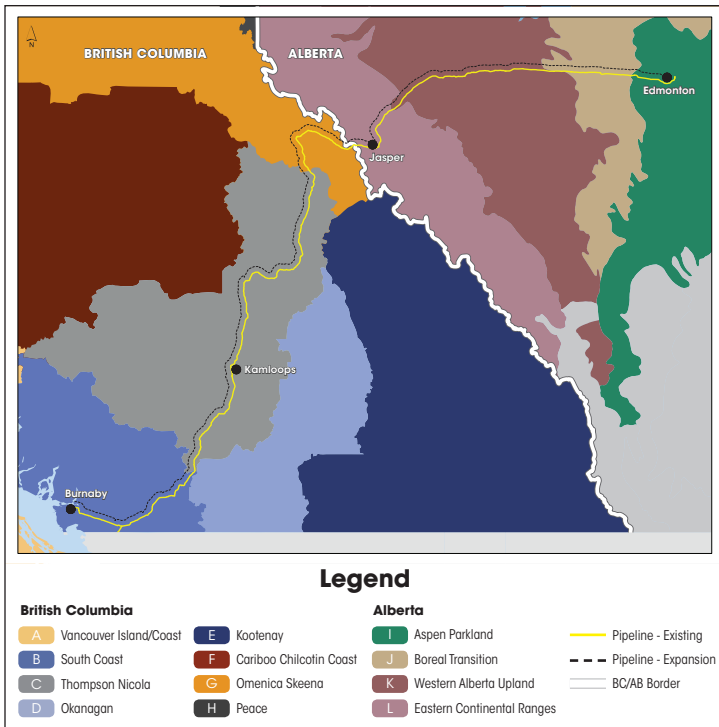


# Species at Risk

ALONG THE TRANS MOUNTAIN PIPELINES

## FIELD GUIDE





## Definitions: Species at Risk Status

**Extinct** - A wildlife species that no longer exists.

**Extirpated** - A wildlife species that no longer exists in the wild in Canada, but exists elsewhere.

**Endangered** - A wildlife species facing imminent extirpation or extinction.

**Threatened** - A wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.

**Special Concern** - A wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.

## How to Use this Guide

This guide organizes species alphabetically. To find out which species may be found in your area, refer to the coloured map on the left and look for the corresponding colour on the bottom corner of each species page.

## I Saw One! What Now?

Some species at risk are very rare, hard to see, or are found in only a few places. Other species at risk may be abundant in some places, are easy to spot, or can be found throughout BC. Whichever the case, follow these steps if you think you've seen a species at risk:

- Take a picture! Include a common object in the picture for scale, if possible.
- Document where and when you saw it. Be as specific as possible (GPS points are great!).
- Report sightings in BC to the BC Conservation Data Centre at: [www.env.gov.bc.ca/wildlife/wsi/incidental\\_obs.htm](http://www.env.gov.bc.ca/wildlife/wsi/incidental_obs.htm) and in Alberta to Alberta Parks at: [www.albertaparks.ca/albertaparksca/management-land-use/alberta-conservation-information-management-system-acims/submit-data/](http://www.albertaparks.ca/albertaparksca/management-land-use/alberta-conservation-information-management-system-acims/submit-data/)
- Contact Environment and Climate Change Canada if you observe any threats to the species or its habitat at: [ec.ep.rpy-sar.pyr.ec@canada.ca](mailto:ec.ep.rpy-sar.pyr.ec@canada.ca)
- If the species or its habitat is found on land you own or manage, please see the appendix of this guide to learn more about the *Species at Risk Act* and how it applies on private land.

# About this Guide

---

This guide contains information about 39 federally listed species at risk that are found along the Trans Mountain pipeline routes. The actions we take during routing, construction, reclamation, remediation, follow-up mitigations, and on-going operation and maintenance activities help ensure these species and future generations continue to co-exist.

Most species included in this guide have recovery or management plans available online. These documents contain information about the species and what it needs to survive or recover. This pocket guide provides a few highlights from those documents to help you identify these species at risk, find the places where they live, and learn about threats they face.

Threats to species are broadly grouped in this guide to help people working in those sectors identify which species they want to learn more about. Not all types of activities carried out by a given industry or sector represent a threat to the species. Land management practices along the Trans Mountain pipeline routes may

benefit some species (e.g. expanding American badger and Lewis's Woodpecker foraging habitat, planting native plant and pollinator gardens along right of ways) or may harm some species (e.g., incidental trampling or removing vegetation during sensitive times for a species). If you would like more details on particular species at risk, please visit: [www.sararegistry.gc.ca](http://www.sararegistry.gc.ca) to find the recovery or management plans.

