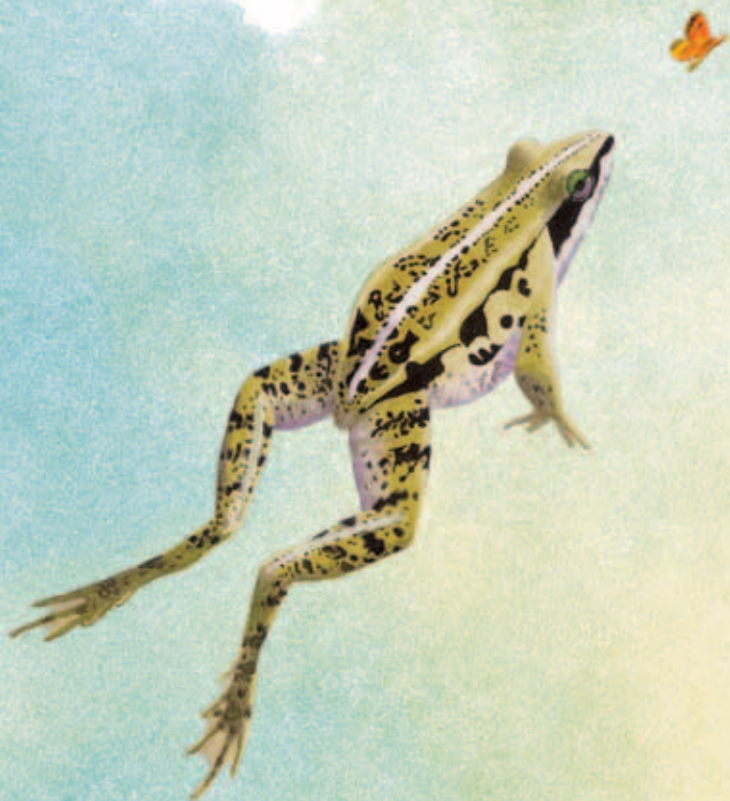




Yukon Amphibians





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except "Frog" p. 17 by Keith Wolfe Smarch

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to this project.

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**For more information on amphibians
and other Yukon wildlife, contact:**

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Email: wildlife.viewing@gov.yk.ca

www.wildlifeviewing.gov.yk.ca



WHAT IS THIS? QR (Quick Response) codes
contain information that will send you to a website.
Using your smart phone and decoding software,
scan the codes in this booklet to go to a Yukon
government webpage that allows you to listen to the frog calls.



CHECK OUT
the Identification Chart
in the Centrefold!

A Guide to YUKON AMPHIBIANS

Of the nearly 6,000 species of amphibians in the world, only four species are found in Yukon. This booklet will provide you with information about frogs, toads, and salamanders, and help you understand a bit more about this unique class of animals. You will learn about the northern adaptations these frogs have and where you can see them.

We still have a lot to learn about amphibians in the North, so we encourage you to report any unusual sightings as you are exploring Yukon's wilderness. Use this booklet to help identify them and take photos, but leave them in place so they are not injured or stressed. Amphibians are excellent indicators of environmental health and an important part of Yukon's biodiversity.

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M. Thompson

All About AMPHIBIANS

Herpetology, from the Greek meaning “the study of creepy things”, includes both reptiles and amphibians. Reptiles have dry, scaly skin that can withstand drying out, and they usually lay eggs with hard shells. Because of their tough skin and shells, reptiles such as turtles, snakes, and crocodiles can spend a long time—even their entire lives—out of water.

Amphibians, however, have smooth, moist skin that absorbs and releases water. Their eggs do not have hard protective shells and must always be laid in water. Thus amphibians such as frogs, toads, and salamanders are closely tied to water sources and moisture.

As the name suggests, amphibians (*amphi* for ‘both’ and *bios* for ‘life’) live both in and out of water. Most amphibians lay their eggs in water with the young becoming tadpoles with gills and fins. As adults they move to land, though many of them remain in damp places to avoid drying out. Although most amphibians have lungs, they also “breathe” oxygen and water through their moist skin and the lining of their mouths. As a result, they are extremely sensitive to pollution and changes in their environment.

Wood Frog egg masses floating below the water surface in a pond near Whitehorse in May.



YG - C. McClelland

Cold-blooded in a *COLD CLIMATE*

Amphibians are ectothermic, or “cold-blooded,” and cannot produce enough of their own heat to stay warm. Yukon’s extremely cold winters, short and cool summers, scarce hibernation sites, and thin snow cover are not ideal living conditions.

