

Appendix 15

Red and Blue-Listed Vertebrate and Vascular Plant Species The report that follows lists red- and blue-listed species occurring in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan Area.

**Listed Vertebrate and Vascular Plant Species Occurring in the
Cranbrook Forest District and in the
Southern Rocky Mountain Management Plan Area**

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Summary

The BC government designates and ranks species 'at risk' as either vulnerable in BC (Blue-listed), or endangered or threatened (Red-listed). The species are ranked at the provincial level and forest district level (BCCDC 2002). This document examines each listed species of vertebrates and vascular plants that occur, or potentially occur, in the Cranbrook Forest District and in the Southern Rocky Mountain Management Plan (SRMMP) Area. The SRMMP Area is a subset of the Cranbrook Forest District, and species that are Blue and Red listed in this district may not all occur in the SRMMP Area.

In the Cranbrook Forest District, 104 species of vascular plants and 32 species of vertebrates are either Blue or Red listed. Among the listed vertebrate species, at least 14 occur in the SRMMP Area, and 11 are also listed within the Identified Wildlife Management Strategy (IWMS). The IWMS aims to preserve elements of biodiversity that are believed to be inadequately addressed by other components of the BC Forest Practices Code, and recommends specific practices for those species and habitats (IWMS, 2001).

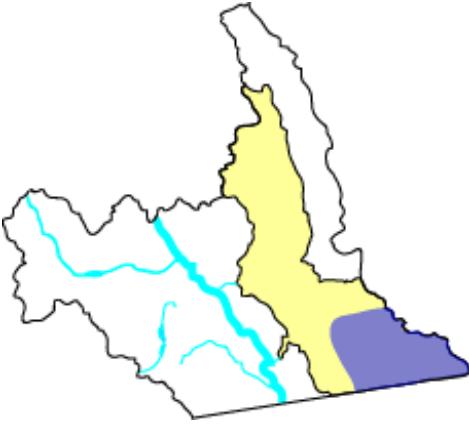
Part One of this document describes the species of vertebrates Red and Blue listed in the Cranbrook Forest District and potentially in the SRMMP. A brief habitat description is given and potential threats to the population are identified. Population range maps are presented. Yellow areas on maps indicate the SRMMP. Ranges for vertebrates were obtained from Cannings et al. (1999), Fraser et al. (1999), and from personal communications with local experts.

Part Two describes the species of vascular plants that are Red and Blue listed in the Cranbrook Forest District and in the SRMMP Area. Distribution maps are not provided because the information on the distribution of rare vascular plants is limited. However, species were grouped among the five vegetation zones found in the Rocky Mountains (Lowland, Montane, Steppe, Subalpine, Alpine) as described by Douglas et al. (2001a and b).

VERTEBRATES

Fish

Mottled Sculpin (*Cotus bairdi hubbsi*) – Blue List

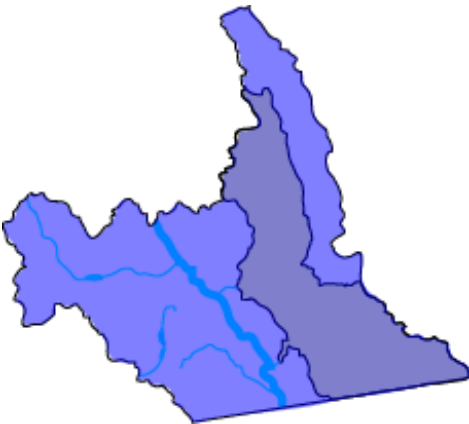


Habitat: Mottled Sculpin inhabit a wide range of stream sizes with cool and clear water. They are also found in montane lakes with, in some cases, warmer water as high as 20°C (Cannings and Ptolemy 1998).

Threats: Loss and alteration of habitat due to forest harvesting, associated roads, and to hydroelectric impoundments. Pollution of habitat from agricultural, urban, and industrial activities. Competition with introduced exotic species.

Distribution: Mottled Sculpin are found in the Flathead River Drainage. It is suggested that the population found in the Flathead River would be the only true population of Mottled Sculpin in British Columbia (Cannings 1993).

Westslope Cutthroat Trout (*Onchorynchus clarki lewisi*) – Blue List



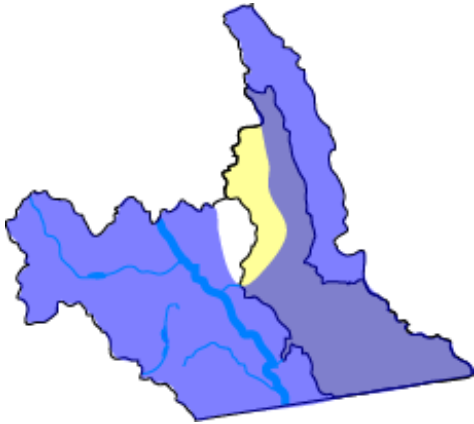
Habitat: Although Westslope Cutthroat Trout occurs in lakes and streams of various sizes, spawning is restricted to small streams (<5 m wide), (Scott and Crossman 1973). Abundance of juveniles in streams tends to decrease when channel size increases (Jordan et al. 2000).

Threats: Loss and alteration of habitat due to forest harvesting, associated roads, and to hydroelectric impoundments. Increase of angling harvest and recreational access (logging roads). Pollution of habitat from agricultural, urban and industrial activities. Competition and hybridization with introduced species of salmonids.

Distribution: Westslope Cutthroat Trout occur throughout the Cranbrook Forest Districts (Scott and Crossman 1973).

Bull Trout (*Salvelinus confluentus*) – Blue List

◆ Identified Wildlife Species



Habitat: Bull Trout occur in small, steep and cold streams with summer temperature less than 16°C in average (Haas 2001). Selected streams have clean water and are connected to allow fish movement throughout the stream system.

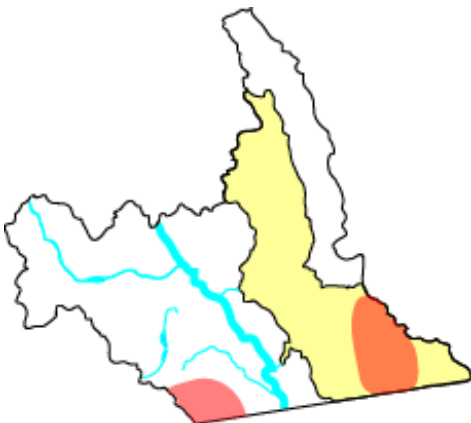
Threats: Loss and alteration of habitat due to forest harvesting, associated roads, and to hydroelectric impoundments. Increase of angling harvest and recreational access (logging roads). Pollution of habitat from agricultural, urban and industrial activities. Competition with introduced exotic species.

Distribution: Bull Trout occur throughout the Cranbrook Forest District, but are absent from the Bull River above the Abercrombie Dam (J. Bell, pers. comm.).

Amphibians

Tailed Frog (*Ascaphus truei*) – Red list (interior pop.)

◆ Identified Wildlife Species

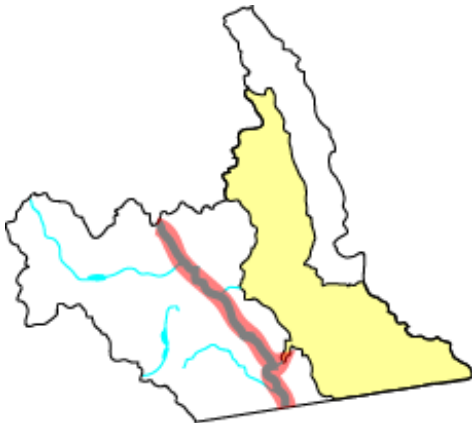


Habitat: Tailed Frog breed and mature in fast, small, permanent forest streams with clear, cold water. In the Kootenay Region, they are found at high elevations (1200-1900 m), mostly in the Englemann-spruce Sub-alpine Fir zone. They prefer streams with cobble or boulder substrates with little silt. Young and adult frogs use forest near streams for dispersal (Bunnell et al. 2001).

Threats: Habitat alteration due to forest harvesting. Tailed Frog are vulnerable to stream warming, and to increased siltation from cover removal and roads. Streamside buffers appear critical (Bunnell et al. 2001).

Distribution: Tailed Frog were found in the west Flathead River Drainage and in the Yahk River Drainage (T. Antifeau, pers. comm.)

Northern Leopard Frog (*Rana pipiens*) – Red List



Historical range

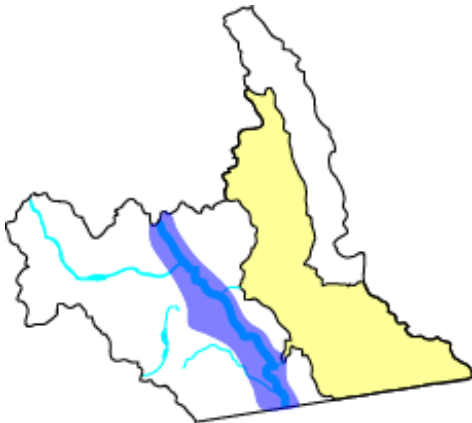
Habitat: Northern Leopard Frog use various moist and wet habitats (ponds, lakes, streams, marshes, wet meadows and riparian areas with thick vegetation) (Green and Campbell 1984; Cannings et al. 1999). The species hibernates on the bottom of lakes and streams (Green and Campbell 1984) and lays its eggs in ponds, lakes and wetlands.

