The genus *Festuca* in Canada is represented in all major floristic zones (Aiken and Darbyshire 1990). In the Columbia Basin region it occurs from the dry, open ridge tops in the alpine zone to the moist valley bottoms and the open, dry grasslands.

The name *Festuca* comes from the Latin word *festuc*, which means a stalk or stem (Borror 1960). This could refer to the long culm that holds up the flowerhead. Aiken and Darbyshire (1990) refer to the origin of the word *Festuca* as being from Latin for weedy grass. This certainly describes the way some people feel about certain introduced *Festuca* species. In Canada, fescues have a long history of introduction as an important part of seed mixtures for rangeland grasses. Species such as *Festuca trachyphylla* and cultivars were seeded because of their resistance to frost and drought. Other introduced species were *Festuca arundinacea*, *F. pratensis,* and some *F. rubra* types. The *F. rubra* complex has some members that are introduced and some species that are native, and these species have hybridized. In the West, native species such as *F. occidentalis*, *F. campestris*, *F. saximontana,* and *F. idahoensis* are important forage species. Naturally occurring hybrids as well as artificial hybrids from breeding programs have compounded the taxonomy of the fescues.

All fescues are perennial, but there is a closely related genus—*Vulpia*—that looks like fescue but has an annual habit. At one time, *Vulpia* was classified within *Festuca.* The annual habit is the main character for differentiating the two genera, and this necessitates looking at the root.

The most recent and comprehensive study of the *Festuca* grasses of North America is available on interactive CD-Rom from the Canadian Museum of Nature. This is an update of the Fescue Grasses of Canada by Aiken and Darbyshire (1990). For a detailed account on British Columbia fescues, Douglas et al. (1994) contains keys to the B.C species.

***Festuca*—Adapted from Douglas et al. (1994)**

1a. Flowerhead appears as a dense one-sided spike; spikelet branches very short; stem densely hairy below the flowerhead . . . . . *Festuca baffinensis*
1b. Flowerheads not as above but with branches. 2
2a. Leaf sheaths with auricles. 3
3a. Auricles with scattered hairs along the edge; stems coarse and reed-like. . . . . *Festuca arundinacea*
3b. Auricles without scattered hairs . . . . . *Festuca pratensis*
2b. Leaf sheaths without auricles. 4
4a. Rhizomes present (may be short); leaf sheaths reddish and fibrous. . . . . *Fescue rubra*
4b. Rhizomes absent; leaf sheaths not shredding into fibres. 5
5a. Lemma awns 1/2 as long to longer than lemma body 6
6a. Leaf blades flat or loosely inrolled (3–8 mm wide). . . . . *Festuca subuliflora*
6b. Leaf blades mostly inrolled (less than 2 mm wide) 7
7a. Spikelet axis (rachilla) visible between flowers; glumes not sharply pointed but with more rounded tip, with some hairs along the edge . . . . . *Festuca idahoensis*

7b. Spikelet axis (rachilla) not visible between flowers; glumes sharply pointed, no hairs along the edge. . . . . *Festuca occidentalis*

5b. Lemma awns less than 1/2 as long as lemma body. 8

8a. Stem nodes not extended from leaf sheaths; dead sheaths breaking off at collars and leaving sheaths than remain for years; living sheaths usually purple . . . . . *Festuca campestris*

8b. Stem nodes extended from leaf sheaths 9

9a. Glumes keeled or rounded. 10

10a. Dead leaf sheaths not prominent at base of sheaths but split into long fibres; plant of subalpine/alpine . . . . . *Festuca viridula*

10b. Dead leaf sheaths prominent and not splitting into long fibres; rare introduction at lower elevations . . . . . *Festuca trachyphylla*