Northern amphibians survive the winter by hibernating underground, under ponds, or under leaf

litter beneath a blanket of snow. While most amphibians would freeze to death if cooled below 0°C, Wood Frogs and Boreal Chorus Frogs can survive temperatures as low as -12°C. They produce a glucose that acts as antifreeze to prevent cells from bursting when they freeze. The heart stops beating, the fluid between the cells freezes, and the frogs look frozen solid. Yet they emerge alive in the spring!



B. Slough



B. Slough

Snow lines the edges of this pond during frog breeding season.



B. Slough

Frogs and toads take full advantage of summer’s midnight sun. Their eggs are large and dark to absorb heat and are submerged below the water’s surface which might freeze. Dark tadpoles absorb sun in the shallows, while adults bask on land or in shallow water. Some amphibians that are nocturnal in warmer climates prefer the brightest part of the day in the North.



B. Slough

Dark tadpoles absorbing heat from the sun.



C. Wong



Wood Frog

LITHOBATES SYLVATICUS

The most common and widespread frog in Yukon, the Wood Frog is found as far north as Ney Khwi Vun (Frog Lake) on the Old Crow Flats. It lives in a wide variety of habitats and adults can be found well away from water. They gather together to breed in clear, shallow ponds from late April through June, often with some ice still on the water.



Eggs are globular, tennis ball-sized masses attached to sticks or plants.



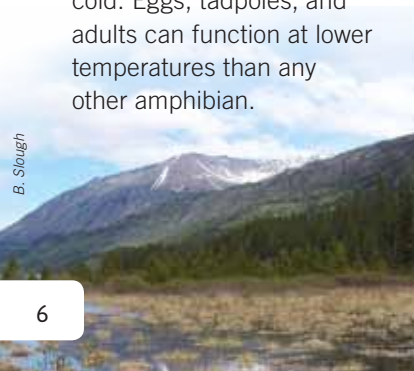
B. Bennett

Listen for their choruses of duck-like quacks, an early indication of spring.



SCAN THIS to hear
a Wood Frog call.

The Wood Frog thrives in the North because it grows quickly and can tolerate cold. Eggs, tadpoles, and adults can function at lower temperatures than any other amphibian.



Western Toad

ANAXYTRUS BOREAS

Found throughout most of northern British Columbia, Western Toad populations are so far confined to the Liard River basin in Yukon. Though it is nocturnal further south, it may be active during daylight in the North.



SCAN THIS to hear
a Western Toad call.

Western Toads hibernate communally in burrows more than a metre underground. They are limited to areas where deep snow cover provides insulation. In the North they are abundant around geothermal springs such as those in Atlin, Meister River, or Coal River.



Bead-like eggs are laid in long strings wrapped around vegetation, as opposed to clumps like other frogs.



L. Mermel



YG - M. Dunn



Columbia Spotted Frog

RANA LUTEIVENTRIS

More closely tied to water than the Wood Frog, the Columbia Spotted Frog prefers permanent ponds up to the treeline. It has only been sighted in the Hyland River and Irons Creek Lake area east of Watson Lake and on Bennett Lake near Carcross.



Eggs are laid in floating, globular, grapefruit-sized masses.



SCAN THIS
to hear a Columbia
Spotted Frog call.

Unlike the Wood Frog, the Columbia Spotted Frog cannot survive freezing so it hibernates under water with a thick layer of ice and snow. When the ice melts, the frogs use the shallow flooded margins of ponds to breed and lay eggs.

Distribution of the Columbia Spotted Frog



B. Slough

Boreal Chorus Frog

PSEUDACRIS MACULATA

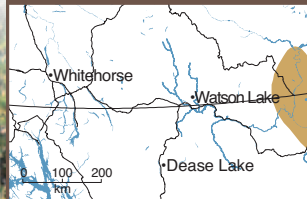
The smallest of Yukon amphibians, the Boreal Chorus Frog is found only in the La Biche River in the extreme southeast corner of Yukon. It inhabits damp grassy or wooded areas, but is seldom seen as it spends most of the summer underground.

When mating, male Boreal Chorus Frogs make a rising “kreeeep” similar to the sound of drawing your finger down a comb. They breed in the early spring, before the snow and ice have melted, and continue into June.



SCAN THIS
to hear a Boreal
Chorus Frog call.

