

Species of Management Concern (SOMC) 2023 BCTS TSG Field Cards

Amphibians

- Northern Red-legged Frog, *Rana aurora* **
- Western Toad, *Anaxyrus boreas* *

Birds

- Bald Eagle, *Haliaeetus leucocephalus* ^
- Great Blue Heron, *Ardea Herodias fannini* **
- Marbled Murrelet, *Brachyramphus marmoratus* **
- Northern Goshawk, *Accipiter gentilis laingi* **
- Northern Pygmy Owl, *Glaucidium gnoma swarthi* **
- Osprey, *Pandion haliaetus* ^
- Peregrine Falcon, *Falco peregrinus anatum* and *Falco peregrinus pealei* **
- Pileated Woodpecker, *Dryocopus pileatus* ^
- Western Screech Owl, *Megascops kennicottii kennicottii* **

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Appendix

- Migratory and Breeding Birds Field Card
- TSG Breeding Bird Quick Reference Guide

** = 2022 Focus list

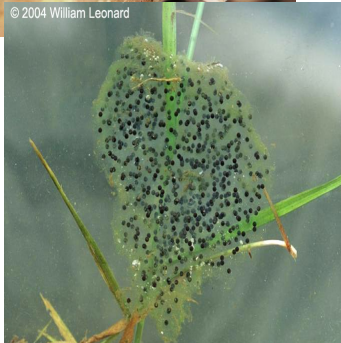
* = 2022 Awareness list

^ = FRPA/Wildlife Act/Migratory Bird Act

Red-legged Frog, *Rana aurora*



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Red-legged Frog Egg Mass



Red-legged Frog Tadpole

Description

- Medium sized brown-reddish frog, with smooth skin, whitish underbelly and black 'freckles'.
- Males are approximately 7 cm in length; females can be longer, approximately 10 cm.
- Named after their long slender hind legs, with red colouring on the undersides.
- Usually have a dark mask and upper jaw stripe running back to the shoulder.
- *Tadpoles*: tan to brown color with specks throughout their body. Their bodies look short because they have a long tail that is at least as long as the length of their body. The tail has a dorsal fin with light spots on it. Mouth with 4 teeth rows on the bottom and 3 on the top. They reach a size of 2-7 cm before they metamorphose.

Similar Species

- Oregon Spotted Frog

Biology

- Begin to mate & lay their eggs very early in spring, as early as January in coastal areas.
- Males call underwater to attract females.
- Females lay eggs in large jelly-like clusters of 750-1300, and clusters attached to stems of aquatic plants just below the surface.
- Eggs are in a grapefruit size mass; individual eggs are black above and white below.
- High site fidelity to natal breeding ponds, and females may lay their eggs in the same locations within a breeding site each year.

Habitat

- Adults often found in damp wooded areas.
- During breeding season, which is winter to early spring, they may be found in ponds and streams.
- *Elevations*: 0-850 m

Occurrence: DSI, DCR

- In BC, Red-legged Frogs are found on the mainland coast, Fraser Valley, Vancouver Island, and other small coastal islands. Outside of BC, range can extend south to California.

Status

BC: Blue-listed (Species of Special Concern) and Identified Wildlife Species in B.C.

Canada: Special Concern (SARA Schedule 1)

Action Required

- Notify BCTS and document location of verified breeding area.
- Consult qualified professional (if necessary) to verify identification & breeding.
- Biologist will work with field team staff to design a riparian buffer between & around occupied breeding ponds or wetlands within or adjacent to cutblock.

Western Toad, *Anaxyrus boreas*



Occurrence: DSI, DCR

- Found throughout BC

Status

BC: Yellow Listed (Not at Risk);

Canada: Special Concern (SARA Schedule 1)

Action Required

- Notify BCTS and document location of suspected breeding area.
- Consult a qualified professional (if necessary) to verify identification and breeding
- Biologist will work with field team staff to design a riparian buffer between and around occupied ponds or wetlands within or adjacent to the cutblock
- Refer to BCTS SoG Management Protocol for Red-legged Frogs and Western Toads

Description

- Adult Western Toads are 10 – 13 cm long,
- Can be a range of colours including brown, grey, green and red,
- Adults have a white or cream stripe down the center of their backs,
- Bellies and throats are lightly coloured and mottled with black spots,
- They have large, kidney-shaped parotid glands (poison-secreting glands) behind their eyes.
- Their backs are covered in warty glands.

Similar Species -No similar species on the coast

Biology

- Breed in mid-spring congregating in ponds and shallow lakes
- Males do not call to attract mates
- Females lay strands of up to 12,000 eggs in a single file, multiple females may lay overlapping strands of eggs
- usually silent, may “peep” when handled
- tadpoles are dark brown or black, swarm in dense groups in warm and shallow waters
- after 6-10 weeks toadlets migrate out of ponds in huge numbers, they reach sexual maturity in 3-5 years and can live up to 11

Habitat

live under leaves and in depressions in fields, forests, meadows and wetlands

Can tolerate dry environments, during dry spells will be close to streams and ponds

near estuaries and broad intertidal zones.

- Secrete a bitter toxin that repels most predators except for garter snakes
- Toads will eat worms, slugs, insects and also larger ani-



Bald Eagle, *Haliaeetus leucocephalus*

Adult & Juvenile



Description

- Large eagle, with a wingspan of more than 2m, measures 76 cm tall and can weigh over 7 kg.
- Adults have a dark brown (almost black) body, with white contrasting feathers on their head and tail. Beak, eyes and legs are yellow.
- Juvenile Bald Eagles have a mottled brown colour all over. They achieve the distinct adult colouration at four or five years of age.

Similar Species

- Juvenile Bald Eagles are often confused with Turkey Vultures or Golden Eagles.

Biology

- Bald Eagles feed primarily on fish, but can also feed on aquatic birds, amphibian, reptiles and mammals (alive or found dead).
- The Bald Eagle nest is the largest of any bird in North America; on average the nests are 1.5-2m across and 1m tall.
- Females lay 1-3 eggs.
- Nesting activity can occur from mid Feb to July

Habitat

- Nests are almost always in dominant old-growth trees near salt water or fresh water shorelines. Nesting shorelines are often near estuaries and broad intertidal zones.
- In the interior, nesting habitats are along large low-gradient rivers and high floodplain/ wetland development, and at low elevation lakes.
- Common nest tree species include; Sitka spruce, Douglas fir, western red cedar, cottonwood and Aspen. These are usually dominant or co-dominant specimens in the nest vicinity and quite often knarled and very old.
- Nest found at lower elevations.

Occurrence: DSI, DCR

- Most of Canada's breeding population is found on BC coast.

Status

BC: Yellow-listed (Not at Risk); Wildlife Act–Section 34(b) (cannot injure, molest or destroy a bird, eggs, or nest)

Canada: Not at Risk

Action Required

If nest is found:

- Retain the nest tree (protected under the *Wildlife Act*) with a 200m veg buffer.
- Notify BCTS, document, flag the location of the nest tree and occupation status
- Contact a qualified professional if you are uncertain about occupancy.
- From mid February to Aug. 31, stop work within 200m of an occupied nest until an assessment has been completed by a qualified professional biologist

Great Blue Heron, *Ardea herodias fannini*



Description

- The pacific subspecies is the largest of all herons in Canada, standing at 1 meter tall.
- Tall long-legged, long-necked wader that holds its head in an "S" curve at rest and in flight.
- Long, thick yellow bill, white crown and face.
- Black plume from above eye to beyond back of head.
- Black shoulder, shaggy blue-gray body & wings.
- Juvenile has brown-grey back and upper wing plumage and lacking black eyebrow.
- Sexes similar

Similar Species

- Other Great Blue Heron subspecies.

Biology

- nest in colonies of 2-10 nests (average).
- Nests are reused in successive years.
- Nests, 4-70 m high in trees, are large stick platforms, < 1 m diameter, lined with twigs, bark strips, coniferous boughs and rushes.
- Both nest and ground beneath are messy with droppings, old food, & sometimes dead chicks.
- Currently the four main colonies in southern BC contain 45% of the Canadian population.

Habitat

- Populations nest in quiet woodlots within 8 kms of their foraging habitat.
- Nest in undisturbed mature deciduous; less often in mixed, or coniferous forest. Canopy closures of >80% is typical for Heronries.
- Foraging habitat is usually large eelgrass meadows along rivers and in estuarine and freshwater marshes.
- *Elevations:* 0-1100 m, but mainly near sea level.



Occurrence: DSI, DCR

- Range extends from the coast of southeastern Alaska (Prince William Sound) south to Puget Sound, Washington. Along the entire coast of BC.
- Potential breeder throughout much of the TSG Business Area

Status

BC: Blue-listed (Species of Special Concern) and Identified Wildlife Species in B.C.

Canada: Special Concern (SARA Schedule 1)

Action Required

If nest or nest trees are found:

- Notify BCTS and take photos, document habitat and activity/occupancy details, and GPS the location.
- Retain the nest tree or trees within a WTP with a 200m buffer.
- From Jan 15 – Sept 15 maintain a quiet buffer within 200m of nest site, if occupied.