---

*Note: This guide provides a very brief overview of key topics included in the recovery document for each species and should not be considered a replacement for the recovery documents.*

## Contents

How to Use this Guide .....	i
I Saw One! What Now? .....	i
About this Guide .....	ii
Alkaline Wing-nerved Moss .....	1
American Badger, <i>jeffersonii</i> subspecies .....	2
American Badger, <i>taxus</i> subspecies .....	3
Ancient Murrelet .....	4
Bank Swallow .....	5
Black Swift .....	6
Black-footed Albatross .....	7
Coastal Giant Salamander .....	8
Dun Skipper, <i>vestris</i> subspecies .....	9
Great Basin Gophersnake .....	10
Great Basin Spadefoot.....	11
Great Blue Heron, <i>fannini</i> subspecies .....	12
Grizzly Bear, Western population.....	13
Haller's Apple Moss .....	14
Horned Grebe, Western population .....	15
Lewis's Woodpecker .....	16
Long-billed Curlew .....	17
Marbled Murrelet .....	18
Mexican Mosquito Fern .....	19
Olive-sided Flycatcher.....	20
Oregon Forestsnail .....	21
Oregon Spotted Frog .....	22
Pacific Water Shrew .....	23
Pink-footed Shearwater .....	24
Red Knot, <i>roseaari</i> type .....	25
Roell's Brotherella Moss .....	26

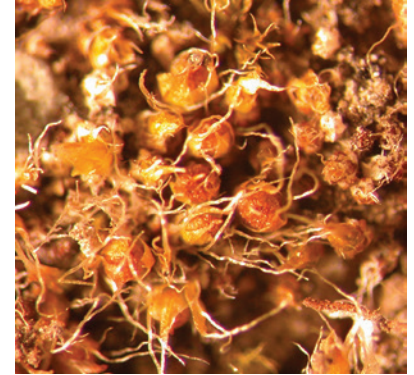
Short-tailed Albatross .....	27
Spotted Owl, <i>caurina</i> subspecies .....	28
Tall Bugbane .....	29
Toothcup, Southern Mountain population.....	30
Townsend's Mole .....	31
Western Grebe.....	32
Western Painted Turtle, Pacific Coast population .....	33
Western Rattlesnake .....	34
Western Screech-Owl, <i>kennicottii</i> subspecies.....	35
Western Screech-Owl, <i>macfarlanei</i> subspecies .....	36
Whitebark Pine.....	37
Williamson's Sapsucker .....	38
Woodland Caribou, Southern and Northern Mountain pop....	39
Species at Risk Act and Private Land.....	40

# Alkaline Wing-nerved Moss

*(Threatened)*

Alkaline Wing-nerved Moss is a perennial moss that has light green or yellow-green leaves, each ~1 mm (~0.04") long. It can grow in small clumps or over larger areas like a carpet.

The Alkaline Wing-nerved Moss is found in south-central and southeastern BC.



© Terry McIntosh

## HABITAT

- Open, seasonally wet, saline edges of lakes, ponds and sloughs
- Open areas without tall vegetation

## THREATS TO SURVIVAL OR RECOVERY

- Trampling of suitable habitat by livestock
- Habitat damage by off-road vehicle use outside of existing trails or roads

# American Badger

*jeffersonii* subspecies

*(Endangered)*

The American Badger is ~76 cm (~30") in length. It has a heavy body with short legs and tail.

Its fur is mainly grey with distinct white stripes on its head and characteristic "badges" on each cheek.

The *jeffersonii* subspecies is found in the dry interior of south-central and southeastern BC.



Courtesy of U.S. Fish & Wildlife Services

## HABITAT

- Open areas such as open forests, grasslands, pastures, recently cleared areas, and burned sites

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by development and fire management practices
- Being hit or run over by vehicles
- Trapping and persecution by humans
- Loss of prey

# American Badger

*taxus* subspecies

*(Special Concern)*

The American Badger is ~76 cm (~30") in length. It has a heavy body with short legs and tail. Its fur is mainly grey with distinct white stripes on its head and characteristic "badges" on each cheek.



© Yathin S Krishnappa

The *taxus* subspecies is found across southern Alberta.

## HABITAT

- Open areas such as open forests, grasslands, pastures, recently cleared areas, and burned sites

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by development and fire management practices
- Being hit or run over by vehicles
- Trapping and persecution by humans
- Loss of prey

# Ancient Murrelet

*(Special Concern)*

The Ancient Murrelet is a small seabird, ~25 cm (10") in length. Adults are mostly grey and black with white undersides. It nests in burrows and feeds in the ocean.

The Ancient Murrelet is found on and around Haida Gwaii during the breeding season.