Distribution of the
Boreal Chorus Frog



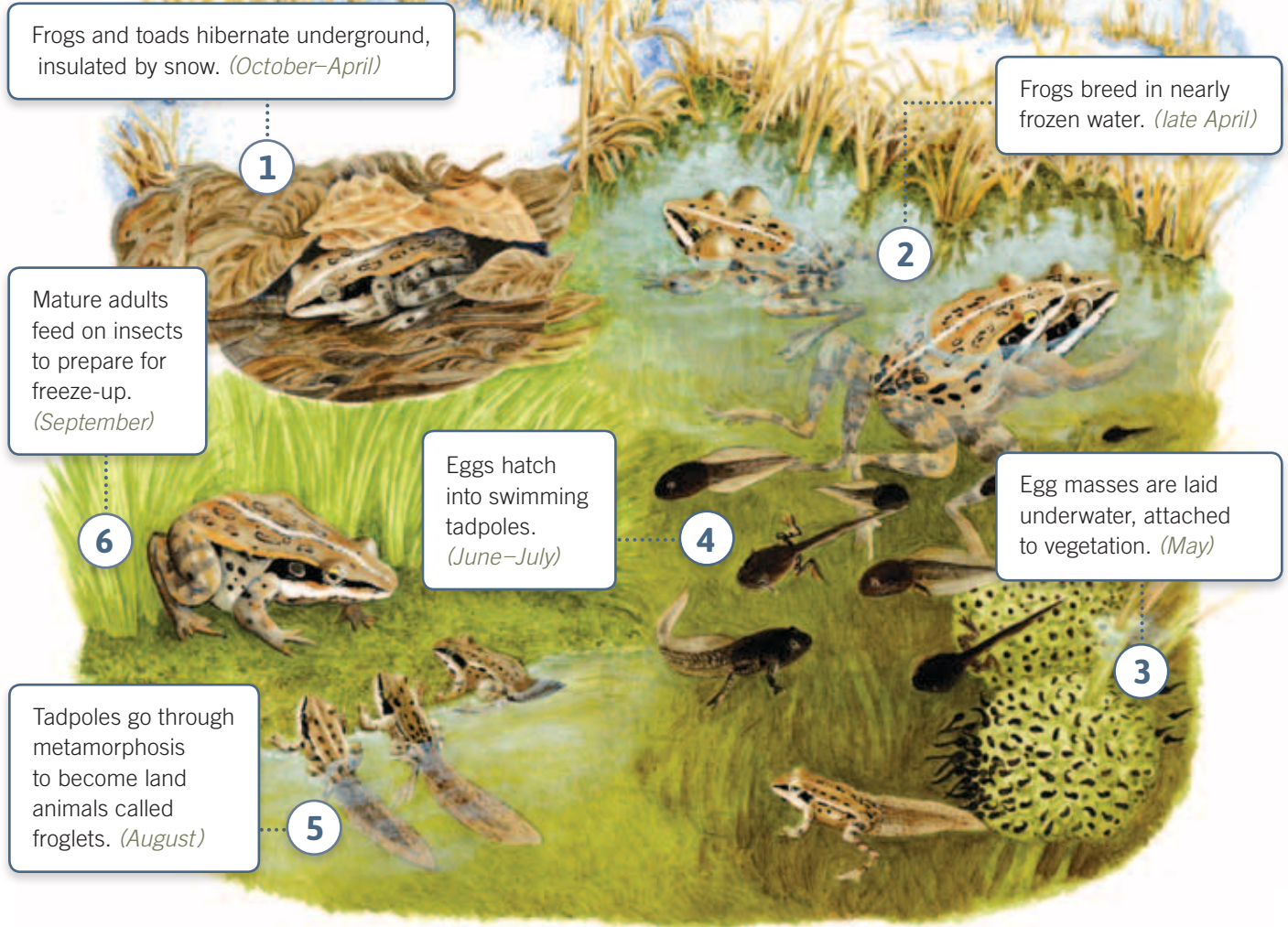
Eggs are laid in small clumps 25 mm across and attached to submerged plants.



D. Collier

Life CYCLE

Wood Frogs complete their reproduction cycle in 7–12 weeks—faster than any other North American frog.