Threats: Introduced predators (fish, bullfrogs), and intensive collection of individuals for educational purposes and laboratory studies. Loss and degradation of aquatic and wetland habitat due to urban and agricultural development.

Distribution: Northern Leopard Frog were historically found in the Columbia River Drainage, in the Creston Valley, and in the Osoyoos Area (Green and Campbell 1984). Since the mid 1990's, Northern Leopard Frog in BC are only known to occur in the Creston Valley (Waye 2000).

Reptiles

Painted Turtle (*Crysemys picta*) – Blue List



Habitat: Painted Turtle is a highly aquatic species found in waters with large amounts of aquatic vegetation such as ponds, lakes, marshes and slow moving rivers (Storm and Leonard 1995; Gregory and Campbell 1984). Movement on land may occur in the spring and fall when the turtles travel between summer habitat and hibernating ponds. (Gregory and Campbell 1984; Cannings et al 1999).

Threats: Loss of habitat due to urban and agricultural development. The turtles may be affected when there is obstruction of movement to the nesting sites because of roads, and by the level of exploitation through the pet trade (Storm and Leonard 1995).

Distribution: Suitable habitat exists at low elevations in the Columbia River Drainage (T. Antifeau, pers. Comm.).

Birds

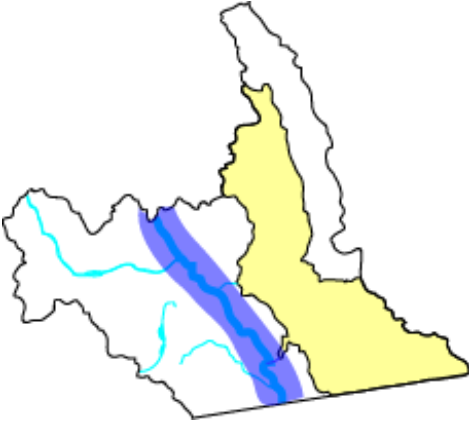
American Bittern (*Botaurus lentiginosus*) – Blue List

◆ Identified Wildlife Species

Habitat: American Bittern depend on wet habitat with dense growth of tall emerging vegetation such as marshes, swamps, and shallow lakes (Fraser et al. 1999). Nests are usually built among the vegetation emerging from water up to 36 cm deep (Campbell et al. 1990a).

Threats: Loss of habitat due to urban and agricultural development that may alter, pollute (agricultural pesticides), or destroy wetlands.

Distribution: Breeding sites were recorded in the Creston area but not from the Cranbrook Forest District. (Campbell et al. 1990a).



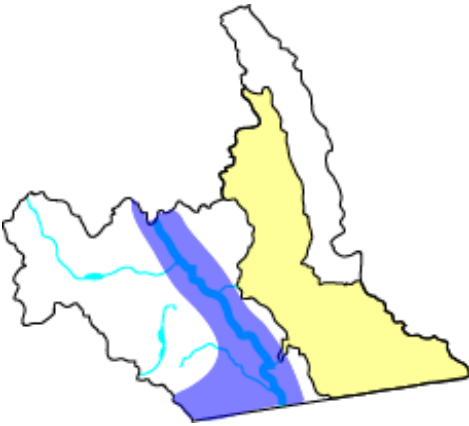
No breeding records from the Cranbrook Forest District

Great Blue Heron (*Ardea herodias herodias*) – Blue List

Habitat: Great Blue Herons nest in groups (heronries) in stands of larger trees of many species, although black cottonwood is favoured in the Kootenay region (Forbes et al. 1985, and Gebauer 1995 in Machmer 1996). Heronries usually are located near foraging habitat, or slow-moving rivers, sloughs, and marshy lakes.

Threats: Loss of nesting habitat in mature stands due to forest harvesting, and habitat contamination that may affect breeding success. Great Blue Heron are sensitive to disturbance near the heronry immediately prior to or during nesting.

Distribution: Great Blue Heron are absent from high mountain areas and dry deserts, and are known to breed in the west Kootenay (BCMELP 1998a).

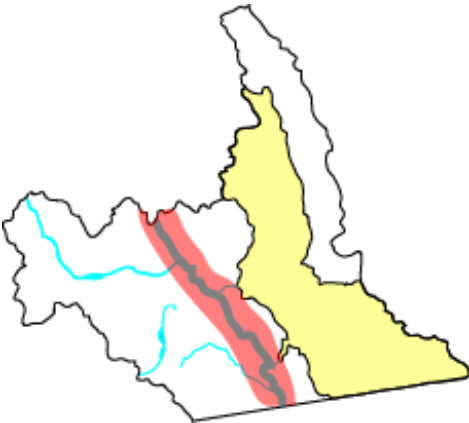


Swainson's Hawk (*Buteo swainsoni*) – Red List

Habitat: Swainson's Hawk are found in open areas such as grasslands, open woodlands, farmlands, wetlands, and alpine meadows. Nesting occurs in upland areas of foothills and valleys.

Threats: Loss of habitat due to urban and agricultural development, and to forest encroachment in grasslands (because of fire suppression). Winter and foraging site contamination by pesticides (Fraser et al. 1999).

Distribution: There are no breeding records for the Cranbrook Forest District, but the species uses the alpine meadows of the Kootenay River Drainage during migration (Campbell et al. 1990b).



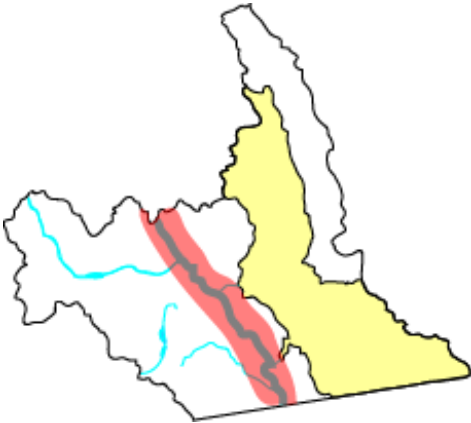
Migration corridor

Peregrine Falcon (*Falco peregrinus anatum*) – Red List

Habitat: Peregrine Falcon use various habitat that support populations of prey such as shorebirds, waterfowl, and other medium size birds. Nests are built on cliff ledges and sometimes on tall buildings in cities.

Threats: Foraging habitat (wetlands) may be lost due to urban and agricultural development. Nesting sites may be abandoned because of disturbance through recreational activities in cliff areas. One of the main causes of population decline in North America is due to fragmentation of thin egg shells caused by contamination with pesticides such as DDT and DDE (Fraser et al. 1999).

Distribution: Peregrine Falcon are very rare in Interior BC. The species is not known to breed in the Cranbrook Forest District (Campbell et al. 1990b).



Possible breeding distribution.

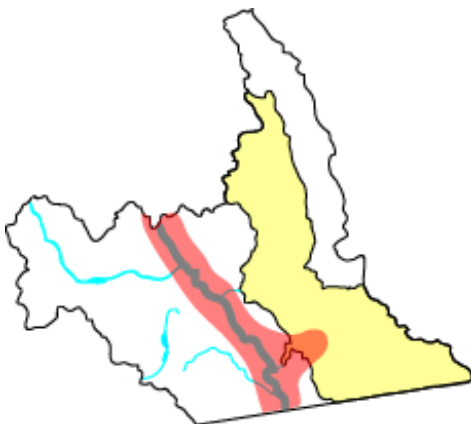
Prairie Falcon (*Falco mexicanus*) – Red List

◆ Identified Wildlife Species

Habitat: Prairie Falcon typically breed in steep escarpments and rocky cliffs associated with large, dry grasslands or sagebrush steppes (Hooper 1997). The species spends the winter south to Mexico, and returns to BC for breeding season.

Threats: Loss of foraging habitat due to forests encroachment and conversion of grassland to agricultural fields. Prairie Falcon are sensitive to disturbance during nesting and may be affected by activities in hill sides. Reproduction rate is affected by fragmentation of thin egg shells caused by contamination with pesticides such as DDT and DDE.

Distribution: In British Columbia, Prairie Falcon are at the northern limit of their range. Nest sites were not recorded from the Cranbrook Forest District (Fraser et al. 1999; Hooper 1997).



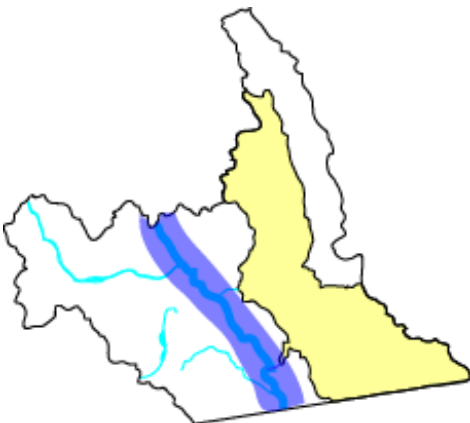
Possible breeding distribution

Sharp-tailed Grouse (*Tympanuchus phasianellus columbainus*) – Blue List

Habitat: Sharp-tailed Grouse are ground nesters found in open lowlands with grasslands and shrub-steppes vegetation types. They seek cover in adjacent riparian and deciduous woodlands during winter.

Threats: Loss of grasslands and riparian woodland due to urban and agricultural development.