Marbled Murrelet, *Brachyramphus marmoratus*



Summer/Breeding Plumage



Winter Plumage

Description

- A small (length 24-25cm, mass 190-270g) chunky seabird with a black bill and an entirely dark tail.
- Short thin bill.
- Breeding adult is dark brown above, heavily mottled below.
- In winter, plumage is white below with white scapular streak on otherwise dark upperparts.
- Solitary or in pairs, generally does not flock with other birds.

Biology

- Marbled murrelets normally feed in inshore marine waters, including shallow bays, channels and fjords.
- In British Columbia, adult diet during the breeding season is mostly fishes, primarily Pacific Sandlance and Pacific Herring or crustaceans, euphausiids
- Clutch size 1, incubation lasts 30 days with both sexes alternating in 24hr shifts.
- Young are fed by adults 2-4 times daily and fledge in 27-40 days.

Habitat

- Nests up to 30-80 km inland.
- Prefer old growth forest (Sitka spruce, with an abundance of mossy platforms for landing and nesting purposes)
- Forage in coastal areas, mainly in salt water within 2 km of shore, including bays and sounds, not uncommon up to 5 km offshore.

Occurrence: DSI, DCR

- Nesting is widespread in suitable old growth stands on Vancouver Island and the mainland coast.
- Spends most of its time along the inshore marine habitat within 0.5 kms of shore in shallow waters.

Status

BC: Blue-listed (Species of Special Concern) and Identified Wildlife Species in B.C.

Canada: Threatened (SARA Schedule 1)

Action Required

- If the species is observed take photos, document habitat and activity details, and GPS the location. Report the observation to supervisor and contact BCTS.
- If an active nest is observed, do not disturb the nest and limit activity in the immediate area. Take photos and locate with GPS waypoint if possible and contact BCTS.
- Managed under higher level planning, FRPA, WHA's OGMA's etc.

Northern Goshawk, *Accipiter gentilis laingi*



Description

- Northern Goshawks are a raven-sized raptor, with short, rounded wings and a long tail.
- Adults (>2 years) have a conspicuous light grey supercilium (feathering above the eye) flaring out behind the eye that separates their black crown from their blue-grey back.
- Adults have a white eye-stripe, chests are white with grey barring, and their tails have prominent alternating black and grey bands.

Similar Species

- Sharp-shinned Hawk (much smaller) and Cooper's Hawk (lacks white eye-stripe) as well as the *Accipiter gentilis atricapillus* subspecies (is usually lighter in colour, and more frequently found further inland).

Biology

- Generally feed on large prey, including squirrels and large birds, (Grouse, woodpeckers, Varied Thrush and Steller's Jay). They hunt below the canopy in open forests.
- Breeding and brood-rearing season is from April to September.

Habitat

- Goshawks are well suited for dense, mature forest stands, and generally require structural stage 6 or 7.
- Prefer habitat containing high levels of coarse woody debris, snags and stumps, where their prey is abundant.
- Nest areas usually contain the active 'nest tree' as well as additional alternate nests.
- Elevation: lower to mid elevations.



Occurrence: DSI, DCR

- *Laingi* subspecies are found along the coast from SE Alaska, to Western Washington. In BC, they are found within four designated conservation areas, Haida Gwaii, North Coast, South Coast and VI.

Status

BC: Red-listed (Threatened or Endangered) and Identified Wildlife Species in B.C.

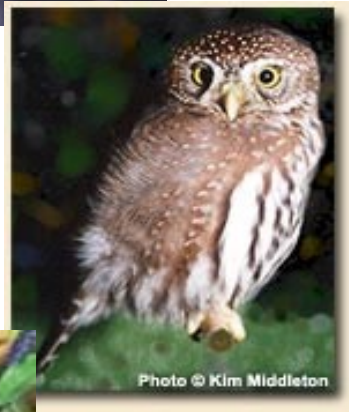
Canada: Threatened (SARA Schedule 1)

Action Required

If nest or bird is found:

- If the species or nest is observed take photos, document habitat and occupancy details, and GPS the location.
- Immediately notify BCTS
- Stop any work that may cause disturbance in area (road construction, harvesting)
- Contact a qualified professional to verify species and nest occupancy and assist in retention design.
- Refer to the [BCTS TSG Northern Goshawk Nest Management Protocol](#).

Northern Pygmy Owl, *Glaucidium gnoma swarthi*



Description

- Very small owl (maximum 80 g), slightly smaller and darker than the mainland species.
- Yellow eyes; also has pair of vertical black patches (resembling eyes) on nape
- Grey-brown colour with whitish underbelly.
- Length: 6 inches Wingspan: 15 inches
- Large, rounded head, crown spotted white
- Dark streaking on under parts, long, dark tail with thin, white bars
- Sexes similar
- Predatory bird, more diurnal than other owl spp

Similar Species

- Northern Saw-whet Owl

Biology

- Crepuscular (active dawn and dusk) hunter
- Preys on small rodents
- Series (60-80/min) of single or double "toot" notes.
- Non-migratory

Habitat

- Habitat generalist
- Secondary cavity nester, using second-growth and mature coniferous forests, mixed riparian forest and deciduous forest
- Prefers edge rather than interior forest
- Limited by suitable habitat, especially the availability of cavities for nesting
- Retention of WTs on the landscape critical
- May reuse cavities for several consecutive years
- Pairs typically spaced 600 m to 1600 m apart
- Will nest in WTPs within logged areas.
- Elevations: 50 to < 1700 m.

Occurrence: DSI, DCR (VI)

- Range on VI, where suitable habitat exists, from Cape Scott to Sooke.
- The largest concentration is in the Nimpkish River Valley. There is also a small population on Quadra Island. Present in CDF, CWH, MH biogeoclimatic zones.

Status

BC: Blue-listed (Species of Special Concern) and Identified Wildlife Species in B.C.

Canada: Not listed

Action Required

If an active nest is found:

- Document location of sighting and/or nest tree.
- Immediately notify BCTS & contact qualified professional to verify species and assist in retention
- Retain the nest tree within a WTP with a 200m buffer around the nest tree and leave other snags or trees with cavities within the WTP.
- An active nest should not be disturbed between April 1st and August 31st

Osprey, *Pandion haliaetus*



Description

- Ospreys have long narrow wings, dark brown upperparts, white underparts, a white head with a prominent dark eye streak, and dark wrist patches (visible in flight) on the underside of the wings.
- Immatures have pale buff edging on the dark feathers of the upper surface.
- Average length 56-64 cm, wingspan 147-183 cm.

Similar Species

- Superficial similarity to adult Northern goshawk

Biology

- Ospreys occur primarily along rivers, lakes, reservoirs, and seacoasts.
- Ospreys eat almost exclusively fishes but will occasionally take rodents, birds, other small vertebrates or crustaceans.
- Ospreys capture prey with a feet-first plunge into shallow water, usually by flight hunting, sometimes from perch.

Habitat

- They typically build large stick nests on living or dead trees and also use numerous man-made structures such as utility poles, wharf pilings, windmills, microwave towers, chimneys, and channel markers.
- Nests are usually near or above water.

Occurrence: DSI, DCR

Status

BC: Yellow-listed (Not at Risk); Wildlife Act—Section 34(b) (cannot injure, molest or destroy a bird, eggs, or nest)

Canada: Not listed

Action Required

If nest is found:

- Retain the nest tree (protected under the *Wildlife Act*)
- Default 200m vegetative buffer around nest location
- A Qualified Professional may be able to recommend alternative buffers on a case by case basis
- Notify BCTS, document, flag the location of the nest tree and occupation status
- Contact a QP if you are uncertain about occupancy.

Peregrine falcon, *Falco peregrinus*



- Contact a qualified professional to verify the species and recommend reserve design and timing restrictions

Description

- Medium to large (crow-sized) falcon; Males are 36-49cm and 650g, females 45-58cm and 950g.
- Adults have blue-grey or darker plumage on upperparts, and underparts are pale, white-grey with dark spotting/barring.
- Have dark “hood” on crown of head with extended malar stripes (“sideburns”).
- Immatures have pale, slate or chocolate brown upperparts, and underparts buffy with dark streaks.
- Clinal differences: darker in wet areas, paler in dry, larger in south and west, smaller in north extent of range.

Similar Species

- Gyrfalcon: larger, with pointed and broader wings and a larger tail, lack dark hood and malar stripes.

Biology

- Court in late winter, nest in March or April, clutch size is 1-5 eggs (usually 3-4).
- Nestlings leave nest after 40 days, may stay in vicinity of nest for up to 3-6 weeks.
- Nest are simple scrapes located in substrate, 17-22cm diameter and 3-5cm deep. No nesting material is added and nests are often located on ridges, cliff edges, or buildings. May occasionally use abandoned raven or eagle nests.

Habitat

- Nests are usually located on cliffs, 4-335m in elevation, often with overhanging cover. Must be

Occurrence:

- *Anatum* subspecies: Southwest coast of BC (CR, SI Forest Districts).
- *Pealei* subspecies: Pacific Coast; Aleutian Islands to Oregon (CR, SI Forest Districts).

Status:

- BC: *Anatum* subspecies Red-Listed, *Pealei* subspecies Blue-Listed
- Nests (occupied or unoccupied), eggs, and birds of all subspecies are protected under provincial Wildlife Act.
- Canada: *Anatum* and *Pealei* Species of Special Concern (SARA Schedule 1).

Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location. If an active nest is observed, do not disturb the nest and limit activity in the immediate area.
- Notify BCTS and document location of suspected breeding area.

Pileated Woodpecker, *Dryocopus pileatus*

Description:

- Large crow sized (40-49 cm) woodpecker. Largest woodpecker in North America.
- Mostly black with a bright red crest and white stripes extending down the neck from the bill to underwing area.
- Sexes are similar in appearance. Male has a red patch on the black line off base of bill.
- In flight striking white on linings of underwings are revealed.
- Flies with slow, jerky wing beats.

Biology:

- Diet consists of carpenter ants, other ants, woodboring beetle larvae, termites and other insects such as flies, spruce budworm and caterpillars, some fruit and nuts.
- Drill rectangular or irregular shaped feeding holes with rough edges in rotten wood.
- Feed in snags, logs and stumps.
- Pairs stay together in their territory all year round.
- Pairs excavate a new nest cavity each year.
- Entrances to nesting cavities can be circular, slightly oval (tear drop shaped) or rectangular with smooth edges; vertical diameter around 12 cm and horizontal diameter around 9 cm.
- Nests are excavated in large diameter (typically > 40cm) live or dead trees with heart rot.
- Nest trees typically have only one cavity, roost trees may have numerous entrance holes.
- Clutch size of 2-5, one brood annually.
- Eggs are glossy white.
- Incubation by both parents 15-18 days.
- Nestlings stay in nest 24-31 days.

Phenology:

		Breeding	Fledging									
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	



Habitat:

- Forest birds that require large, standing dead trees and downed wood.
- Mature evergreen, deciduous or mixed forests can be used.
- Found in suburban areas where large dead trees are present.
- Nests in mature mixed or coniferous forests or in younger forests with numerous large, dead trees.
- In BC prefers live hardwoods for nesting, especially trembling aspen and black cottonwood, but paper birch, red alder and maple are also used. Conifers are used but less frequently.

Field Action Required:

- If an active nest is observed - do not disturb the nest and limit activity in the immediate area. Take photos, document habitat and activity details, and locate with GPS waypoint if possible.
- Report the observation to supervisor and contact BCTS.

Pileated Woodpecker Nesting Cavities

One per tree, smooth edges



Pileated Woodpecker Feeding Excavations

Multiple per tree, irregular shapes, rough edges



Status:

- Provincial List: Yellow.
- Listed on Schedule 1 of the *Migratory Birds Regulation*

Occurrence: DSI, DCR, DNI

Western Screech Owl, *Megascops kennicottii kennicottii*



Description

- Small, streaked owl with yellow eyes.
- The Western Screech Owl has tufts over its ears, and is slightly darker in colouring than the other mainland subspecies, *macfarlanei*.
- Female average Length: 23cm (9.2") Wingspan 56cm (22"). Male average Length: 21cm (8.2"), Wingspan 54cm (21")

Similar Species

- *macfarlanei* subspecies

Biology

- Nocturnal, with activity generally beginning 20-30 minutes after sunset.
- Pairs are monogamous and territorial throughout the year.
- Eggs are laid in natural cavities of large trees, or nest-boxes where available, without any nesting material.
- Flight is noiseless with soft wing beats & gliding. Will become motionless if disturbed at roost.
- is very aggressive when defending a nest site, and may attack humans
- male's most common call is a muted trill "hoo-hoo-hoo....", or bouncing ball song, that speeds up at the end, but maintains a constant pitch. A secondary song is a double trill of rapid bursts. Other calls are a soft "cr-oo-oo-oo-oo" given as a greeting call, and a sharp bark given when excited.

Habitat

- They are found in varied habitats throughout their range.
- Typically in lower elevation forested areas close to water.

Occurrence: DSI, DCR

- In BC, *kennicottii* occur the entire coast of BC as well as VI, excluding the Queen Charlotte Islands.

Status

BC: Blue-listed (Species of Special Concern)

Canada: Special Concern (Species at Risk Act Schedule 1)

Action Required

If an active nest is found:

- Document location of sighting and/or nest tree with GPS and take photos.
- Notify BCTS and contact a qualified professional (if necessary) to verify species and assist in retention design.
- Retain the nest tree within a WTP with a 200m buffer around the nest tree and leave other snags or trees with cavities within the WTP.
- An active nest should not be disturbed between March 15th and August 31st.

Species at Risk Awareness: Gastropods

Dromedary Jumping Slug, *Hemphillia dromedarius*

BC Red List, COSEWIC: Threatened

Description

- greyish in colour with cream mottling, base of foot is yellow, orange or cream.
- Body can be up to 6cm long.
- Slit in the mantle through which the internal shell is visible.
- Tail is laterally compressed and keeled, and has a mucous gland (caudal horn) at the tip.

Biology: Lays 50 to 60 semi opaque eggs, 3.3mm long by 2.5mm wide, usually in moist, rotting logs or coarse woody debris.

Habitat: Mostly found in old growth conifer forests, or forests with old growth characteristics, especially with coarse woody debris.

- *Elevations:* 0-1060m on Van. Island

Occurrence

- South Island Forest District, up to Kennedy Lake and Port Alberni.

Action Required: Notify BCTS, document location of breeding area



Warty Jumping Slug

Warty Jumping Slug, *Hemphillia glandulosa*

BC RedList, COSEWIC: Special Concern

Description:

- Body is whitish or grey with darker markings and paler sides. Tentacles and head are blue-tinged and dark in colour
- Numerous bumpy projections (papillae) cover mantle
- Dorsal hump on mantle, body depressed behind hump
- Horn-like fleshy protuberance at end of tail
- Found in moist old growth and young forests, need coarse woody debris and logs.
- *Elevations:* 0-1060m on Vancouver Island

Biology: • lays 1-6 translucent tear shaped eggs in small clusters. Eggs 3mmx 2mm

Habitat:

- Found in moist old growth and young forests, need coarse woody debris and logs
- Elevation—0-1060m on Vancouver Island

Occurrence:

- Have been found on southern Vancouver Island up to Nanaimo River.

Action Required:

- Notify BCTS and document location of breeding area.



Dromedary Jumping Slug

Threaded Vertigo, *Nearctula rowellii*

BC Blue List, COSEWIC: Special Concern

Description:

- Minute snail with a grey body, lighter on the sides and base.
- Shell averages 2.7mm long, and is dull dark brown and coarse in appearance.
- Lip of shell opening flares outward, has four white dentures inside.

Habitat

- deciduous and mixed forests, especially riparian areas.
- In CDF and CWH, below 200m elevation in stands with mature bigleaf maple

Occurrence: SI, CR Forest Districts:

Action Required: Notify BCTS and document location of breeding area.



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Dun Skipper, *Euphyes vestris*

Description:

- A small skipper (wingspan 23 – 32 mm) with uniform chocolate-brown wings with a purplish hue and tan fringes on the outer margins.
- Adults sit with hindwings laid flat and forewings held upright.
- Head and thorax of adults (both sexes) are yellowish-orange.

Biology:

- Eggs are pale green, crescent-shaped, globular and smooth when first laid, but prior to hatching change to a reddish colour on top.
- Larvae have a shiny, pale green body with many fine, wavy, silvery lines. Pupae are various shades of yellow, brown and light green, with a blunt, ridged edge at one end.
- Mating and oviposition coincide with the flight season from late May through early August.
- Males perch approximately one meter above the ground and wait for receptive females.
- Females lay one egg on the host plant and the eggs hatch after approximately one week.
- Larvae begin feeding and eventually form tubular silk shelters (one larva per shelter), formed from two to four tied and rolled host plant leaves.
- Larvae diapause through the winter within these tubular silken rolls, emerging the following spring.
- Pupation occurs within silken tubes, likely at the base of the host plants in spring.
- Host plants are sedges (*Carex heliophila*).
- Flight period coincides with the annual growth period of the species' host plants, known to be sedge, grass, and Yellow-nut grass.

Occurrence: DCR, DSI

Phenology:

				Flight							
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec



Habitat:

- Occurs in moist, open habitats, including meadows, wetlands, and disturbed sites.
- Occupies a variety of open habitats with south to southwest exposure including sparsely treed and disturbed sites such as cleared right of ways.
- Areas with spring floods, natural hot springs or seeps, and wet seasonally flooded stream banks.

Field Action Required:

- If the species is observed take photos, document habitat and activity details, and GPS the location.
- Report the observation to supervisor and contact BCTS.

Status:

- SARA Schedule: 1-Threatened.
- Provincial List: Blue.
- Identified Wildlife: No.

Johnson's Hairstreak, *Callophrys johnsoni*



Description

- Small butterfly with a wingspan of 25-30mm.
- Dorsal surface of the wings is brown; chocolate shade in males, reddish in females.
- Small tail-like protrusion from hindwing is bluish and orange with black dots.
- Underside of wings brown with white stripe, bordered in black, running across both wings.
- Larvae are yellowish-olive green and have red, green, yellow or white markings on raised protrusions along dorsal area.

Similar Species

- The Cedar Hairstreak is smaller and the white wing stripe is bordered by amber.

