



Species of Management Concern Field Reference: Haida Gwaii

BCTS Chinook
June 25, 2024

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Field Procedures

Everyone working in the field has a responsibility to observe and report Species of Management Concern (SOMC) & At-Risk Ecological Communities (AREC) including BCTS staff, contractors, and Timber Sale License holders.

If an SOMC, AREC, or SOMC habitat feature is identified or suspected in the field:

1. Stop work in the immediate area.
2. Do not disturb the feature.
3. Record relevant information, take photos and GPS coordinates.
4. Report to supervisor/BCTS – further action may be required.
5. All instances of SOMC or AREC must be documented using the [*Species of Management Concern & At-Risk Ecological Communities Tracking Form*](#).

For additional details on SOMC and AREC procedure, reporting, and management refer to the BC Timber Sales Chinook [*Species of Management Concern & At-Risk Ecological Communities Standard Operating Procedure*](#).

Amphibians

Western Toad

(*Anaxyrus boreas*)

Description:

- Skin is dry granular with bumpy warts, colouration can be light to dark green to brown or even reddish.
- Distinguished by cream-coloured or white vertebral stripe running down the length of the back.
- Oval-shaped parotid glands, horizontal pupils.
- Underside is pale and coarsely mottled.
- Hind feet have two horny nodules for digging.
- Females, up to 125mm, are slightly larger than males, up to 110mm, total length.

Biology:

- Diet consists of worms, slugs and small insects.
- Hibernate during winter, the length of hibernation depending on the climatic and seasonal conditions. Typically, between late September and March or April.
- Hibernation is below the frost line in small mammal burrows, crevices, and can be in easily excavated substrate, such as mud and sand.
- Breeding takes place in shallow water of ponds and lakes.
- The female lays between 3000 to 12000 eggs in two long strings. Eggs are black, surrounded by a clear jelly sac. Eggs hatch in 4-12 days, and the tadpoles develop into juvenile toads within 12 weeks.
- Can travel several kilometers between breeding and summer and hibernation sites.

- Toads are often on roads in the spring and fall hunting or migrating to and from breeding and hibernation grounds.

Phenology:

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



Photo Credit: Glynnis Maundrell

Habitat:

- Western Toads are found in forest, wetlands, grassland, meadows, shrub lands, or subalpine or alpine meadows and dry habitats.
- Usually not far from water.
- Can be found thermoregulating in open areas, but also under structures for protection.

Status:

- SARA Schedule: 1-Special Concern.
- Provincial List: Yellow.
- Identified Wildlife: Yes.

BEC Zones:

- BG, BWBS, CDF, CWH, ESSF, ICH, IDF, PP, SBS, SWB.

Vocalization:

- [Breeding call](#). Not all populations call.



Photo Credit: [Whatfrogs](#)

Range:

- Western Toads are found throughout British Columbia.
- Found from low to high elevations.
- Current inventory data is lacking for the far Northeast corner of British Columbia.



Photo Credit: C. Maundrell

Birds

Ancient Murrelet

(Synthliboramphus antiquus)

Description:

- Small seabird, grayscale feather pattern.
- Mostly black head with white neck collar.
- White streaks form the eyebrow.
- Back is dark gray to black.
- Short bill white, pale yellow at tip.
- Legs and feet are a pale blue.
- Breeding plumage has black bib extending from throat to upper breast.
- Non-breeding birds lack the black bib and eyebrow plumage.
- Wings are same colour as back.



Photo Credit: [inaturalist](#)

Biology:

- Food consists of large zooplankton and small schooling fish.
- A diving bird using their wings for underwater thrust as deep as 20m
- Ancient Murrelets are a colony nester.
- Nests are in crevices or excavated burrows.
- Both grassy and forested sites are used.
- Small nest of grass and twigs located at the end of a short small diameter tunnel.
- Usually only two eggs are laid 6-10 days apart.
- Incubation, approximately 30 days, with parents sharing the duties.
- Chicks are not fed in the burrows.
- Chicks exit the burrows to join the parents at sea within 2-3 days.
- Parents feed chicks at sea until fully grown.

Habitat:

- Breeding colonies are located on the offshore island of Haida Gwaii.
- Nesting colonies are off the northwest of Graham Island and the east coast of Moresby Island.
- Birds gather in evening and dawn offshore of nesting colonies.
- Spend most of their time in marine habitats, only coming on land to breed.
- Sitka Spruce and Western Hemlock sites are important forest sites for burrows.

Status:

- SARA Schedule: 1-Special Concern.
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

- CDF, CWH.

Vocalization:

- [https://www.allaboutbirds.org/guide/Ancient Murrelet/sounds](https://www.allaboutbirds.org/guide/Ancient_Murrelet/sounds)

Phenology:

		Breeding		P. Care							
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec

P. Care: Parental Care.

Range:

- Ancient Murrelets are mostly found along the north coast of British Columbia.
- Breeding only on islands off Haida Gwaii.
- Small numbers winter throughout coastal British Columbia.
- Global populations stretch from China in the northwest pacific to California.



Photo Credit: [inaturalist](#)

Bald Eagle

(Haliaeetus leucocephalus)

Description:

- Large powerful raptor.
- Characterized by the white head and tail at maturity.
- Adults have black body that contrasts with the white head and tail.
- Can reach one meter tall at maturity.
- Wingspan of two meters.
- Large yellow bill.
- Female is larger than male.
- Immature eagles are mostly dark for one to two years before white begins to appear.
- Time to maturity approximately four years, can vary.



Photo Credit: Miep Burgerjon.

Biology:

- Food consists of small birds, mammals and fish as well as scavenging carrion.
- Eagles mate for life, but will mate again if one mate dies.
- Nests are large stick structures, usually constructed on the top of large trees.
- There may be one or two alternate nests in the breeding territory.
- Nests can be constructed on cliffs if no suitable trees exist.
- One to three dull coloured eggs are laid.
- Incubation is approximately 35 days.
- Young fledge in 11 to 13 weeks.
- Susceptible to human disturbance.
- They will nest in urban areas where suitable habitat exists.

