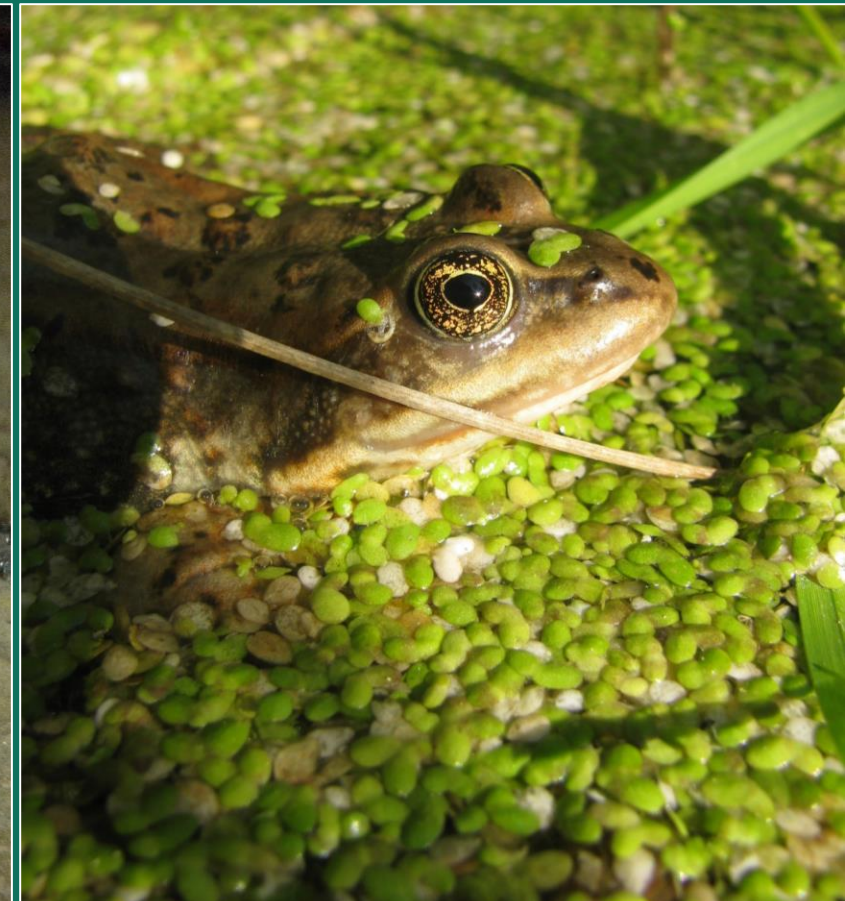


Amphibian and Reptiles of Prince George and the Central Interior

Matt Robinson
May 3, 2025



AMPHIBIANS

Amphibians

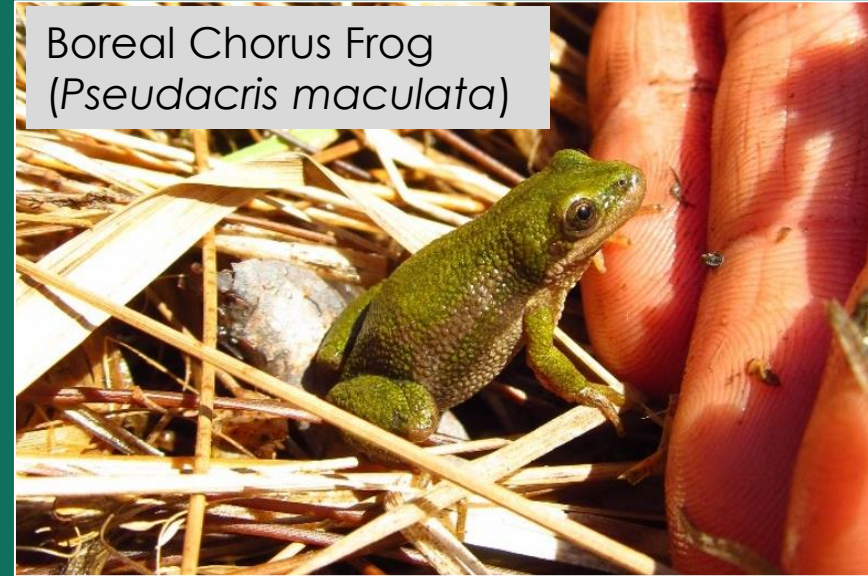
- Frogs, Toads → Anurans
- Salamanders and Newts → Caudates
- Caecilians (legless amphibians)

Common Features

- Permeable Skin (No Scales)
- Eggs that require moisture (No Hard Shell)

Reliance on Water

Boreal Chorus Frog
(*Pseudacris maculata*)



Western Tiger Salamander
(*Ambystoma mavortium*)



REPTILES

- Snakes and Lizards
- Turtles and Tortoises
- Crocodiles and Alligators

Common Features

- **Scales**
- **Cleidoic/Amniotic Egg**
- Absence of fur or feathers

Both reptiles and amphibian are ectothermic

Snake Eggs
(Western Yellow-bellied Racer)



Red Diamond Rattlesnake
(*Crotalus ruber*) * Not a BC Species



Western Painted Turtle
(*Chrysemys picta*)



Northern Alligator Lizard
(*Elgaria coerulea*)



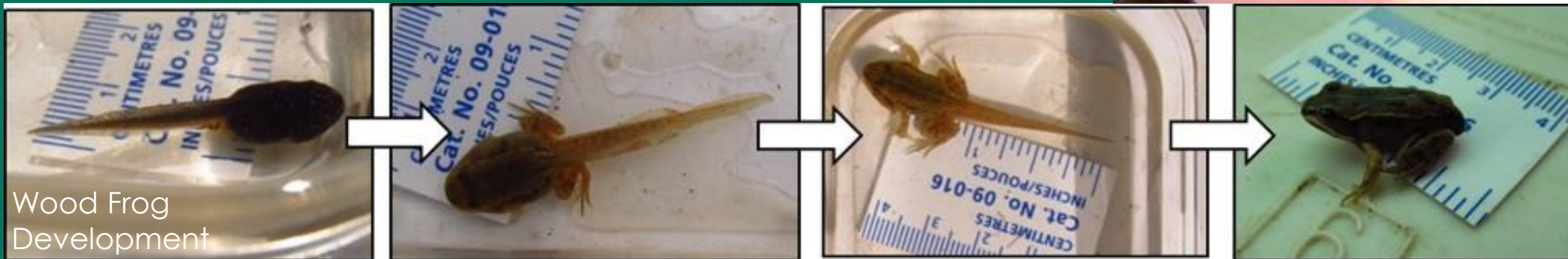
HABITATS



Life Cycle of Aquatic Breeding Amphibians

- All amphibians in BC Interior are Aquatic Breeding
- Lay eggs in water, turn into tadpoles/larvae, juveniles emerge later in year summer or fall
- Require both aquatic and terrestrial habitats

Not all Amphibians are breed aquatically.
E.g. Plethodontid (lungless salamanders)