Biology

- Larvae feed exclusively on dwarf mistletoe, most commonly associated with western hemlock in B.C. (CDF, CWH, CMA BEC zones).
- Larvae exude a substance which ants feed upon, and in turn protect the larvae.
- Adults can be seen in flight from late May to early June. Eggs are deposited on western dwarf mistletoe, *Arceuthobium campylopodum*.

Habitat

- Require mature or old hemlock forests with mistletoe infestations.
- Found at elevations from sea level to 625m.

Occurrence (DCR, DSI)

- In B.C., Johnson's Hairstreak formerly occurred in southeast and southwest Vancouver Island, and in the Fraser Valley east to Hope. Recent occurrences have been noted only in the Vancouver area.
- Found in the South Island Forest District.

Status

BC: Red-listed and an Identified Wildlife Species. **Canada:** Not assessed.

Action Required

- Notify BCTS and document location of verified breeding area.
- Consult a qualified professional (if necessary) to verify identification and breeding area.
- Biologist will work with field team staff to design a reserve around dwarf mistletoe infected trees within or adjacent to the location of the confirmed sightings.
- Refer to Accounts & Measures for managing Identified Wildlife

Cryptic Paw, *Nephroma occultum*

Description:

- brown, paw-like apothecia (the spore-producing sexual stage of reproduction) on the lower surface
- It has a yellowish, greenish, or bluish-grey upper surface with net-shaped ridges, and a hairless tan to sometimes blackish lower surface.
- Commonly 2-7 cm broad and has rounded lobes 4-12 mm wide.
- It produces many asexual propagules, called soredia, along the margins and the ridges of the upper surface.

Habitat:

- Infrequent over conifers in open old-growth maritime and intermontane forests at lower elevations.
- Moist forested regions at elevations below 1200 m, and most populations occur between 400 m and 800 m.
- Cryptic Paw inhabits the upper forest canopy of coastal ecosystems but is restricted to the lower forest canopy in inland localities where humidity is maintained throughout the summer by shading and by moisture retention from older trees and associated vegetation.
- Grows in forests which receive at least 75 mm of precipitation during the summer months, and which have nutrient-rich soils, typically with toe-slope topography where soils are enhanced by moisture and nutrient addition.



Field Action Required:

- Do not disturb the plant.
- Confirm species identification through photos and specialist if necessary.
- Document and GPS the location.
- Report to BCTS.
- Implement a stand level management strategy identifying necessary buffer.



Photo Credit: [iNaturalist](#)



Status:

- SARA Schedule: 1-Special Concern
- Provincial List: Blue

BEC Zones:

- BAFAun; CWHds; CWHvm; CWHxm; ESSFwcp; ESSFwvp; ICHmc; ICHvk; ICHwk; MHmm; SBSvk

Range:

- Coastal and inland rainforests in BC.
- South to Oregon.

Oldgrowth Specklebelly, *Pseudocyphellaria ranierensis*



Description

- Generally 5-12 cm across, broad lobed, and loosely attached to branches and trunks in lowland-mid-elevation old growth forests (>200 years)
- Upper surface is dull pale greenish-blue, top is often weakly dimpled and may be smooth or have short stiff hairs that make it feel rough
- Can be distinguished from other species by its spotted lower surface—tiny white spots on pale brownish background

Habitat

- restricted to sheltered old-growth ecosystems at low to moderate elevations in the Coastal Western Hemlock Zone—often in CWHvm2 or upper elevations of vm1
- preferred habitat is on bark of lower canopy trees (esp Ba) within the dripline of a yellow-cedar
- Also found on Hw, Hm, Yc, Cw, and yew
- Requires open, humid, stable forests—harmed by too much sun or shade

Occurrence: DSC, DSI

- Several occurrences reported near in the mid-Island area—Artlish R, White R, Memekay R, and Nitnat R

Status

BC: Blue-listed (Species of Special Concern)

Canada: Special Concern (SARA Schedule 1)

Action Required

- Ensure all occurrences in the area are identified and recorded.
- Collect samples collect a sample and place in Ziploc bag, protect from crushing and label sample with date, and location, note surrounding forest type including site series.
- Store samples in refrigerator until identification can be confirmed

Management:

- Report confirmed locations to the BC Conservation Data Centre
- Maintain known all populations in cutblock reserves, or exclude occurrences from block and road design
- Implement a buffer of 1.5 tree lengths from all known occurrences and ensure protection from windthrow.
- Do not use pesticides in the adjacent area
- Minimize the introduction and spread of invasive species
- Maintain the hydrological characteristics of the reserve area.

American Water Shrew, *Sorex palustris brooksi*



Description

- Large water shrew with an average length of 152 mm of which 75 mm is tail; average weight of 10.6 grams.
- The water shrew has a bi-coloured body, with glossy black fur on its dorsal surface and silvery white fur on its ventral surface.

Similar Species

- Pacific Water Shrew, although ranges do not overlap.
- Terrestrial shrews.

Biology

- The water shrew is semi-aquatic, hunting for prey under water and on land.
- Food is consumed on land.
- The shrew feeds every 10 minutes and consumes its own weight in food every 24 hours.
- Lifespan of 18 months.

Habitat

- As the shrews spend up to half of their time hunting underwater, they stay very close to water.
- Habitat includes riparian areas, creeks, streams and possibly bogs and marshes.
- Found at all elevations.



Occurrence: DSI, DCR

- Assumed to be found throughout Vancouver Island; there are only 67 records from 38 locations. Locations are as far north as Port Hardy, along the east coast at the Quinsam River (near Campbell River), as far inland as Robertson Creek (near Port Alberni), along the west coast at Lost Shoe Creek (near Ucluelet) and as far south as Veitch Creek (near Victoria).
- South Island and Campbell River Forest Districts

Status

BC: Blue listed (Species of Special Concern) and Identified Wildlife Species in B.C.

Canada: Not listed

Action Required

- Notify BCTS, contact a qualified professional to verify species and assist in retention design.
- Maintain a 5m buffer along streams in the vicinity of where the shrew was found.

Black Bear, *Ursus americanus*



Dens can be under logs, within the trunk of a tree or in a cavity higher in a tree

Occurrence: DSI, DCR

•Natural range includes forestland across the province, coastal islands including Vancouver Island and the Queen Charlotte Islands.

Status:

BC: Yellow-listed (Not at Risk)

Canada: Not at Risk

Action Required: Under the [2020 BCTS TSG Bear Den BMP](#):

If a den is found:

- Notify BCTS and document location of the den and whether it is occupied. Take photos of the entrance and den.
- Contact a qualified professional if you are uncertain about occupancy, den quality, or value.
- Retain den site within a windfirm TLA/WTRA (preferably 1 ha or tied to reserves already on site); ensure there is security and thermal cover around the den, some larger trees or snag where adult females and cubs can “escape” to and a healthy shrub layer for forage.
- If den is active, non-disturbance buffers defined in the protocol are applicable in the between Nov 1 and May 15.
 - 200m buffer around the den(s) for falling, primary harvesting activities, hauling, road building (no blasting)
 - 1000m buffer around dens for blasting or helicopter yarding

Portions of the Campbell River Forest district fall within the Great Bear Rainforest: Under the GBRO Part 3-South Central Coast, Division 5-Wildlife,

19. Objectives for grizzly and black Bear Dens

(1)Protect grizzly Bear Dens and black Bear Dens.

(6) All found Bear Dens must be documented and this documentation must be submitted to the Applicable First Nations and the Province of British Columbia at the end of each calendar year.

Description

- The Black Bear is the smallest and most widely distributed of the bear family in North America.
- Colour can vary from black, cinnamon, brown and blonde. A white coloured-morph, called Kermode or Spirit Bear is reported most frequently on the north-central coast of BC.

Similar Species

- Grizzlies are usually larger and are seldom completely black. Grizzlies have a prominent shoulder hump, and a wider dish-shaped face, which are both lacking in Black Bears.

Biology

- Black Bears are classified as carnivores, but are omnivorous.
- Mating occurs in June and July and cubs are born during hibernation in January-February.
- In coastal BC dens are in or under large diameter trees, snags, logs or stumps. Dens can be up to 25 meters above ground.

Habitat

- Population is higher in wet climatic zones where vegetation is more plentiful and there is greater access to spawning salmon.
- Black Bear habitat includes areas that provide structure for denning habitat (large diameter trees and stumps with cavities) and optimal forage, which can include salmonberry and skunk cabbage, as well as other berries.
- Found at all elevations.

Grizzly Bear, *Ursus arctos*

Description

- Grizzlies are usually larger with a prominent shoulder hump and a wider dish-shaped face, which are both lacking in Black Bears.
- The long, outer guard hairs of the Grizzly Bear are often tipped with white, silver, or cream giving the bear a grizzled appearance.
- Coat colour is quite variable, usually brown but ranging from black to almost white.
- The front claws on a Grizzly Bear are longer than on Black Bears, being as long as 10 cm. The long front claws and hump of muscle on the shoulders are adaptations for digging.



Similar Species

- Black Bears can sometime be mistaken for Grizzly Bears, as their ranges overlap.