9b. Glumes not keeled. 11

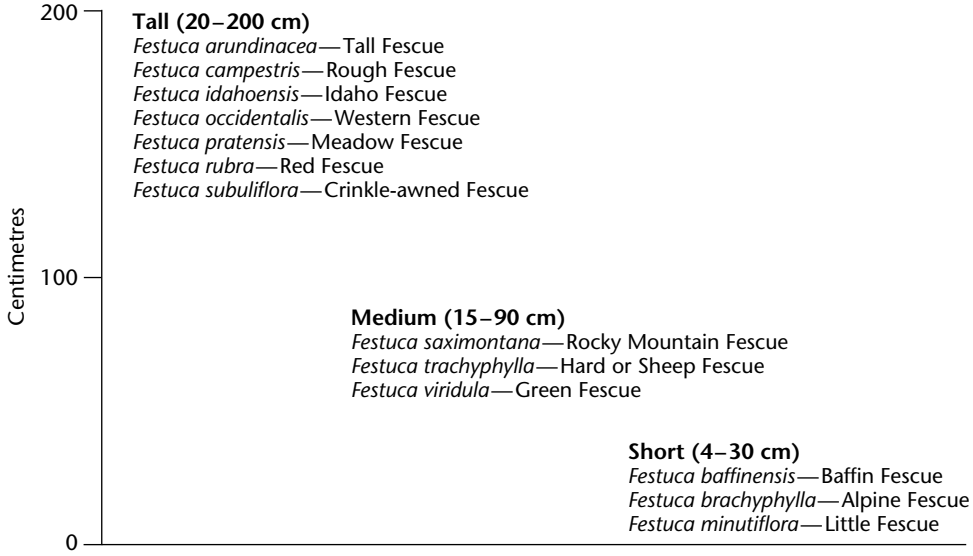
11a. Leaf blades rounded in cross-section. . . . . *Festuca saximontana*

11b. Leaf blades angular in cross-section. 12

12a. Leaves fine, almost hair-like; dead sheaths not prominent at base; living sheaths open to base of plant . . . . . *Festuca minutiflora*

12b. Leaves narrow but not hair-like; dead sheaths more or less prominent at base of plants and splitting; living sheaths closed for 1/2 their length . . . . . *Festuca brachyphylla*

Heights of *Festuca* species



Festuca arundinacea Schreb.
Tall Fescue

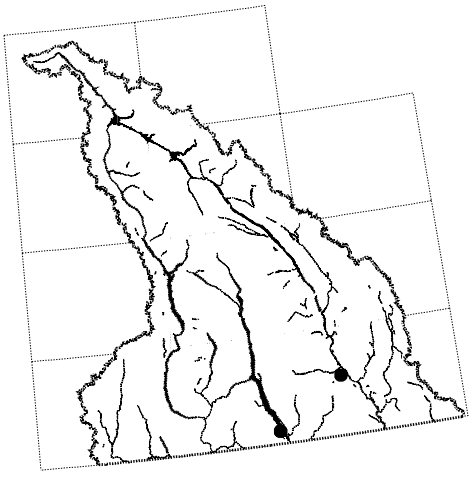
Plant: *Festuca arundinacea* is an introduced species that grows 60–200 cm tall. It is a tufted, dark green perennial with no rhizome in specimens observed in Canada, but U.S. specimens may have a rhizome. The flowerhead is relatively long and narrow.

Leaves and Stem: The stem is stout and almost reed-like, with exposed nodes and smooth internodes. The dead sheaths remain at the base of the plant and are smooth to slightly roughened. The leaves are flat, with coarse ridges, and are about 3–12 mm wide. The auricles are obvious and claw-like, with dense hair along the margins. The tiny ligules are ragged-edged and scarcely 2 mm high.

Flowerhead and Flowers: The flowerhead is narrow, 10–35 cm long, and well-branched, and may be somewhat droopy at maturity. Young flowerheads look somewhat spike-like at a distance. The lowest node on the flowerhead has two to three branches. The glumes are much shorter than the spikelets and are smooth and rounded on the back. The lemma is rounded, smooth or rough to the touch, with a 0.3- to 1.5-mm-long awn at the tip of the lemma.