ANURANS IN BRITISH COLUMBIA



Credit: Joe Crowley

Western Toad

Anaxyrus boreas



Credit: Andrew Nydam

Great Basin Spadefoot

Spea intermontana



Credit: Glacier NPS

Rocky Mountain Tailed Frog

Ascaphus montanus



Credit: Dave Huth

Coastal Tailed Frog

Ascaphus truei



Credit: Pourya Sardari

Pacific Treefrog

Pseudacris regilla



Credit: Peter Paplanus

Boreal Chorus Frog

Pseudacris maculata



Credit: Patrick Randall

Northern Leopard Frog

Lithobates pipiens



Credit: Kristin Lohr

Columbia Spotted Frog

Rana luteiventris



Credit: Pourya Sardari

Oregon Spotted Frog

Rana pretiosa



Credit: John Clare

Northern Red-legged Frog

Rana aurora



Credit: Distant Hill Gardens

Wood Frog

Lithobates sylvaticus



Credit: Joel Tonyan

American Bullfrog

Lithobates catesbeianus



Credit: Ryan Hodnett

Green Frog

Lithobates clamitans

CAUDATES IN BRITISH COLUMBIA



Credit: John Clare

Coastal Giant Salamander

Dicamptodon tenebrosus



Credit: Natalie McNear

Northwestern Salamander

Ambystoma gracile



Credit: Stephanie Winton

Western Tiger Salamander

Ambystoma mavortium



Credit: John Clare

Long-toed Salamander

Ambystoma macrodactylum



Credit: Dave Huth

Rough-skinned Newt

Taricha granulosa



Credit: Joe Crowley

Ensatina

Ensatina eschscholtzii



Credit: Sean McCann

Wandering Salamander

Aneides vagrans



Credit: Joe Crowley

Western Red-backed Salamander

Plethodon vehiculum



Credit: Laura Matthias

Coeur d'Alene Salamander

Plethodon idahoensis

**Plethodontids
(lungless
salamanders)**

Lay eggs on land

Squamates in British Columbia



Credit: Laura Matthias

Common Gartersnake
Thamnophis sirtalis



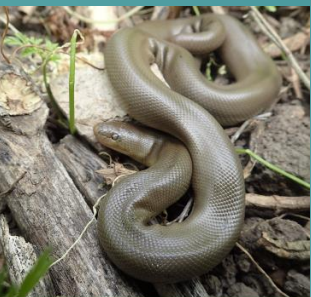
Credit: Joe Crowley

Northwestern Gartersnake
Thamnophis ordinoides



Credit: Andrew DuBois

Western Terrestrial Gartersnake
Thamnophis elegans vagrans



Credit: J. Maughn

Northern Rubber Boa
Charina bottae



Credit: Marcus Atkins

Western Rattlesnake
Crotalus oregonus



Credit: Mike Cardwell

Desert Nightsnake
Hypsiglena torquata deserticola



Credit: Joe Crowley

Western Yellow-bellied Racer
Coluber constrictor mormon



Credit: Marcus Atkins

Great Basin Gophersnake
Pituophis catenifer deserticola



Credit: Laura Matthias

Common Sharp-tailed Snake
Contia tenuis



Credit: Andrew Nydam

Northern Alligator Lizard
Elgaria coerulea



Credit: Joe Crowley

Western Skink
Plestiodon skiltonianus



Credit: Antje Schultner

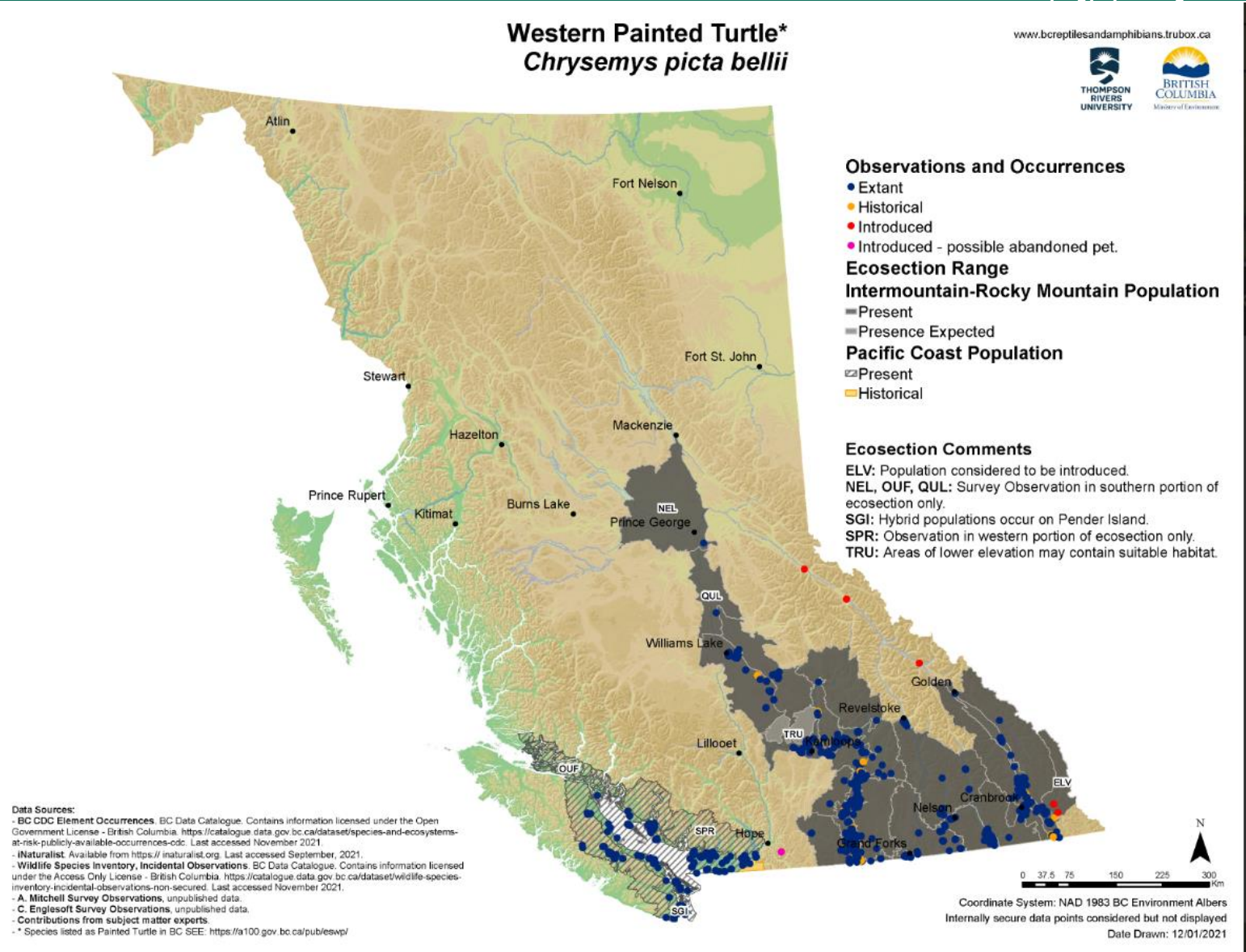
Common Wall Lizard
Podarcis muralis

TURTLES IN BRITISH COLUMBIA



Credit: Pourya Sardari

Western Painted Turtle
Chrysemys picta



RED-EARED SLIDER – INVASIVE SPECIES

RED-EARED SLIDER



Red mark behind eye
Sometimes ear mark is yellow



Pale yellow usually with dark blotches



No red bars underneath

WESTERN PAINTED TURTLE



No red mark behind eye



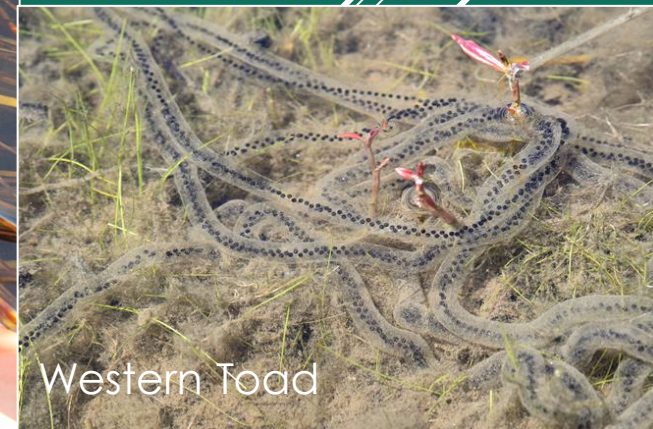
Bright red or orange with a central
black and yellow pattern radiating
out to sides



Red vertical bars underneath

Amphibian Eggs

- Aquatic eggs all consist of ovum (usually dark in color) surrounded by one or more jelly layers.
- Egg masses of different species are best identified by shape of mass

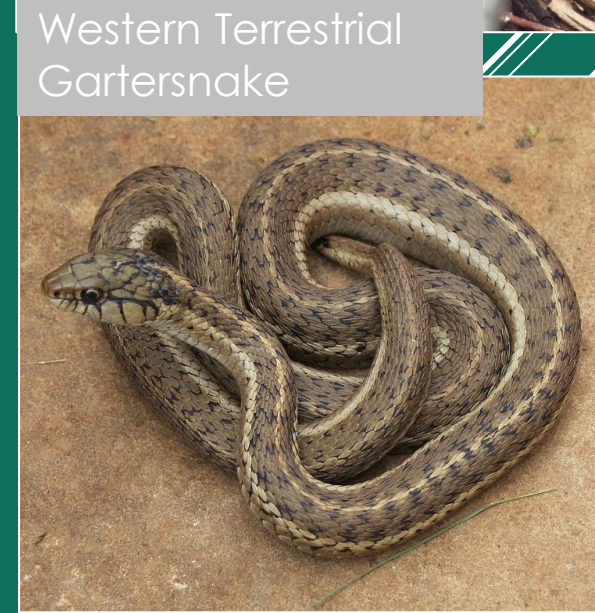


PRINCE GEORGE SPECIES

AMPHIBIANS



REPTILES



Species of Northern BC

Western Toad

Stocky amphibian with warts

Young-of-the-year (toadlets) are about the size of a dime

Very Good Diggers – likes sand and loose soils



Western Toad Toadlet
(Young-of-the-Year)

Western Toad Call



Western Toad Toadlet
(Young-of-the-Year)



Adult Western Toad

Western Toad

[Western Toad Breeding Video](#)

[Western Toad Call](#)



Western Toad Toadlet
(Young-of-the-Year)