Habitat:

- Forested, riparian, marine and grassland habitats throughout British Columbia.
- Nesting and foraging activities are common near water.
- Higher populations occur near the Pacific Region near fjords, and estuaries.
- Some inland populations migrate to the Pacific Regions after freeze up.
- Prefer forested shorelines and waterways, lakes.

Status:

- SARA Schedule: Not Listed.
- Provincial List: Yellow.
- Identified Wildlife: Yes.

Phenology:

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

BEC Zones:

- BAFA, BG, IDF, PP, CMA, CWH, ESSF, ICH, MH, BWBS, IMA, SBPS, SWB, CDF, MS.

Range:

- Bald Eagle is found throughout British Columbia, from valley bottoms to high elevations.
- Majority of birds are concentrated along the coast and inland stream habitats.
- Small numbers winter throughout coastal British Columbia.



Photo Credit: [inaturalist. Immature Bald Eagle.](#)

Barn Swallow

(*Hirundo rustica*)

Description:

- Medium sized songbird, about the size of a sparrow, 15-18cm length, 29-32cm wingspan.
- Back and tail distinctive iridescent blue, light brown or rust stomach, chestnut coloured throat and forehead.
- Distinctive long forked tail and pointed wings.
- Streamlined bodies, for acrobatic flight.
- Male and female similar size.
- Female not as brightly coloured and shorter tails.
- When perched they look conical due to flat short head, short neck, long body.

Biology:

- Aerial insectivore.
- Diet consists of feeding on beetles, bees, wasps, ants, butterflies, moths, and other flying insects.
- Usually take relatively large, single insects rather than feeding on swarms of smaller prey.
- Nests in barns or other buildings, under bridges, in caves or cliff crevices.
- Clutch size 3-7. Often 2 broods, except in far north.
- Incubation lasts 13-17 days, mainly or totally by female.
- Fledge at 18-23 days, stay together and are fed by parents for about a week.
- Females first breed at 1 year, males may remain unpaired until 2 years old.
- Adults often have same mate in successive years. Eggs are creamy or pinkish white, spotted with brown, lavender and gray.

Phenology:

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



Photo Credit: Miep Burgerjon

Habitat:

- Open grasslands, fields, over water, and open forest cutblocks where nesting habitat exists.
- Often found near water, can be small ponds.
- During breeding season these birds can be found at mud puddles sourcing mud for nest building.
- This is a long-distance migrating bird.
- Spending their summers in North America and their winters in Central or South America.

Status:

- SARA Schedule: 1-Threatened.
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

- BAFA, BG, IDF, PP, CDF, CWH, ESSF, ICH, MH, BWBS, IMA, SBPS, SBS, SWB, MS.

Vocalization:

- https://www.allaboutbirds.org/guide/Barn_Swallow/sounds

Range:

- Barn Swallows are found throughout British Columbia.
- One of the most common widespread birds in British Columbia and the World, but is threatened by habitat loss, climate change/earlier Springs, and declining insect populations.
- Can be found from low elevations in open habitat to alpine meadows.



Photos Credit: [inaturalist](#)

Great Blue Heron *Fannini* subspecies

(*Ardea herodias fannini*)

Description:

- Two subspecies are identified in British Columbia, the *Fannini* on the West Coast and the *Herodias* in the interior.
- *Fannini* subspecies has darker plumaged, smaller in size and has a smaller clutch size.
- Adults are tall (60cm), long-legged wading birds with a sinuous neck held in an “S” curve at rest and in flight.
- The thick long bill is yellow and black
- Head and face are white.
- Mature Great Blue Herons, plumage is a steel blue-grey with dark blue-grey flight and tail feathers.
- As the birds mature a distinctive black plume extends from above the eye to beyond the back of head and a bib of long trailing plumes on the chest and scapula area become more pronounced.
- Juveniles are grey-brown on the back and upper wing plumage and lack the black eyebrow and adult head and bib plumes.

Biology:

- Herons are colonial nesting birds.
- Nest are built with sticks in large trees in forests and woodlands.
- Heronry can have many nests in a small area. Reports of up to 200 in two hectares.
- A single tree can have multiple nests.
- Nest are added to in successive years.
- Diet consists of small fish, crayfish, crabs, frogs, salamanders, snakes, large insects and small mammals.
- Clutch size 3-5, only one brood.
- Eggs are pale blue.
- Incubation by both parents lasts about 27 days.
- Young remain in nest for up to two months.

Phenology:

		Fledging/Parental Care									
	Nest Construct	Eggs Laid/Chicks in Nest									
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec



Photo Credit: [SCCP](#)

Habitat:

- Forage in fresh and marine waters and riparian and tidal areas.
- Mudflats, grassland and farm field.
- During non-breeding periods birds may roost high up in mature trees in close proximity to foraging sites.
- Canopy closures of >80% is typical for Heronries.
- Most common on the South Coast in association with low elevation lakes, wetlands, sloughs and estuaries.

Status:

- SARA Schedule: 1-Special Concern.
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

- CDF, CWH.

Vocalization:

- [https://www.allaboutbirds.org/guide/Great Blue Heron/sounds](https://www.allaboutbirds.org/guide/Great_Blue_Heron/sounds)

Range:

- Great Blue Heron *Fannini* subspecies is distributed along the coast of British Columbia.
- A relatively small population is concentrated at a few breeding colonies (Green Lined) in southern British Columbia. Red dotted line is the Range.
- *Fannini* subspecies is non migratory.



Photo Credit: [SCCP](#)

Marbled Murrelet

(Brachyramphus marmoratus)

Description:

- Small bulky seabird with a large head for its size.
- Short thin bill.
- Summer plumage dark brown with red-brown tints. Crown and face may be darker than body.
- Winter plumage mostly black above and white below with white scapular strip.