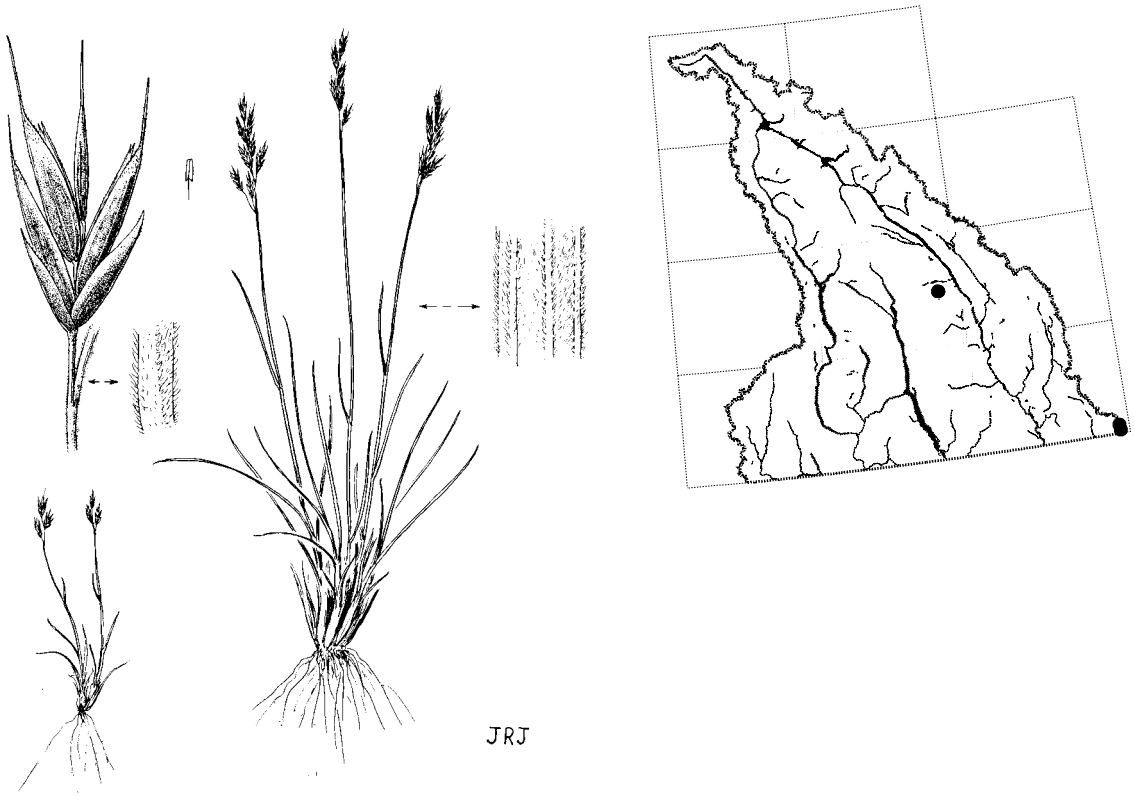
Habitat: Tall Fescue was first introduced from Europe and Asia in 1870, because it is a robust forage that can survive the winter. Since then it has been used for land stabilization and turf. It grows on beaches, roadsides, disturbed areas, and moist meadows, and is widespread in the Columbia Basin region around the Cranbrook and Creston areas.

Similar Species: Tall Fescue is similar to Meadow Fescue (*Festuca pratensis*) in that they are both flat-leaved. Tall Fescue can be distinguished by the hairs on the margins of the auricles, and the leaves are wider and coarser than those of Meadow Fescue (3–12 mm compared to 2–7 mm). These leaves form a more robust tuft in Tall Fescue and the foliage remains fresh after first frost, whereas Meadow Fescue withers quickly. In addition, Tall Fescue has pale, straw-coloured, closed leaf sheaths. Tall Fescue may be confused with the larger members of *Bromus* (bromes), but by looking closely you will notice that the awns of the lemma of Tall Fescue extend from the tip, whereas in *Bromus* they extend from a point between two teeth at the tip.



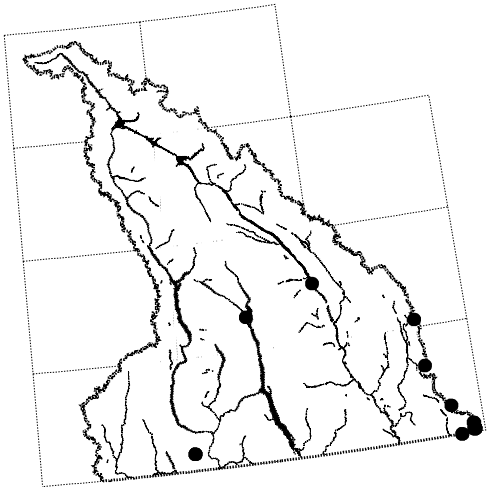
Festuca baffinensis Polunin
Baffin Fescue

Plant: *Festuca baffinensis* is a native species that grows 6–30 cm tall. It is a densely tufted bluish green perennial with no rhizomes. The flowerhead is very compact and dense and appears to have flowers on one side of the stem.
Leaves and Stem: The stem can have exposed nodes or not, but the most easily distinguished character is the densely hairy upper internode. These thick hairs will be obvious when looking with a hand lens at the base of the flowerhead. There are dead sheaths visible at the base of the stem or culm, and these sheaths decay into fibres (splitting between the veins). The living sheaths are open to 1/2 the length to the next node. The obvious auricle consists of an erect swelling. The ligule is 0.1–0.3 mm long, ragged, and blunt. The bristle-like leaves are 0.25–0.5 mm wide, inrolled, and stiff.
Flowerhead and Flowers: The purplish flowerhead is 1.5–4 cm long and brush-like, in that the flowers appear to be on one side of the stem, with the branchlets pointing upward. The glumes are unequal, much shorter than the spikelets, and rounded on the back rather than keeled. The glumes can be smooth or rough to the touch. The lemma is rounded on the back and feels rough or harsh to the touch toward the tip of the lemma. Elsewhere the lemma appears glossy. The awn is 0.8–2.6 mm long.
Habitat: Baffin Fescue occurs in Arctic/alpine sites and its geographic range circles the pole. In the Columbia Basin region it occurs at Mount Festubert, Akamina Ridge, and Paradise Mine.
Similar Species: Baffin Fescue resembles Alpine Fescue (*Festuca brachyphylla*), except that Baffin Fescue has a dark one-sided flowerhead, and is very hairy just below the flowerhead—especially at the node.



