of all frogs in the world!
- Rocky Mountain tailed frogs do not have a mating call; mates find each other by sight or smell.
- The family that tailed frogs belong to, the Leiopelmatidae, is considered to be the most ancient family of frogs in the world. This family has unique characteristics shared by no other frog family.
- Tadpoles develop a sucker-like mouth on their bottom surface of their head that they can use to hold on to rocks when stream flow is high.
- Hatchlings are nearly transparent!

Conservation

Rocky Mountain tailed frogs are habitat specialists with low dispersal capabilities, which make them vulnerable to habitat changes due to human activity. They have an extremely narrow range of temperature tolerance, and can not withstand temperature increases in the waterbodies they live in. Land use activities that change stream morphology, cause sedimentation, or increase stream temperature are leading threats to their populations.

Rocky Mountain tailed frogs are very restricted to cool mountain streams. When hiking in their habitat, you can help to protect this species by staying on trail and keeping your pets on leash. Disturbances along the streambed can cause sedimentation that may negatively impact this species. In areas where off-highway vehicle travel is allowed, stay on trails. If you find a Rocky Mountain tailed frog in the wild, it is best to avoid touching it. Amphibians have delicate skin that can be damaged when handled. Chemicals and oils carried on your skin (including sunscreen, bug spray, or other products) may be harmful to amphibians.

Little information is available regarding population trends for this species throughout its range. In Oregon, they are an Oregon Conservation Strategy Species (Species of Greatest Conservation Need) and a Sensitive Species. They are a Federal Species of Concern. For more information about the conservation status of Rocky Mountain tailed frogs including special needs, limiting factors, data gaps, and conservation actions, refer to the Oregon Conservation Strategy.