Distribution: Population of Sharp-tailed Grouse remains low to moderate in the east Kootenay region (Campbell et al. 1990b).



Possible breeding distribution

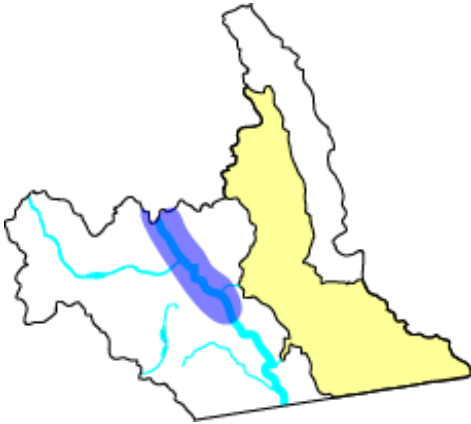
Sandhill Crane (*Grus canadensis*) – Blue List

◆ Identified Wildlife Species

Habitat: Sandhill Crane are found in wet sites with shallow water such as marshes, edges of lakes, swamps, meadows, ponds, and flooded agricultural fields. Selected sites are usually located in landscapes that isolate them from surrounding disturbance.

Threats: Urban and agricultural development may alter, pollute (agricultural pesticides), or destroy wetlands. Sandhill Crane are highly sensitive to disturbance. Activities such as tree removal or grazing around nesting sites may affect the population.

Distribution: Breeding distribution includes the east Kootenay Trench with 1 or 2 breeding pairs (Cooper 1996).



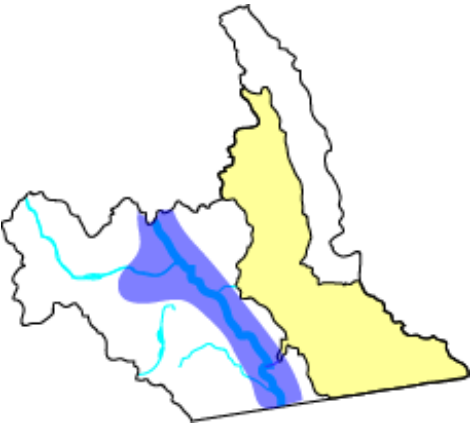
Long-billed Curlew (*Numenius americanus*) – Blue List

◆ Identified Wildlife Species

Habitat: Long-billed Curlew is a shorebird that migrates to the southern portion of Interior British Columbia, at spring. The species builds nests in depressions on ground, usually in open dry grasslands with short vegetation (< 25 cm tall), and below 1200 m elevation (BCMELP 1998b; Fraser et al. 1999).

Threats: Loss of grasslands due to urban and agricultural encroachment. Habitat alteration because of overgrazing by livestock.

Distribution: Long-billed Curlew were recorded breeding in the Kootenay River Drainage (Fraser et al. 1999; T. Antifeau, pers. comm.).

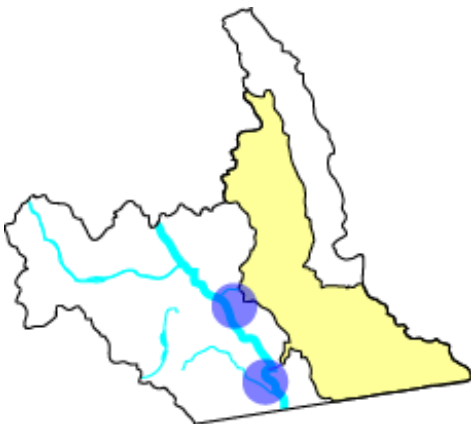


Flammulated Owl (*Otus flammeolus*) – Blue List

Habitat: Flammulated Owl occur throughout montane forests, in mature/old stands, with open understory (Groves et al. 1997). In British Columbia, Flammulated Owl are found primarily in the Interior Douglas-fir biogeoclimatic zone where they nest in dead and dying trees with old cavities excavated by woodpeckers (Fraser et al. 1999).

Threats: Loss of habitat due timber harvest in Ponderosa Pine and Douglas-fir forests. Habitat degradation due to fire suppression. Snag removal because of firewood cutting, and safety measures related to forest activities (Groves et al. 1999; Fraser et al. 1999).

Distribution: Flammulated Owl are rare in the Cranbrook Forest District, but were recorded at low elevations in the Kootenay River Drainage. (T. Antifeau, pers. comm.).

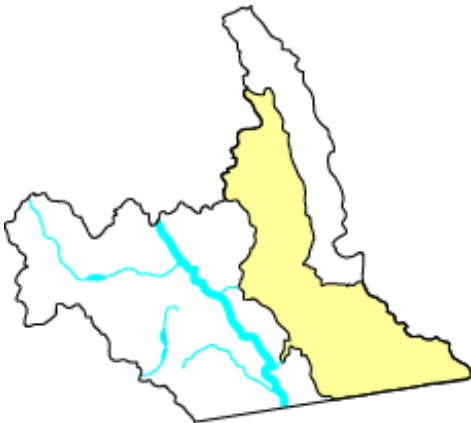


Western Screech-owl (*Otus kennicottii macfarlanei*) – Red List

Habitat: Western Screech-owl (sub-species *macfarlanei*) occur in low-elevation, deciduous, riparian forests dominated by cottonwood or birch trees. Nest trees are usually large (>25 cm dbh), older, dead or dying trees, with natural cavities (Campbell et al. 1990b).

Threats: Loss of habitat due to urban and agricultural development, and forest practices. Conservation of habitat for Western Screech-owl may be complicated because most of these owls are located on private land (Hobbs 2002).

Distribution: Western Screech-owl (sub-species *macfarlanei*) are very rare in the Kootenay (Campbell et al. 1990b). The species is not known from the Cranbrook Forest District (T. Antifeau, pers. Comm.).



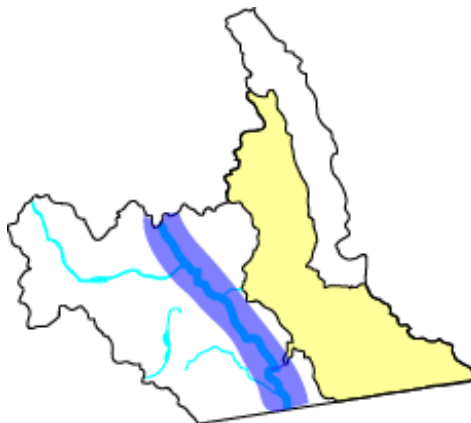
Not known from the Cranbrook Forest District

Short-eared Owl (*Asio flammeus*) – Blue List

Habitat: Short-eared Owl are associated with open spaces such as grasslands, brushy fields, marshlands, alpine meadows, and forest clearings. Small mammals are the main food source. Nesting and roosting occur on the ground (BCMELP, 1998c).

Threats: Loss of habitat due to urban and agricultural development. Short-eared owl are very sensitive to human disturbance.

Distribution: Suitable habitat is found in the Kootenay River Drainage. Although it was sighted, there are no breeding records for the District (Campbell et al. 1990b).



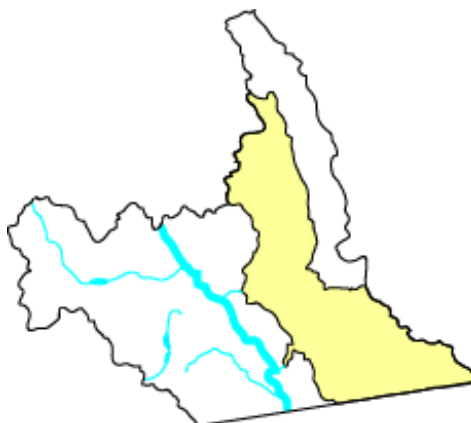
Possible breeding distribution

White-throated Swift (*Aeronautes saxatalis*) – Blue List

Habitat: White-throated Swift are associated with cliffs and canyons. Nests are built in cracks and crevices of steep rocky cliff faces. Aerial foraging on invertebrates takes place close to nesting cliffs.

Threats: Little threat is known to their nesting habitat, but nests may be affected by disturbance from human activities in rock cliffs and canyons (e.g. rock-climbing and housing development).

Distribution: White-throated Swift are known to breed mostly in the Okanagan and the Similkameen River valleys. Breeding distribution includes Canal Flat area, just north of the Cranbrook Forest District (Fraser et al. 1999).



No breeding records from the Cranbrook Forest District

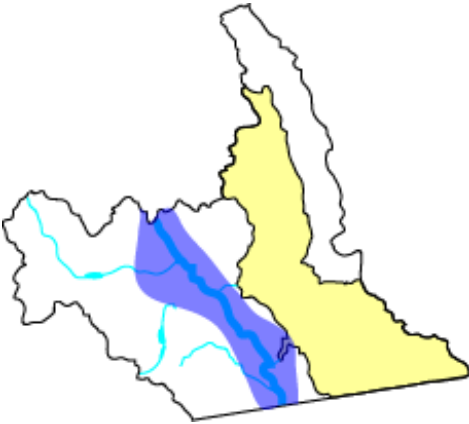
Lewis's Woodpecker (*Melanerpes lewis*) – Blue List

◆ Identified Wildlife Species

Habitat: Lewis's Woodpecker occurs in forests with very open canopy, large standing dead or dying trees, and shrubby understory. In the east Kootenay Trench, nests were found in open mature Ponderosa Pine forest, grassland with veteran Ponderosa Pines, riparian cottonwood, but mostly in Ponderosa Pine and Douglas-fir forests that were burned (Cooper and Gillies 2000).