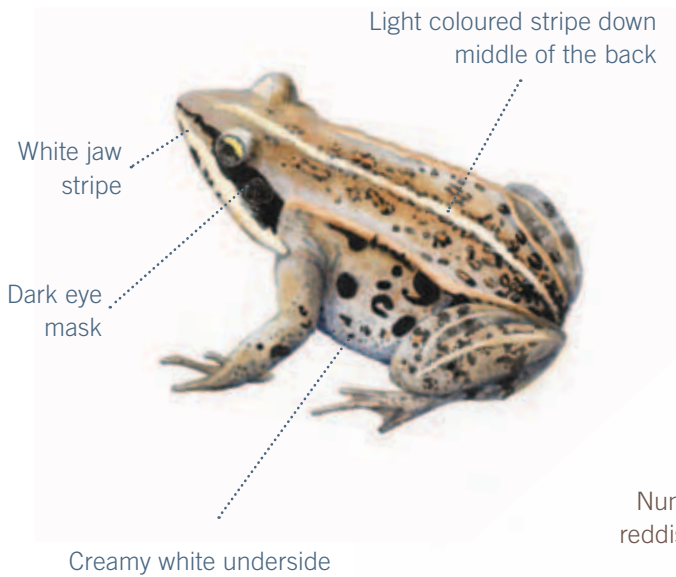


Yukon Amphibians IDENTIFICATION CHART

Sketches are actual size.