Biology:

- Food is small fish and pelagic crustaceans.
- A diving bird using their wings for underwater thrust.
- Nests are of solitary pairs.
- Often nests are within 30km of the ocean but can be as far as 65km inland.
- Nests are inconspicuous on larger mossy branches.
- Eggs, usually one, placed on well-developed moss layer often in the branches of old growth trees.
- Incubation, approximately 30 days, fledging approximately 30 days.
- The breeding season is long (late-April through early September).
- Breeding season overlaps with fledging and parental care.

Phenology:

	Breeding, Fledging and Parental Care										
Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec



Photo Credit: birdatlas

Habitat:

- Spends most of its time along the inshore marine habitat within 0.5 kms of shore in shallow waters.
- They spend time on land, for nesting, breeding and rearing their young, most of which is in Old Growth coastal forests of Sitka Spruce and Western Hemlock.

Status:

- SARA Schedule: 1-Threatened.
- Provincial List: Blue.
- Identified Wildlife: Yes.

BEC Zones:

- CDF, CWH, MH.

Vocalization:

- https://www.allaboutbirds.org/guide/Marbled_Murrelet/sounds

Range:

- Marbled Murrelet are found along the entire coast of British Columbia.
- However, they may migrate farther north in the summers and south in the winters. Resident populations exist throughout its range in BC.
- Found along the Pacific coast from Northern California to the Alaskan Aleutian Islands.



Photos Credit: [inaturalist](#)

Northern Saw-whet Owl *brooksi* subspecies

(*Aegolius acadicus brooksi*)

Description:

- Small owl only about 20cm in length.
- Large head for its size, round face
- No ear tufts.
- Plumage is darker than continental subspecies, with buffy appearance and dark stripes on the underparts.
- White V between the eyes.

Biology:

- They are a generalist when foraging for food, but mainly rodents, birds and insects. May take small fish, mollusks from the shoreline.
- Nocturnal hunter.
- They are secondary cavity nesters and rely primary on cavity excavators to create their nest sites.
- Nest can be in conifer or deciduous tree.
- Clutch size of 5-6, one brood annually.
- Eggs are white.
- Incubation by female takes 26-29 days.
- Nestlings stay in nest 27-34 days.



Photo Credit: [Environment and Climate Change Canada](#)

Phenology:

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

Habitat:

- Found primarily in mature and old forest habitats at low elevations in the breeding season.
- Coastal Western Hemlock biogeoclimatic zone is preferred.
- Habitat use during the non-breeding season is not well understood, although many individuals appear to move to coastal areas during the winter.

Status:

- SARA Schedule: 1-Threatened.
- Provincial List: Blue
- Identified Wildlife: Yes.

BEC Zones:

- CMA, CWH, MH.

Range:

- The *brooksi* subspecies of Northern Saw-whet Owl is restricted to the Haida Gwaii archipelago.
- Resident year round on Haida Gwaii.

Vocalization:

- <https://www.inaturalist.org/observations/42341607>

Northern Goshawk *laingi* subspecies

(*Accipiter gentilis laingi*)

Description:

- There are two subspecies of the Northern Goshawk in British Columbia, *Laingi* breeds in the coastal rainforests west of the Coast Mountains and *Atricapillus* breeds throughout the interior.
- A raven sized (50cm long) sturdy hawk.
- Adults are brown-gray to slate-gray on the back.
- Underparts are pale-gray with fine horizontal grey bars and darker vertical streaking.
- There is a distinctive whitish line above the eye and a dark-gray to black cap.
- Long tail rounded at the tip with a thin white band.
- Broad round tipped wings.
- Wing span of around one meter.
- The bill and claws are bluish gray to black.
- Immature birds are an overall mottled brown.
- Adult females may be more brownish above.
- Females are larger than males.
- Juveniles are browner with heavy streaking below, and yellow eyes.

Biology:

- The Northern Goshawk diet varies from birds, small mammals, amphibians and reptiles and insects.
- They hunt below the canopy in open forests.
- Stick nests are built under the canopy in large trees.
- The same nest is used year after year but can have alternate nests.
- Clutch size of 2-4, one brood annually.
- Eggs are bluish white.
- Incubation by female takes 28-32 days.
- Nestlings stay in nest 35-55 days.

Phenology:

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



Photo Credit: [BC Environment](#)

Habitat:

- Mature and old growth forests for nesting.
- Open and dense forests of all types for foraging.
- Tree snags, coarse woody debris and open forests are all important habitat attributes.

Status:

- SARA Schedule: 1-Threatened.
- Provincial List: Red.
- Identified Wildlife: Yes.

BEC Zones:

- CWH, CDF.

Vocalization:

- https://www.allaboutbirds.org/guide/Northern_Goshawk/sounds

Range:

- The coastal subspecies (*Accipiter gentilis laingi*) occurs along the northwest coast of North America from Washington to Alaska.
- Resident year round on British Columbia coast.



Photos Credit: [SCCP](#)

Peregrine Falcon *pealei* subspecies

(*Falco peregrinus pealei*)

Description:

- Peregrine Falcons are a medium sized falcon.
- Fastest bird in the world. Closes wings to body when stooping or dropping on prey.
- The *Pealei* and *Anatum* Falcon have long pointed wings, a dark crown and nape.
- Adults are bluish-grey or darker in colour and have a blackish facial stripe that extends from the eye to along-side the lower jaw.
- Forehead is black or gray pale in adults, and brownish pale above in immatures.
- Two subspecies, *F.p. pealei* and *F.p. anatum* breed in British Columbia.
- The *pealei* subspecies are slightly larger than the *anatum*.
- They are whitish, greyish or buff-coloured underneath and have blackish spots and stripes.
- Females are larger than males.