© Dan Tallman

## HABITAT

- Forest floors (primarily on Haida Gwaii) with soft soils for nesting burrows
- Ocean habitats for feeding (in winter ranges across the entire BC coast)

## THREATS TO SURVIVAL OR RECOVERY

- Introduced predators at breeding colonies
- Fisheries practices that result in bird mortality from bycatch
- Development and industrial activities that cause loss of forest habitats

# Bank Swallow

*(Threatened)*

The Bank Swallow is a small songbird ~12 cm (5") in length. It has brown upperparts, white underparts and a dark breast band. In flight, it has quick erratic wing beats, and buzzy, chattering vocalizations.

The Bank Swallow is found across Alberta and BC.



© Melissa Hatting

## HABITAT

- Sites with vertical banks, including riverbanks, lakes and ocean bluffs, gravel quarries, road cuts, and stock piles of soil
- Open areas such as grasslands and meadows, and large wetlands

## THREATS TO SURVIVAL OR RECOVERY

- Loss of nesting and hunting habitats caused by erosion and flood control, gravel extraction, and conversion of pastures to crops and forest
- Large scale loss of insects



# Black Swift

*(Endangered)*

The Black Swift is the largest swift in North America, ~18 cm (~7") in length. It is almost entirely black. It has long, pointed wings and a notched tail.

The Black Swift is found across BC and western Alberta.



© Andrew Spencer

## HABITAT

- Their nesting habitat is near or behind waterfalls and in caves, located in canyons and sometimes on sea cliffs
- Their nest sites are characterized by presence of flowing water, high relief, inaccessibility, darkness, and an unobstructed flight path

## THREATS TO SURVIVAL OR RECOVERY

- Airborne pollutants that kill insects which Black Swifts hunt
- Reduced stream flow at nest sites and a mismatch between the time food is available and the swift's breeding cycle caused by climate change

# Black-footed Albatross

*(Special Concern)*

The Black-footed Albatross is ~74 cm (~29") in length. Adults have dark brown feathers, with lighter areas around the base of the bill, under the eyes, and on the tail.

The Black-footed Albatross is found offshore of BC's coast.



© Catherine Jardine

## HABITAT

- Pacific Ocean

## THREATS TO SURVIVAL OR RECOVERY

- Longline fishing practices that result in this bird being caught as bycatch
- Ocean plastics, toxins, and chronic oil pollution



# Coastal Giant Salamander

(Threatened)

The Coastal Giant Salamander is the largest salamander in Canada. It is ~35 cm (~14") in length. It has a thick body and legs, a large head and a blunt snout. When living in water, they are dark grey on top with a light underside. Adults found on land have marbled skin with tan, copper or gold mixed with dark brown to grey.



© Hugh Griffith

The Coastal Giant Salamander is found in the Chilliwack River Valley of BC.

## HABITAT

- Mostly aquatic, including small, shaded streams that are cool and clean, with rocky bottoms, many pools, and slow, choppy ripples
- Less common habitat includes damp, mature forest with decaying logs and leaves

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage to streams and forests caused by industrial and residential development activities
- A fungal disease spreading in frogs and salamanders
- Herbicides, pesticide run-off, and removal of stream side vegetation
- Introduced fish that eat young salamanders

# Dun Skipper

*vestris* subspecies

(Threatened)

Dun Skipper, *vestris* subspecies, is a butterfly with a wingspan of ~2-3 cm (~1"). It has dark, purple-brown wings and a yellow-orange body.

The Dun Skipper is found on the islands and mainland of southwestern BC.



"Dun skipper in purple vitex" by Vicki DeLoach

## HABITAT

- Open forests, grasslands, wetlands, wet areas (e.g., seepages) and roadsides
- Sedges and grasses are the most common host plants for larvae
- Various flowering plants (e.g., Spreading Dogbane, Alfalfa) provide nectar for adults

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss and damage caused by residential and industrial development
- Use of pesticides to control European Gypsy Moth



# Great Blue Heron

*fannini* subspecies

*(Special Concern)*

The Great Blue Heron stands over 1 m (~3') tall. Its feathers are blue-grey with white streaks. In its characteristic flight, its wings beat slowly and deeply while it holds its neck in an S-shape.

The Great Blue Heron is found on the coast and islands of BC.



© Ross Vennesland

## HABITAT

- Hunts in fresh and salt water marshes, streams and rivers, grasslands, ditches, wet agricultural fields, and on coastlines
- Perches and nests in large trees such as Red Alder, Black Cottonwood, and Douglas-fir

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss caused by forestry practices and urban and industrial development
- Human activities that disturb nesting birds (e.g., pedestrian activity, off-road vehicles, loud noises)
- Bald Eagles attacking colonies and hunting these birds, especially eggs and chicks

# Grizzly Bear

Western population

*(Special Concern)*

The Grizzly Bear is a large and muscular bear. Adult females are 100-150 kg (220-330 lbs) and adult males are 180-270 kg (397-595 lbs). Its colour ranges from blonde through shades of brown to nearly black.