Biology

- Mating occurs May through mid-July and gestation is 63-70 days; 1-3 cubs are born in January or February in the den. Cubs will remain with their mothers for 2 - 4 years.
- Grizzly Bears hibernate for 5-8 months, and usually dig their dens on north-facing slopes to ensure good snow cover.
- Grizzly Bears are omnivorous, feeding opportunistically on large and small animals, plants, and fish.

Habitat

- Grizzly bears are found in a variety of habitats, from dense forests, to subalpine meadows
- Important feeding areas are estuaries, skunk cabbage swamps, wetlands, herb-dominated avalanche tracks on warm aspects, berry producing sites and salmon spawning reaches. Avalanche tracks area a critical habitat component that provide spring foraging opportunities of emerging vegetation and roots.
- Elevations: Valley bottoms to alpine meadows

Occurrence: DCR (CM)

- Found throughout the coast forest region except the islands, and the southwest portion of the province.

Status

BC: Blue-listed (Species of Special Concern) and Identified Wildlife Species in B.C.

Canada: Special Concern (SARA Schedule 1)

Action Required

- If an active block is near a Grizzly Bear WHA, follow GWMs
- If a den, pad trail or significant feeding area is observed within or near a block notify BCTS and document location.
- Maintain the ecological integrity of important seasonal habitats or features within a WTP, buffered retention or a WHA.
- Contact a qualified professional if you are uncertain about retention requirements.

Portions of the Campbell River Forest district fall within the Great Bear Rainforest. Under the GBRO Part 3-South Central Coast, Division 5-Wildlife,

18. Objectives for grizzly bear habitat

- (1) Maintain 100% of Class 1 Grizzly Bear Habitat shown in Schedule D.

19. Objectives for grizzly and black Bear Dens

- (1) Protect grizzly Bear Dens and black Bear Dens.

- (2) Adjacent to grizzly Bear Dens, maintain a Reserve Zone with a minimum width of 50 metres.

- (4) In addition to subsections (1) and (2), adjacent to any Reserve Zone required in subsection (2), maintain a Management Zone with an average width equal to 1.0 Tree Length, measured from the outer edge of the Reserve Zone, to protect the Integrity of the Reserve Zone.

Roosevelt Elk, *Cervus elaphus roosevelti*



Description

- Large member of the deer family; One of two BC subspecies and largest subspecies of North American elk
- Dark head and neck with a yellow-brown or cream-coloured rump patch with a short tail.
- Large males may reach more than 400 kg, while females are approximately 250 kg in weight.
- Males grow antlers, ranging from simple spikes & forks on yearlings to large branched structures, with up to 5 or 6 ivory-tipped tines on mature bulls. Antlers usually have a brownish main beam & can be more than 1m long. Generally, antlers are shed from March through May.

Biology

- Elk are 'ecotonal' species, concentrating their habitat use along edges.
- Rut occurs Sep-Oct. Birth of single calf, late May – early Jun.
- During calving, optimal for females to have cover & forage areas close together. Cows & new calves usually remain in calving areas (sometimes within 1ha or less) for 10 days - 3 weeks after birth, before rejoining the larger maternal group.

Habitat

- Optimal habitats: open conifer stands, stands dominated by deciduous trees (>50% deciduous), non-forested wetlands, riparian areas, vegetated slides on summer ranges, and borders of south-facing rock outcrops on winter and spring ranges.
- Choose stands that provide security & shelter. Coniferous stands <10m in height with a mean canopy closure of 60-90% intercept snow while providing light for understory growth for forage.

Occurrence: DSI, DCR

- Population estimates are approximately 6900 in BC, approximately 5500 of which are on VI. Small mainland population was transplanted to Sechelt Peninsula & Powell River. On VI there are two main populations, southern and northern. The southern is centered near Cowichan Lake and Nanaimo River watershed. The northern population is found within the loose boundaries of Woss, Gold River, Campbell River and the Tsitika River.

Status

BC: Blue-listed (Species of Special Concern)

Canada: Not listed

Action Required

- Document any high use foraging and wintering areas.
- Consult the [BCTS TSG Roosevelt Elk Management Protocol](#) for Pacific TSA
- Determine if Landscape Unit you are working in requires a specific management strategy to protect or enhance forage, security cover or winter thermal cover.

Vancouver Island Marmot, *Marmota vancouverensis*



Description

- The VI Marmot is a colonial rodent.
- Measures 67-72 cm from nose to tip of tail. Size of large house cat or small dog.
- Rich chocolate brown coat with contrasting white fur patches on nose, chin, forehead, and chest.
- Adults can have mottled appearance in July (due to molt), distinguishing from pups & yearlings.
- Incisors pale yellowish-white.
- Bushy tail.

Biology

- These marmots are relatively long-lived (10 years in the wild) and reproduce infrequently.
- Mating occurs above ground during first 3 weeks after spring emergence (late Apr-early May).
- Burrows for hibernation, to give birth in, hide from predators & take cover in.
- Active morning and evening. Rests in burrow at midday, correlates with maximum daily temperature

- Hibernation generally takes place from early October to late April.

- Voice:** Their most frequent call is a high-pitched whistle, which warns colony members of danger.

- Droppings: 3-6 cm long, 1-1.5 cm wide, pinched at both ends, green when fresh, often in large numbers at latrines.

- Burrow entrances (30-45 cm diameter) underneath a boulder or tree root. Those used as hibernation or birth sites usually have some dirt mounded on the low side of the entrance.

- Hibernacula can be identified either by grass and mud "plugs" found at tunnel entrances in late autumn, or by emergence tunnels through the snowpack in May or early June.

Habitat

- The Vancouver Island Marmot lives in subalpine meadows on south to west-facing treeless slopes at 1000-1500 m

- They require suitable soil to construct burrows and grass-forb vegetation for food.

Occurrence: DSI, DCR (VI)

- Endemic to VI, these marmots are found on a small number of mountains on the island.
- Prior to reintroduction in 2003, they were only on five mountains within the areas of Nanaimo Lakes and Mount Washington. There are now populations on 28 mountains.

Status

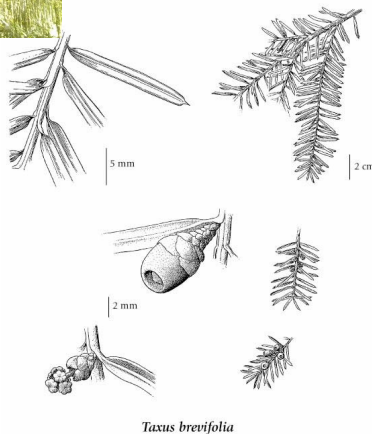
BC: Red-listed (Threatened or Endangered) and Identified Wildlife Species in B.C.

Canada: Endangered (SARA Schedule 1)

Action Required

- If observed, stop work in the immediate area. Take photos and record sighting's coordinates.
- Notify BCTS and document any sightings or burrows.
- Inform the Ministry of Environment of sightings.
- If the area is within a WHA, follow all general wildlife measures (GWM).
- If the area of the sighting or burrow is outside any protection; consult with a qualified professional to determine

Western yew, *Taxus brevifolia*



Description

- Small tree 2-15 m tall, often shrubby; branches spreading to drooping in flat sprays; bark thin, with outer purplish scales over reddish to reddish-purple inner bark; male and female plants separate.
- *Leaves*: Needles 2-ranked, flattened, and pointed at tip, (12) 14-18 mm long, 1-2 mm broad; yellow-green and paler on lower surface.
- *Cones*: Fruit is a round, red, fleshy aril, 5-6 mm long, borne on the underside of the branches; pollen cones yellow, globe-shaped, 3 mm long

Habitat

- An understory tree of Pacific Northwest forests, found in light to deep shade.
- Somewhat moist forests, especially along streams and on slopes.
- In poorly drained mixed conifer forests at the northern extent of its range.
- Scattered in coniferous forests; common on water-receiving sites, frequent on water-collecting sites, and occasional on water-shedding sites.

Occurrence: DCR DSI

- Only requires management in the portion of DCR that falls within the GBR

Status

BC: Yellow-listed (Not at Risk), Objectives for retention of western yew set out in GBRO.

Canada: Not listed

Action Required under GBRO

Part 3, South Central Coast, Division 2 First Nations, Section 9. Objectives for retention of western yew

- (1) In Development Areas, retain western yew trees.
- (2) Despite subsection (1), western yew trees may be altered or harvested if:
 - (a) alteration or harvesting is required to accommodate operational requirements for road and bridge construction and there is no practicable alternative; or
 - (b) the retention of all western yew trees in a Cutblock would make harvesting economically unviable and measures are implemented to provide for use of the altered or harvested western yew trees by Applicable First Nations.
- (3) Where practicable, include western yew trees in Stand Retention.
- (4) All areas retained or managed in accordance with subsections (1), (2) and (3) must be documented and submitted as digital spatial data at the end of each calendar year to the Applicable First Nation and the Province of British Columbia.

Painted Turtle, *Chrysemys picta pop. 1*



Description

- Has a smooth, dark (black, brown or olive) carapace that can be up to 25cm long. There may be faint yellow lines along scutes.
- The plastron (underside of the shell) is orange-red in color with a large, dark, central mark.
- The limbs and head are dark olive with yellow lines on the head and tail, yellow spots on the legs.