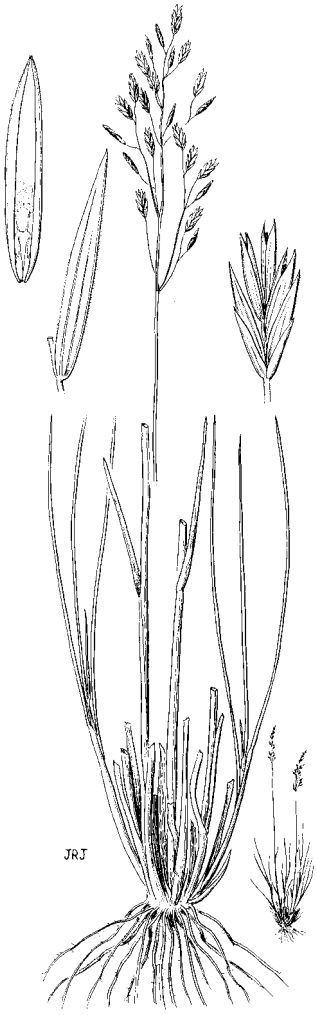
Festuca brachyphylla Schult. and Schult. fil.
Alpine Fescue

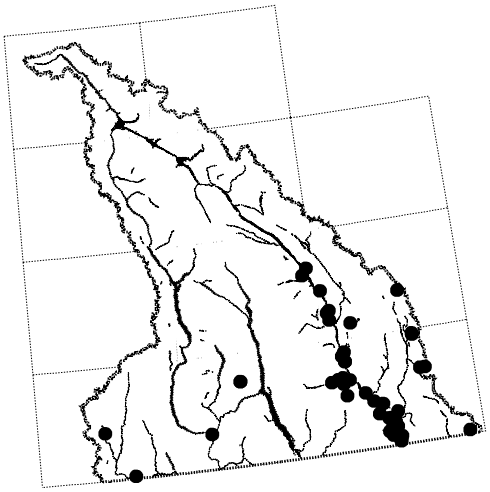
Plant: *Festuca brachyphylla* is a native species that grows 5–30 cm tall. It is a bluish to bright green perennial that has a loose or a dense habit, depending on the whether the roots are confined by rocks. The flowerhead is spike-like but not as dense as that of Baffin Fescue.
Leaves and Stem: The stem can have a purplish tinge at the base and may or may not have exposed nodes. The internodes are hairless to sparsely hairy. The dead sheaths remain at the base and the live sheaths are open at least 1/2 their length and are slightly hairy. The auricle is an erect swelling, and there is a ligule that consists only of tiny hairs. Leaf blades are 0.35–0.65 mm wide, stiff, bristle-like, and smooth on the back.
Flowerhead and Flowers: The flowerhead is 1.4–4 cm high and spike-like, and stands erect. Its colour is either green or purple. The short branchlets have small hairs. Glumes are much smaller than the spikelets and are rounded across the back. At the glume tip there may be small hairs but there are no hairs over the back. Lemmas are rounded across the back and may be smooth or rough-hairy at the tip. The awn is 1.2–3 mm long.
Habitat: Alpine Fescue grows on dry slopes in the alpine zone and occurs throughout the Arctic and subarctic areas of the Northern Hemisphere. In the Columbia Basin region it grows at Paradise Mine, Ashman Lake, Mount Festubert, and Old Glory Mountain.
Similar Species: Aiken and Darbyshire (1990) state that there are three other species in this complex that are closely related and look very similar to Alpine Fescue. They are Baffin Fescue, Little Fescue (*F. minutiflora*), and Rocky Mountain Fescue (*F. saximontana*). In Douglas et al. (1994), Rocky Mountain Fescue is separated from the complex by having rounded leaves in cross-section, whereas the other three have angular blades. Baffin Fescue is distinguished from Alpine Fescue by having hairiness near the flowerhead on the stem. To see the differences between Alpine Fescue and Little Fescue check the description under Little Fescue (*F. minutiflora*).



