

factsheet

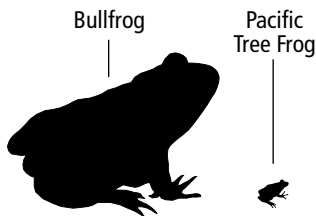
7

Bullfrog

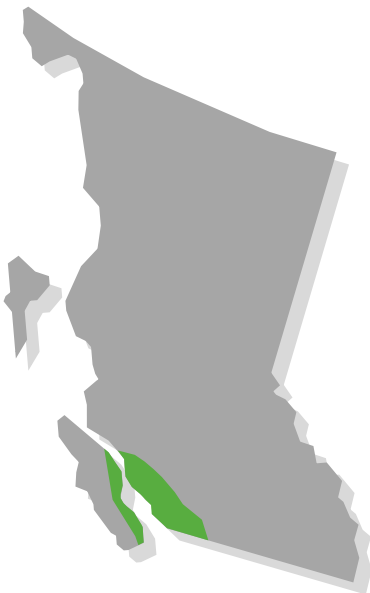
Rana catesbeiana

LENGTH: 20 CM

Compare the Sizes!



INTRODUCED SPECIES ARE SPECIES THAT HAVE BEEN INTRODUCED INTO AREAS WHERE THEY DO NOT NATURALLY OCCUR.



Present range of the Bullfrog in British Columbia

At a Glance

The Bullfrog is not a native species in British Columbia. Its natural range lies in the eastern part of North America, from Canada as far south as Florida. It was introduced to B.C. in the early part of the twentieth century by people wanting to “farm” it for its meaty legs. It has spread through much of the Lower Mainland and southern Vancouver Island, and is widely distributed in the western United States, where several introductions took place.

The Bullfrog is quite distinctive in all its life stages. It is a very large, robust frog, green or brown in colour and with large golden eyes. Adult female Bullfrogs may reach 20 centimetres in length (not including legs!) and 750 grams in weight. Male Bullfrogs are somewhat smaller, as is usual for amphibians. Both sexes have a large and distinct tympanum (“ear”) just behind and below the eye. The tympanum is partly surrounded by a fold of skin that runs from the eye down to the shoulder. Males have a tympanum roughly twice the size of the eye, while females have a smaller tympanum that is about the same size as the eye. There are no dorsolateral folds (the folds of skin that run down the sides of the back of many frogs). The sexes may also be distinguished by their throat colour — adult males have yellow throats, often quite bright, while females have paler cream or white throats.

Green Frogs, another introduced species, also have a conspicuous tympanum, but they do have dorsolateral folds. They do not grow as large as Bullfrogs.

You may often see adult Bullfrogs floating just beneath the water’s surface — all that is visible are their eyes and their green snouts. Even more often, you may hear the deep *bwaa, bwaa* call of the males in the spring and summer; the calls can carry up to a kilometre. Sometimes, when approaching a shoreline, you may hear frogs leaping into the water with loud splashes and “*eep!*” cries; these are juvenile Bullfrogs, avoiding you as a potential predator. None of the native frogs in B.C. do this, though Green Frogs do.

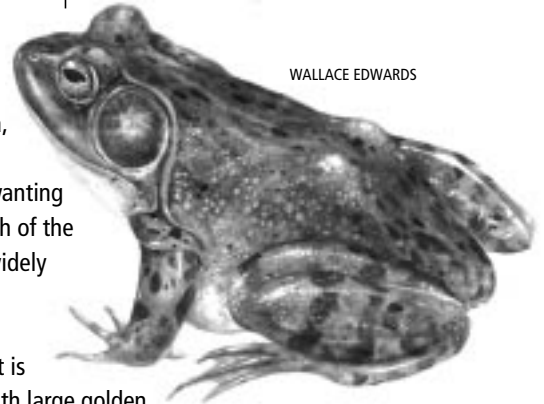
Bullfrog tadpoles are as easy to spot as their parents. Again, they are quite large — up to 15 cm long! Bullfrogs often spend two years in the tadpole stage, compared to just a few months for many other frog species. The tadpoles are very dark green — almost black — in colour, with an arrowhead-shaped body and a dorsal fin that begins behind the body. Newly metamorphosed Bullfrogs are small compared to adult Bullfrogs, but are still as big as the adults of other species. They can be distinguished from native frogs by their large tympanum.

Home Sweet Home

Bullfrogs are very aquatic frogs, more so than any of the native species except the Oregon Spotted Frog. The adults seldom leave the water, unlike most frogs and toads which forage on land. They seem to prefer fairly shallow, warm ponds and lakes with lots of vegetation. Sometimes they are seen in ditches and slow streams, but in general they prefer standing water. The breeding ponds must be permanent, due to the long tadpole stage. On occasion, adult or juvenile Bullfrogs may travel short distances over land, dispersing to new ponds; juveniles travel in the fall, shortly after metamorphosis, while adults are more often seen travelling in the spring.

