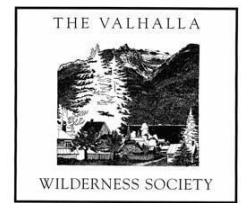


# WESTERN TOAD FACT SHEET



## Fish/Bear Lakes

The West Kootenay region supports a high density of breeding Western Toads (*Anaxyrus boreas*). The population of Western Toads at Fish Lake likely represents a regionally significant population.

Our research shows that a substantial number of adult and juvenile toads (toadlets) are killed by vehicle traffic every year on Highway 31A during their migration periods. The five year study is looking at ways to mitigate this and other threats to the population.

*The Western Toad is a species of conservation concern. It is internationally listed as Near Threatened by the World Conservation Union, is federally listed as Special Concern by the Committee on the Status of Endangered Wildlife in Canada, and Yellow-listed by the BC Conservation Data Centre. Thus, provincially Western Toads are less at-risk than they are nationally or globally, making BC an important care-taker of their survival.*

## What is a Western Toad?

Western Toad adults are mostly terrestrial amphibians that have wider bodies and shorter legs relative to body size compared with most other amphibians. They can be a variety of colours and usually have a thin pale green or cream stripe down the back. Females are generally larger than males and have rough skin on their front feet. All adults have large oval glands on their head called parotid glands. The “warts” on the body of these toads are actually glands that secrete a bitter poison that is distasteful to predators. The skin of an amphibian is extremely sensitive and permeable, so if a person handles them, it is strongly recommended that they wear plastic gloves or, at the very least, that their hands are free of sunscreen, lotion, or soap.



**DIET:** Western Toads depend on a wide variety of insects and invertebrates for sustenance. Over 95% of their adult diet consists of flying insects, ants, beetles, crayfish, spiders, centipedes, slugs, and earthworms. They will also take larger items if given a chance. The tadpoles are herbivores, feeding on aquatic plants, detritus, and algae (BC FrogWatch). Although the toxin secreted by adult Western Toads deters a lot of predators, such as bears, the toadlets are commonly eaten by garter snakes, birds, fish, small mammals, and even other amphibians.



**HABITAT:** Unlike most amphibians, Western Toads spend 95% of their life in terrestrial habitats, using aquatic environments only to breed. This always occurs in shallow water; the preferred sites have substrate for egg strands to be secured onto and are often sheltered from wind and wave action. There are three main migrations as adults move to and from Fish Lake for breeding in the spring, and toadlets leave the lake in late summer for upland habitat. For adults in spring, migration is intermittent, taking place primarily during warm, wet nights. Toadlets migrate only in the daytime, usually following summer rain events. Toads hibernate underground in the winter, often in small mammal burrows. This makes them vulnerable to clearcut logging, roading, and other developments.

# Five Year Study of Western Toads at Fish/Bear Lakes to Find Ways to Mitigate Highway Mortality

In 2015, biologists working for the Valhalla Wilderness Society began a five year study of Western Toads at Fish/Bear lakes. In spring, adult toads migrate across Hwy 31A to breed at Fish Lake and the west end of Bear Lake. On average, 1-2 adults are killed nightly by traffic, including females that each carry over 12,000 eggs. Large schools of blackish tadpoles hatch from the masses of eggs laid along the lakeshore. By July, these metamorphose into hundreds of thousands of toadlets smaller than a dime. Mass migrations of toadlets move across the highway to the mountains, most dramatically after summer rains. Tens of thousands cross Hwy 31A from different parts of Fish Lake during the height of the tourism season. Thousands of baby toadlets get squished by traffic. Some people help to move toadlets across the road in buckets. You may encounter masses of toadlets at the Fish Lake rest stop. Please watch where you walk. We are working on long-term solutions to reduce road kills, such as by installing barrier fencing and toad-friendly culverts. The Fish and Wildlife Compensation Program; Columbia Basin Trust; Valhalla Wilderness Society; Yellowstone to Yukon Conservation Initiative (y2y.net); Regional District of Central Kootenay through the Kootenay Lake Local Conservation Fund for Areas A, D, and E; McLean Foundation; and others are providing funding support for the study. We appreciate your support. For more information, go to [www.vws.org](http://www.vws.org).



Toadlet, small enough to fit on the tip of a thumb.

Photo: Barb Houston

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BC's Ministry of Transportation & Infrastructure (MoTI) is a key partner in helping to mitigate highway impacts to Western Toads at Fish/Bear lakes