The Grizzly Bear is found throughout BC and western Alberta.



© Ross Vennesland

## HABITAT

- Temperate coastal rain forests, alpine tundra, mountain slopes, upland boreal forest, and dry grasslands

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss caused by roads and residential developments
- Poaching

# Haller's Apple Moss

*(Special Concern)*

Haller's Apple Moss has 4-13 cm (1.5-5") high tufts of green- yellow or green-brown leaves. The short stocks amongst the leaves hold capsules that make spores.



© René Belland

Haller's Apple Moss is found in and around the Rocky Mountains in BC and Alberta.

## HABITAT

- Mountainous regions
- Crevices and ledges of forested cliffs
- Exposed stabilized talus (fallen, broken rock) slopes

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by logging, road maintenance, residential development, industrial land use and fires
- Removing rocks and soil and trampling or dislodging
- Road dust, de-icing agents and herbicides

# Horned Grebe

Western population

*(Special Concern)*

The Horned Grebe is a small waterbird. It is black and white in the winter. When breeding, its sides and neck are chestnut-red. It has bright yellow feathers behind its red eyes, which look like "horns".



© Jukka Jantunen

The Horned Grebe is found east of the coastal mountains in BC and on the south coast in winter. It is found across Alberta during the breeding season.

## HABITAT

- Small, shallow semi-permanent or permanent ponds, marshes, and shallow bays on lake borders
- Open water with vegetation that can be seen above the water

## THREATS TO SURVIVAL OR RECOVERY

- Loss of wetland habitats caused by agriculture and climate change
- Pesticides, fertilizers, and animal waste that damage water bodies

# Lewis's Woodpecker

*(Threatened)*

The Lewis's Woodpecker is ~26-28 cm (10-11") in length. Its back, wings, and head are green-black with a silvery collar. Its belly is pink-red and it has a dark red face.

Lewis's Woodpecker is found in the southern half of BC's interior.



"Preparing to enter its nest cavity in a trembling aspen, an adult Lewis's Woodpecker looks into the surrounding forest with a beak full of insects. Photographed in British Columbia's North Thompson Valley." by Jess Finlay

## HABITAT

- Open forest and grassland with scattered trees, riparian forests next to open areas, and recent burns with standing dead or dying trees.
- Large dead and dying trees are important for nesting, including Ponderosa Pine, Black Cottonwood, and Douglas-fir

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by residential and commercial development, changes in land use, and agricultural practices
- Removal of nest trees or potential nest trees and fire suppression that results in denser forest stands

# Long-billed Curlew

*(Special Concern)*

The Long-billed Curlew is a large sandpiper. It has a slender, down-curved bill ~20 cm (8") in length. It is cream-tan tinged with cinnamon or pink. Its upper parts are streaked with dark brown, while the underparts are cream-tan. It has long light blue-grey legs.



© Matthias Bieber

The Long-billed Curlew is found in southern and central BC, south of Prince George, and in southern Alberta.

## HABITAT

- Dry, short grasslands and pastures with low shrubs and high grass cover
- Hayfields and wet meadows

## THREATS TO SURVIVAL OR RECOVERY

- Loss of nesting habitat caused by cultivation and urban development
- Habitat loss caused by industry, livestock overuse, fire control, and the spread of exotic plants
- Increased risk from predators caused by habitat being fragmented or broken into separate parts

# Marbled Murrelet

*(Threatened)*

The Marbled Murrelet is a small, plump seabird, ~25 cm (10") in length. In winter its feathers are black and white and in summer they are marbled grey-brown (for camouflage when nesting).

The Marbled Murrelet is found along the coast and islands of BC.



"Marbled Murrelet" by Tom Benson

## HABITAT

- Nests in old-growth trees with high, well-hidden, moss-covered branches up to 50 km (~31.1 miles) inland
- Feeds in marine areas close to shore

## THREATS TO SURVIVAL OR RECOVERY

- Loss of inland nesting habitat and marine feeding habitat
- Contamination from oil spills
- Gill-nets used for fishing that entangle birds

# Mexican Mosquito Fern

*(Threatened)*

The Mexican Mosquito Fern is only ~1-1.5 cm (~0.5") wide. Its tiny leaves can be red or green. It floats on the surface of lakes, streams and other fresh water sources.

The Mexican Mosquito Fern is found in south-central BC.



© Ozarks Regional Herbarium; photo: Paul Redfearn

## HABITAT

- Still, shallow waters with low salinity

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss caused by road construction or urban development that fills in water bodies where these ferns live
- Activities that change the chemistry of the water



# Olive-sided Flycatcher

*(Threatened)*

The Olive-sided Flycatcher is a medium-sized songbird, ~18-20 cm (7-8") in length. Its back and sides are a deep brown to olive-grey. Its throat and belly are white.