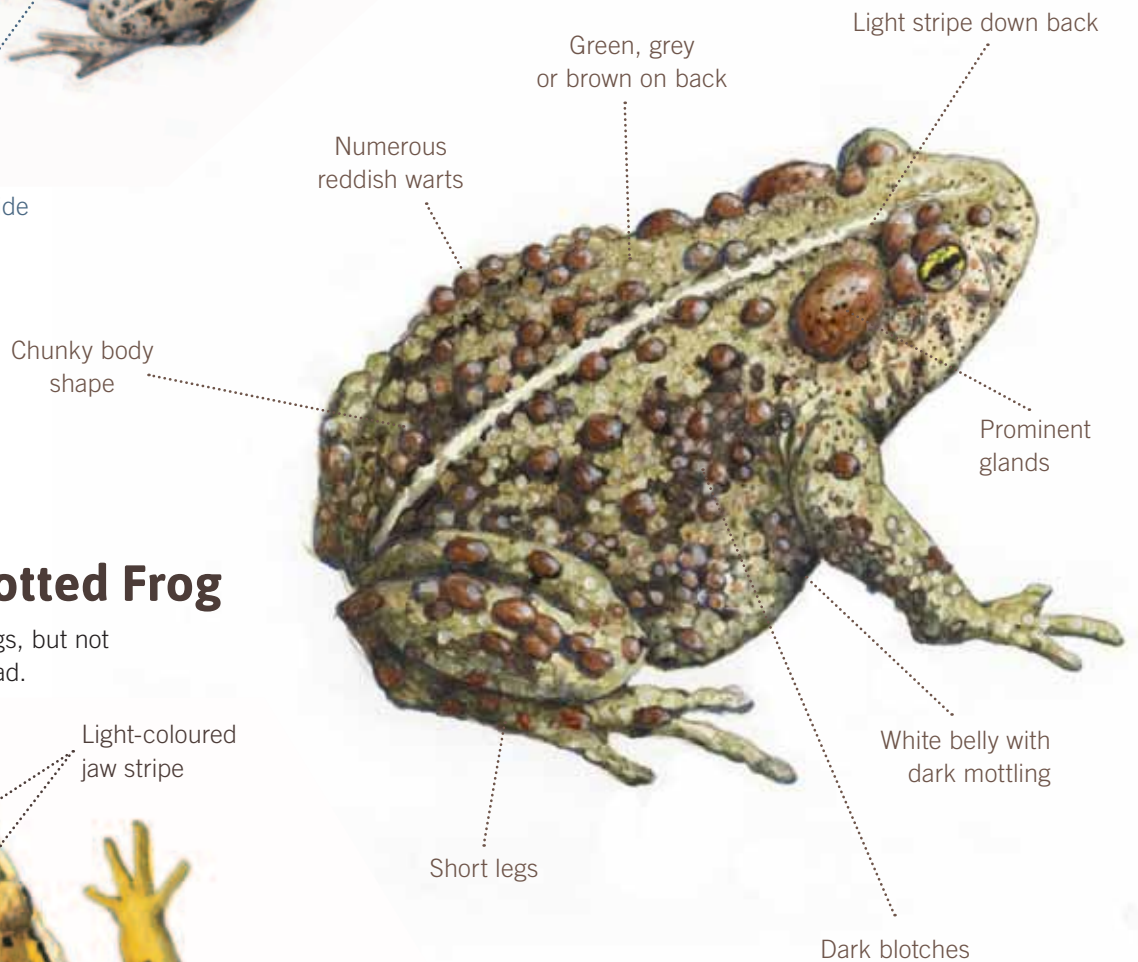
Wood Frog

Vary greatly in colour from brown to grey or pinkish.
LENGTH: up to 6 cm



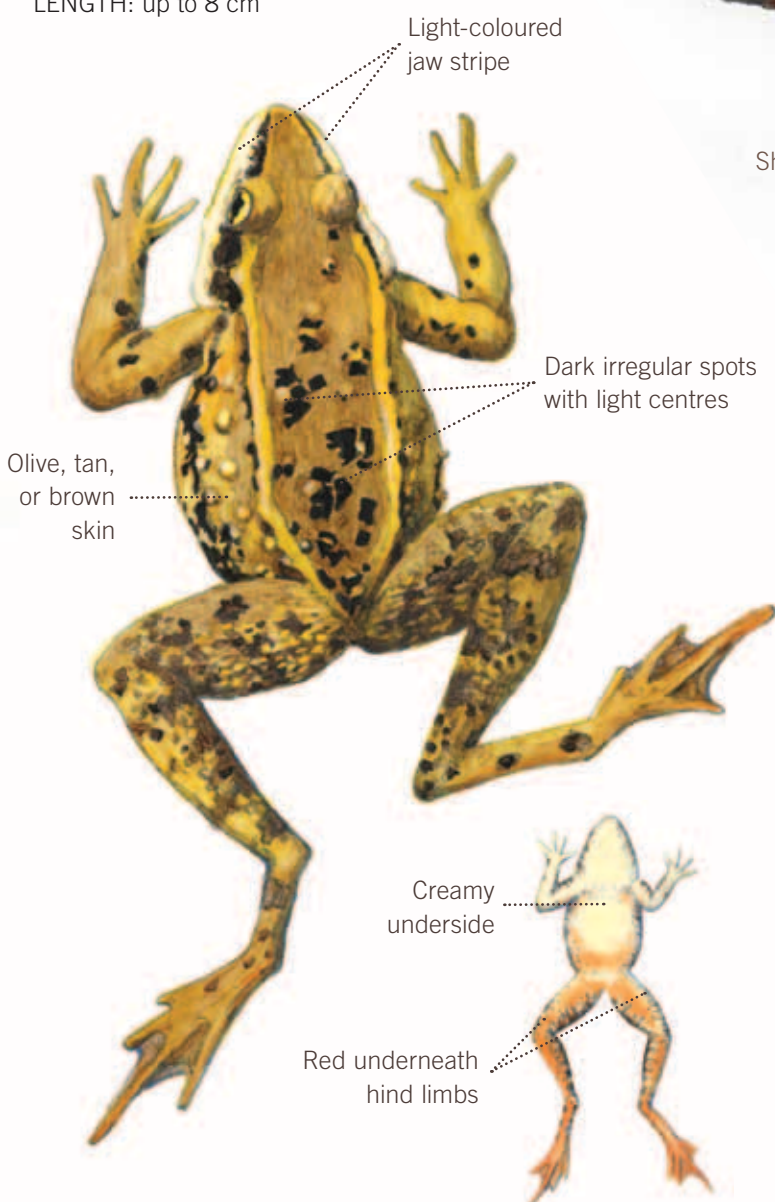
Western Toad

Much larger than Yukon's frogs and can be found quite far from water.
LENGTH: up to 12.5 cm



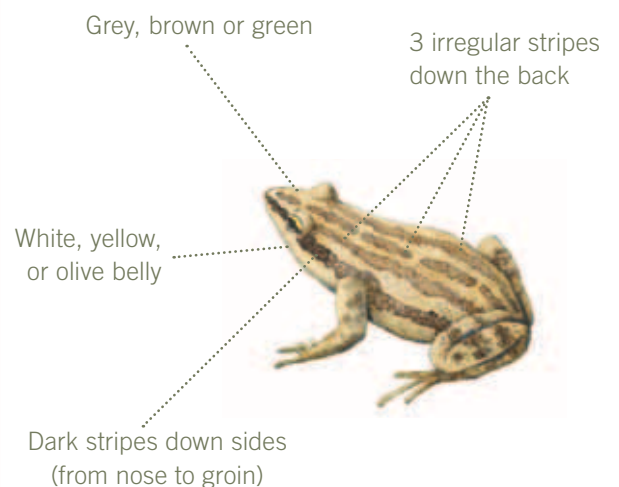
Columbia Spotted Frog

Much larger than other frogs, but not as large as the Western Toad.
LENGTH: up to 8 cm