Threats: Loss of habitat due to fire suppression and timber harvest. Removal of nest trees because of firewood cutting.

Distribution: Lewis's Woodpecker were recorded from the Kootenay River Drainage



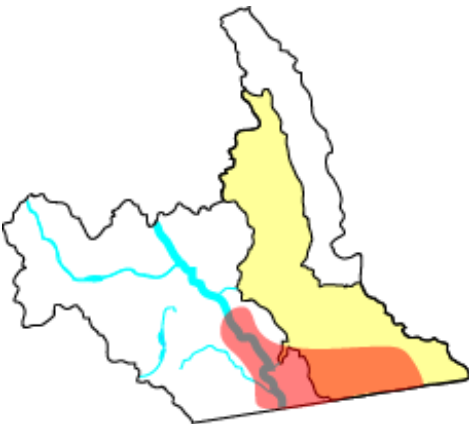
Williamson's Sapsucker (*Sphyrapicus thyroideus nataliae*)

– Red List

Habitat: Williamson's Sapsucker occurs in Western Larch, Douglas-fir and Ponderosa Pine forest. Nests are built in cavities excavated in large (>30 cm dbh) live or dead coniferous trees (Steeger et al. 1996).

Threats: Loss of habitat due to forest harvest, especially removal of older Western Larch trees (Gyug and Peatt 2000). Low population numbers also make the species vulnerable (Steeger et al. 1996).

Distribution: Williamson's Sapsucker occur only in southern Interior British Columbia. The sub-species *nataliae* is very rare, but was sighted in the Flathead area (Fraser et al. 1999).



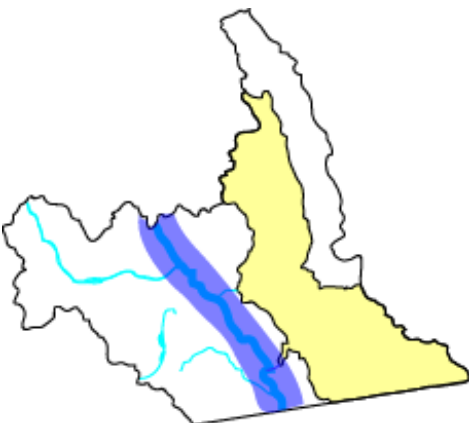
Bobolink (*Dolichonyx oryzivorus*) – Blue List

◆ Identified Wildlife Species

Habitat: Bobolink is a spring migrant and a summer visitant of BC (Campbell et al. 2001). Nests are built on ground, in open and grassy areas such as hayfields, meadows, and fields with tall grass.

Threats: Loss of habitat due to urban development and agricultural activities (haying practices, conversion of grass fields to alfalfa crop, contamination due to insecticides).

Distribution: Bobolink are restricted to the southern and central portion of the province. Breeding range includes the Kootenay River Drainage (T. Antifeau, pers. comm.)



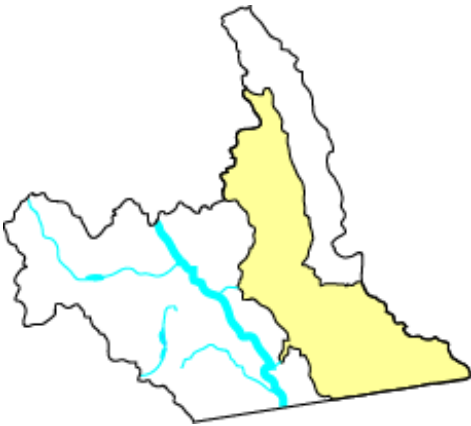
Mammals

Northern Long-eared Myotis (*Myotis septentrionalis*) – Blue List

Habitat: Northern Long-eared Myotis are generally associated with boreal forests. Roosting sites include buildings, trees, caves and mines. These bats are gleaners and take insects from branches and foliage under the tree canopy (Nargosen and Brigham, 1993).

Threats : Loss of roosting sites due to timber harvest. Northern Long-eared Myotis are sensitive to disturbance at hibernacula.

Distribution: There are no records for the Northern Long-eared Myotis in the Cranbrook Forest District (T. Antifeau, pers. comm.).



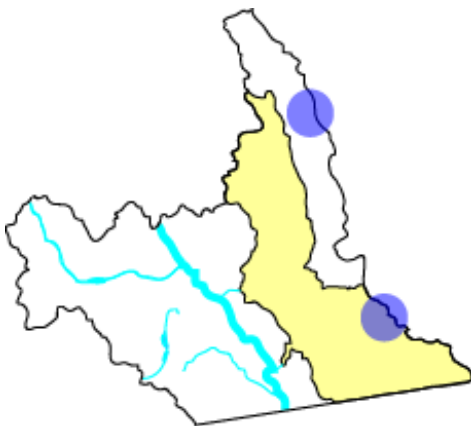
Not known from the Cranbrook Forest District

Least Chipmunk (*Tamias minimus orecetes*) – Blue List

Habitat: Least Chipmunk are omnivorous animals, found in subalpine and alpine zones (Fraker et al. 1997).

Threats: There are no apparent threats because range is at high elevation. However, habitat may be lost due to development and natural resource extraction in areas at high elevation.

Distribution: Least Chipmunk (sub-species *orecetes*) were recorded from Akamina Pass, and Elkford area (Nargosen and Fraker 2002).

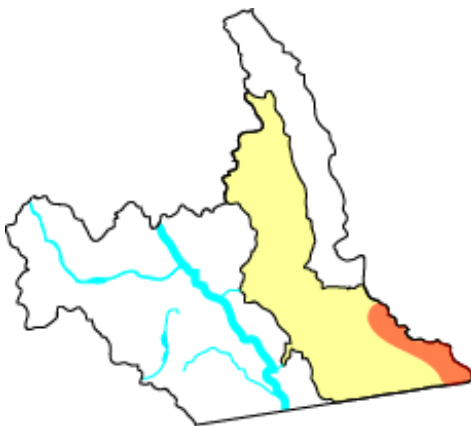


Red-tailed Chipmunk (*Tamias ruficaudus ruficaudus*) – Red List

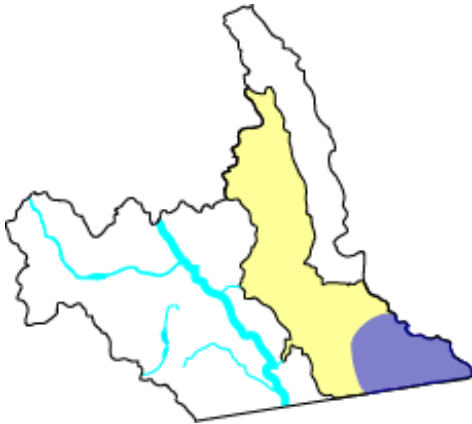
Habitat: Red-tailed Chipmunk occur in various conifer forest habitats, but are most abundant near forest openings where shrubs are abundant (Fraker et al. 1997). Trees and shrubs provide seeds and fruits, and are used for nesting.

Threats: There are no apparent threats because range is at high elevation. However, habitat may be lost due to development and natural resource extraction in areas at high elevation.

Distribution: Red-tailed Chipmunk (sub-species *ruficaudus*) are known only from the southeast corner of the Cranbrook Forest District (Nargosen and Fraker 2002).



**Southern Red-backed Vole (*Clethrionomys gapperi galei*)
– Blue List**



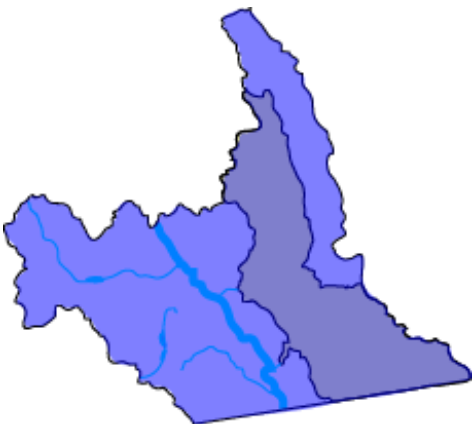
Habitat: Southern Red-backed Vole are found in cool, moist forests and prefers areas with large amounts of ground cover. They are known to be associates of older forests, but use second growth stands (Fraker et al. and Kerr 1997). They feed on vegetation, fungi and insects, and nest in forest structural features such as downed wood, stumps and roosts (Cannings et al 1999).

Threats: Loss of moist forest habitat due to timber harvest.

Distribution: In British Columbia, Southern Red-backed Vole (sub-species *galei*) was recorded only from the southeast corner of the Cranbrook Forest District, (T. Antifeau, pers. comm.; Cannings et al. 1999).

Grizzly Bear (*Ursus arctos*) – Blue List

◆ Identified Wildlife Species



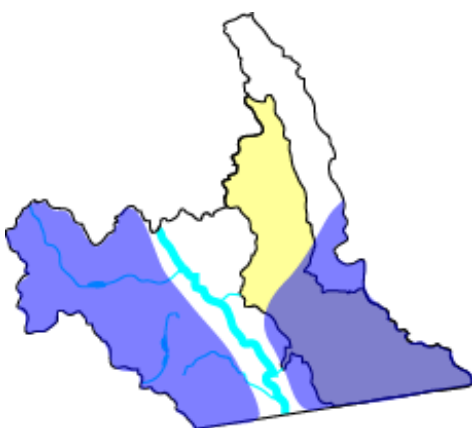
Habitat: Grizzly Bear use a wide range of habitat throughout the year. Habitat includes avalanche chutes, lower elevation valleys and riparian zones, forests with open and close canopy, naturally burned stands, and sometimes regenerating cutblocks (McLellan and Hovey 2001).