Festuca campestris Rydb.
Rough Fescue

Plant: *Festuca campestris* is a native species that grows 30–140 cm tall. It is a tufted, bluish grey-green perennial. This species rarely has rhizomes, but they do occur on occasion. The flowerhead has stiffly spreading branches and does not droop or nod.
Leaves and Stem: Rough Fescue is a bunchgrass and this form has both living and dead leaf sheaths at the base. The dead leaf sheaths break off at the collars and leave sheaths that persist for several years. The living sheaths are bright purple at the base and hairy with short hairs. The auricle is a distinct swelling. The ligule is 0.1–0.5 mm long and has a hairy appearance. The erect and stiff leaves tend to be inrolled or flat. When the leaves are flat, they can be as wide as 1.2–3.2 mm The underside of the leaf blade is rough.
Flowerhead and Flowers: The flowerhead has stiffly spreading branches that are 4.4–7 cm long. Glumes are shorter than the spikelets and smooth or slightly rough to the touch. The lemma is rough textured but the veins are not prominent. The awn is 0.5–1.5 mm long.
Habitat: Rough Fescue grows in dry to moist meadows and forest openings in the montane and subalpine zones. It is the dominant component in the Bluebunch Wheatgrass association of grasslands. In the Columbia Basin region it is a widespread fescue species.
Similar Species: Pavlick and Looman (1984) in the study of Rough Fescues in Canada and the adjacent United States, determined that there were three very similar species of Rough Fescues in western Canada and that there is no overlap in their ranges. Northern Rough Fescue (*F. altaica*), differs from Rough Fescue by having weak, drooping, deflexed branchlets, and it grows in alpine, subalpine, and boreal sites north of the Columbia Basin region. Rough Fescue, on the other hand, grows in the Columbia Basin region and has rigid, not drooping, branchlets but is somewhat open in the appearance of the flowerhead. Rough Fescue is also similar to Hall's Fescue (*F. hallii*), but Hall's Fescue occurs only east of the Rockies, and it has an erect flowerhead and fewer spikelets. Stem nodes are not visible in any species of the Rough Fescue complex, and this character distinguishes Rough Fescue, Altai Fescue (*F. altaica*), and Hall's Fescue from Rocky Mountain Fescue and Idaho Fescue (*F. idahoensis*).

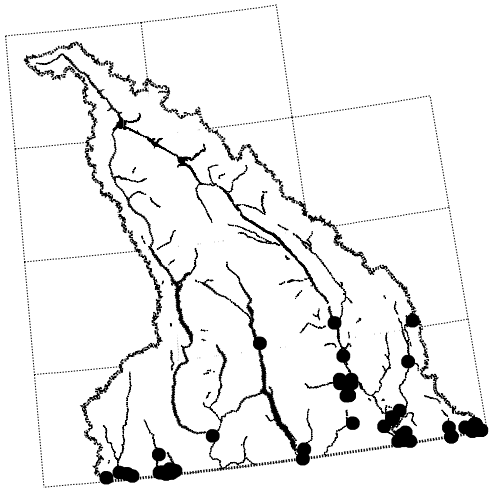




Festuca idahoensis Elmer
Idaho Fescue

Plant: *Festuca idahoensis* is a native species that grows 30–100 cm tall. It is a clump- or bunch-forming bluish or yellowish green perennial with one to several narrow to partly open flowerheads.
Leaves and Stem: The stem has exposed nodes, and the internodes are smooth with scattered tiny bumps. The dead sheaths remain at the base and living sheaths may or may not have purplish pigments. Sheaths are open and there are no auricles. The smooth to slightly rough leaves occur mostly at the base. The leaves are 0.35–0.6 mm wide, bristle-like, folded, and inrolled, and reach 10 cm long. The ligule is 0.3–0.6 mm long and higher at the sides than in the middle, and has a fringed margin.