Boreal Chorus Frog

Small, with a long body and short legs.
LENGTH: 2–4 cm



Salamanders SLIDING IN



Salamanders and newts are from a different order of amphibians known as caudata, or “tailed amphibians”. Like frogs, salamanders are four-legged and moist-skinned, and spend much of their time in moist areas on land, but return to the water to breed. Yukon has no recorded salamanders, but three species are found in northern B.C. and southeastern Alaska, so it is possible you might find one when spending time in similar habitats in southern Yukon.

Long-toed Salamander *AMBYSTOMA MACRODACTYLUM*

Found in the Stikine, Nakina, and Taku watersheds, and the Telegraph Creek area, the Long-toed Salamander hides under rocks, rotten logs, and leaf litter and emerges during rainy periods. It is dark greenish-grey, brown, or black with a prominent light green, yellow or tan stripe running down its back and silver flecks on its side.

LENGTH: 15 cm – 17 cm



Rough-skinned Newt *TARICHA GRANULOSA*

The Rough-skinned Newt is common in coastal Alaska and can be found near permanent ponds and brackish water, and open coastal forests with significant leaf litter. It has a rough, dark-brown back and bright orange belly.

LENGTH: up to 19 cm

Northwestern Salamander *AMBYSTOMA GRACILE*

These large, chunky salamanders inhabit extreme southeastern Alaska but are rarely spotted there as it is the extreme northern limit of their range. They are usually dark brown, grey or black on the back and light brown on the belly. They may have dark or yellow specks on their back.

LENGTH: 23 cm – 26 cm



J. Sayer

WikkiComments

Viewing AMPHIBIANS



Though adult frogs may be found away from water, such as damp forests and meadows, you are more likely to find frogs and toads on the edges of rivers and ponds.

Put on rubber boots and walk slowly around the edge of a pond. Watch carefully for frogs jumping in front of you.



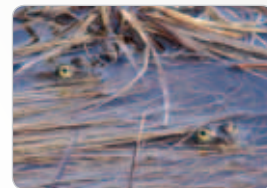
Their camouflage is so effective you may only spot them if they move. You can also paddle your canoe quietly through shallow reeds near the lakeshore or simply take some time to sit quietly watching the water.



YG - K. Tournant

Rainy days can be the best time to hit the trails. Because frogs and toads need moisture, you are more likely to find them in forests and meadows when it is raining. Keep your eyes on the trail and watch for movement so you don't step on them.

In order to see anything but a Wood Frog, you may need to travel to very southern areas of Yukon. But if you do see a frog, try to take a picture rather than pick it up. Oils and chemicals on our hands can be harmful to the frog's delicate skin, and we can accidentally transfer bacteria or viruses to other frogs.



B. Slough



YG - C. McClelland



B. Slough

Key Frog VIEWING AREAS



B. Slough

Walk around the edge of a pond.



YG - C. McClelland

Visit ponds in the early spring to hear them calling.



Gently turn over rocks or logs to peek under them for salamanders.



YG - C. McClelland

Follow trails through the woods keeping an eye to the ground.



Southern ponds on the Chilkoot Trail are home to Western Toads and Columbia Spotted Frogs.

First Nations & FROGS

With their large eyes, eerie sounds, and ability to survive both in and out of water, amphibians — especially frogs—have always intrigued humans. In many parts of the world these creatures are seen as messengers of spring and good news, and a source of wisdom, knowledge, and healing.

For several Yukon First Nations, frogs are animal shamans, capable of healing when their “hands” are placed on the ailing part of a person’s body. Frogs can also be guardian spirits, like the frog helper that appeared to Skookum Jim (Keish) after he rescued a frog trapped in a deep hole. Skookum Jim later dreamed of a frog, showing him a gold-tipped walking stick and telling him where he would find his fortune. In 1896, after travelling down the Yukon River to Dawson, Skookum Jim was one of the first people to discover gold in the Klondike.