Threats: Grizzly Bear are sensitive to human encroachment and potential conflicts with forestry (Nams et al. 2001). Grizzlies have been restricted to mountainous terrain because of severe alteration of land and excessive mortality at lower elevations. Direct killing by humans is the major mortality factor for grizzlies (McLellan and Hovey, 2001).

Distribution: Grizzly Bear occur throughout The Cranbrook Forest District.

Fisher (*Martes pennanti*) – Blue List

◆ Identified Wildlife Species



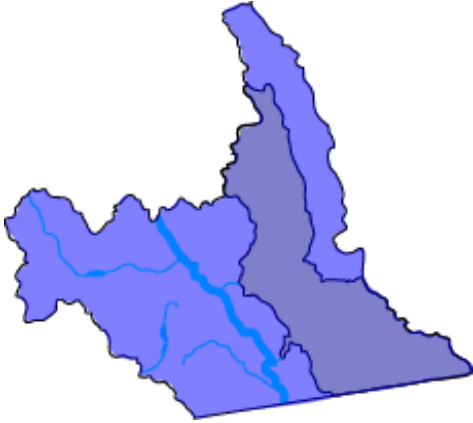
Habitat: Fisher are found in dense, late-seral coniferous or mixed wood habitats. They use a diversity of forest types when foraging, and large-diameter trees with cavities, especially riparian spruce or cottonwoods, as den sites.

Threats: Removal of larger diameter trees, particularly from riparian sites – both streams and wetlands. Over-trapping and hydroelectric development.

Distribution: Fisher may currently occupy the southeast corner of the province in low densities, and at high elevation. Historical range includes the west and southeast portions of the Cranbrook Forest district (BCMOF 1997).

Historical range

Wolverine (*Gulo gulo luscus*) – Blue List

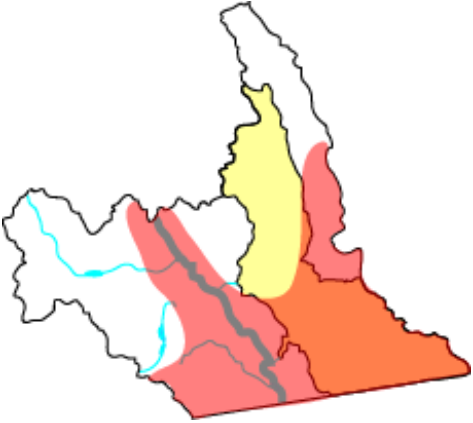


Habitat: In the Kootenays, Wolverine are found near tree line and in tundra habitats where they feed on Caribou and Ground Squirrel (Krebs et al., 1993). Denning sites are predominantly in sub-alpine areas, and in large boulder talus slopes (Cannings et al., 1999).

Threats: Wolverine are very sensitive to human disturbance, especially during breeding season. They are vulnerable to habitat alteration and fragmentation due to roads.

Distribution: Wolverine occur throughout the Cranbrook Forest District.

Badger (*Taxidea taxus*) – Red List

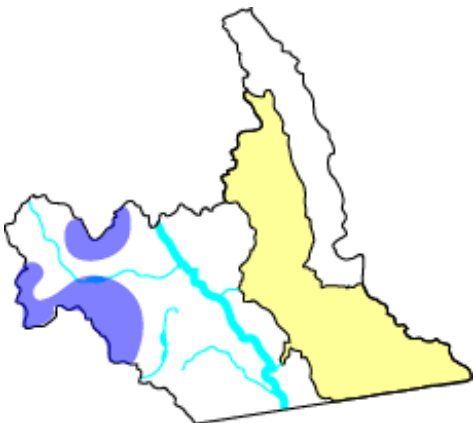


Habitat: Badger are burrowing carnivores that are abundant in non-forested habitats and in open Douglas-fir forests. Their distribution was strongly correlated with abundance of Ground Squirrel holes (Newhouse 1997).

Threats: Badger are sensitive to human disturbance and require large home ranges. They are vulnerable to human encroachment causing loss of habitat and prey, and mortality from road kills and landowners.

Distribution: Badger occur in the southern half of the Cranbrook Forest district, in the Kootenay River Drainage and in the Elk Valley.

Mountain Caribou (*Rangifer tarandus*) – Red List



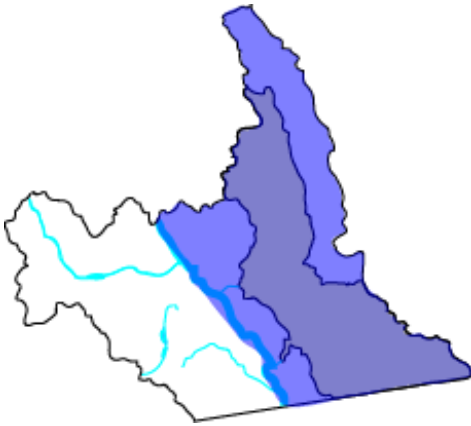
Habitat: Mountain Caribou require large home ranges that maintain various seasonal habitats and connectivity between these habitats (McLellan 1995). Winter sites occur in older forests with high canopy cover, and in subalpine forest with abundant arboreal lichen during late winter. Summer and breeding time take place at higher elevation sites in the ESSF or in the alpine tundra, to avoid predators (Bergerud 1985).

Threats: Loss of old forest habitat and food supply (arboreal lichens) due to forest harvesting. Further fragmentation and isolation of remaining late-seral winter habitat. Caribou are sensitive to disturbance and may be affected by human recreational activities (snow machine use, heli-skiing).

Distribution: Caribou occur in low numbers in the South Purcell Mountains (Kinley 2001).

Bighorn Sheep (*Ovis canadensis canadensis*) – Blue List

◆ Identified Wildlife Species



Habitat: Bighorn Sheep spend the summer in treeless open areas of the alpine tundra, and above 2000 m elevation (Cannings et al. 1999). Foraging sites must provide cliffs or very steep terrain to allow escape from predators (Wilson and Ruff 1999). The sheep move to lower elevation during winter, where foraging occurs on south-facing grasslands, with steep slopes and lighter snowfalls.

Threats : Loss of grassland habitat due to fire suppression and forest encroachment. Bighorn Sheep are also vulnerable to livestock grazing and loss of connectivity between seasonal ranges.

Distribution: Bighorn Sheep occur throughout the east portion of the Cranbrook Forest District (Cannings et al. 1999).

VASCULAR PLANTS

Table 1. Rare vascular plants of the Cranbrook Forest District. Listing in the district: Red (threatened/ endangered) or Blue (vulnerable), habitat and known distribution.

Species found in the Alpine Zone

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Arabis lemonii</i> var. <i>drepanoloba</i>	Lemmon's Rockcress	B	Dry fields, scree and talus in alpine zone	Infrequent in c and s Bc, YT, AB s to UT and NV.	Kershaw et al. (2001) Douglas et al. (1989) Douglas et al. (1998b)
<i>Besseya wyomingensis</i>	Wyoming Kitten-tails	B	Dry open slopes in the alpine zone.	Rare in se BC, s to CO	Kershaw et al. (1998) Douglas et al. (1991)
<i>Bupleurum americanum</i>	American Through-wax	B	Dry open sites	Rare in s BC, known only from Kootenay Pass, n to AK, s to WY	Kershaw et al. (1998) Douglas et al. (1989)
<i>Carex incurviformis</i> var. <i>incurviformis</i>	Curve-spiked Sedge	B	Mesic to dry meadows in upper alpine zone	Rare in se BC AK, YT, MT, ID	Douglas et al. (2001a)
<i>Carex rupestris</i> spp. <i>drummondiana</i>	Drummond's Sedge	B	Dry rocky slopes, scree slopes and meadows in the alpine zone.	Rare in se BC. s to UT, NM and SD.	Douglas et al. (2001a)
<i>Draba densifolia</i>	Nuttall's Draba	B	Alpine gravel and scree slopes elsewhere on turfey tundra and in cold ravines and subalpine fir forests.	Rare in sc BC and AB Waterton area. s to WY, VT and CA.	Kershaw et al. (2001) Douglas et al. (1989)
<i>Erigeron ochroleucus</i> var. <i>scribneri</i>	Buff Daisy	B	Gravelly slopes in Dryas dominated tundra; elsewhere, in exposed mountain sites on limestone and dolomite rock. Alpine	Waterton area. No collections to date in BC (1989)	Kershaw et al. (2001) Douglas et al. (1989)
<i>Erigeron trifidus</i>	Three-lobed Daisy	B	Alpine slopes	Frequent locally in se BC, e to w AB	Kershaw et al. (2001) Douglas et al. (1989)
<i>Minuartia elegans</i>	Northern Sandwort	B	Moist gravelly alpine slopes, elsewhere, on dry, turfey, gravelly or sandy calcareous barrens	Rare in ne BC, n to AK, YT, NT e to w AB.	Kershaw et al. (2001) Douglas et al. (1989)
<i>Papaver pygmaeum</i>	Dwarf Poppy	B	Rocky slopes in alpine	Rare in se BC, e to AB, s to nw MT.	Kershaw et al. (1998)
<i>Pellaea gastonyi</i>	Gastony's Cliff Brake	B	Dry to mesic sites in rocky alpine zone.	Rare in BC.	Douglas et al. (1991)
<i>Phacelia lyallii</i>	Lyall's Phacelia	B	High rocky slopes	Rare in Extreme se BC, AB and ID, MT	Kershaw et al. (1998) Douglas et al. (1990)
<i>Polemonium elegans</i>	Elegant Jacob's-ladder	B	Dry cliffs and scree slopes in the alpine zones	Rare in the Cascades and coast, n CA.	Douglas et al. (1990)