Biology:

- The Peregrine Falcon diet is related to concentrated populations of shorebirds, waterfowl, pigeons, songbirds.
- Other prey includes bats, rodents and insects.
- Peregrines require an ample supply of suitable prey species in areas that permit aerial hunting.
- The *pealei* subspecies nest on rock cliffs above lakes or river valleys where abundant prey is nearby.
- Nest is a well-rounded scrape on the ground usually on a cliff ledge.
- Clutch size of 2-6, one brood annually.
- Eggs are white pinkish occasionally marked with brown or red blotches.
- Incubation by female takes 29-32 days.
- Nestlings stay in nest 35-42 days.

Phenology:

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



Photo Credit: [inaturalist](#)

Habitat:

- Open landscapes with suitable nesting cliff sites.
- The *pealei* subspecies are associated with coastal areas of British Columbia.
- Sometimes nesting under Sitka Spruce roots.

Status:

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

BEC Zones:

- CWH, CDF.

Vocalization:

- https://www.allaboutbirds.org/guide/Peregrine_Falcon/sounds

Range:

- The *pealei* subspecies of the Peregrine Falcon is restricted to Pacific coastal areas of British Columbia.
- This subspecies breeds on the Queen Charlotte Islands, Triangle Island, the central coast of British Columbia, northern and western Vancouver Island, and eastern Vancouver Island and the Gulf Islands south to Nanaimo. Some individuals of the *pealei* subspecies of the Peregrine Falcon do not migrate.



Photos Credit: [inaturalist](#)

Gastropods

Haida Gwaii Slug

(Staalaa gwaii)

Description:

- Only known terrestrial gastropod in western North America that is a relic of pre-glaciation and has not expanded its range.
- Small slug, adult size of 8-17 mm.
- Large mantle extends over two-thirds of body length covering the visceral pouch, which is elevated into a pronounced hump.
- Entire body, including tail, neck, and mantle, is covered with small, often black-tipped projections or papillae.
- Sole of the foot is undivided.
- Colour ranges from jet black to grey or tan, and darker mottling is often present on the mantle.



Photo Credit: [Environment & Climate Change Canada](#)

Biology:

- Life history and habits are poorly known.
- Hermaphroditic and presumably lays eggs, but no eggs have been found.
- Very small, recently hatched juveniles found from Jul-Sep.
- Generation time is probably 1 year.
- Likely feeds on live and dead vegetation and fungi, but no data are available.

Habitat:

- Cool, moist microhabitats. May be sensitive to modifications in temperature and moisture regimes.
- Lowland conifer forest, dominated by Sitka Spruce, Western Redcedar and Western Hemlock to subalpine tundra.
- Seldom found in lowland forest, although most extensive search effort was here.
- More likely in mid elevation forest with Yellow Cedar, Mountain Hemlock and Shore Pine, and in subalpine meadows and mountain slopes.
- Subalpine very moist with scattered, stunted (< 2 m tall) trees and bushes swales of grasses, heather, and crowberry.
- Survived glacial periods in mountain top habitats that remained ice-free. Due to this, appears adapted to harsh conditions and short growing seasons.
- Threats – logging at lower elevations, grazing of native vegetation by introduced deer, and encroachment of forest into subalpine habitat due to global warming.

Phenology (hypothesized, no exact data):

			Eggs Laid	Eggs Hatch	Juveniles						
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Status:

- SARA Schedule: 1- Special Concern.
- Provincial List: Red.
- Identified Wildlife: No.

BEC Zones:

- CWH.

Range:

- Endemic to BC.
- Haida Gwaii and Brooks Peninsula on Vancouver Island.

Mammals

Ermine

(*Mustela ermina haidarum*)

Description:

- Endemic to Haida Gwaii.
- Single subspecies.
- Smallest of North American ermine subspecies.
- Common names – short-tailed weasel or stoat.
- Long thin body and neck and short legs.
- Short oval ears, and scent glands producing a strong musky odour.
- Short, black-tipped tail (~10 cm).
- Males with tail 40 cm, weigh 67-106 g and females ≤ 30 cm long and two-thirds weight.
- Summer coat is reddish-brown with white cream necks and bellies.
- White coat in winter despite limited snow coverage.
- Molt occurs late Mar-Apr, and late Oct-Nov.

Biology:

- Mating May-Jul following parturition (Mar-Apr).
- Exhibit delayed (9 months) implantation, with birth the following spring.
- Young grow quickly and can hunt when 8 weeks old.
- Females are adult size 6 weeks after birth and males not until second summer.
- No Haida Gwaii data but usual is one litter annually.
- Non-social beyond mating and females raising young and territorial.
- Primarily nocturnal.
- Prey: Keen's mouse and dusky shrew.
- Marine intertidal invertebrates, small birds, and maybe red squirrels are also prey. Also scavenge.

Phenology:

		Molt							Molt		
Implant		Birth		Breeding							
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec



Photo Credit: [iNaturalist](#)

Habitat:

- Coniferous forests, marshes, meadows, and woodlands.
- Prefer lower elevation CWH near ocean, rivers, creeks, and estuaries.
- Year-round home ranges between 10 and 40 ha for males and 20 ha for females. Non-migratory.
- Home range size is dependent on prey availability and where dens located.
- Black-tailed deer have reduced ground and shrub cover leaving ermine more at-risk to predation.
- Introduced species, rat, and raccoon, reduced ground nesting bird abundance, less food available.
- Native marten also reduces food availability.
- Population abundance closely tied to prey availability.

Status:

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

BEC Zones:

- CWH, MH.

Natural Resource District:

- Haida Gwaii.

Range:

- Distribution limited to Haida Gwaii archipelago off the central BC coast.



Photo Credit: [Environment & Natural Resources Canada](#)

Little Brown Myotis

(*Myotis lucifugus*)

Description:

- Females slightly larger than males.
- Adults weigh 7-9 grams, 7-10 cm long, forearm 33-41 mm, and wingspan 22-27 cm.
- Fur is cinnamon buff to dark brown on back and may be glossy and slightly paler on the belly.
- Wings and tail lack fur and are dark brown.
- Ears are large compared to size of head.
- Tragus (fleshy projection which covers the entrance of the ear) is short and blunt.
- Summer, males largely solitary, and females form colonies.
- Difficult to distinguish among bat species.