The Olive-sided Flycatcher is found throughout most of BC, but not on Haida Gwaii, and in the Boreal Forest regions of Alberta.



Photo by Jerry Oldenettel

## HABITAT

- Nests in tall living or dying trees
- Hunts in forest openings and edges, often near water bodies

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss caused by logging, energy production and mining, and urban development
- Fire suppression activities that prevent forest openings from being created
- Pesticide use that reduces the numbers of flying insect prey

# Oregon Forestsnail

*(Endangered)*

The Oregon Forestsnail is a large snail with a spiraled shell ~35 mm (~1.5") across. The shell is pale brown or straw-yellow and opens with a white, flared, outer rim.

The Oregon Forestsnail is found in the lower Fraser Valley in southwestern BC and on southeastern Vancouver Island.



Photo by Laurel Parshall

## HABITAT

- Older mixed-wood and deciduous lowland forests, typically with Bigleaf Maple and Black Cottonwood, with thick vegetation beneath the trees
- Stinging Nettle patches, and fallen branches and leaves

## THREATS TO SURVIVAL OR RECOVERY

- Habitat fragmentation, loss, or damage caused by development
- Brush-burning, trampling, and pesticides
- Introduced species that compete for food and shelter (e.g., Giant Garden Slug and Chocolate Arion slug)



# Oregon Spotted Frog

*(Endangered)*

The Oregon Spotted Frog is ~6 cm (~2.5") in length, not including its legs. It is red-brown, with raised red to black spots on its head and back. It has golden eyes set on the top of its head. It has a light brown to orange ridge on each side. Adults have dark spots on their bellies.



Photo by Teal Waterstrat

The Oregon Spotted Frog is found in the lower Fraser Valley in southwestern BC.

## HABITAT

- Warm, shallow, and muddy water with aquatic plants found within wetlands, ponds, and slow-moving waterways and any aquatic habitat that connects these main habitats

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage (e.g., pollution of waterways) caused by farming, mining, and logging practices
- Invasive species like Reed Canary Grass (which take away habitat) and bullfrogs (which eat Oregon Spotted Frogs)
- A fungal disease spreading in frogs and salamanders

# Pacific Water Shrew

*(Endangered)*

The Pacific Water Shrew is the largest shrew in BC. It is about the size of a mouse. Its fur is dark brown or black. It has stiff hairs on the edges of its hind feet to help it swim and move short distances across the surface of the water.



Photo by Denis Knopp

The Pacific Water Shrew is found in the lower Fraser Valley region of southwestern BC.

## HABITAT

- Dense, wet forests
- Streams and wetlands
- Large, coarse, downed wood in forests, streams and wetlands

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by urban development, logging, and agricultural practices

# Pink-footed Shearwater

(Endangered)

The Pink-footed Shearwater is a medium-sized seabird with a stocky body and long broad wings. It has grey-brown upperparts, a white belly with grey markings, white wing linings, and a dark grey head. Its bill is pink with a dark tip.



© Peter Hodum

The Pink-footed Shearwater is found off the west coast of BC between March and October.

## HABITAT

- Marine habitats with lots of food to eat (along the continental slope, shelf, and shelf-break)

## THREATS TO SURVIVAL OR RECOVERY

- Being caught in fishing nets (bycatch)
- Oil and other pollution
- Eating plastics

# Red Knot

*roselaari* type

(Threatened)

The Red Knot is ~23-25 cm (9-10") in length. In the breeding season, its face and front feathers are rich brown-red and its back is dark brown or black mixed with red and grey. In the non-breeding season, its back is plain grey and it has dull grey or brown streaks on its white front.



"Red Knot" by Aaron Maizlish

The Red Knot *roselaari* type migrates along BC's Pacific coast. The Fraser River Estuary in BC's Lower Mainland is a Red Knot migration stopover site.

## HABITAT

- Coastal areas with broad intertidal flats

## THREATS TO SURVIVAL OR RECOVERY

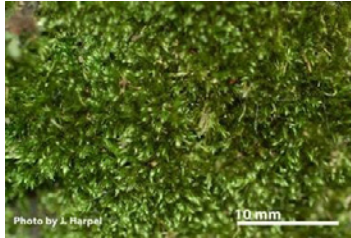
- Habitat loss or damage caused by residential and commercial development and energy production
- Introduced and invasive species

# Roell's Brotherella Moss

*(Endangered)*

Roell's Brotherella Moss is a small, green or green-yellow moss that grows in turf-like mats. It has tiny flat stems and its leaves are jagged along the top edges.