Species found in the Subalpine Zone

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Salix boothii</i>	Booth's Willow	B	Streamsides and meadows in the subalpine zones	Rare in sc BC, e to AB, s to CA and CO	Douglas et al. (1991)

Species found in the Subalpine to Alpine Zone

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Androsace chamaejasme</i> <i>spp. lehmanniana</i>	Sweet-flowered Fairy-candelabra	B	Rocky open slopes subalpine to alpine	Rare, scattered throughout BC east of Cascades, n to NT, e to NS to MO, OH, NJ, NH.	Kershaw et al. (1998) Douglas et al. (1991)
<i>Astragalus vexilliflexus</i> <i>var. vexilliflexus</i>	Bent-flowered Milk-vetch	B	Dry sree, grass knolls in subalpine and alpine	se BC McLatchie, Flathead and Fording River areas	Kershaw et al. (2001) Kershaw et al. (1998) Douglas et al. (1990)
<i>Carex lenticularis</i> <i>var. lenticularis</i>	Lake shore Sedge	R	Marshes and wet meadows in the lowland zone, streamsides and ponds in the subalpine and alpine zones, and bogs and wet sites in all but the alpine zone.	NT to NF, eastern states	Douglas et al. (2001a)
<i>Carex paysonis</i>	Paysons' Sedge	B	Moist meadows and rocky slopes in the subalpine and alpine zones.	Rare in se BC. s to UT, NV and e OR	Douglas et al. (2001a)
<i>Minuartia austromontana</i>	Rocky Mountain Sandwort	B	Dry slopes subalpine to alpine	Rare in extreme se BC, e to AB, s to WY, UT and NE OR.	Kershaw et al. (1998) Kershaw et al. (2001) Douglas et al. (1989)
<i>Senecio conterminus</i>	High Alpine Butterweed	B	Rocky slopes subalpine to alpine	Locally frequent in extreme se BC. e to AB, s to MT.	Kershaw et al. (1998) Douglas et al. (1989)
<i>Senecio megacephalus</i>	Large-headed Groundsel	B	Rocky alpine and subalpine slopes	Few localities near Waterton, infrequent in se BC, e to AB, s to ID and MT.	Kershaw et al. (2001) Douglas et al. (1989)

Species found in the Montane to Alpine Zone

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Carex geyeri</i>	Geyer's Sedge	B	Dry meadows and open forest in the montane to alpine zones	Rare in se BC, s to UT, NV and CA.	Douglas et al. (2001a)
<i>Claytonia megarhiza</i> <i>var. megarhiza</i>	Alpine Springbeauty	B	Rocky sites in upper montane to alpine in BC	Rare in se BC, known only from Goat Mountain. e to AB, s to CO, UT, NM	Kershaw et al. (1998) Douglas et al. (1990)
<i>Epilobium leptocarpum</i>	Small Flowered Willowherb	B	Moist open stoney slopes montane to alpine	Rare throughout BC, n to AK, s to MT, ID and OR	Kershaw et al. (2001) Douglas et al. (1990)
<i>Gentiana affinis</i>	Prairie Gentian	B	Grows on moist open sites in foothills, montane and alpine	Rare in se BC, s to AZ, CA, NM	Kershaw et al. (1998) Douglas et al. (1990)
<i>Gentiana calycosa</i>	Mountain Bog Gentian	B	Wet to moist open sites montane to alpine	Rare in se BC, s to ID, MT	Kershaw et al. (1998) Douglas et al. (1990)
<i>Lewisia triphylla</i>	Three-leafed Lewisia	B	Moist, sandy, snowbed sites from the montane to alpine zone.	Rare in se BC, s to MT, CO, CA	Douglas et al. (1990)

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Plantago canescens</i>	Arctic Plantain	B	Grassy and gravelly slopes. on non-alkaline soils; elsewhere, on steep open slopes, riverbanks, eskers and scree slopes. Montane to sub alpine	Rare in se BC, AB, n to AK, YT.	Kershaw et al. (2001) Douglas et al. (1990)
<i>Townsendia parryi</i>	Parry's Townsendia	R	Rocky slopes in montane, sub alpine and alpine zones	Rare, known from several locations in se BC. e to AB s to CO and OR.	Kershaw et al. (1998) Douglas et al. (1989)

Species found in the Montane to Subalpine Zone

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Epilobium saximontanum</i>	Rocky Mountain Willowherb	B	Moist montane slopes and subalpine meadows and on stream banks. known only from Crowsnest Pass.	AB, s to e OR, CA, NM e to PQ, NF	Kershaw et al. (1998) Douglas et al. (1990)
<i>Eriogonum androsaceum</i>	Androsace Buckwheat	B	Dry open sites in the montane to subalpine zones	Rare in sc and se BC, e to AB s to n MT.	Douglas et al. (1990)
<i>Lomatium sandbergii</i>	Sandberg's Desert Parsley	B	Dry sites in upper montane and subalpine zones.	Rare in extreme se BC. e to AB s to MT and ID.	Douglas et al. (1989)
<i>Melica specabilis</i>	Purple Oniongrass	B	Wet to dry meadows and open forests in the montane subalpine zones.	Rare in BC more common in western states	Douglas et al. (2001b)
<i>Potentilla diversifolia var. perdissecta</i>	Diverse-leafed Cinquefoil	B	Mesic meadows and rock outcrops in the montane to subalpine zones	Rare in sc and se BC	Kershaw et al. (1998) Douglas et al. (1991) Douglas et al. (1999b)
<i>Potentilla nivea var. pentaphylla</i>	Five-leafed Cinquefoil	B	Mesic meadows and rock outcrops in the montane to subalpine zones.	Rare in s BC east of the Cascades	Kershaw et al. (1998) Douglas et al. (1991) Douglas et al. (1999b)
<i>Potentilla ovina var ovina</i>	Sheep Cinquefoil	B	Moist open areas in the montane to subalpine zones.	Rare in extreme sc and se BC. e to SK, s to CO, NM, CA	Douglas et al. (1991) Douglas et al. (1999b)
<i>Valeriana edulis ssp. edulis</i>	Edible Valerian	B	It grows in moist to slightly dry sites in montane to sub alpine zones.	Rare in sc and e BC. s to Mexico	Kershaw et al. (1998) Douglas et al. (1991)

Species found in the Montane Zone

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Agastache foeniculum</i>	Giant Hyssop	R	Meadows and thickets in the montane zone	Rare in central and e BC, e to ON, s to CO	Kershaw et al. (1998) Douglas et al. (1990)
<i>Anemone canadensis</i>	Canada Anemone	B	Moist meadows and forest openings in montane zone	Rare, scattered throughout BC east of Cascades, n to NT, e to Ns s to MO, OH, NJ, NH.	Douglas et al. (1991)
<i>Astragalus drummondii</i>	Drummonds Milk-vetch	B	Dry open, grassy slopes in montane	Rare in se BC, Known only from Natal Ridge, s to KS, UT, NM	Douglas et al. (1990) Douglas et al. (1999a)
<i>Botrychium crenulatum</i>	Dainty Moonwort	B	They grow in mountain meadows, grassy areas and moist parkland.	Rare in ne and se BC. Known in Flathead River, s to WY AZ CA	Vitt et al. (1998) Douglas et al. (2000)

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Botrychium simplex</i>	Least Moonwort	B	No information found on this species.	There are 13 species of this genus that occur in northwestern North America.	Vitt et al. (1998) Douglas et al. (2000)
<i>Brickellia grandiflora</i>	Large-flowered Brickellia	R	Eroded slopes and rocky banks. Montane	Rare in se BC known only from Flathead Valley.	Kershaw et al. (2001) Douglas et al. (1994)
<i>Castilleja cusickii</i>	Cusick's Paintbrush	R	Grasslands and meadows in montane zone	Infrequent in sc and se BC. e to sw AB, s to WY, ID, NV	Kershaw et al. (2001) Douglas et al. (1991)
<i>Cirsium scariosum</i>	Elk Thistle	B	Moist woodland, often on disturbed sites, elsewhere on rocky sites and clearings in forests in montane zone.	Rare in se BC e to AB, ID and MT	Kershaw et al. (2001) Kershaw et al. (1998) Douglas et al. (1989)
<i>Eriogonum pauciflorum</i> var. <i>pauciflorum</i>	Few-flowered Buckwheat	R	Dry rocky open slopes in montane	Rare in se BC e to SK, s to SD, MT, WY, NV. Known only from south Kootenay Pass.	Kershaw et al. (2001) Douglas et al. (1990) Douglas et al. (1999b)
<i>Gayophytum humile</i>	Dwarf Groundsmoke	B	Dry sandy open areas in the montane zone.	Rare in sc BC, known only at Manning Park.	Douglas et al. (1990)
<i>Impatiens ecalcarata</i>	Spurless Touch-me-not	B	Moist forests in the montane zone.	Rare in BC, s to MT and n OR.	Douglas et al. (1989)
<i>Lupinus arbustus</i> ssp. <i>pseudoparviflorus</i>	Montana Lupine	R	Moist sites in the montane zone.	Rare in extreme se BC, s to MT and CA	Douglas et al. (1990)
<i>Prenanthes sagittata</i>	Arrow-leafed Rattlesnake Root	R	Moist often shady sites	Extreme sw AB Waterton area. Not on BC list.	Kershaw et al. (2001) Douglas et al. (1989)
<i>Senecio hydrophiloides</i>	Sweet-marsh Butterweed	R	Swamps, often alkaline sites in montane zone.	Rare in se BC Only known at Kootenay River near US border. s to WA and CO.	Douglas et al. (1989)