Frogs are important to First Nations in southern Yukon and northern B.C. The frog is the crest emblem for three Inland Tlingit clans in this region: The *Ishkaahittan* of Carcross and the *Ishkitàn* of Teslin and Atlin.

How You Can Contribute TO SCIENCE

Biologists in the North are always learning more about the ecosystems around us. With the changing climate and altered habitats, more amphibians may be moving into Yukon. You can help expand our knowledge of their distribution by reporting any unusual sightings of frogs, toads, and salamanders.



B. Slough

If you see something:

- Take a picture trying to get many different angles.
- Record your location as accurately as possible, using a GPS unit if available.
- Note the habitat (pond, lake, stream, meadow, forest).
- Make note of its call (croak, quack, or kleep).

Parks Canada ecologist Carmen Wong and a young helper take water measurements in frog habitat.



Learn more about amphibians before heading out

YG - M. Berkman

Send your observations to the
Yukon Conservation Data Centre at
yukoncdc@gov.yk.ca or phone (867) 667-5331.



B. Slough

B. Slough

Amphibians **AT RISK**

B. Slough



Amphibian populations are rapidly declining all over the world. Their permeable skin and dependence on specific environments makes them highly vulnerable to environmental changes and

chemical contaminants. The loss of prime wetland habitat has also significantly impacted amphibian populations.

Amphibians are also in danger of new diseases, such as the chytrid fungus (*Batrachochytrium dendrobatidis*) which clogs their skin, preventing them from effectively absorbing or releasing water and oxygen. Though the disease has only been detected in one population in Yukon, there is risk of it spreading through

cross-contamination and introduced fish to new ponds.

Did You Know?

Amphibian populations are declining more rapidly than birds or mammals.

To help protect amphibians, avoid touching them or picking them up so that you don't inadvertently transfer bacteria or viruses.

If you're hiking around wetlands clean off your boots and hiking poles after each trip. To learn more about protection, visit the Canadian Amphibian and Reptile Conservation Network.

A biologist disinfects his boots after working in the field.

Want to Learn More?



Yukon Conservation
Data Centre

The Yukon Conservation Data Centre has detailed reports and information about Yukon amphibians. Visit www.env.gov.yk.ca/cdc to learn more.



FrogWatch

NatureWatch programs encourage you to become a citizen scientist. You can learn more about the environment while gathering information needed to monitor and protect it. Visit www.frogwatch.ca for specific information on monitoring frogs.



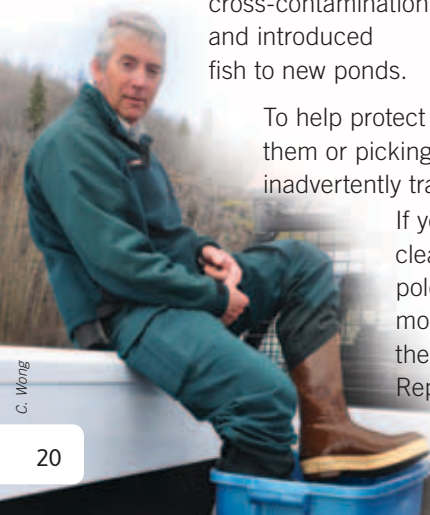
The Canadian Amphibian and Reptile Conservation Network (CARCNET) is devoted to conserving Canada's native species. Visit www.carcnet.ca to learn more about frogs, toads, and salamanders in Canada.

S.O. MacDonald, *Amphibians and Reptiles of Alaska: A Field Handbook*, (2003): <http://aknhp.uaa.alaska.edu/herps/title.htm>

Government of British Columbia, *A Guide to Amphibians of British Columbia North of 50*, (2010): www.gov.bc.ca/env/

Government of Canada, *Species at Risk Public Registry*, (2012): www.sararegistry.gc.ca

C. Wong





A frog fills his throat with air to produce a call. Alberta's Western Toads possess a similar vocal sac, while Western Toads elsewhere do not.

Talkative Toads?

Alberta's Western Toads are causing quite a ruckus. Western Toads in Yukon and the rest of North America make quiet chirping noises and lack the vocal sacs to produce loud advertisement calls. But Western Toads in Alberta are singing away!

It is believed that Alberta's Western Toads inherited this trait from a vocal ancestor. But why some toads can sing and others cannot is not known. In November 2012, scientists decided to split the Western Toad species into two groups or populations: calling and non-calling.

For free distribution only.

Finished with your copy?

Pass it on.



Yukon
Environment