Roell's Brotherella Moss is found in southwestern BC.



© J. Harper

## HABITAT

- Cool, humid mixed deciduous and coniferous second-growth and old-growth forests
- Stream terraces, swampy floodplains, creek ravines
- Grows on trunks of live trees, rotting logs and stumps, especially Red Alder, Bigleaf Maple, Western Flowering Dogwood, and Birch

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by residential and commercial development, recreational and tourism activities (e.g. trail construction, maintenance, replacement of native trees), and mining

# Short-tailed Albatross

*(Threatened)*

The Short-tailed Albatross is a large seabird with long, narrow wings that span over 2 m (~7.5'). It has black and white wings, and black tail fringes. Its head and the back of its neck are pale yellow. It has a large, pink, hooked bill with a light blue tip.



"An adult Short-tailed Albatross takes off from the turbulent waters of the North Pacific, just south of the Aleutian Island Archipelago." by Jess Finlay

The Short-tailed Albatross is found off the coast of BC except in December.

## HABITAT

- Marine habitats with lots of food to eat (along the continental slope, shelf, and shelf-break)

## THREATS TO SURVIVAL OR RECOVERY

- Being caught in fishing nets (bycatch)
- Oil and other pollution
- Eating plastics

# Spotted Owl

*caurina* subspecies

(Endangered)

The Spotted Owl - *caurina* subspecies is ~45 cm (18") in length with a wingspan of ~90 cm (35"). It has dark brown feathers speckled with small, pale spots over most of its body. It has light feathers around its large, dark eyes.

The *caurina* subspecies of the Spotted Owl is found in the southwest mainland of BC.



© Jared Hobbs

## HABITAT

- Mature and old, coniferous and mixed-coniferous forests with uneven-aged trees, including numerous large trees with broken tops, large holes and large dead or dying trees (i.e. snags)

## THREATS TO SURVIVAL OR RECOVERY

- Barred Owls, which compete for habitat and prey
- Habitat loss and damage caused by road-building, logging, fire and fire suppression

# Tall Bugbane

(Endangered)

Tall Bugbane stands ~1-2 m (~3-6') tall. It has small, white flowers grouped in bunches of 50-900. It is typically found in damp areas of mixed wood forests with Douglas-fir, Bigleaf Maple and Devil's Club.

The Tall Bugbane is found in the Cultus Lake–Chilliwack River area of southwestern BC.



© Dianne Fristrom

## HABITAT

- Old and mature mixed coniferous and deciduous forests, most commonly with Douglas-fir and Broadleaf Maple.
- Prefers moist parts of forest (e.g., seepages and near water courses), and also small, sunny gaps in the canopy

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by forestry practices, industrial activities, and residential and commercial development
- Some recreational activities (e.g., hiking, mountain biking, off-roading)
- Introduced and invasive species

# Toothcup

## Southern Mountain population

*(Endangered)*

Toothcup is ~10-40 cm (4-16") tall plant with small white-pink flowers. It is generally green in colour, although it may have a reddish colour in late summer.

The Southern Mountain population is found in south-central BC.



© Larry Allain

### HABITAT

- Moist to wet, often alkaline, muddy shorelines of lagoons, ponds, or sandy shorelines
- Sites are typically under water early in the year, plants then emerge when water levels recede (late July- September)

### THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by residential and commercial development, and lake level management

# Townsend's Mole

*(Endangered)*

The Townsend's Mole is ~20 cm (~9") in length from nose to tail. Its short fur is dark brown to grey and may appear lighter in the summer months. It has broad, shovel-like front feet with long claws that it uses for tunneling. It builds large molehills and spends most of its life underground.



Photo by Jerry Kirkhart

Townsend's Mole is found in a small area of BC's lower Fraser Valley.

### HABITAT

- Spends most of its life in underground tunnels and burrows
- Pasturelands, grassy fields, lawns, and areas with loose soils

### THREATS TO SURVIVAL OR RECOVERY

- Agricultural practices that cause habitat loss, prey loss, or directly harms or kills this species
- Persecution by humans who view moles as pests
- Habitat loss or damage caused by residential and commercial development
- Use of pesticides that cause declining numbers of prey (e.g., earthworms)

# Western Grebe

*(Special Concern)*

The Western Grebe is a large waterbird. It has a white throat, breast and belly. Its head, neck, back and wings are black and grey. It has bright red eyes and a long, pointed yellow-green bill.



© Frank Schulenburg

The Western Grebe is found in the southern interior of BC and central and southern Alberta in summer and along the entire coast of BC in winter.