Adult Western Toad



Adult Western Toad



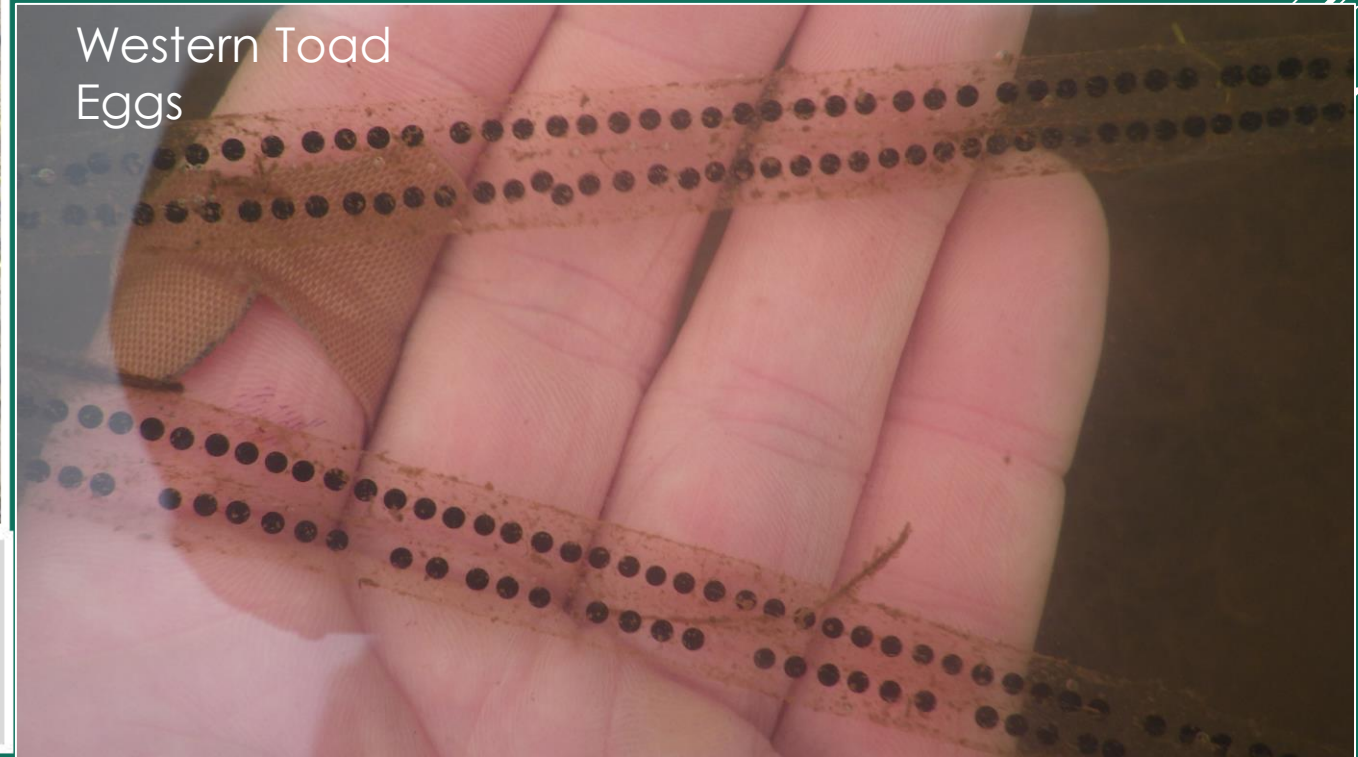
Adult Western Toad

Western Toad

- Lay eggs in long strings
- Single female lays several thousand eggs



Long stands of eggs are laid by mating pairs
(>15,000 eggs/pair)

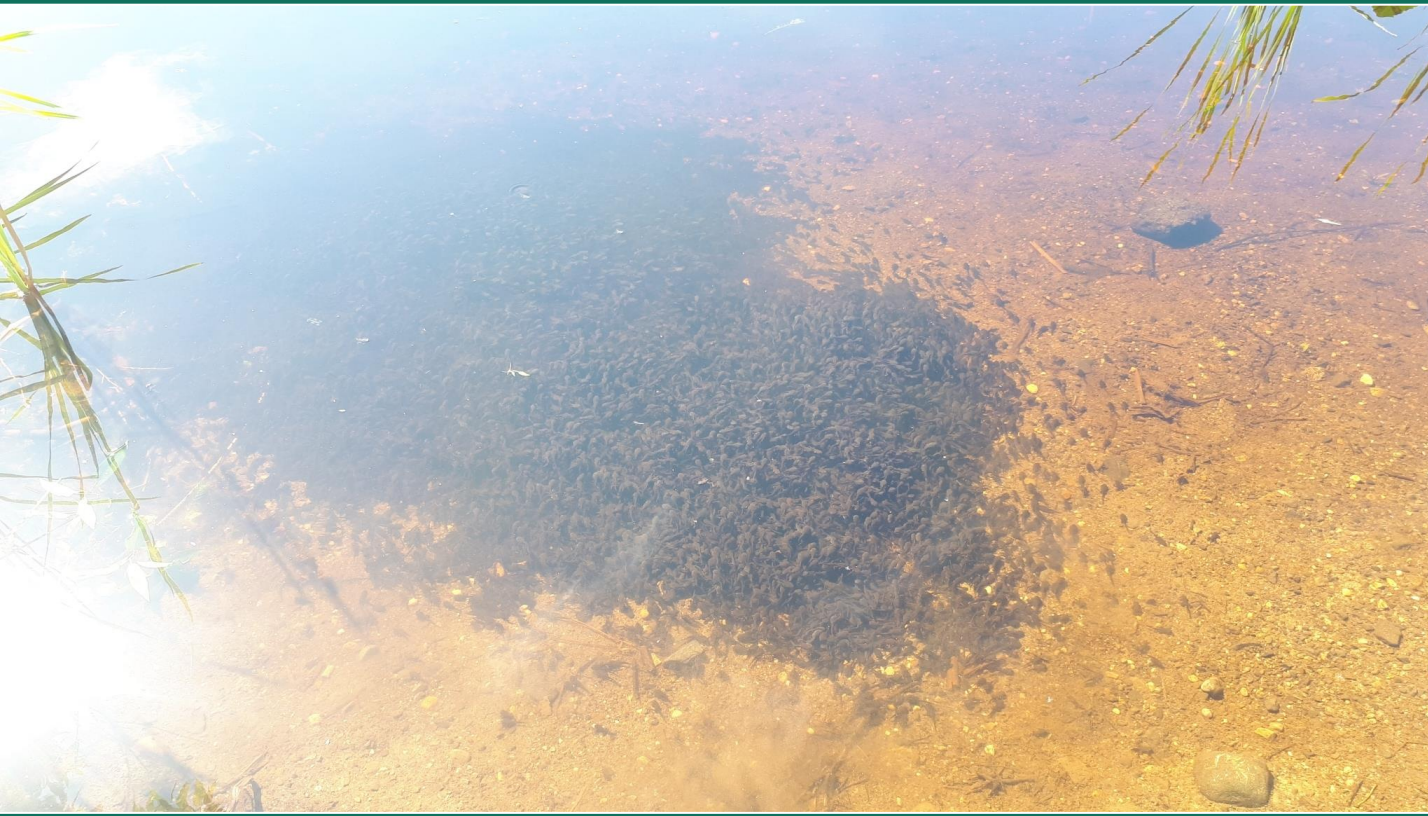


Western Toad Breeding Pair and Egg Strings



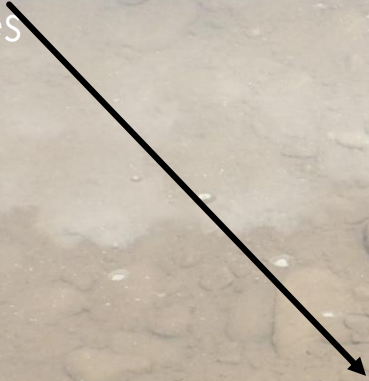
Western Toad Tadpoles

Tadpoles are small and black and **always swim in schools!**



Some life stages can be hard to detect

Newly hatched western toad tadpoles



Close-up Photo



Newly hatched tadpoles are not strong swimmers.