Species found in the Montane and Steppe Zones

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Apocynum x floribundum</i>	Western Dogbane	B	Mesic to dry roadsides in steppe and montane	Rare in s BC East of the Cascades. s to VA, TN, NM, TX	Douglas et al. (1998a)
<i>Astragalus crassicaerpus</i>	Ground Plum	B	Dry sites in steppe vegetation and montane zones.	Rare in se BC. Known only in Crowsnest Pass area. s to TX, MT AZ and NM	Douglas et al. (1990)
<i>Astragalus microcystis</i>	Least Bladder Milk-vetch	R	Dry sites in steppe vegetation and lower montane zones.	Known only from a few collections in extreme se BC. s to ID, MT, WA	Douglas et al. (1990)
<i>Carex xerantica</i>	Dry land Sedge	B	Dry slopes and open forests in the steppe and montane zones.	Rare in BC e to MB, s to MT and NB	Douglas et al. (2001a)
<i>Gayophytum racemosum</i>	Racemed Groundsmoke	R	Dry grasslands and forests in the steppe and lower montane zone	Rare in se BC Known at Marysville, s to CO, MT	Kershaw et al. (2001) Douglas et al. (1990) Douglas et al. (1999a)
<i>Gayophytum ramosissimum</i>	Hairstem Groundsmoke	R	Dry open places in the steppe vegetation and lower montane zone.	Rare in s BC. East of the Cascades. s to CA, AB, ID MT and CO	Douglas et al. (1990)

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Glycyrrhiza lepidota</i>	Wild Licorice	R	Rich well drained sites often on disturbed ground and along streams, steppe and lower montane.	Rare in extreme se BC, AB to NM	Kershaw et al. (1998) Douglas et al. (1990)
<i>Hedeoma hispida</i>	Rough Pennyroyal	R	Dry fields and grasslands in the steppe and montane zone.	Rare in se BC e to PQ, s to MT CO	Douglas et al. (1999a)
<i>Juncus regelii</i>	Regel's Rush	B	Wet streambanks and marshes in the steppe and montane zones	Rare in BC, s to WY, UT, NV and CA	Douglas et al. (2001a) Douglas et al. (1994)
<i>Lathyrus bijugatus</i>	Pinewood Peavine	R	Dry sites in the steppe vegetation and lower montane zone.	Rare, Known only from Elko, s to ID and e WA.	Douglas et al. (1990)
<i>Lupinus arbustus ssp. neolaxiflorus</i>	Spurred Lupine	R	Dry sites in the steppe vegetation and lower montane zone.	Rare in extreme se BC, s to MT and CA	Douglas et al. (1990)
<i>Lupinus bingenensis var. subsaccatus (aka Lupinus sulphureus)</i>	Sulpher Lupine	R	Dry sites in the steppe vegetation and lower montane zone.	Rare in sc BC, near Kamloops	Douglas et al. (1990)
<i>Orobanche ludoviciana ssp. ludoviciana</i>	Suskdorf's Broomrape	R	Parasite of Aster sp. Grows in grass, shrubs in steppe and montane.	Rare in se BC. Known only from Bull River. e to MB, s to IN, ND, NM	Douglas et al. (1999b)
<i>Polygonum douglasii ssp. austinae</i>	Austin's Knotweed	B	Dry sites in the steppe vegetation and lower montane zone.	Rare in se BC Known only from the South Kootenay Pass	Douglas et al. (1990)
<i>Polygonum douglasii ssp. engelmannii</i>	Engelmann's Knotweed	B	Moist to dry sites in the steppe vegetation and lower montane zone.	Rare in se BC, e to sw AB, s to WY and CO.	Douglas et al. (1990)
<i>Scolochloa festucacea</i>	Sprangle-top	R	Ponds, marshes, lakeshores and streambanks in the steppe and montane zones.	Rare in ec, sc and se BC. KS, MT, ID, OR.	Douglas et al. (2001b) Douglas et al. (1994)
<i>Sphenopholis intermedia</i>	Prairie Wedgegrass	R	Moist meadows and streambanks, shallow ponds and hot springs in the steppe and montane zones.	Rare in sc and se BC and western states.	Douglas et al. (2001b) Douglas et al. (1994)
<i>Sphenopholis obtusata</i>	Prairie Wedgegrass	R	Moist meadows and streambanks, shallow ponds and hot springs in the steppe and montane zones.	Rare in sc and se BC and western states.	Douglas et al. (2001b) Douglas et al. (1994)
<i>Stellaria obtusa</i>	Blunt-sepaled Starwort	B	Damp meadows, on lakeshores and streambanks. Steppe and montane	Rare e of Cascades in s BC. CO, CA, e to AB	Kershaw et al. (2001) Douglas et al. (1989)
<i>Thermopsis rhombiflora var. rhombiflora</i>	Prairie Golden Bean	R	Mesic sites in the steppe vegetation and lower montane zone.	Rare in se BC, e to MB, s to NB, ND and CO	Kershaw et al. (1998) Douglas et al. (1990) Douglas et al. (1999a)

Species found in the Steppe to Alpine Zone

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Allium validum</i>	Swamp Onion	B	Moist meadows in the steppe to alpine zones.	Rare in se BC, s to ID, NV, CA	Douglas et al. (2001a)
<i>Minuartia nuttallii ssp. nuttallii</i>	Nuttall's Sandwort	B	Dry open sites in steppe to alpine zones.	Infrequent in s BC, e to AB, s to WY, UT and OR.	Douglas et al. (1989)

Species found in the Steppe to Subalpine Zone

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Delphinium bicolor</i> ssp. <i>bicolor</i>	Montana Larkspur	B	Dry open or woody slopes. Plains to subalpine Dry sites in steppe vegetation to sub alpine zones.	Rare in se BC. s to WY	Kershaw et al. (1998) Douglas et al. (1991)
<i>Silene drummondii</i> var. <i>drummondii</i>	Drummond's Campion	B	Dry sites in the steppe vegetation and subalpine zones	Rare at scattered locations throughout BC interior. e to MB, s to NE,CO AZ	Kershaw et al. (1998) Douglas et al. (1989)

Species found in the Steppe Zone

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Cryptantha ambigua</i>	Obscure Cryptantha	R	Dry grasslands and scrubs in steppe zone.	Rare in sc and se BC. s to CO NV CA	Douglas et al. (1998b)
<i>Gaura coccinea</i>	Scarlet Gaura	R	Dry sagebrush slopes in the steppe vegetation zone	Rare in BC east of the Cascades. s to Mexico and e to MB.	Douglas et al. (1990)
<i>Linanthus septentrionalis</i>	Northern Linanthus	B	Dry hillsides and plains; elsewhere, in forest openings and dry meadows steppe zone	Rare in sc and se BC, AB to CA Waterton Park area.	Kershaw et al. (2001) Douglas et al. (1990)
<i>Orobanche corymbosa</i> ssp. <i>mutabilis</i>	Flat-topped Broomrape	R	Parasitic mainly on Artemisia, on dry sites in the steppe vegetation zone.	Rare in sc BC, s to MT, WY, UT and ne CA.	Douglas et al. (1990)
<i>Silene spaldingii</i>	Spalding's Campion	R	Dry sites in the steppe vegetation zone	Rare in se BC, known only from Tobacco Plains, s to MT ID OR	Douglas et al. (1998b)
<i>Bouteloua gracilis</i>	Blue Gamma	R	Dry grasslands in steppe zone	Rare in se and sc BC. Western states of USA	Douglas et al. (2001b) Douglas et al. (1994)