Biology:

- Nocturnal.
- Peak feeding periods 1-2 hours after sunset and before sunrise.
- Few natural predators.
- Insectivorous, primarily feed on aquatic flies but also eat beetles, ants, crane flies, crickets, and leafhoppers.
- Forage while flying over water and semi-open areas such as rocky hillsides, lawns, fields, and forest edges
- Adjust habitat in response to seasonal changes in insect abundance.
- Breeding occurs during fall (Sep, Oct), fertilization after hibernation in spring (Feb, Mar).
- Young born May to July, fly within 3 weeks and are independent after a month.
- Migrate 50-200 km between hibernacula and summer roosts.

Phenology:

Implant			Birth				Copulate				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec



Photo Credit: [Parks Canada](#)

Habitat:

- Dry open forests as well as wet riparian areas from low elevation IDF up to 2300 meters.
- Daytime roosts protect from predation and weather extremes.
- Roost sites preferably on south to southeast aspects.
- Summer, in attics, under bridges, in hollow trees, under loose bark or shingles, or in rock crevices.
- Require open water and may concentrate at pools and streams to drink at dusk.
- Hibernating habitat poorly understood but thought to hibernate in caves or old mines with stable temperature (2-12 C).
- If undisturbed, occupy same sites year after year.



Photo Credit: [NL Ministry Fisheries, Forestry & Agriculture](#)

Status:

- SARA Schedule: 1- Endangered.
- Provincial List: Yellow.
- Identified Wildlife: No.

BEC Zones:

- BG, BWBS, CDF, CWH, ESSF, ICH, IDF, MH, MS, PP, SBPS, SBS, SWB.

Range:

- Distributed in forested habitats throughout BC including Haida Gwaii and Vancouver Island.

Black Bear

(*Ursus americanus*)

Description:

- Not always black, can be cinnamon, brown, and blonde. White Kermode or Spirit Bear is on N-central coast and Blue “Glacier” Bear in British Columbia’s northwest.
- Small black eyes, broad head, rounded ears, short tail, fine, long fur.
- Prominent shoulder hump of grizzlies is absent and facial profile is straight rather than dish-shaped and claws are shorter
- Size and weight, varies greatly by sex, season, food supply, and locale.
- Adult males 60-90 cm in shoulder height and 130-190 cm long and weigh 80-300 kg. Females are smaller at 40-140 kg.
- Solitary life history.



Photo Credit: Wildsafe BC

Biology:

- Omnivorous, vegetation is about 80% of diet. Seek abundant food high in protein and energy and available with minimal energy expenditure.
- Mate early Jun–mid Jul but embryo does not implant until Oct–Nov with cubs born Jan–Feb during hibernation weighing about 400 g and nurse while mother hibernates.
- Cubs stay with mother for first year.
- Usual hibernation is 3-5 months on S coast and 5-7 months in the interior and northern. Females hibernate longer than males.
- Coastal dens in or under large trees, snags, logs, or stumps. May be 25 m above ground. Interior, in tree cavities, but can den in rock cavities, under-brush piles, or in holes dug into ground.

Habitat:

- Prefer forested and shrubby areas to open but use wet meadows, high tidelands, ridgetops, burned areas, riparian areas, and avalanche chutes.
- Home ranges (feeding areas joined by travel routes), males about 25-150 km² - larger than females’, 5-25 km².
- Home ranges may shift due to environmental factors and often overlap those of other bears.



Photo Credit: USDAFS

Phenology:

Hibernate												Hibernate	
Birth		Nursing			Fertilization				Implantation				
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		

Status:

- SARA Schedule: Not Listed
- Provincial List: Yellow.
- Identified Wildlife: No.

BEC Zones:

- BAFA, BWBS, CDF, CMA, CWH, ESSF, ICH, IDF, IMA, MH, MS, SBPS, SBS, SWB.

Range:

- Occupies most of BC.



Opening to
Bear Den under
tree root.

Photo Credit: Brian Gustafson

Fish

Cutthroat Trout *clarkia* subspecies

(*Oncorhynchus clarkii clarkia*)

Description:

- Most widely distributed and abundant subspecies.
- Migratory and non-migratory stocks occur throughout the range.
- Three major life history form populations, sea-run, freshwater-resident (lacustrine and fluvial) and headwater streams.
- Colour varies, dark green to greenish-blue on back, olive-green on upper flank, silvery on lower flank and belly.
- Irregular spots on dorsal, adipose and caudal fins and anal, pectoral and pelvic fin bases. Gill covers are pinkish.
- At sea or recent migrants to freshwater, silvery with a bluish back, yellowish lower flanks and fins, and sparse spots.
- Adult weight variable: sea run, 900-2300 grams; stream resident juveniles, 11-91 grams; lake adults, smaller than sea run.

Biology:

- Spawn, late winter, or early spring (Jan-May). Peak in Feb with water temperature > 6-8 °C.
- Spawn in streams on clean, small gravel substrates.
- Eggs hatch, 6-7 weeks, hatchlings (fry) emerge from gravel (Mar-Jun) in 1-2 weeks with Apr peak.
- Sea-run trout migrate to salt water in late spring or early summer at age 2 or 3.
- Adults eat insects, crustaceans, and other fishes.
- Young feed on aquatic and drift insects, microcrustaceans, and some small fish.

Phenology:

			Emergence								
		Hatch									
Spawn											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec



Photo Credit: [South Coast Conservation Program](#)

Habitat:

- Large variety of habitat types - lower and upper reaches of large or small river systems, estuaries, sloughs, ponds, lakes, and nearshore ocean waters.
- Small, low gradient coastal streams and estuaries.
- Freshwater, prefer deeper pool habitat and cover formed by CWD.
- Well-shaded streams with water temperatures < 18 °C.
- Lake populations require access to gravel-bottomed streams to be self-sustaining.
- Spend more time in freshwater environment than most other anadromous Pacific salmonids.
- Brief period offshore during summer, returning to freshwater by fall-winter.