Usually attached to old egg masses and vegetation for up to 1 week before they become "free-swimming"

Western Toad Tadpoles





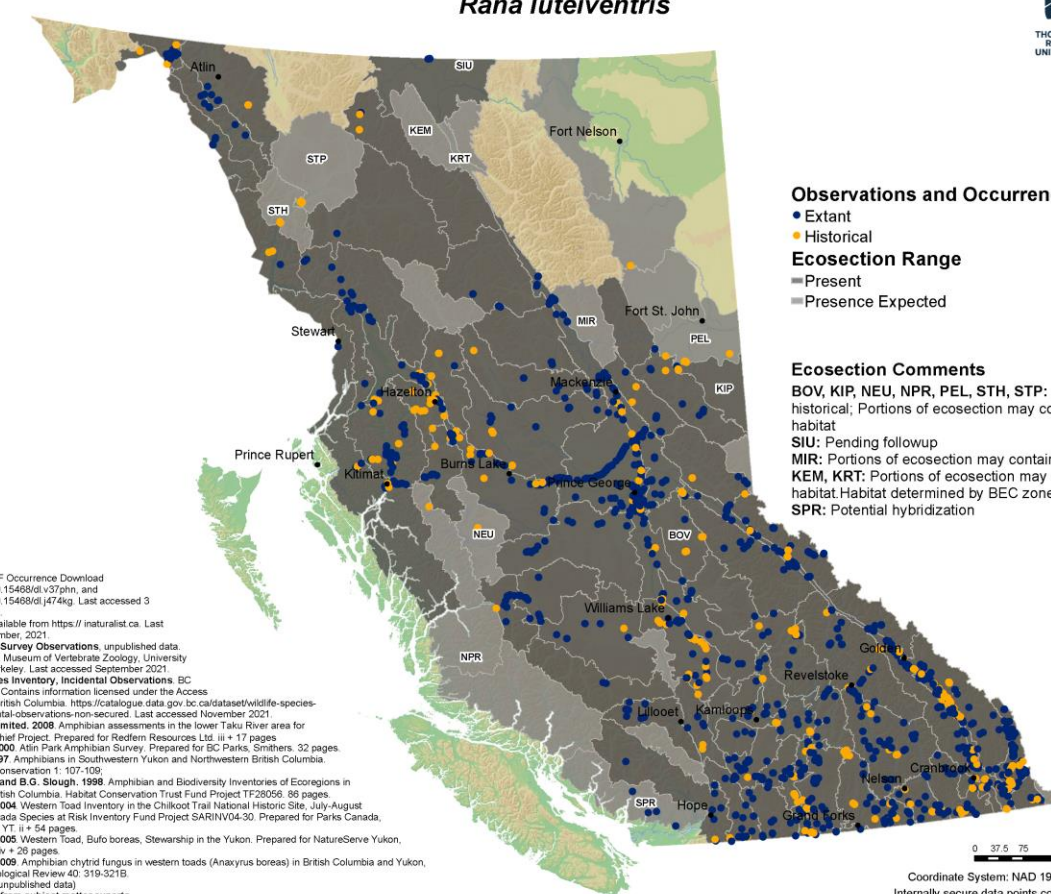
Columbia Spotted Frog

- Irregular black spots, usually light centered on back legs and head
- Adults: Brown, reddish-brown; Juveniles Olive
- Highly Aquatic; webbing on hind feet extends to tips on toes
- Eyes angled slightly upward



Columbia Spotted Frog *Rana luteiventris*

www.bcreptilesandamphibians.trubox.ca



Observations and Occurrences
 • Extant
 • Historical
Ecoregion Range
 ■ Present
 ■ Presence Expected

Ecoregion Comments
 BOV, KIP, NEU, NPR, PEL, STH, STP: Changed from historical, Portions of ecoregion may contain suitable habitat
 SIU: Pending followup
 MIR: Portions of ecoregion may contain suitable habitat
 KEM, KRT: Portions of ecoregion may contain suitable habitat
 Habitat determined by BEC zone.
 SPR: Potential hybridization

Data Sources:
 - GBIF.org GBIF Occurrence Download
<https://doi.org/10.15468/ol.v37phn>, and
<https://doi.org/10.15468/ol.j474kg>. Last accessed 3 September 2021.
 - iNaturalist. Available from <https://inaturalist.ca>. Last accessed September, 2021.
 - W. Thompson Survey Observations. unpublished data.
 - MVZ Berkeley. Museum of Vertebrate Zoology, University of California, Berkeley. Last accessed September 2021
 - Wildlife Species Inventory, Incidental Observations. BC Data Catalogue. Contains information licensed under the Access Only License - British Columbia. <https://catalogue.data.gov.bc.ca/dataset/wildlife-species-inventory-incident-observations-non-secured>. Last accessed November 2021.
 - Gartner Lee Limited. 2008. Amphibian assessments in the lower Taku River area for the Tulsequah Chief Project. Prepared for Redfern Resources Ltd. iii + 17 pages.
 - Houwers, C. 2000. Atlin Park Amphibian Survey. Prepared for BC Parks, Smithers. 32 pages.
 - Menzell, L. 1997. Amphibians in Southwestern Yukon and Northwestern British Columbia. Herpetological Conservation 1: 107-109.
 - Menzell, R.L., and B.G. Slough. 1998. Amphibian and Biodiversity Inventories of Ecoregions in Northwestern British Columbia. Habitat Conservation Trust Fund Project TF26056. 89 pages.
 - Slough, B.G. 2004. Western Toad Inventory in the Chilkoot Trail National Historic Site. July-August 2004. Parks Canada Species at Risk Inventory Fund Project SARINV04-30. Prepared for Parks Canada, Haines Junction, YT. ii + 54 pages.
 - Slough, B.G. 2005. Western Toad, Bufo boreas, Stewardship in the Yukon. Prepared for NatureServe Yukon, Whitehorse, YT. iv + 26 pages.
 - Slough, B.G. 2009. Amphibian chytrid fungus in western toads (Anaxyrus boreas) in British Columbia and Yukon, Canada. Herpetological Review 40: 319-321B.
 - Slough, B.G. (unpublished data)
 - Contributions from subject matter experts.

0 37.5 75 150 225 300 Km
 Coordinate System: NAD 1983 BC Environment Albers
 Internally secure data points considered but not displayed
 Date Drawn: 12/01/2021



Spotted Frogs → Eyes oriented upward

eyes oriented up



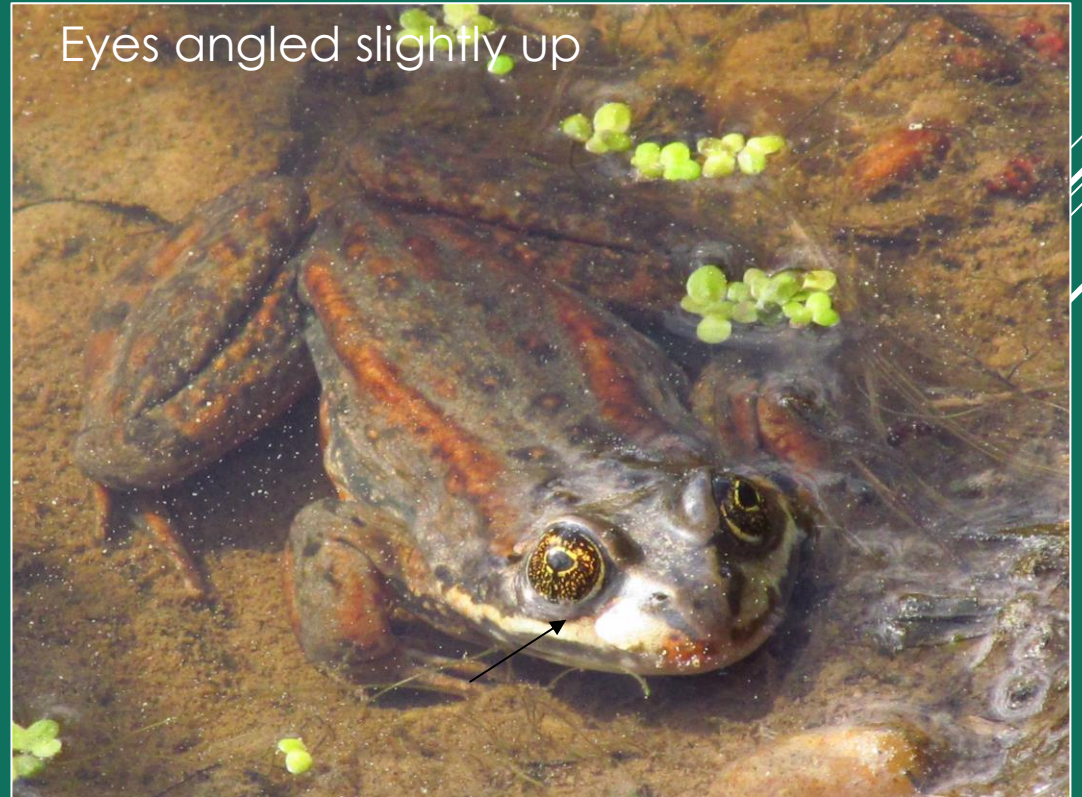
Wood Frogs → Eyes oriented to side

eyes oriented out



Columbia Spotted Frog

Spotted Frog Call



Eyes angled slightly up

Columbia Spotted Frogs

Egg masses = Big blobs of eggs (several hundred per mass)

Egg mass should be about size of grapefruit (up to 20 cm in diameter)