Flowerhead and Flowers: The flowerhead is 7–15 cm long and has erect to slightly diverging branches. The spikelets are mostly five- to seven-flowered and spread out along the axis. The glumes are much shorter than the spikelets, and one of the two narrow glumes is about 1/2 the size of the other. The glume tips are rounded. The 4- to 6.5-mm-long rounded lemma bears a stout, erect, 2- to 5-mm-long awn.
Habitat: Idaho Fescue occurs in meadows, dry and rocky slopes, and balds. It is widespread throughout the Columbia Basin region. Idaho Fescue is an important rangeland plant, and in the bunchgrass habitat is codominant with Bluebunch Wheatgrass (*Pseudoroegneria spicata*) (=*Agropyron spicatum*) and Rough Fescue.
Similar Species: There has been a great deal of debate as to whether Idaho Fescue is distinct from Western Fescue (*Festuca occidentalis*), but they do have observable differences. Idaho Fescue has a distinct bunchgrass form, whereas Western Fescue has a loose tuft habit. The flowerheads of Idaho Fescue are not as distinctly spread, and the awns are shorter than those of Western Fescue (2–5 mm compared to 5–10 mm long). Rocky Mountain Fescue (*Festuca saximontana*) is similar to Idaho Fescue, but differs by the size and shape of the flowerhead and the length of lemma awns. However, vegetative or immature specimens may be difficult to distinguish.

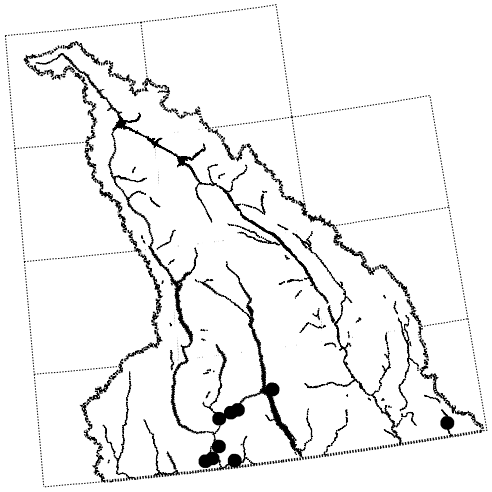


Festuca minutiflora Rydb.
Little Fescue

Plant: *Festuca minutiflora* is a native species that grows 4–30 cm tall. It is a delicate, bluish green, loosely to densely tufted perennial. The flowerhead is small with short branches.
Leaves and Stem: The smooth stem rarely has exposed nodes and there are no obvious dead sheaths around the base of the plant. The living sheaths are mostly bluish green or rarely purple. They are open and smooth, and have a midvein. The auricle is an erect swelling and the ligule is 0.1–0.3 mm high. Leaf blades are bristle-like and scarcely 1 mm wide, and appear tightly in-rolled.
Flowerhead and Flowers: The narrow flowerhead is only 1–5 cm long and has short branchlets. The spikelets are 2.5–5 mm long and have two to five flowers. The glumes are much shorter than the spikelets, rounded on the back, and rough-textured towards the glume tip. Scattered hairs occur along the margins of the glume. The lemma is abruptly and sharply pointed and rough at the tip of the 0.7- to 1.5-mm-long awn.
Habitat: Little Fescue grows scattered on dry, stony slopes in the alpine zone and in meadows in sub-alpine openings. According to Aiken and Darbyshire (1990) it occurs along the Rocky Mountain corridor in the Columbia Basin region.
Similar Species: Little Fescue resembles Alpine Fescue, but has smaller spikelets, more abruptly pointed glumes, and shorter awns.

Festuca occidentalis Hook.
Western Fescue

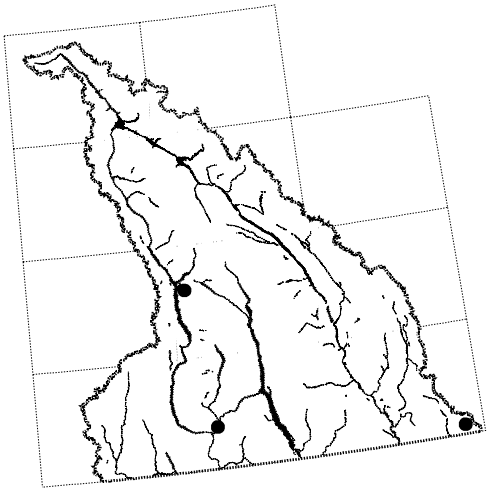
Plant: *Festuca occidentalis* is a native species that grows 25–110 cm tall. It is a tuft-forming perennial with hair-like leaves, a few slender stems, and an open flowerhead.
Leaves and Stem: Western Fescue grows from a large clump of hair-like basal leaves. The sheaths are open and smooth. The soft inrolled leaf blades scarcely reach 1 mm wide. The ligules are only 0.5 mm long and are fringed at the tip. There is no auricle.
Flowerhead and Flowers: The open-branched flowerhead is 7–20 cm long and usually droops at the tip. At maturity, the branchlets are visible between the spikelets. The two unequal and reflexed branches at the lower node separate Western Fescue from other fescues. Spikelets are three- to five-flowered and crowded close together on the axis. The glumes are unequal and sharply pointed and much shorter than the spikelet. The 5-mm-long membraneous lemma tapers into a 5- to 10-mm-long bendable awn attached at the tip of the lemma.
Habitat: Western Fescue inhabits meadows, open moist woods, edges of woods, rocky slopes, streambanks, and lake margins. In the Columbia Basin region it grows near Cranbrook, Nelson, Rossland, and Fruitvale.
Similar Species: Idaho Fescue is very similar to Western Fescue, but Western Fescue has smaller lemmas (4–6 mm)—some of which are always shorter than the awn. Idaho Fescue has a tight, narrow flowerhead compared to the open flowerhead of Western Fescue, and Idaho Fescue usually favours drier sites than does Western Fescue.