- Migratory form does not overwinter in the ocean.
- Marine habitats, remain close to coast, usually within estuary (within 10 km of land).
- Some may spend entire life in freshwater (many in lakes), but most are anadromous (summer in saltwater).
- Typically, does not occur farther inland than 150 km.

Status:

- SARA Schedule: Not listed
- Provincial List: Blue.
- Identified Wildlife: No

BEC Zones:

- BWBS, CDF, CWH, ICH, SBS.

Range:

- Broadly distributed throughout coastal BC.



Photo Credit: [iNaturalist](#)

Bryophytes

Dalton's Moss

(Daltonia splachnoides)

Description:

- Dalton's Moss is a small, glossy yellow-green to bronze-coloured moss with reddish stems and linear-lanceolate leaves.
- The leaves are untoothed, have a yellowish border, and a ridged costa ('midrib') that almost reaches the leaf tip.
- The sporophytes consist of a red stalk and a small, brown, upright, cylindrical-ovoid capsule with a short neck and a contracted base.
- The highly distinctive calyptra (hood-like structure covering the lid of the capsule) is pale and conspicuously fringed.
- Stems 1(-1.5) cm; cortical cells attached at leaf insertion.

Biology:

- Both male and female reproductive organs occur on the same shoots, which promotes self-fertilization and the production of sporophytes.
- Asexual reproductive structures occur infrequently but have not been observed in Canadian specimens.
- The estimated lifespan of Dalton's Moss is 9 to 18 years, with an average generation time of 3 to 6 years.
- The moss is epiphytic on Coastal Red Elderberry, Stink Currant, Yellow Cedar and Western Red Cedar.
- The adaptability of Dalton's Moss is unknown, but it currently persists on one site that has experienced overgrazing by introduced Sitka Black-tailed Deer and where its original host-plant is not currently found, suggesting that the

species has adapted to an alternative host.

Phenology:

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



Photo Credit: [Government of Canada](https://www.canada.ca)

Habitat:

- Humid, rich, lakeshore forests near sea level.
- Found at 0-300 m elevation.

Status:

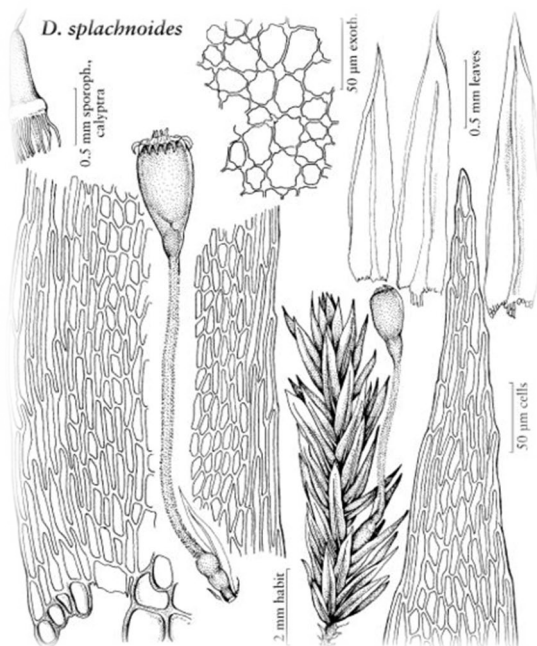
- SARA Schedule: Not Listed
- Provincial List: Red
- Identified Wildlife: No

BEC Zones:

- CWHvh3

Range:

- Uncommon to rare in BC, only found on Haida Gwaii.
- Also found in the United States, Mexico, and in the West Indies, Central America, South America, western Europe (Ireland), China, Atlantic Islands, Pacific Islands (New Zealand), and Australia.
- It is believed to be introduced in California, from Australia.



Credit: [Flora of North America](#)



Photo Credit: [British Bryological Society](#)

Drooping-leaved Beard-Moss

(Oxystegus recurvifolius)

Description:

- Drooping-leaved Beard-moss is a pale, yellowish-green moss that typically grows intermixed among other bryophytes and grasses but occasionally forms loose, erect tufts.
- The stems are 2 to 10 cm tall and seldom have branches.
- The long tongue-shaped to narrowly spatulate (narrow below and broad and flat above) leaves are typically 2.5 mm in length, slightly undulate, and curve downward near the apex.
- The leaf margins have a pale border and sharp, irregular teeth near the broadly acute leaf tip.

Biology:

- The male and female reproductive organs occur on separate gametophytes (shoots). Throughout its global range, only female plants have been found.
- Like many species of mosses that are thought to be relictual, sporophytes are unknown.
- The life history strategy of Drooping-leaved Beard-moss closely resembles that of a “perennial stayer,” which are characterized by a long lifespan and low sexual reproductive effort.
- The lifespan of gametophytic shoots of Drooping-leaved Beard-moss has not been studied but is estimated to be approximately 20 years based on the “perennial stayer” life history strategy, and the average age of individuals within colonies is estimated to be approximately 7 to 12 years.



Photo Credit: [Government of Canada](#)

Habitat:

- Drooping-leaved Beard-moss occurs on cliff shelves, talus slopes, lake margins, and streambanks influenced by base-rich seepage.
- The temperate climate is characterized by cool temperatures and high rainfall throughout much of the year.
- Low cloud and fog are common, and dry spells are rare.



Photo Credit: [Government of Canada](#)

Status:

- SARA Schedule: Not Listed
- Provincial List: Red
- Identified Wildlife: No

BEC Zones:

- CWH; MH

Range:

- In BC, Drooping-leaved Beard-moss is known from five sites on the west coast of Haida Gwaii: Mercer Lake, on Graham Island, and Mount Moresby, Moresby Lake, Takakia Lake, and Newcombe Inlet on Moresby Island.
- The species is also known from Adak Island in the Aleutian Island archipelago of Alaska; coastal Ireland, England, Wales, and Scotland; and the High Himalaya region of Nepal.