Egg mass and individual eggs (ovum+ jelly) are a bit larger than wood frogs

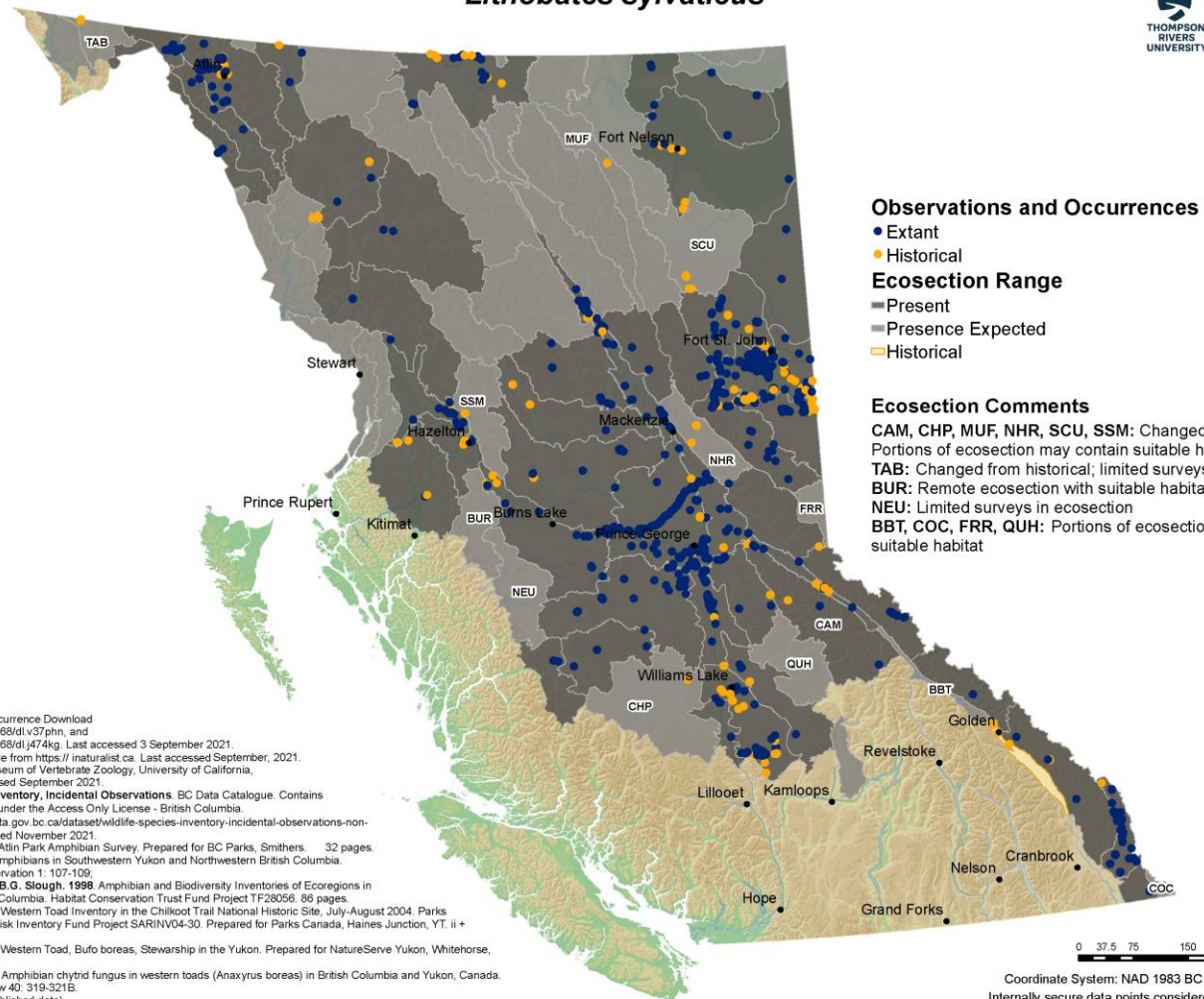




Wood Frog

Wood Frog *Lithobates sylvaticus*

www.bcreptilesandamphibians.trubox.ca



Data Sources:

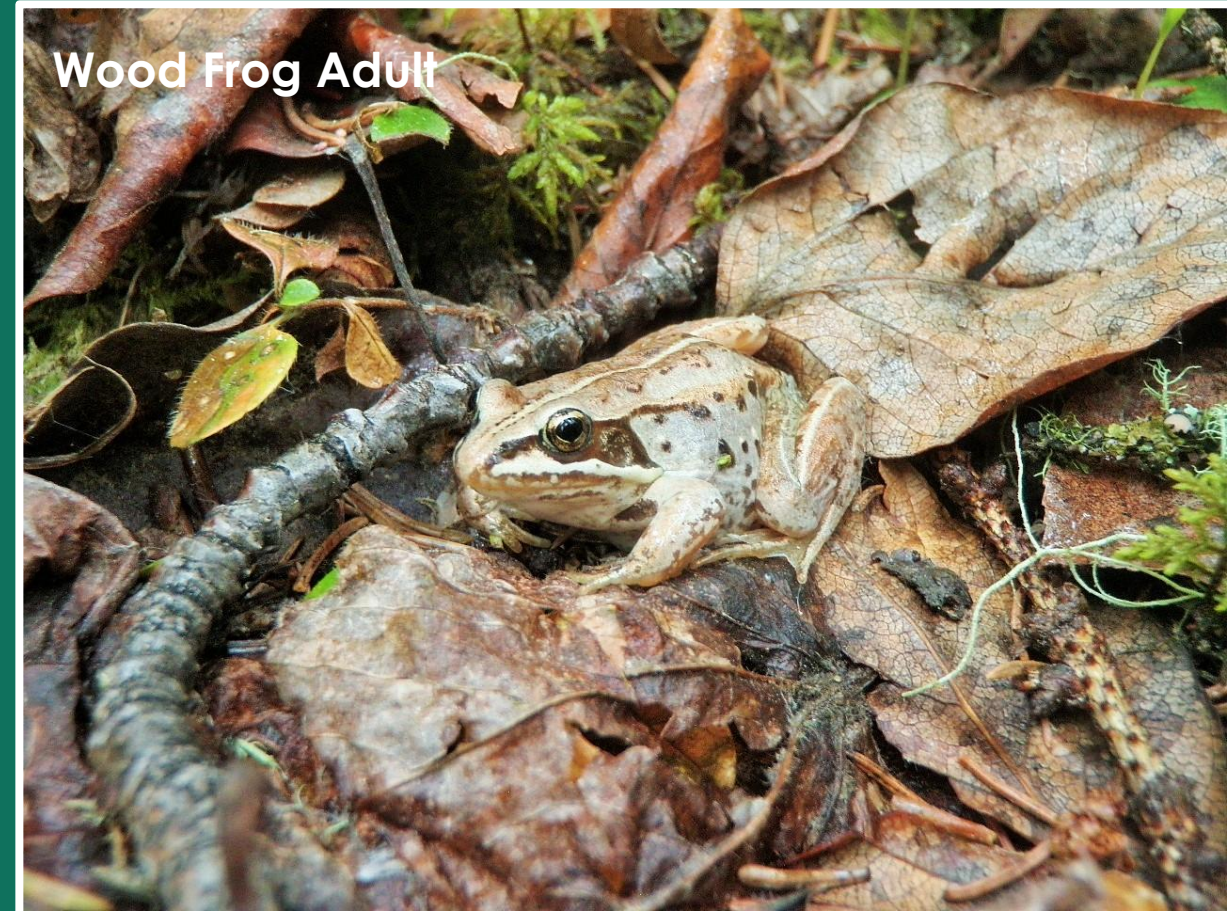
- GBIF.org. GBIF Occurrence Download <https://doi.org/10.15468/dl.v37phn>, and <https://doi.org/10.15468/dl.j474kg>. Last accessed 3 September 2021.
- iNaturalist. Available from <https://inaturalist.ca>. Last accessed September, 2021.
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- Houwers, C. 2000. Atlin Park Amphibian Survey. Prepared for BC Parks, Smithers. 32 pages.
- Mennell, L. 1997. Amphibians in Southwestern Yukon and Northwestern British Columbia. Herpetological Conservation 1: 107-109.
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- Slough, B.G. (unpublished data)
- Contributions from subject matter experts.

Wood Frog

- Reddish, tan or dark brown
- Dark mask under and below eyes
- Some have light line down middle of back
- Dark blotch on chest near each front leg

Wood Frog call

They sound like ducks.