Festuca pratensis Hudson
Meadow Fescue

Plant: *Festuca pratensis* is an introduced species that grows 30–120 cm tall. It is a loosely tufted perennial with or without rhizomes. The flowerhead is tightly closed at maturity, but relatively long.
Leaves and Stem: Nodes are exposed along the smooth stem. The brown, dead sheaths do not remain intact at the base of the plant; instead they split into fibres. Living sheaths are round, open, and hairless and may be purplish. The auricles are clearly visible, claw-like, and smooth. The ligule has a ragged-looking margin and is 0.2–0.4 mm high. Flat, loosely inrolled leaf blades are 2–7 mm wide and droop.

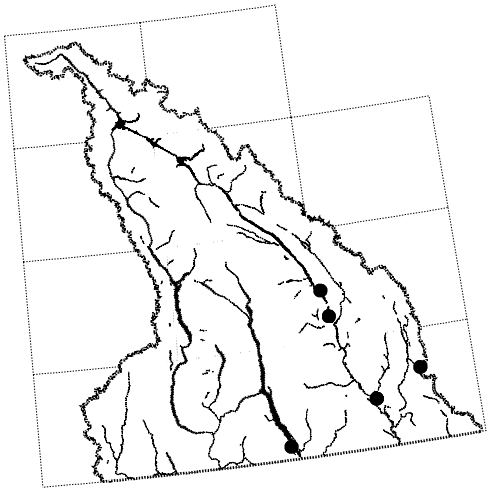
Flowerhead and Flowers: The narrow flowerhead ranges from 6 to 22 cm long. Its lowest node has two branches. Two unequal glumes are much shorter than the spikelet and have rounded backs. They feel slightly rough textured and have wide transparent margins. The lemmas are rounded on the back and smooth to rough near the tip. The veins along the back of the lemma do not reach the tip, ending instead at the transparent margin. The lemma is usually awnless or it may bear a small hair that is less than 2 mm long
Habitat: Although there are no specimens of Meadow Fescue in the Royal British Columbia Museum collections from the Columbia Basin region, we have included a description of the species because it has been documented as occurring in British Columbia by Aiken and Darbyshire (1990), from near Revelstoke and Castlegar, and in the Flathead region of the Columbia Basin region.
Similar Species: Meadow Fescue is one of the parents in a hybrid with Perennial Ryegrass (*Lolium perenne*) (see the *Festulolium* x *Loliaceum* description). The offspring of the cross do not resemble the *Festuca* parent very closely. Meadow Fescue sometimes resembles smaller forms of Tall Fescue. A character useful in distinguishing the two is the dense hair along the margins of the auricle of Tall Fescue.



