

THE AMERICAN BIOLOGY TEACHER



About Our Cover

The Western Toad (*Anaxyrus boreas*) is a large amphibian native to western North America from southern Alaska to northern Baja, Mexico, penetrating into the Yukon and Northwest territories and as far east as Montana. Once known as the Boreal Toad and assigned to the genus *Bufo* sp., this species is now divided into two subspecies—the Boreal Toad (*Anaxyrus boreas boreas*; found throughout the north) and the California Toad (*Anaxyrus boreas halophilus*), which inhabits Nevada through Baja.

Western Toads have stocky bodies with adult lengths of 6–15 cm. Mature toads weigh between 50 and 150 grams; with males being smaller than females. Their skin appears dry and bumpy and ranges in color from greens to dark grays and browns to reds with a white or cream-colored dorsal stripe running from the snout down the spine. The ventral surface is a dull white with dark mottling that occurs in patterns unique to each individual.

Outside of the breeding season, toads hunt in forests, meadows, bogs, marshes, and grasslands, spending time under fallen logs, in rock crevices, and underground. They can dig their own burrows or use those of small mammals. In preparation for hibernation, toads move down such burrows to below the frost line. They have variable diets with a large portion of it attributable to insects and other invertebrates. Beetles, flying insects, and ants often top the list, which they catch by lunging forward with a sticky tongue extended. Western Toads are eaten by garter snakes, birds, mammals, fish, and other amphibians.

Breeding and egg laying generally occurs between April and July, but this varies by year, elevation, and other factors. Preferred breeding sites tend to be water bodies that stay wetted throughout summer. The female will lay between 3,000 and 16,000 dark-colored eggs in long bead-like strings that can be several meters long. The eggs typically hatch in less than two weeks. Tadpoles eat algae and detritus and metamorphose into juveniles between 1 and 3 months, depending on water temperature. Once metamorphosis is complete, the toadlets emerge en masse (as captured in this image) and head to higher grounds to hunt and grow to sexual maturity.

The major threats to Western Toads are anthropogenic disturbances, Chytrid fungus, and Ranavirus. The International Union for the conservation of Nature (IUCN) has designated this species as “near threatened” due to declines and extirpations over parts of its distribution in the United States. In British Columbia, where these toadlets were photographed, Western Toads are considered a species of concern, especially where native habitats have been impacted by habitat loss.

Roy Rea, from the University of Northern British Columbia, captured this image in Prince George, British Columbia, Canada, on June 14, 2022, with a Canon 5D Mark 3 and a Canon EF 24-105mm 1:4 lens.

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