Wood Frogs

Mass masses = “blobs” of eggs (several hundred per mass)

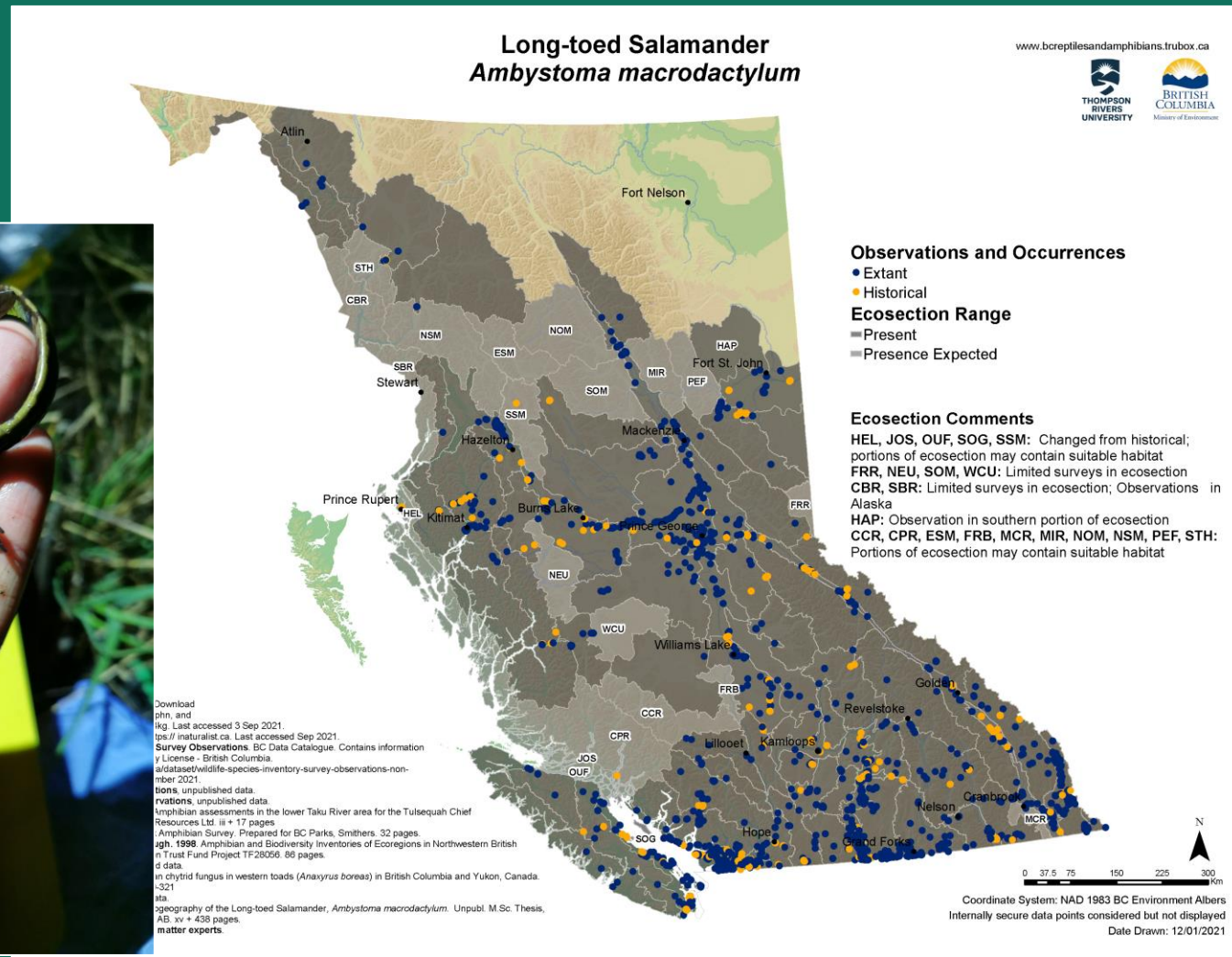
Egg mass about size of fist/small orange (5-7 cm diameter)

Egg mass and individual eggs (including jelly) are a bit smaller than Columbia Spotted Frogs



Long-toed Salamander

- Green-yellow stripe down back
- 4th toe on hind limbs long
- Earliest breeding amphibian in Central Interior (often gather at breeding as soon as there's open water)



Migrating Over Snow and Ice!



Can drop tail when
threatened

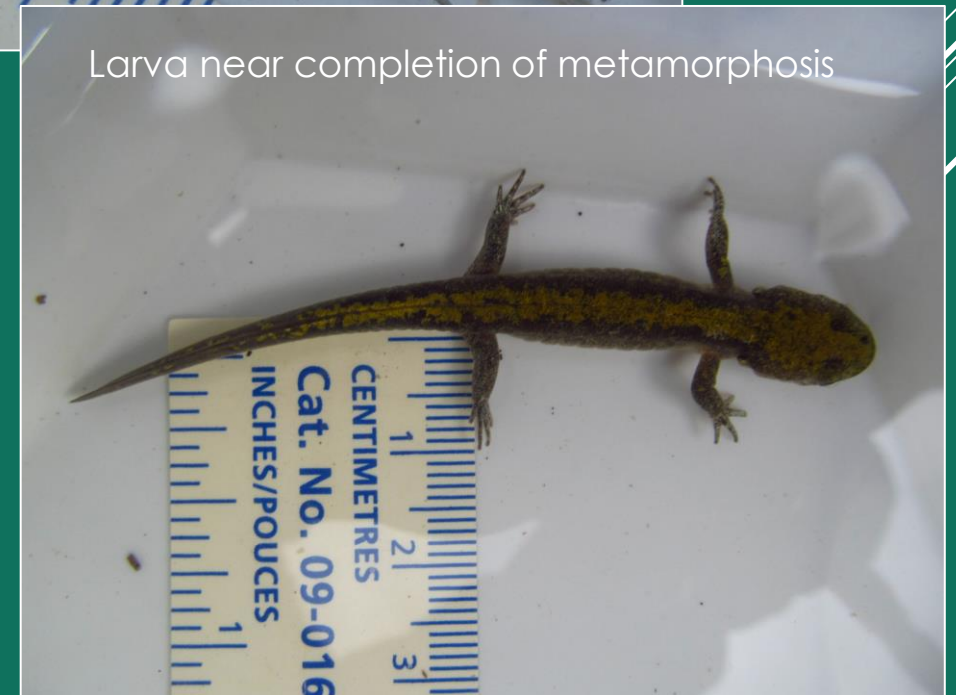
Long-toed Salamander (Egg Masses)

Attached to grass, sticks, leaves
Eggs large due to wide jelly layer around each egg



Larvae

Color is variable, but identified by **external gills**



Long-toed Salamander Eggs and Larvae



Pacific Chorus Frog

Chorus Frog Call:



Toe Pads

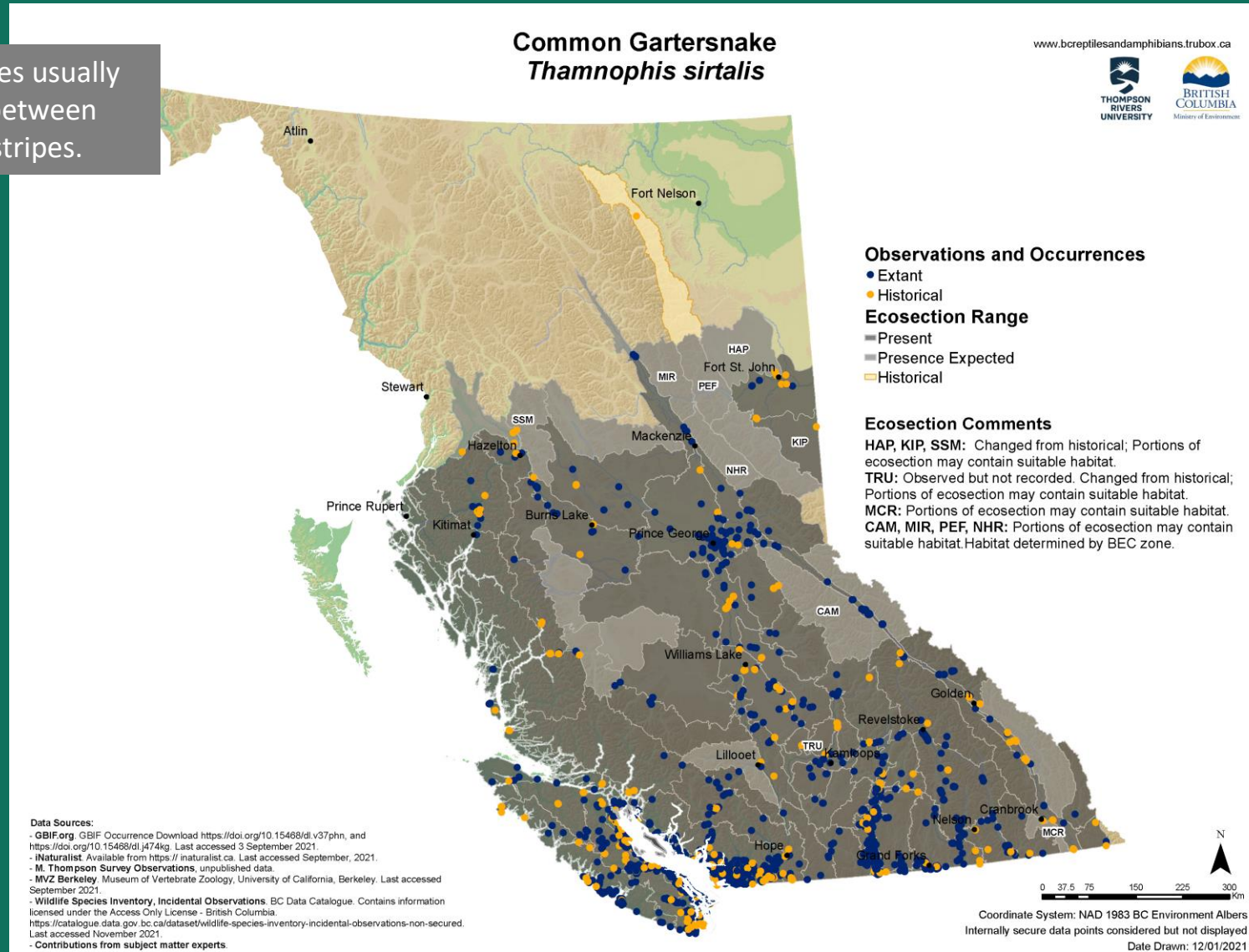
- Large Toe Pads
- Very common in urban settings
- Skin produces waxy coating helps retain water

Common Gartersnake



The western sub-species usually has red bars on sides between the dorsal and lateral stripes.