Considerable Gingerbread

(*Pannaria rubiginosa*)

Description:

- Considerable Gingerbread is a member of the group called the Mouse Lichens. This reflects the miniature size of the lobes and the dull greyish brown colour of the upper surface in many species.
- Minute to small or occasionally medium sized, and can vary in appearance with many small, leafy lobes, or a few lobes.
- May appear crust like.
- It has a cortex above but not below.
- Rarely pruinose (covered in powder on surface).
- Lobes closely appressed, subrotund to elongate, averaging to 1–3 mm wide, thin to thick.
- Upper surface pale tan to greyish blue or dark brownish (lobe margins often whiter), smooth to slightly roughened.
- Lower surface pale and often resting on dark hypothallus.
- Apothecia (fruiting body) located over upper surface, disc usually reddish brown; spores simple, ellipsoid to somewhat spindle shaped, colourless.



Photo Credit: J. Riley, [E-Flora BC](#)

Biology:

- Considerable Gingerbread lichens reproduce both sexually, through spores, and asexually through vegetative reproduction.

Habitat:

- Over conifers and sometimes rock, moss, and soil in open coastal forests at lower elevations.

Status:

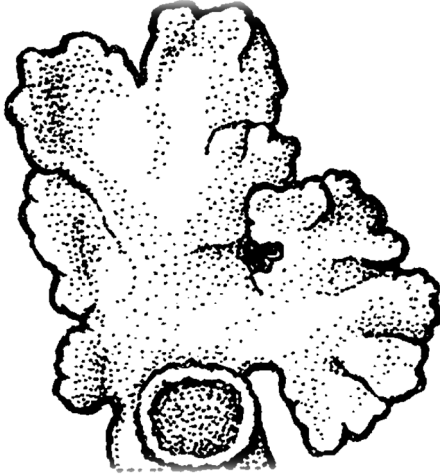
- SARA Schedule: Not Listed
- Provincial List: Red
- Identified Wildlife: No

BEC Zones:

- CWHds; CWHvh; CWHwh; CWHxm

Range:

- In BC, found in coastal forests.
- South to New Mexico.



Credit: [Lichens of British Columbia](#)



Photo Credit: [iNaturalist](#)



Photo Credit: T. McMullin, [LichenPortal](#)

Flaking Tarpaper

(Collema flaccidum)

Description:

- Flaking Tarpaper lichen is part of a group called the Tarpaper Lichens. These lichens have a blackish non-stratified medulla (horizontal layer within a lichen body) that becomes somewhat swollen, translucent, and jellylike when moistened.
- Flaking Tarpaper lobe margins are hairless; isidia (stalked, protruding reproductive parts) if present, also lacking hairs.
- Lobes brownish to olive-brownish or blackish, but never jet black above and below.
- Lobes averaging to more than 6 mm wide; lobe margins plane.
- Thallus (body of lichen) foliose (leaf-like) or, if somewhat fruticose (coral-like and shrubby), then lobes proportionally much shorter and broader.
- Isidia present, these mostly flattened and scalelike at maturity; scalelike lobules therefore rather common over upper surface.

Biology:

- Flaking Tarpaper lichens reproduce both sexually, through spores, and asexually through vegetative reproduction.
- Primary means of reproduction is asexual however, via isidia fragmentation.



Photo Credit: [iNaturalist](#)

Habitat:

- Flaking Tarpaper lichens grow in places where there is little soil, and are found on a variety of substrates, including rock surfaces, tree trunks, and on the ground.



Photo Credit: [iNaturalist](#)

Status:

- SARA Schedule: Not Listed
- Provincial List: Red
- Identified Wildlife: No

BEC Zones:

- CWHdm; CWHwh; CWHxm; PPxh

Range:

- Rare over (mossy) rocks and trees in open coastal localities in BC.
- South to California.



Photo Credit: [iNaturalist](#)



Photo Credit: [iNaturalist](#)

Vascular Plants

Aleutian Adder's-mouth Orchid

(*Malaxis diphyllas*)

Description:

- A vascular plant with stem 10-30 cm tall.
- The stem is leafless, smooth, and pale green in color.
- Two or sometimes three leaves, oblong-elliptic, 2-10 cm long, 2-5 cm wide, yellow green in color.
- Inflorescence densely flowered, terminal spike like raceme.
- Flowers are small, yellowish, and the flower stalks are twisted.
- Fruits are capsules and ellipsoid, 5 mm long, 3 mm wide.

Biology:

- Perennial herb from bulblike bases (corms).
- Flowers are pollinated by fungus gnats.

Phenology:

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



Photo Credit: J. Fenneman on [E-Flora BC](https://www.e-flora.bc.ca/)

Habitat:

- Conifer forests in moist or slightly wet soils.
- Riparian forests and streambanks.
- Thrive in gravel bars.

Status:

- SARA Schedule: Not Listed
- Provincial List: Red
- Identified Wildlife: No

BEC Zones:

- CWHwh

Range:

- In British Columbia, only found on Haida Gwaii.
- Also found north in Alaska.



Photo Credit: [iNaturalist](#)

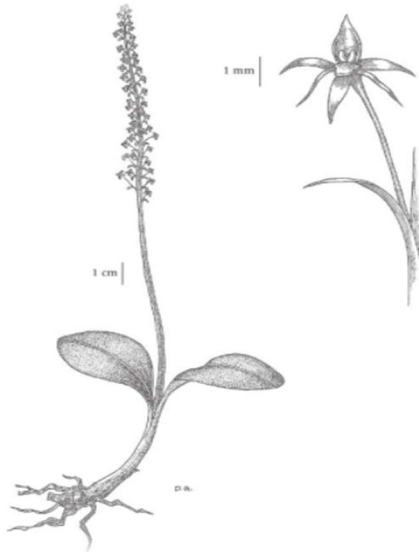


Photo Credit: [The Illustrated Flora of British Columbia](#)



Photo Credit: [iNaturalist](#)

Haida Gwaii Land Use Order Plant Summaries

The following plants have been identified for protection in the BCTS Chinook SOMC program through the Haida Gwaii Land Use Order Objectives. These species all appear in Land use Order as **traditional forest features**, which are a type of **cultural feature**, afforded specific protections under the **Cultural Objectives** section of the Land Use Order. Given the cultural significance of these species, the Haida names for the plants have been respectfully included where available.