This is the Life

Adult Bullfrogs gather at breeding ponds in early summer, much later than most native frog species. Males stake out territories with good egg-laying sites and defend them, calling loudly to attract females and chasing away rival males. After mating, females lay masses of up to 20,000 eggs in a film on the water’s surface; the eggs hatch in four or five days (depending on temperature). Tadpoles hatch out in July and remain in the ponds through that summer and the following winter, metamorphosing in August or September of their second year. They may not reach breeding age for two or more years after metamorphosis. Bullfrogs may live up to ten years in the wild, but mortality is very heavy in the first few years.





no kidding!

Adult **Bullfrogs** can turn the tables on snakes — garter snakes (which usually prey on frogs) have been found in Bullfrog stomachs, and injured snakes are sometimes found near Bullfrog ponds.

Bullfrogs can leap up to two metres distance.

Bullfrogs defend their territory with a special call and, if that doesn't work, by kicking, pushing and wrestling.



What's On the Menu?

The short answer to this is "anything the Bullfrog can fit in its mouth." Of course, this applies to many frogs and toads, but since Bullfrogs have such big mouths, they have more items on their menu. Adult Bullfrogs are highly predatory, consuming in addition to the conventional frog fare of insects and other small invertebrates, birds, small mammals, snakes, and other frogs (including smaller Bullfrogs). It is disconcerting to see a frog eating a duckling, but the aspect of the Bullfrog diet of most concern to biologists is their habit of eating frogs. Most of B.C.'s native frogs are little more than a bite-sized snack for Bullfrogs, and there is evidence that Bullfrog colonisations of lakes are followed by declines in the native Red-legged Frog and Pacific Treefrog populations.

Bullfrog tadpoles are primarily herbivorous, grazing on algae and detritus. Although they have been observed eating eggs and newly hatched tadpoles, this was probably general browsing rather than deliberate choice on the part of the Bullfrogs.

Bullfrog tadpoles also compete for food and habitat with the tadpoles of native frogs. Researchers have found that two native species, Pacific Treefrogs and Red-legged Frogs, show reduced larval growth rates and survival when the tadpoles are placed in tanks with Bullfrog tadpoles.

Where and When?

Bullfrog populations have become established in B.C. in the Lower Mainland, Lasqueti Island, and Vancouver Island as far north as Parksville. The frogs were brought to B.C. by would-be frog farmers in the 1930s and 40s, and have spread under their own power or with more human assistance since then.

In their natural range in Eastern Canada, adult Bullfrogs hibernate at the bottom of breeding ponds through the winter. In milder B.C. winters, they may not go into true hibernation, but they will reduce their activity.

Bullfrogs emerge from hibernation or torpor in the spring, becoming most active in midsummer (June and July) during their breeding season. The loud booming calls of breeding males can be heard up to a kilometre away.

How They're Doing

Bullfrogs are spreading in the Lower Mainland and on Vancouver Island, displacing native frogs in the habitats they invade. The rate of their spread on Vancouver Island is being studied by a team from the University of Victoria. Bullfrogs have also been reported recently in other areas of the province.

How You Can Help

You can help native frogs by *not* transporting Bullfrogs from one place to another. The large tadpoles are tempting "pets" for children or for gardeners who want some life in their backyard pond, but this kind of bucket-brigade transport seems to be one of the primary ways that Bullfrogs are spreading in the province. Bullfrogs are considered wildlife in B.C., and it is illegal under the *Wildlife Act* to capture, transport, keep or sell them.

If you would like to have frogs in your pond, the best thing you can do is to create an attractive environment, with water, shelter, and plenty of insects for food — which means laying off the chemicals! — and native frogs will most likely find your pond on their own. Never move frogs or frog spawn — you risk killing the eggs, accidentally spreading frog diseases, or transporting a species you don't want (such as Bullfrogs of course!).

If you notice new Bullfrog colonies, or anything else that causes you concern about Bullfrogs, contact BC Frogwatch and we'll do what we can to help.

You can find out more about BC Frogwatch, the Wildlife Branch and the Conservation Data Centre at

<http://www.elp.gov.bc.ca/wld>



BRITISH
COLUMBIA

Ministry of Environment, Lands and Parks

BC Frogwatch

Ministry of Environment, Lands and Parks
P.O. Box 9374 Stn Prov Govt
Victoria, B.C. V8W 9M4
email: bcfrogwatch@victoria1.gov.bc.ca

Conservation Data Centre

Resources Inventory Branch
Ministry of Environment, Lands and Parks
P.O. Box 9344 Stn Prov Govt
Victoria, B.C. V8W 9M1

Wildlife Branch

Ministry of Environment, Lands and Parks
P.O. Box 9374 Stn Prov Govt
Victoria, B.C. V8W 9M4