Common Garter Snake

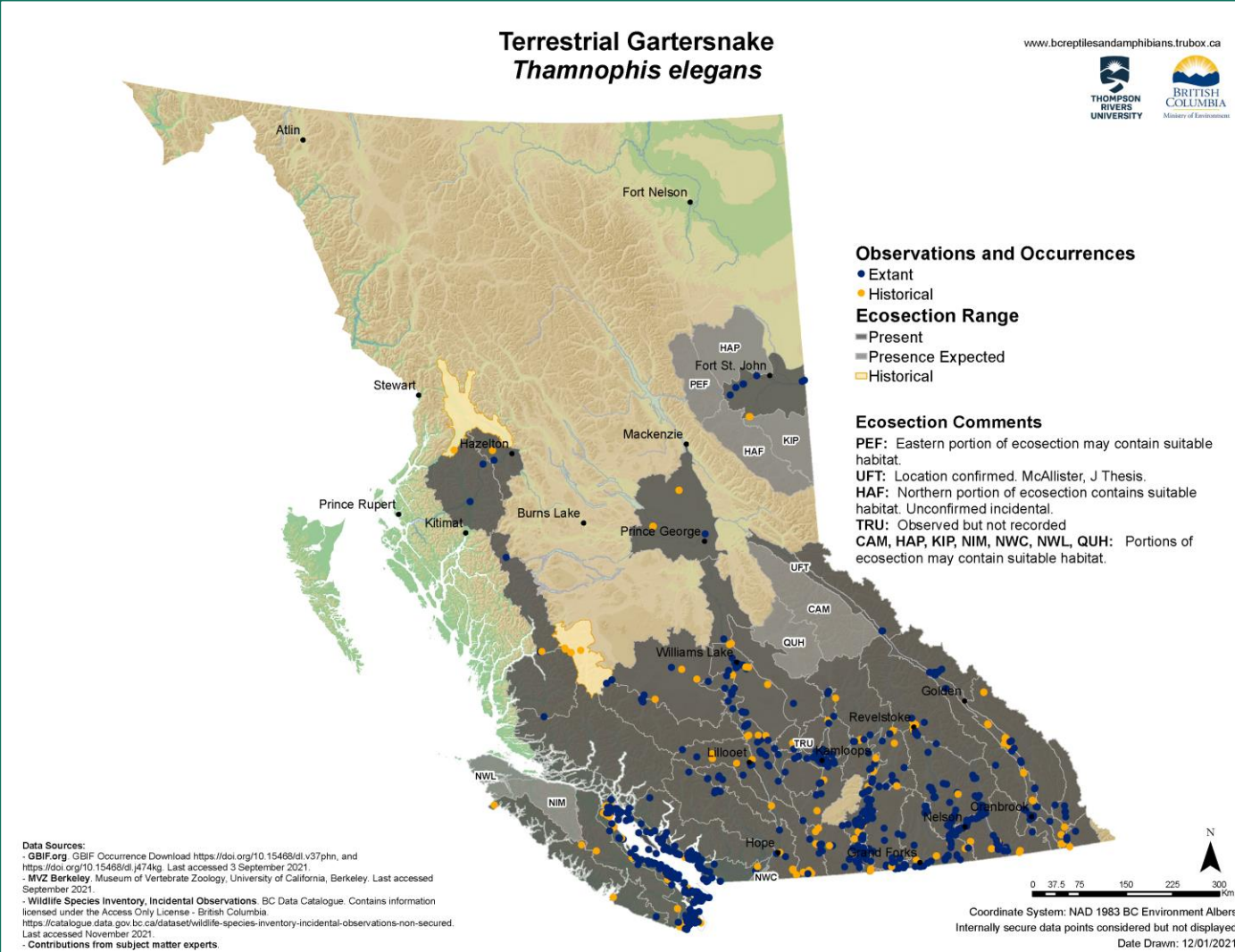


Western Terrestrial Gartersnake



Generally lighter in color; No red bars on sides

Western Terrestrial Garter Snake



Overwintering

Brumation → Amphibians and Reptiles

Terrestrial Overwintering



Freeze Tolerant

- Cryoprotectants
- Don't need to burrow.



Not Freeze Tolerant

- Burrow below frostline

Aquatic



THREATS

Habitat Loss and Fragmentation



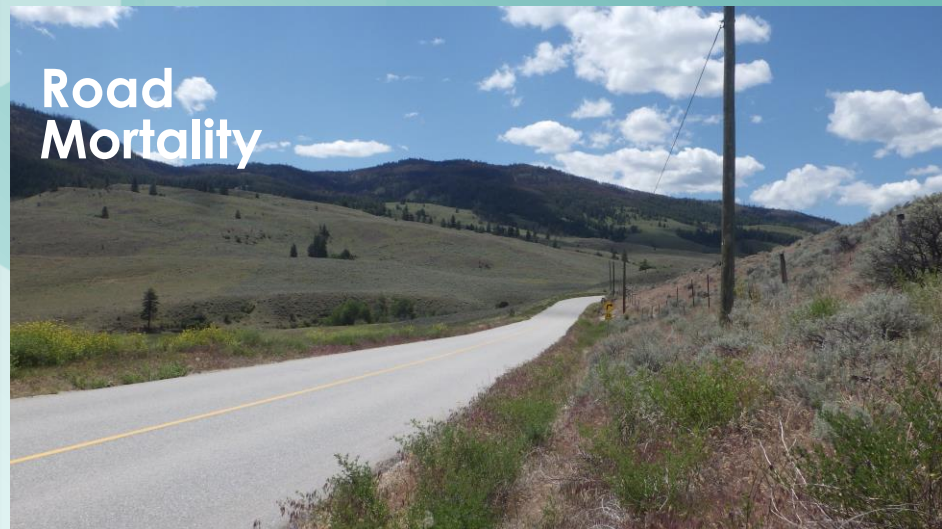
Climate Change



Disease



Road Mortality



Invasive Species



How You Can Help

Share Your Observations

Take Photos

Take notes and tell a story!



Acc (m): 9 Src: manual

Satellite

Selected photos

View Sync?

Choose Files No file chosen

Sync obs. w/ photo metadata? clear

re-order photos

Changing the geoprivacy alters how other people see the location of your observation.

open
Everyone can see the coordinates unless the taxon is threatened.

Obscured
Public coordinates shown as a random point within the 0.2 degree lat/lon cell that contains the true coordinates.

private
Coordinates completely hidden from public maps, true coordinates only visible to you and the curators of projects to which you add the observation. Observations with hidden coordinates will still be used to verify place check lists.