Similar Species

- Red-eared Slider, *Trachemys scripta* (introduced). These turtles are slightly larger, often have a red mark behind the eye, and have a yellow plastron.

Biology

- In late May or June, females lay up to 23 eggs in an approximately 10cm deep nest dug from warm, well-drained, loose soil.
- Nests can be located up to 150m away from a waterbody, in fields, roadsides and on beaches.
- Young hatch in late summer/early fall and remain in the nest until early spring.
- After the first winter in the nest, they hibernate in the muddy substrate of ponds and wetlands through the winter.
- Can migrate more than several hundred meters over land, usually during fall/spring migrations.

Habitat

- Found in shallow, predominantly ≤ 3 m deep, bodies of water, such as ponds, wetlands and lakes, slow moving streams, and the associated riparian zones
- Prefer waterbodies with a muck/sand substrate, woody debris (logs), cattail mats and open banks.

Occurrence

- In BC, the Pacific Coastal population of Painted Turtles occurs west of the Cascade Mountain range.
- This subspecies has been found on the mainland coast up to Powell River, in the Fraser Valley from Hope to Vancouver, as well as on Vancouver Island in the Nanaimo lowlands and in the Gulf Islands.

Status

- BC: Red-listed (Threatened or Endangered)
- Canada: Endangered (SARA Schedule 1)

Action Required: Notify BCTS and document location of breeding area. Have a qualified professional verify the species.

Northern Abalone, *Haliotis kamtschatkana*

Only a concern when planning activities in foreshore / near shore areas—log dumps, heli drop zones etc

Description

- single ear shaped shell with row of perforations along one side
- usually mottled reddish or greenish with areas of white and blue. Orange variant seen rarely
- often overgrown with various encrusting organisms
- Inside shell is pearly white with faint iridescence
- Large foot usually tan coloured

Similar Species—no similar single shelled shellfish in BC

Biology

- Can be sexually mature at shell length of 50-70mm (2-5 years)
- Immature found under rocks or crevices
- Mature found on exposed rock surfaces
- Thought to live up to 15-20 years
- Feed primarily on macro-algae
- Larval abalone are poor swimmers and have low dispersal rate
- Threats include illegal harvest; predation and low recruitment

Habitat

- Sheltered bays to exposed coastlines
- Require full salinity (no brackish water)
- Require source of macro algae such as kelp
- <10m depth
- Ample habitat available on coast of BC

Occurrence: DSI, DCR

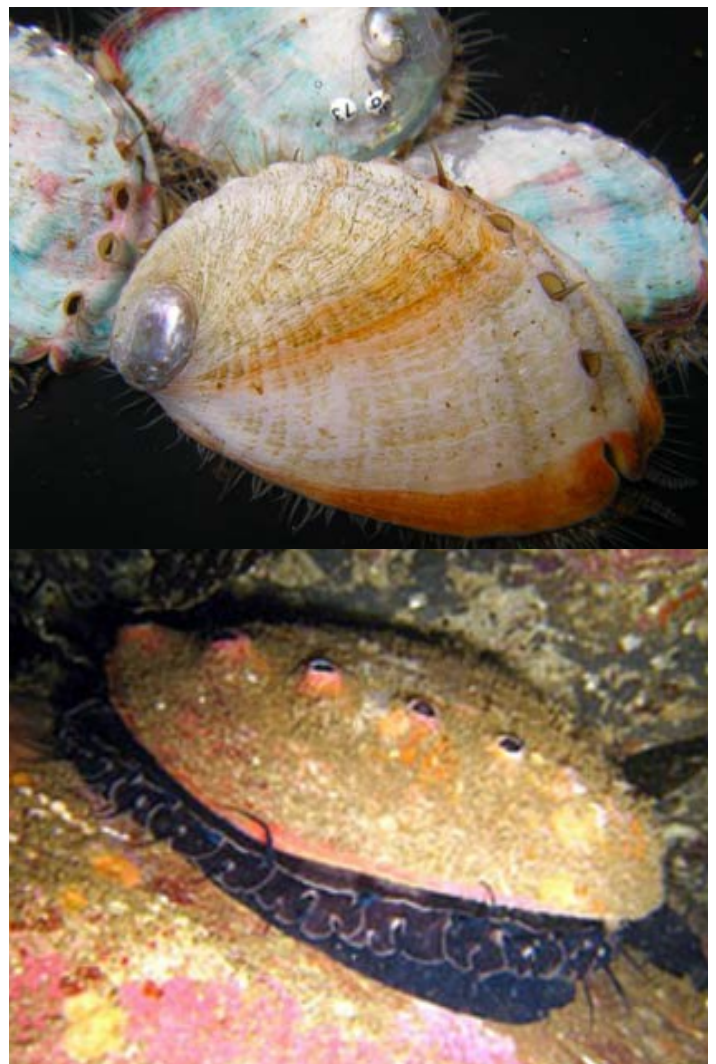
- Found throughout BC

Status

BC: Red Listed (Threatened or Endangered);
Canada: Endangered (SARA Schedule 1)

Action Required

- Contact a Qualified Registered Professional to develop mitigation strategy for any activities taking place in foreshore or near shore areas



Orca Whale, *Orcinus orca*

Only a concern when planning activities in foreshore / near shore areas—log dumps, heli drop zones etc

Description

- The killer whale, or orca, is the largest member of the dolphin family. Its size, striking black and white colouring, and tall dorsal fin are unmistakable. Males reach lengths of 8 or 9 metres and weigh up to 5 tonnes. Females are smaller at 7 metres and 4 tonnes. Killer whales are mainly black above and white below, with an oval white patch behind each eye.

Biology

- Travels in well-defined social groups (pods), usually of fewer than 40 (averaging less than 10); sometimes forms aggregations exceeding 100. Studies in Puget Sound indicate strong social bonds and stable group structure. Typical pod contains mature females and their young (1-3 juveniles per female) and variable proportions of males and/or post-reproductive females.
- Southern Resident population (pop 5):
 - Approximately 75 individuals
- Northern Resident population (pop 6):
 - Approximately 310 individuals
- Primarily feed on salmon (preference Chinook)
- Threats include environmental contaminants, reduced prey availability, disturbance (acoustic and boat traffic), oil spills, and incidental mortalities in fisheries

Occurrence: DSI, DCR

- Canadian Range of Southern Resident Pod: Strait of Georgia to Esperanza Inlet
- Canadian Range of Northern Resident Pod: Dixon Entrance – Johnstone Straits (East Coast of Vancouver Island) and Barkley Sound (W Coast Van Island)

Status

- BC: Red listed (Threatened or Endangered)
- Canada: Southern Resident – Endangered (2008); Northern Resident – Threatened (2008)

Action Required

- Must be given consideration when developing and operating log handling facilities
- Contact a Qualified Registered Professional to develop mitigation strategy as a part of the operational plan for the log handling facility



Migratory Birds and Breeding Birds Federal and Provincial Legislation

FEDERAL LEGISLATION

The **Migratory Birds Convention Act (MBCA)** and the **Migratory Birds Regulations (MBR)** protect migratory birds, their nests and eggs on all land tenures anywhere in Canada and in ocean waters.

What species do these regulations apply to?

They apply to native migratory birds named in the [convention](#) such as ducks, geese, shorebirds, swallows, flycatchers, woodpeckers, hummingbirds and more. They do not apply to hawks, eagles, falcons, owls, corvidae (jays, crows, ravens) and grouse.

What are the prohibitions and protections?

Prohibitions include the deposit of a substance that is harmful to migratory birds to water in an area frequented by migratory birds (**MBCA 5.1(1)**). A person must not capture, kill, take injure or harass a migratory bird (**MBR 5(1)(a)**), or damage, destroy, remove or disturb a nest, nest shelter, eider duck shelter or duck box (**MBR 5(1)(c)**).

All migratory bird nests are protected when they contain a live bird or viable egg. The nests of 18 species listed in [Schedule 1](#) of the **MBR** are protected at all times. These nests may only be removed following [registration](#) of the nest and confirmation that the nest has been abandoned for the species specific designated waiting period outlined in the schedule.

Schedule 1 of MBR – species on the list with the potential for interaction with operations in the TSG BA

Species	Wait Time (months)	Forestry Activities
Pigeon Guillemot	12	Shoreline sites only
Rhinoceros Auklet	12	Shoreline sites only
Great Blue Heron	24	All forestry activities
Green Heron	24	All forestry activities
Fork-tailed Storm Petrel	12	Shoreline sites only
Pileated Woodpecker	36	All forestry activities Cavity Identification

Migratory bird species that are listed as Endangered, Threatened or Extirpated on Schedule 1 of the **Species at Risk Act** ([list](#)) may also have year round nest protection if a nest is included in the definition of their residence habitat (**SARA s.33**).

SARA Schedule 1 Birds – species that breed in the TSG BA and have inactive nest protection

Species
Barn Swallow
Marbled Murrelet

PROVINCIAL LEGISLATION

Section 34 of the **Wildlife Act** outlines provisions related to birds and their nests: *A person commits an offence if the person, except as provided by regulation, possesses, takes, injures, molests or destroys:*

- A bird or its egg,
- The nest of an **eagle, peregrine falcon, gyrfalcon, osprey, heron or burrowing owl**, or
- The nest of a bird not referred to in paragraph (b) when the nest is occupied by a bird or its egg.