Festuca rubra L.
Red Fescue

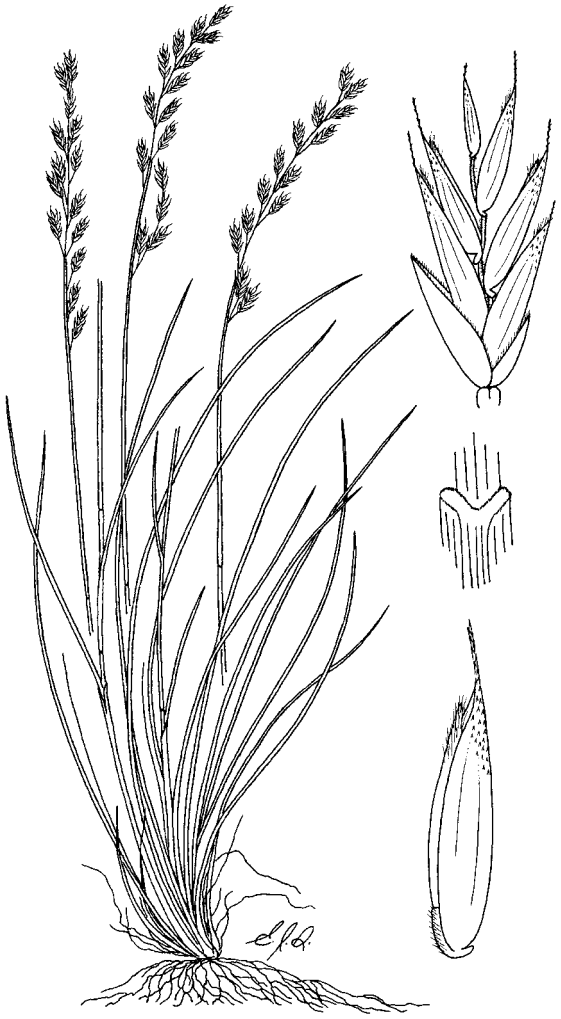
Plant: *Festuca rubra* has native and introduced subspecies. It is a 20- to 100-cm-tall perennial that usually grows from rhizomes and forms loose clumps. The stems are decumbent near the reddish purple base. The narrow to open flowerhead has a few widely separated spikelets.
Leaves and Stem: The stems are thin. The live sheaths are closed for more than 1/2 of their length. Open, live sheaths disintegrate with age into brown curled fibres. The leaf blades are 0.4–1.1 mm wide, folded, inrolled, and hairless, but more or less lax. There are no auricles. The ligules are 0.5 mm long.
Flowerhead and Flowers: The flowerhead is narrow and 3–20 cm long, and it branches. The spikelets vary from reddish purple to glaucous green. There are four to seven flowers above the two narrow glumes. One of the glumes is slightly shorter than the other, and both are much shorter than the spikelet. The lemmas are 5–8.5 cm long with a short awn arising from the tip.
Habitat: Red Fescue grows in a wide variety of habitats including wet meadows and streambanks, clearings, fields, and roadsides. In the Columbia Basin region, this species has been collected from the Windermere Lake area, Wardner, and Creston Flats.

Similar Species: Red Fescue, in the broad sense, includes many subspecies (which are considered species by some) and many varieties (Pavlick 1985). There are two subspecies in the collection at the Royal BC Museum: subspecies *rubra* and subspecies *vallicola*. Red Fescue is also included as part of seed mixtures of native and non-native stocks. Expect a lot of variability in this species.



Festuca saximontana Rydb.
Rocky Mountain Fescue

Plant: *Festuca saximontana* is a native species that grows 5–60 cm tall. It is a densely tufted perennial without rhizomes. The plant is bluish grey to pale green overall. The erect flowerhead has a spreading form at maturity.
Leaves and Stem: The smooth stems sometimes have exposed nodes. Dead sheaths remain at the base of the plant but do not break up into fibres. Living sheaths are open almost to the base. They are covered in sparse, minute, backward-facing hairs. The auricle area has a distinct erect swelling. The ligule is 0.1–0.5 mm long and has a roughly gnawed-looking or torn margin. The leaf blades are stiff and 0.3–0.7 mm wide.
Flowerhead and Flowers: The flowerhead has erect or spreading branches. The glumes are shorter than the spikelet, unequal and rough at the tip. They are rounded to slightly keeled. Glume margins are irregular. The lemmas are rounded and smooth on the back, and there are short, stiff hairs at the tip and on the 0.4- to 2-mm-long awn.



Habitat: Rocky Mountain Fescue grows in dry to mesic meadows from the montane to subalpine zone. In the Columbia Basin region two subspecies have been collected: *purpusiana* and *saximontana.* Douglas et al. (1994) state that "*F. saximontana* ssp. *purpusiana* is the name given to subalpine and alpine forms which are 8–20 (25) cm high, in which the culms are about 2–3 times the length of the basal tufts and the spikelets are moderately purplish."
Similar Species: Alpine Fescue is similar to Rocky Mountain Fescue—see Alpine Fescue (*F. brachyphylla*). The differences between the two subspecies *saximontana* and *purpusiana* appear to be in the amount that the leaf sheaths are open. The leaf sheath is never closed more than 1/3 its length in subspecies *saximontana* whereas it is closed about 1/2 the total length or more in subspecies *purpusiana.* Douglas et al. (1994) separate the two varieties on habitat preferences—subspecies *saximontana* occurs in the montane or boreal zones, whereas subspecies *purpusiana* occurs in alpine or subalpine zones.