Change geoprivacy open

Can Adjust Privacy Settings to Protect Location of Rare Species or Sensitive Features

Reptiles and Amphibians on Road – iNaturalist Project

- Observations of amphibian/reptiles on roads
<https://www.inaturalist.org/projects/canadian-amphibians-reptiles-on-roads>
- Help identify areas of high mortality / animal crossing



Canadian Herpetological Society

iNaturalist

ADD OBSERVATIONS

Canadian Amphibians & Reptiles on Roads

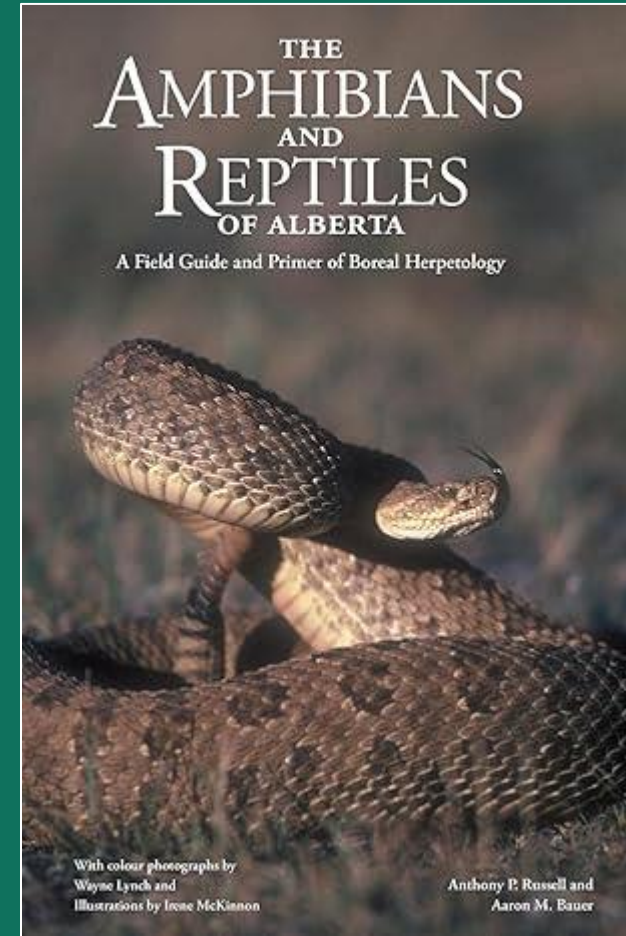
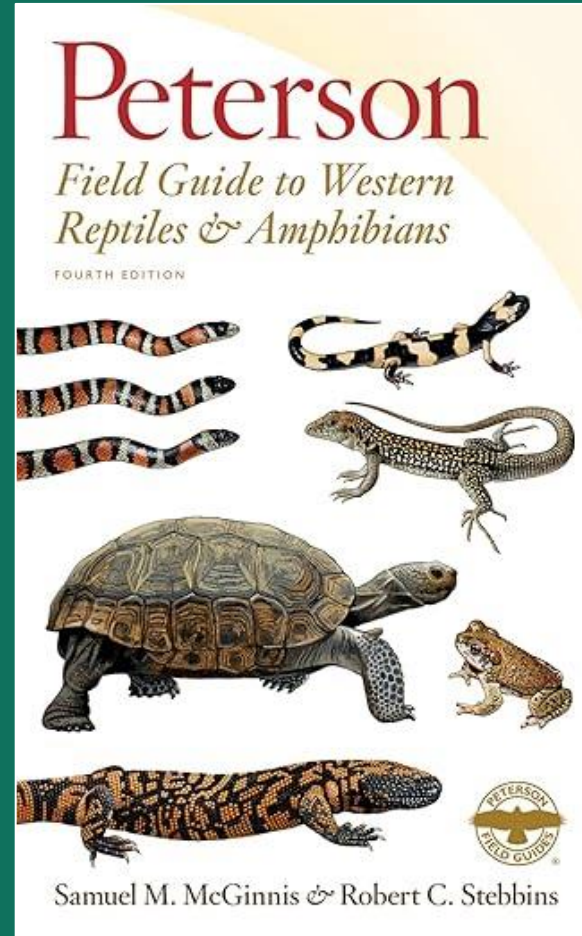
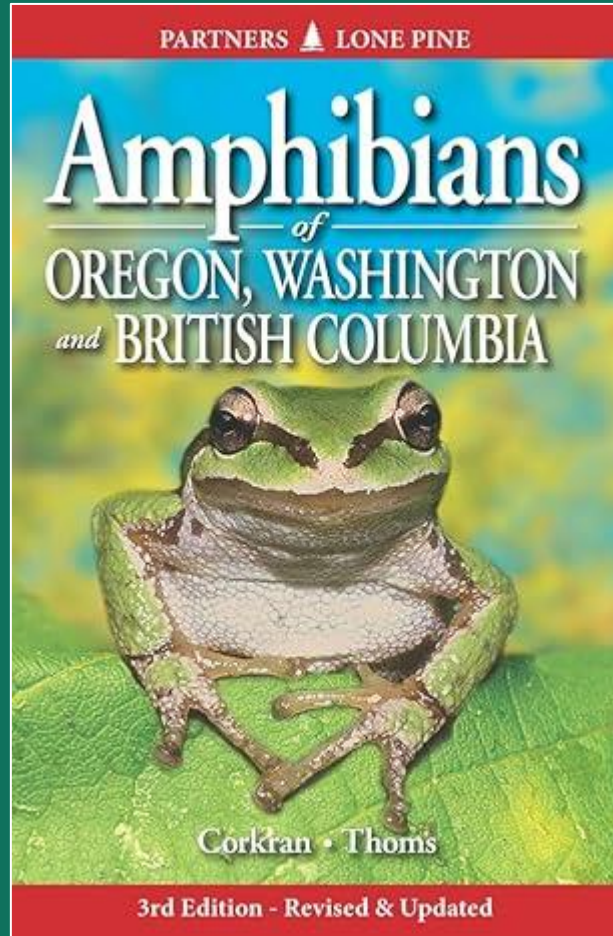
How You Can Help

Be Mindful of Amphibian Habitat

Some Habitats may be small and value hard to see



Useful Resources

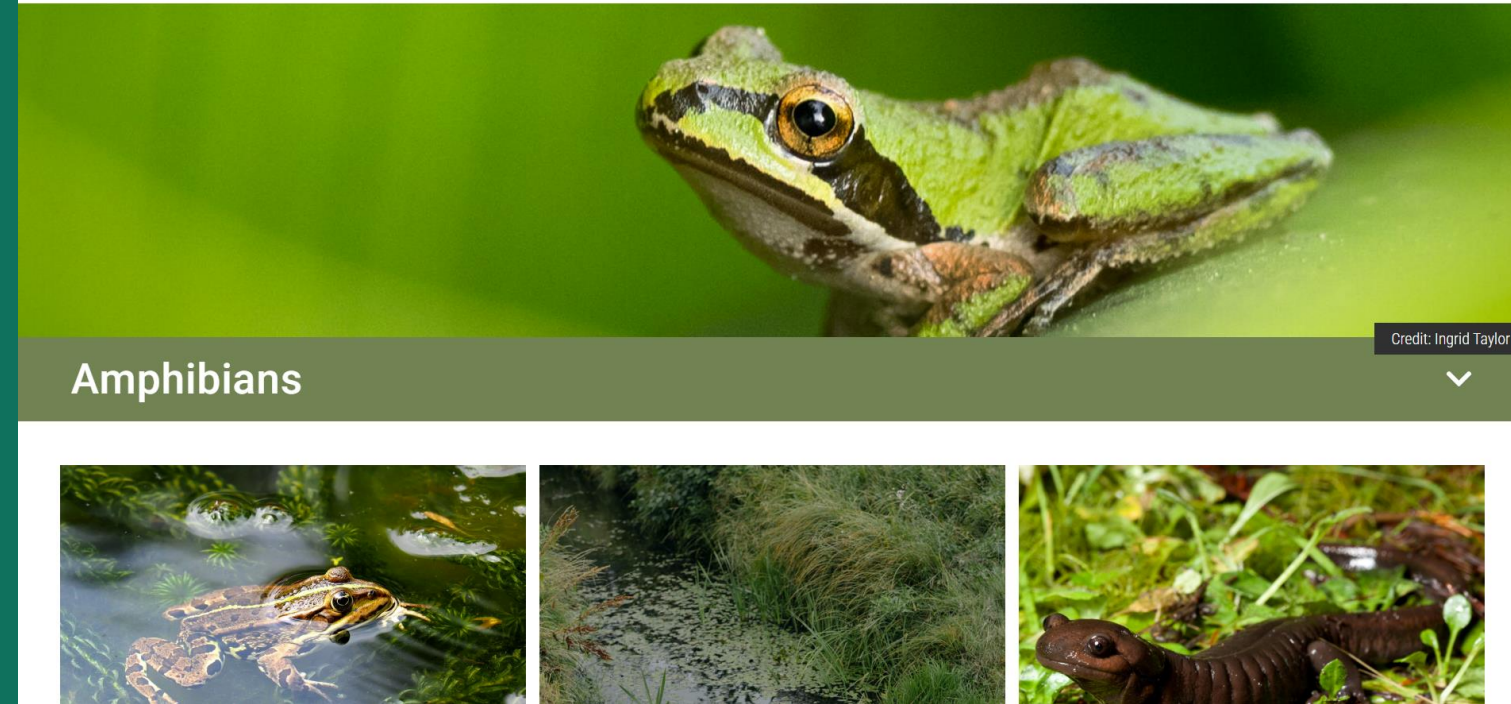


BC Reptile and Amphibian Website: <https://bcreptilesandamphibians.ca/>

More Resources

[BC Reptile and Amphibian Website:](https://bcreptilesandamphibians.ca/)

<https://bcreptilesandamphibians.ca/>



BC Frogwatch E-mail: bcfrogwatch@victoria1.gov.bc.ca



Thank you!