Devil's club (*Oplopanax horridus*)
ts'iihlnjaaw; ts'iihlanjaaw

Description: 1-3m tall; spines (<1cm) on stem and underside of large (<35cm across) deciduous leaves; flowers produced in dense pyramidal terminal clusters, which turn to clusters of small red berries

Black hawthorn (*Crataegus douglasii*)
k'anhll; xaayuwaa hlk'a.aay

Description: large shrub/small tree (<10m tall); thorns (<3cm long); leathery lobed leaves with saw-toothed margins; white stinky flowers; blackish purple fruits



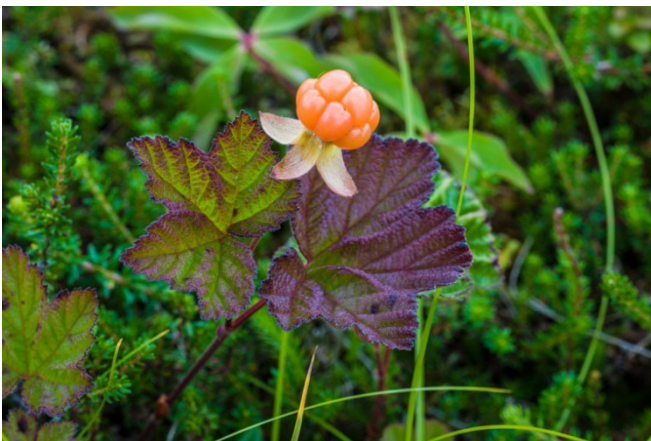


Narcissus anemone (*Anemone narcissiflora*)

Description: 5-60cm tall; perennial from woody base; leaves deeply divided into narrow pointed segments clustered below flowers; flowers creamy-white 2-cm wide

Trailing black currant (*Ribes laxiflorum*)
kaigigunkai, or k'it'agwaandaa hlk'a.aay

Description: trailing with branches running along ground usually <1m tall; leaves with 5 pointed lobes 4-10cm wide; flowers greenish-white to reddish-purple; fruits purplish-black berries with glandular hairs



Cloudberry (*Rubus chamaemorus*)

k'aaxu ts'alaang.ga,
k'a.àw ts'alaangaa xil

Description: perennial up to 20cm tall; 1-3 leaves (lobbed) per stem; solitary white terminal flower; raspberry-like fruit at first reddish, maturing to amber/yellow



Richardson's geranium (*Geranium richardsonii*)

Description: bears several stems with palmately cleft leaves on long stalks, moist near the base, and bear a few white or pale pink flowers in a branched cluster



Northern rice-root (*Fritillaria camschatcensis*)

7inhllng, or stla k'iist'aa

Description: large nodding dark brown flowers | spring; 20-60cm tall; grass-like leaves in groups from the stem; perennial



Western cowbane (*Fritillaria camschatcensis*)

Description: perennial, tuberous herb found in open or forested wetland habitats; up to 1.5m tall; white clustering flowers; leaf has a blade up to 30cm long which is divided into many toothed, lobed, or deeply cut leaflets



Common juniper (*Juniperus communis*)
kaayda kaxawaay, or hlk'am.aal

Description: evergreen usually <1m tall; needle-like lance-shaped leaves; very prickly; berry-like cones pale green at first maturing to bluish-black

Common harebell (*Campanula rotundifolia*)
dal(xil)-guhlahl

Description: blue bell-shaped flowers throughout the summer on very thin, slender stems; 40 cm tall; leaves may droop downward from the weight of the flower



Pacific crabapple (*)*
k'ahl7l, or k'ayanhla

Description: small tree or multi-stemmed shrub; 12 m tall; sharp thorn-like shoots; yellow to purplish-red apples, 2 cm across; white to pink flowers; egg-shaped lobbed leaves up to 10cm long



Stinging nettle (*Urtica dioica*)
gudang.xaal, or gudang.aal

Description: perennial plant that produces tiny, greenish flowers in dense clusters. It is covered with stinging hairs that will cause an irritating rash upon contact

Yellow pond-lily (*Nuphar lutea*)
xil gaaydlgins, or xil giidlagang

Description: aquatic species; bright yellow flowers; large, egg- to heart-shaped leaves; single, fragrant, cup-like flowers that float on water



Indian hellboure (*Veratrum viride*)
gwaayk'yaa, or gwaayk'aa

Description: up to 2m with solid green stem; leaves are spirally arranged, 10 - 35 cm long and 5 - 20 cm wide; numerous green-yellow flowers per plant



Stink currant (*Ribes bracteosum*)

galgun xil, gal.un hlk'a.aay

Description: 1.5-m tall; leaves large and sparsely hairy to smooth with 5 to 7 lobes, stinky when crushed; white and brownish-purple to greenish-white flowers are numerous; berries are blue-black



Wright's filmy fern (*Hymenophyllum wrightii*)

Description: Perennial; deciduous; slender fern with fronds arising singly from long creeping rhizomes; leaves egg-shaped



Black swamp gooseberry (*Ribes lacustre*)

gudga gi gayd, or xaayuwaa

Description: 0.5-2m tall; trailing/spreading vines; small leaves, small flowers - pale yellowish green to a mahogany-red with pinkish petals; fruits are dark-purple with glandular hairs



Fairy slipper (*Calypso bulbosa*)

skil taawaatlxaay, or skil tau

Description: solitary leaf in the autumn; solitary flower (rarely 2) with a pouch-like feature that is produced in late spring and usually pink, magenta, or white