## HABITAT

- Nests near shores of lakes and marshes with stable water levels, open water, and vegetation
- Large lakes during migration where it feeds
- Sheltered salt or brackish water in bays, inlets, estuaries, lagoons and channels during the winter

## THREATS TO SURVIVAL OR RECOVERY

- Being disturbed by humans where they nest and breed
- Habitat loss and damage especially to the vegetation that can be seen above the water in lakes and marshes
- Oil and other chemical pollution, and harmful algal blooms
- Being caught in fishing nets (bycatch)

# Western Painted Turtle

Pacific Coast population

*(Endangered)*

The Western Painted Turtle is ~25 cm (10") in length. It has a smooth dark upper shell, and a bright red or orange underside covered by large distinctive markings.



© Kym Welstead

The Western Painted Turtle Pacific Coast Population is found in BC's Lower Fraser Valley, Sunshine Coast, and Texada, Vancouver, and Salt Spring islands.

## HABITAT

- Slow-moving or stagnant freshwater bodies, including shallow ponds, lakes, marshes, ditches, and streams
- Floating logs or other objects where these turtles can sun themselves out of the water
- Loose, warm, well-drained soils up to ~150 m (~500') from the water's edge

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by development and land use practices
- Being hit or run over by vehicles
- Predators that eat eggs, invasive species that eat hatchlings (e.g., Bullfrogs), and introduced competitors (e.g., Red-eared Sliders) that may transmit disease



# Western Rattlesnake

*(Threatened)*

The Western Rattlesnake is a large snake that can reach up to 1.3 m (~4.3') in length. This snake is brown or olive with dark blotches on its back. It has a triangular head and a "rattle" on the end of its tail.

The Western Rattlesnake is found in the Thompson, Okanagan and Boundary regions of the southern interior of BC.



© Douglas Adama

## HABITAT

- Shrub-steppe, grasslands, ponderosa pine and Douglas-fir forests, rocky talus (fallen, broken rock) slopes and riparian areas

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by urban and agricultural development
- Being hit or run over by vehicles
- Being intentionally harmed or killed by humans

# Western Screech-Owl

*kennicottii* subspecies

*(Threatened)*

The Western Screech-Owl is ~19-25.5 cm (~7.5-10") in length. It is mostly grey-brown, but its front is lighter and it has a white breast with thin dark streaks.

The Western Screech-Owl *kennicottii* subspecies is found along the coast of BC, including Vancouver Island.



"Western Screech Owl (*Megascops kennicottii*)"  
by Randy R. Magnuson

## HABITAT

- Low elevation forest and woodland
- Mixed deciduous-coniferous forests, usually near a stream
- Tree cavities

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by urban development and agricultural and forestry practices
- Barred Owls that prey on this bird



# Western Screech-Owl

*macfarlanei* subspecies

(Threatened)

The Western Screech-Owl is ~19-25.5 cm (~7.5-10") in length. It is mostly grey-brown with a light coloured breast with fine, dark streaks.

The Western Screech-Owl *macfarlanei* subspecies is found in central and eastern BC.



© Jared Hobbs

## HABITAT

- Lower elevation forested areas, usually close to water
- Tree cavities

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by urban development, agricultural and forestry practices, and energy (e.g., hydroelectric) development and production
- Being hit or run over by vehicles

# Whitebark Pine

(Endangered)

The Whitebark Pine is ~5-20 m (~16-65') tall. It is a coniferous tree with needles in bunches of five.

The Whitebark Pine is found at high elevations in the mountains of the BC mainland and in the Rocky Mountains in BC and Alberta.



© Michael Miller

## HABITAT

- High elevation areas (e.g., upper montane, subalpine, tree-line)
- Rocky ridges and open areas (e.g., disturbed by fire, avalanche)

## THREATS TO SURVIVAL OR RECOVERY

- White Pine Blister Rust (a fungal infection)
- Mountain Pine Beetle infestations
- Fire and fire suppression
- Climate change causing increases in the strength and number of storms

# Williamson's Sapsucker

*(Endangered)*

The Williamson's Sapsucker is a woodpecker, 21-25 cm (8-10") in length. Females are brown and black, and males are black and white. Males have patches of white on their wing, rump, and head, and a small red patch on the throat. Both males and females have a yellow belly.



© Les Gyug

The Williamson's Sapsucker is found in the southern interior of BC.

## HABITAT

- Coniferous and mixed coniferous-deciduous forests at mid-high elevations
- Large live or dead trees that are rotting inside which are used to make nest cavities
- Live coniferous trees that make sap wells and ant colonies

## THREATS TO SURVIVAL OR RECOVERY

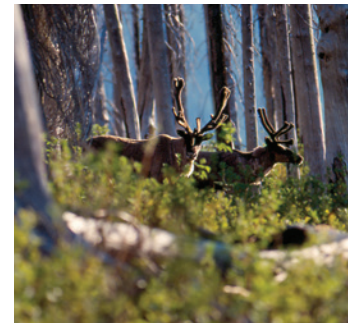
- Habitat loss caused by commercial timber harvest in mature forests
- Salvage logging and firewood cutting
- Fire suppression and high intensity fires that remove all vegetation in an area (i.e., stand-replacing fires)

# Woodland Caribou

Southern and Northern Mountain populations

*(Threatened and Special Concern)*

Mountain populations of Woodland Caribou are one of the largest types of caribou. Both males and females have antlers. Their coats are dark brown with a patch of grey-white under their necks, on their underbelly, and above their hooves.