Where and to what species does this apply?

This act applies on all land tenures in BC and it applies to all native bird species in BC as well as species that have extended their ranges into BC unless the species was introduced by human intervention.

Additional Resources:

Migratory Birds - [Migratory birds - Canada.ca](#)
 Frequently Asked Questions: [Migratory Birds Regulations, 2022 - Canada.ca](#)
 Fact sheet: [Nest Protection under the Migratory Birds Regulations, 2022 - Canada.ca](#)
[Avoiding harm to migratory birds - Canada.ca](#)

Migratory Birds and Breeding Birds Federal and Provincial Legislation

Bird Nests

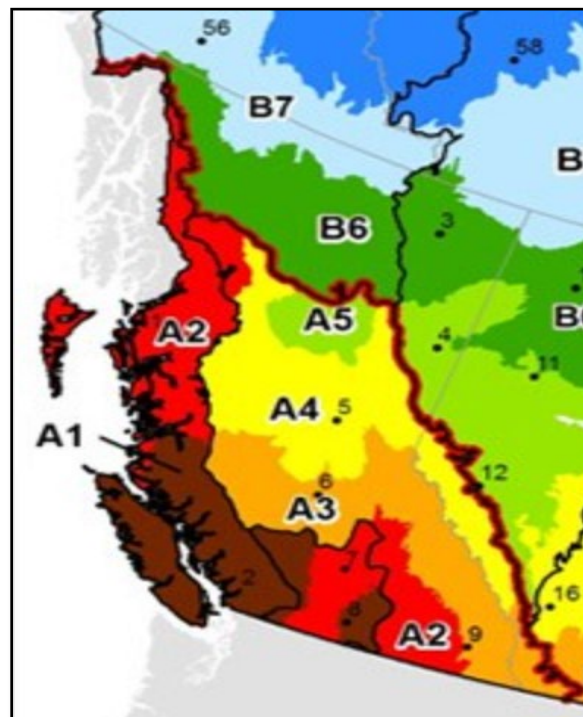
Locations: nests can be located in banks or on cliffs, on the ground, in vegetation or trees, within tree cavities and on structures such as buildings or bridges.

Nest types: nests can be built of sticks, moss, grass, hair and other fibers, they can be a scrape or shallow depression on the ground or they can be in a cavity, crevice or burrow into trees, cliffs or banks.

Active nests: evidence of an active nest include an adult perched in the nest, adult birds performing distraction displays, persistent alarm calls, birds carrying food or nesting materials to a location, accumulated droppings or whitewash below a nest. All active nests are protected. **Do not disturb, remove or relocate an active nest.**

Inactive nests: the inactive nests of birds outlined in the above summary and named on this card are protected by provincial and federal legislation. Photos of nests of these species are included on the following pages. If unsure of the species of a nest take photos and seek the advice of a biologist.

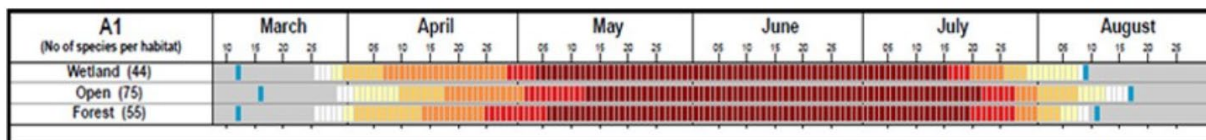
Nesting Zones



Timing of migratory bird breeding in BC

To determine the time periods when migratory bird nests are likely to be present, identify the nesting zone where your activities will occur and then refer to the nesting calendar associated with that zone.

Nesting Calendars



Migratory Birds and Breeding Birds Federal and Provincial Legislation

Summary

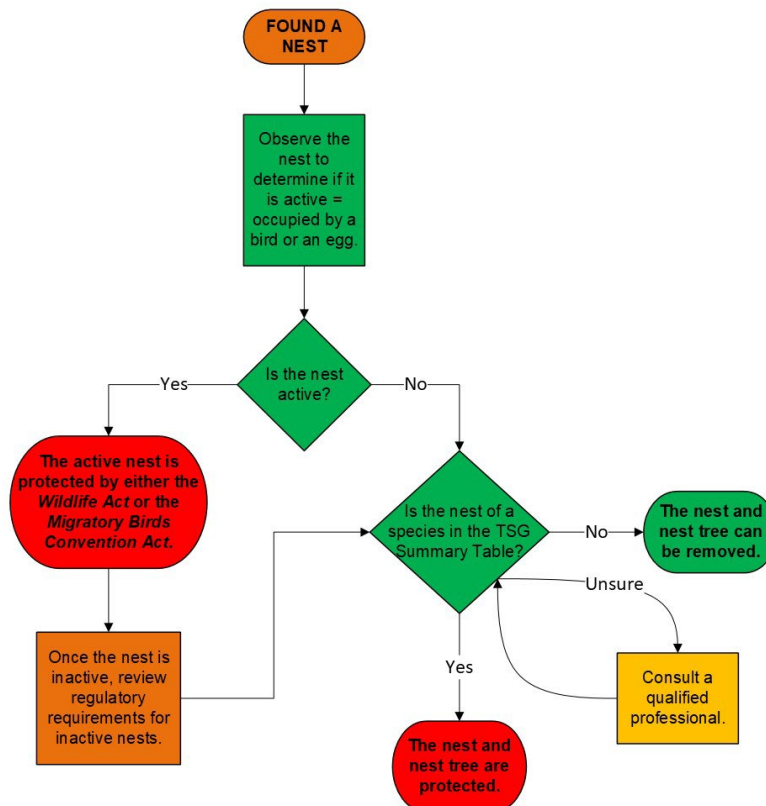
- All active nests of native migratory birds (MBCA) and any native bird species (*Wildlife Act*) are protected on all land tenures in BC.
- Inactive nests of birds listed in Schedule 1 of the MBR are protected.
- Inactive nests of migratory birds listed as endangered, threatened or extirpated on Schedule 1 of the *Species at Risk Act* are protected if nests are included in the definition of the residence for the species.
- Inactive nests of birds named in Section 34 of the *Wildlife Act* are protected.

Summary Table of Inactive Nests that have regulatory protection in TSG*

Great Blue Heron <i>Wildlife Act</i> Schedule 1 <i>Migratory Birds Regulations 2022</i>	Green Heron <i>Wildlife Act</i> Schedule 1 <i>Migratory Birds Regulations 2022</i>	Barn Swallow Schedule 1 of <i>Species at Risk Act</i>
Pileated Woodpecker Schedule 1 <i>Migratory Birds Regulations 2022</i>	Bald Eagle <i>Wildlife Act</i>	Marbled Murrelet Schedule 1 of <i>Species at Risk Act</i>
Peregrine Falcon <i>Wildlife Act</i>	Golden Eagle <i>Wildlife Act</i>	Osprey <i>Wildlife Act</i>

*Schedule 1 of *Migratory Birds Regulations* shoreline sites only species not included as potential interactions are limited to specific activities.

Decision tree to determine regulatory requirements associated with bird nests in BC



The inactive nests of these species have regulatory protection.



Pileated Woodpecker Cavities (Schedule 1 MBR)



Barn Swallow Nest (SARA)



Bald Eagle Nest (Wildlife Act)
Golden Eagle tree nests look similar, or nests can be constructed on cliff ledges



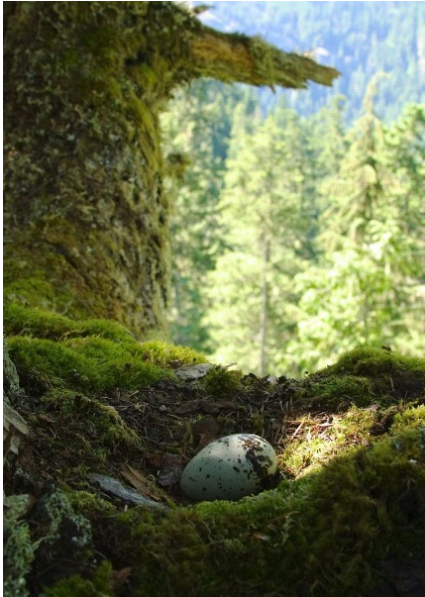
Osprey Nest (Wildlife Act)



Peregrine Falcon Nest (Wildlife Act)



**Great Blue Heron Nests
(Wildlife Act, Schedule 1 MBR)**







Marbled Murrelet Nest (SARA)



Green Heron Nest
(Wildlife Act, Schedule 1 MBR)