Species found in the Lowland to Montane Zone

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Artemisia ludoviciana</i> var. <i>incompta</i>	Western Mugwort	B	Dry open sites plains to montane	BC, AB to New Mexico. Only known from Nelson, e to ON, IL, s to MX.	Kershaw et al. (1998) Douglas et al. (1989)
<i>Cheilanthes gracillima</i>	Lace Fern	B	Dry rocks and rock crevaces in lowland, steppe and montane	Rare in extreme s BC, s to MT UT CO	Vitt et al. (1998) Douglas et al. (2000)
<i>Eloдея nuttallii</i>	Nuttall's Waterweed	B	Lakes, ponds and streams in the lowland, steppe and montane zones.	Rare in BC, e to ON, MT, ND.	Douglas et al. (2001a)
<i>Epipactis gigantea</i>	Giant Helleborine	B	Moist streambanks, fens, marshes and swamps, and around hotspots in the lowland and montane zones.	Rare in BC, s to TX, NM, AZ and CA	Douglas et al. (2001b)
<i>Helenium autumnale</i> var. <i>grandiflorum</i>	Mountain Sneezeweed	B	Moist to mesic sites in the lowland, steppe vegetation and montane zones.	Rare in BC, n to NT, e to PQ, s to FL,TX, AZ:	Douglas et al. (1989)
<i>Helianthus nuttallii</i> var. <i>nuttallii</i>	Nuttall's Sunflower	R	Wet to moist sites in the lowland and steppe vegetation zones. Moist meadow in foothills to montane.	Rare and widely scattered in BC. e to NF, s to GA, NM.	Kershaw et al. (1998) Douglas et al. (1989)

<i>Cheilanthes gracillima</i>	Common Name	Listing	Habitat	Distribution	Source
<i>Juncus confusus</i>	Colorado Rush	R	Moist meadows and forest openings in the lowlands, steppe and montane zones,	Rare in BC e to NF, s throughout USA.	Douglas et al. (2001a) Douglas et al. (1994)
<i>Lepidium densiflorum</i> var. <i>pubicarpum</i>	Prairie Pepper-grass	R	Dry open slopes and disturbed ground plains to montane	Rare in BC s to NM.	Kershaw et al. (1998) Douglas et al. (1989)
<i>Melica smithii</i>	Smith's Melic	B	Moist forests in the lowlands and montane zones	Rare in BC Eastern Canada and mid west USA	Douglas et al. (2001b)
<i>Physaria didymocarpa</i> var. <i>didymocarpa</i>	Common Twinpod	B	Dry open sites in foothills to montane	BC s to WA. ID WY	Kershaw et al. (1998) Douglas et al. (1989)
<i>Plantago eriopoda</i>	Alkali Plantain	R	Open moist saline or alkiline in plains, foothills and montane	Rare in nw and se BC, AB, s to CO, CA, NM	Kershaw et al. (1998)
<i>Sphaeralcea coccinea</i>	Scarlet Globe-mallow	R	Dry open sites, plains to montane	Rare in sc and se BC to MX	Kershaw et al. (1998) Douglas et al. (1990)
<i>Townsendia hookeri</i>	Hooker's Townsendia	R	Dry open lopes foothills to montane	Rare, known from several locations in se BC, AB to CO, UT, CA	Kershaw et al. (1998) Douglas et al. (1989)
<i>Veronica catenata</i>	Pink Water Speedwell	R	Marshy, muddy or gravelly ground and shallow water, by ponds and streams and in ditches; elsewhere, by springs and spring fed streams. Lowland and montane	Rare in s BC. e to PQ, s to OH, OK, MO, NM CA.	Kershaw et al. (2001) Douglas et al. (1991)
<i>Arnica chamissonis</i> ssp. <i>incana</i>	Meadow Arnica	B	Moist meadows from valley to sub-alpine	Rockies only seven specimens found in BC.	Kershaw et al. (1998) Douglas et al. (1989)
<i>Hypericum scouleri</i> ssp. <i>nortoniae</i>	Western St. John's-wort	B	Moist open slopes, foothills, all zones except alpine.	Common in se BC.	Kershaw et al. (1998) Douglas et al. (1990) Douglas et al. (1998b)

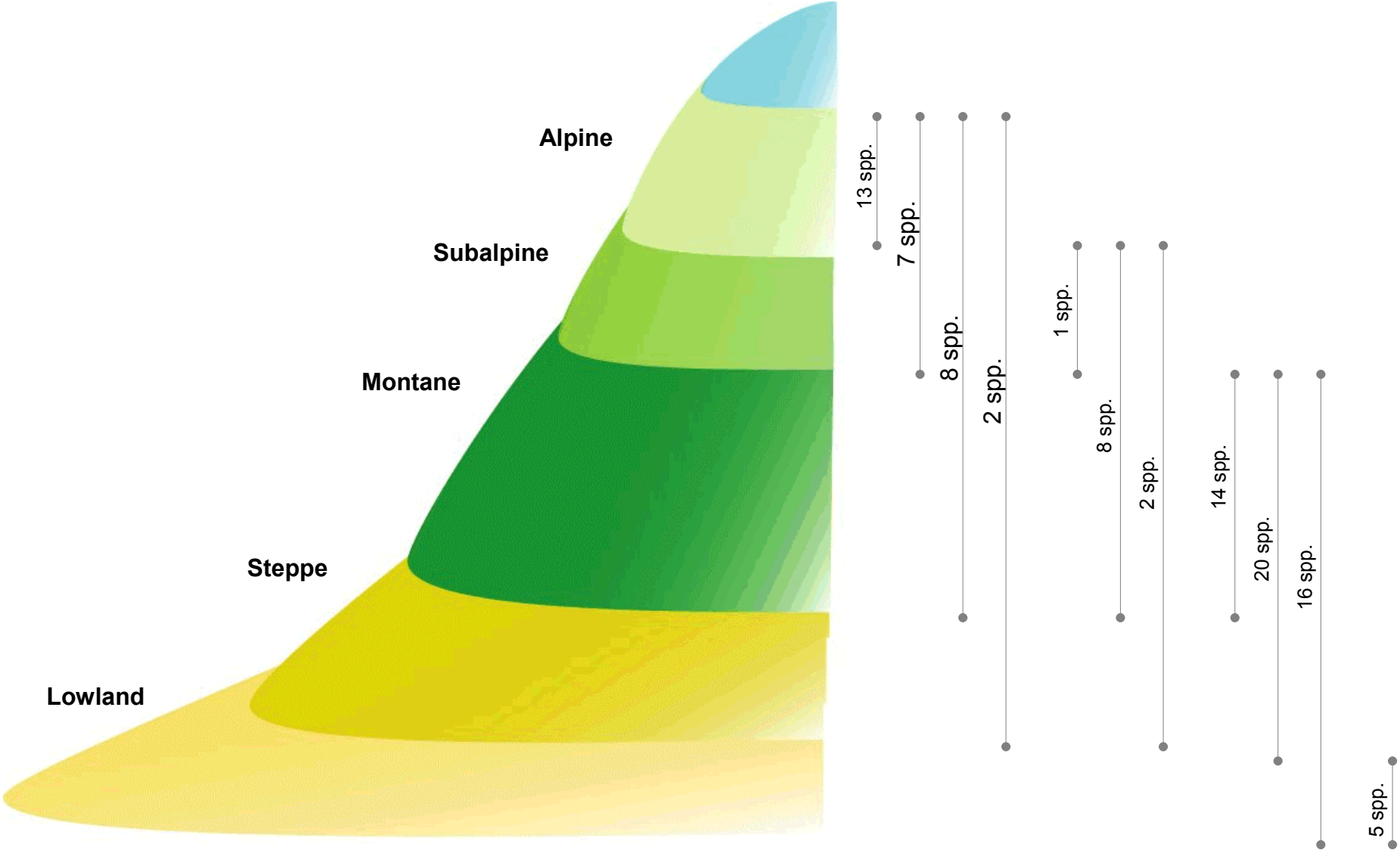
Species found in the Lowland Zone

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Atriplex argentea</i> ssp. <i>argentea</i>	Silver Orache	R	Saline flats and disturbed areas. Steppe and montane zone	Rare in sc and se BC. e to MB, s to NM	Douglas et al. (1989)
<i>Epilobium pygmaeum</i> (aka <i>Boisduvalia glabella</i>)	Smooth Spike-primrose	R	Moist sites in the steppe zone.	Rare to extirpated in s BC east of Cascades, s to SD, NV, CA	Kershaw et al. (2001) Douglas et al. (1999a)
<i>Penstemon nitidus</i> var. <i>nitidus</i>	Shining Penstemon	R	Grassy open slopes at low elevations in BC and AB	Rare in extreme se BC, AB, s to WY	Kershaw et al. (1998) Douglas et al. (1991)
<i>Schizachyrium scoparium</i>	Little Bluestem	R	Prairie grasslands and foothills; elsewhere, usually on calcareous soils. mesic to dry slopes in the steppe and lower montane zones	s AB, rare in BC s to ME, TX, AZ and CA everywhere south.	Kershaw et al. (2001) Douglas et al. (2001b)
<i>Scutellaria angustifolia</i>	Narrow-leafed Skullcap	B	Dry rocky areas on plains and foothills	Rare in s BC, known only from Trail, e to AB, s to MT and UT.	Kershaw et al. (1998) Douglas et al. (1990)

Species found in non defined vegetation zone

Scientific Name	Common Name	Listing	Habitat	Distribution	Source
<i>Glyceria leptostachya</i>	Slender-spike Manna Grass	B	Brackish tidal marshes, swamps, lakeshores, streamsides, and wet meadows in the lowland zones.	AK to CA. Rare in coastal BC.	Douglas et al. (2001b)
<i>Isoetes howellii</i>	Howell's Quillwort	R	Submerged aquatic plant growing in clear nutrient poor lakes and ponds	Limited in se BC near Waterton Park.	Kershaw et al. (2001) Douglas et al. (1991)

Rare vascular plants in the Cranbrook Forest District: distribution among vegetation zones



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