© Lee Harding

The Mountain populations are found throughout BC.

## HABITAT

- Large ranges of relatively undisturbed, interconnected habitat, with diverse topography that includes: alpine tundra, subalpine forests, low-elevation forests, and wetlands
- Mature and old forests with lots of lichens on trees and on the ground

## THREATS TO SURVIVAL OR RECOVERY

- Habitat loss or damage caused by development, industrial and recreational activities
- Being hunted by wolves, bears, wolverines, and cougars
- Avalanches, landslides, and climate change that increases severe weather events

# Species at Risk Act and Private Land

---

## Did you know...

- The *Species at Risk Act* (SARA) applies on all lands and waters in Canada
- How it applied depends on land tenure
- Canada and British Columbia work together through a formal Agreement on Species at Risk
- Provincial and local governments can protect species at risk and their critical habitat through existing tools (e.g., bylaws, zoning, permitting, *Water Sustainability Act*, *Wildlife Act*)
- Land owners and managers play an important role through the stewardship actions they choose to take

## What is critical habitat?

- The habitat the species needs to recover or survive, as identified in a final recovery strategy or action plan
- Critical habitat is identified using the best available information which includes:
  - The area within which critical habitat is found
  - The environmental features the species needs (e.g., types of plants, water bodies)

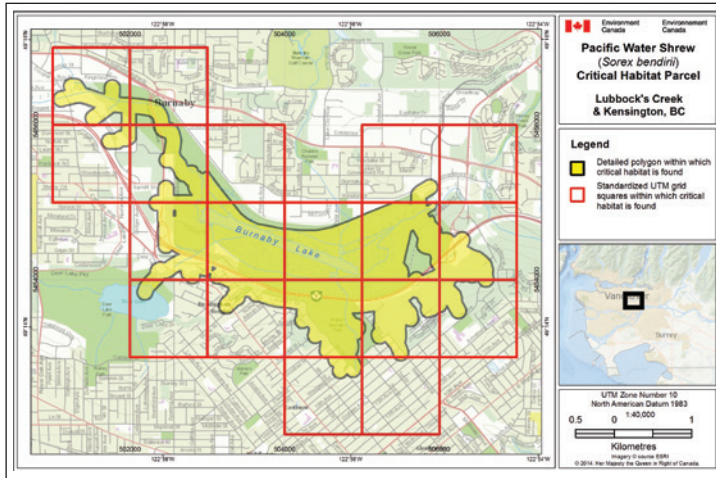
## What does it mean to have critical habitat on your land?

- It may mean that your current land use is compatible with the needs of the species. Thank you!
- If you plan to change how you use your land, you can get advice from species experts in order to avoid harming species or their habitat

## How is critical habitat protected?

- Protection of critical habitat means avoiding activities that could destroy it
  - Critical habitat is 'destroyed' if the habitat is not available to the species when it needs it
  - Destruction can result from a single action or multiple actions over time (cumulative effects)
- The existing laws of the provinces and territories may protect critical habitat (Note: If new laws or regulations are considered, you will be consulted before anything changes)
- Stewardship actions, or best management practices, can also help species survive and recover
- SARA's legislated powers are only considered if the above measures have not protected the species and its critical habitat
- The goal is to meet the conservation needs of the species while minimizing impacts and inconvenience to landowners

## Example of a Critical Habitat Map



Area within which critical habitat occurs for Pacific Water Shrew at Lubbock's Creek and Kensington Interchange (Burnaby, B.C.). Critical habitat is represented by the shaded yellow polygon where the criteria set out in Section 5.1. are met. The 1 km x 1 km UTM grid overlay shown on this figure is a standardized national grid system that highlights the general geographic area containing critical habitat.

## What support is available to help landowners protect critical habitat?

- Tax incentives for "EcoGifts"
- Funding programs (e.g., Habitat Stewardship Fund)
- Conservation Agreements
- Information to assist in land use planning

To learn more about SARA and species at risk,  
please visit: [www.sararegistry.gc.ca](http://www.sararegistry.gc.ca)

This project was undertaken with the financial support of:  
Ce projet a été réalisé avec l'appui financier de :



Environment and  
Climate Change Canada

Environnement et  
Changement climatique Canada