Potential Breeding Birds List for BCTS Strait of Georgia Business Area




Type	Common Name	Prov. Status ¹	Fed. Status ²	Habitat	Nest Location	Nest Height (m)	Re-use of nest? ³	Comments
Waterfowl 	Wood Duck	Yellow	-	In nest cavities adjacent to open water	cavity	0.5-20	Likely Yes	
	Hooded Merganser	Yellow	-	In nest cavities adjacent to open water	cavity	3-6	Likely Yes	
	Common Merganser	Yellow	-	In nest cavities adjacent to open water	cavity	5-16	Likely Yes	
Murres 	Marbled Murrelet	Blue	T	coniferous, deciduous	tree	46	Unk.	Lays eggs on thick, moss-covered lateral branches
Hawks and Eagles 	Red-tailed hawk	Yellow	-	forested	tree	0-37	Likely Yes	
	Osprey	Yellow	-	forested near water	tree	0-61	Likely Yes	Often uses human-made structures
	Sharp-shinned Hawk	Yellow	-	deciduous, mixed woods	tree	3-21	Likely Yes	
	Bald Eagle	Yellow	-	forest edges near water	tree	3-55	Likely Yes	
	Northern Goshawk	Red	T	coniferous	tree	>4	Likely Yes	Can have multiple nests in a territory
Owls 	Cooper's hawk	Yellow	-	coniferous, deciduous	tree	6-20	Likely Yes	
	Barred Owl	Yellow	-	Mixed woods	tree	<10	Likely yes	
	Northern Pygmy-owl	Blue	Not yet rated	coniferous	cavity	2-6	Likely yes	
	Northern Saw-whet Owl	Yellow	-	deciduous	cavity	4-18	Likely yes	
	Western Screech-owl	Blue	T	coniferous, deciduous; riparian habitat	cavity	>2	Likely yes	
	Great Horned Owl	Yellow	-	coniferous, deciduous	tree	5-21	Likely no	



¹ Yellow = not at risk; Blue = special concern; Red = extirpated, endangered, or threatened

² T = Threatened; SC = Special Concern; '-' = not at risk

³ Information about birds reusing nests is somewhat limited. As a rule of thumb, birds that build stick nests (e.g., hawks, eagles, etc.) or nests in cavities will likely re-use nests in following years.

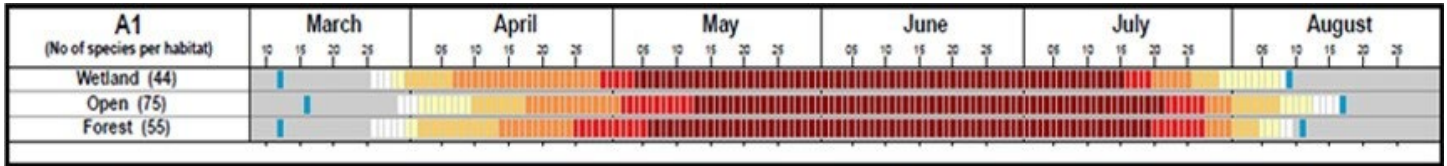
Type	Common Name	Prov. Status	Fed. Status	Habitat	Nest Location	Nest Height (m)	Re-use of nest?	Comments
 Hummingbirds	Rufous Hummingbird	Yellow	-	forested	shrub/tree	0.3-15	Likely no	
	Anna's Hummingbird	Yellow	-	forested	shrub/tree	0.3-15	Likely no	
 Woodpeckers and Sapsuckers	Hairy Woodpecker	Yellow	-	deciduous, mixed woods	cavity	2-6	Likely no	
	Northern Flicker	Yellow	-	forested	cavity	3	Likely no	
	Pileated Woodpecker	Yellow	-	coniferous, mixed woods	cavity	5-24	Likely no	Feeding sign are excavated rectangles
	Red-breasted Sapsucker	Yellow	-	coniferous, deciduous	cavity	2-24	Likely no	prefer dead western hemlock for nesting
 Ravens, Crows, Jays	American Crow	Yellow	-	deciduous, edges	ground/shrub/tree	0-21	Likely no	(prev. Northwestern Crow)
	Canada Jay	Yellow	-	coniferous, mixed woods	tree	1-5	Likely no	(prev. Gray Jay; aka "Whiskey Jack")
	Steller's Jay	Yellow	-	coniferous	tree	2-8	Likely no	
	Common Raven	Yellow	-	Mixed woods	tree, cliff	31	Likely yes	
 Flycatchers	Olive-sided Flycatcher	Blue	T	coniferous, mixed woods	tree	>2	Likely no	flycatchers often perch on tree tops
	Pacific-slope Flycatcher	Yellow	-	coniferous / deciduous	ground/tree/cliff	0-9.1	Likely no	
	Willow Flycatcher	Yellow	-	alder thickets on lakes/swamps	shrub/tree	2	Likely no	
	Hammond's flycatcher	Yellow	-	coniferous	tree	8-18	Likely no	
 Swallows	Tree Swallow	Yellow	-	open areas near forest, water	tree	>1.5	Likely yes	nest box, old woodpecker hole
	Violet-green Swallow	Yellow	-	open forests	trees, cliffs, nest boxes	>1.5	Likely yes	
	Barn Swallow	Blue	T	buildings, structures - nests along roof line	buildings	>1.5	Likely yes	will build new mud nest in same spot as previous years.

Type	Common Name	Prov. Status	Fed. Status	Habitat	Nest Location	Nest Height (m)	Re-use of nest?	Comments
Thrushes 	Hermit Thrush	Yellow	-	coniferous, deciduous; dense forest, edges	ground	0	Likely no	Yellow
	Swainson's Thrush	Yellow	-	coniferous, mixed woods with dense understory	tree	0-2.2	Likely no	Yellow
	American Robin	Yellow	-	matrix of grasses, shrubs, trees - generalist	shrub/tree	1-5	Sometimes	Yellow
	Varied Thrush	Yellow	-	mature contiguous mixed/coniferous	tree	1-5	Likely no	Yellow
Wood-Warblers 	Wilson's Warbler	Yellow	-	deciduous riparian - shrubby areas	shrub	<1	Likely no	
	MacGillivray's warbler	Yellow	-	mixed/conifer regen near water	shrub	<6	Likely no	
	Orange-crowned Warbler	Yellow	-	forested - dense understory	ground/shrub	0	Likely no	flit nervously around low shrubs
	Common Yellowthroat	Yellow	-	early succession forests, wetlands - thick undergrowth	ground	0	Likely no	
	Townsend's Warbler	Yellow	-	coniferous / mixed wood mature forest, dense canopy	tree	2-5	Likely no	
	Yellow Warbler	Yellow	-	open/riparian woodlands - dense low shrubs	fork in shrub/trees	3-12	Likely no	line nest with milkweed fibers/down
	Yellow-rumped Warbler	Yellow	-	coniferous / mixed woods	tree	3-5	Likely no	
Black-throated Gray Warbler	Yellow	-	dry woodlands	shrub/tree		Likely no	actively forages in trees/shrubs	
Sparrows and allies 	Song Sparrow	Yellow	-	forests / shrublands near water and edges	ground	0	Likely no	
	White-crowned Sparrow	Yellow	-	dense second growth - along edges	ground	0	Likely no	breed near ground, shrubs, conifers
	Dark-eyed Junco	Yellow	-	early coniferous forests with dense ground cover	ground	0	Likely no	
	Spotted Towhee	Yellow	-	Dense shrubs	shrub/ground	0-5.5	Likely no	
	Chipping Sparrow	Yellow	-	forest / grassland edges	tree	3	Likely no	prefers coniferous forests for breeding

Type	Common Name	Prov. Status	Fed. Status	Habitat	Nest Location	Nest Height (m)	Re-use of nest?	Comments
Sparrows and allies 	Golden-crowned Sparrow	Yellow	-	coniferous / mixed woods	ground	0	Likely no	feed on/near ground
	Evening Grosbeak	Yellow	-	coniferous / mixed woods	tree	18	Likely no	
	Red Crossbill	Yellow	-	coniferous / mixed woods	tree	1-18	Likely no	2021 numbers are very high - large flocks
	Purple Finch	Yellow	-	primarily coniferous forests	tree	18	Likely no	
	Pine Siskin	Yellow	-	coniferous / mixed woods	tree	2-12	Likely no	2021 numbers are very high - large flocks
	American Goldfinch	Yellow	-	open early succession forests	tree	6	Likely no	
Pigeons	Band-tailed Pigeon	Blue	SC	forest edges and openings	tree	3-54	Likely no	
Misc. Small Passerines 	Chestnut-backed Chickadee	Yellow	-	coniferous / mixed woods	cavity		Likely yes	Only chickadee species on the island
	Bushtit	Yellow	-	open woodlands	shrub/tree	1-8	Likely no	
	Brown Creeper	Yellow	-	mature old growth forest	tree	1-15	Likely no	
	Red-breasted Nuthatch	Yellow	-	coniferous / mixed woods	cavity	2-12	Likely no	sap smeared entrance
	Pacific Wren	Yellow	-	mature moist forests - downed wood	ground	0	Likely no	pre. Winter Wren; nests in clump of moss
	Golden Crowned Kinglet	Yellow	-	coniferous forest	tree	>1.5	Likely no	
	Ruby Crowned Kinglet	Yellow	-	coniferous, mixed woods	tree	0.6-30.5	Likely no	
Western Tanager	Yellow	-	mature coniferous / mixed woods	tree	<15	Likely no		

- **10 of the most common forest species** to encounter on central and northeastern Vancouver Island are highlighted in green.

Environment Canada - Vancouver Island and Southcoast of BC (Zone A1) Nesting Calendar



Legend: Number of species in percentage (blue markers show extreme dates predicted for some atypical parts of the nesting zone where nesting could be earlier or later).

