

In this paper, we treat *Oryzopsis* as a monotypic genus endemic to North America, consisting only of *Oryzopsis asperifolia*. Barkworth (1998) has placed the remaining species in *Piptatherum*. The name *Oryzopsis* comes from the Greek *oryza*, meaning rice, and *opsis*, meaning appearance, in reference to its resemblance to rice. *Oryzopsis* is separated from *Piptatherum* on the basis of the overwintering basal leaves that remain green, the reduced stem leaves (<1 cm long), and a dense ring of callus hairs. *Piptatherum* has basal leaves that die in winter, stem leaves that are longer than 1 cm, and callus hairs that are scattered if present. *Oryzopsis* also resembles *Stipa*, but has a shorter callus and awns. *Oryzopsis* is nutritious and palatable, but not generally a grass that is important as forage.

***Oryzopsis asperifolia* Michx.**
Rough-leaved Ricegrass

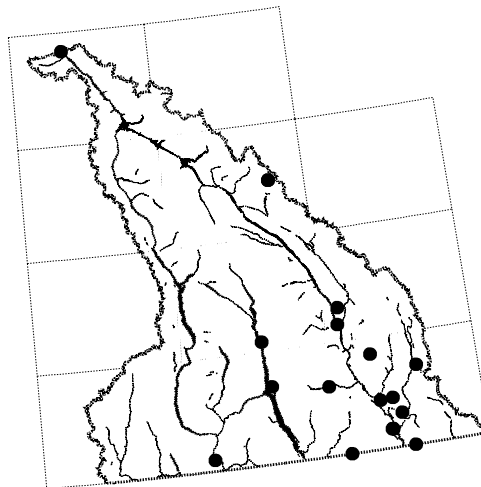
Plant: *Oryzopsis asperifolia* is a native species that grows 20–50 cm tall. It is a loosely tufted perennial with a flowerhead that is reduced to a simple one-sided spike.

Leaves and Stem: Sheaths are open to the base and there are no auricles. Blunt, membrane-like ligules are 0.5 mm high and have a margin of tiny hairs. The basal leaves are 4–10 mm wide, flat or inrolled, lax, and rough to the touch. They remain green over winter. The stem leaves are less than 1 cm long.

Flowerhead and Flowers: The flowerhead spikelets are 5–12 cm long and crowded into a spike. The flowerhead appears as if the spikelets are arranged on one side of the stem. There is only one flower in each spikelet. The glumes are smooth and extend into a short hair at the tip. The first glume is slightly shorter than the second. The hardened lemma equals the glume and has short, whitish hairs scattered on its surface. The edges of the lemma overlap at maturity and the palea is hidden. The lemma extends into a 7- to 10-mm-long awn.

Habitat: Rough-leaved Ricegrass is a native species that grows on dry, gravelly soil such as talus slopes, or in mixed woods in moist depressions. Rough-leaved Ricegrass grows in solitary, bright green tufts that are scattered throughout the site in all seasons (G. Berg, pers.comm. 1999). In the Columbia Basin region it occurs in Yoho National Park, along the Kootenay River, and at Valemont.

Similar Species: The short-stem leaves of Rough-leaved Ricegrass, as well as the evergreen basal leaves, differentiate it from other species.



Panic grasses are part of a large, mainly tropical and subtropical genus. Only three species occur in the Columbia Basin region of British Columbia: *Panicum capillare*, *P. occidentale*, and *P. oligosanthes* var. *scribnerianum*. The word *panicum* is Latin for millet—a common name used for several *Panicum* species. An interesting feature of the *Panicum* species is the variation in appearance as the season progresses. Initially, the flowerhead is extended well out of the sheath, but as the season progresses the later-emerging flowerheads do not extend as far out of the sheath, and in some cases the sheath encloses half the flowerhead.

Panicum

- 1a. Plants annual; lemma tip pointed *Panicum capillare*
- 1b. Plants perennial; lemma tip rounded or blunt 2
 - 2a. Spikelets 3.2 mm long. *Panicum oligosanthes* var. *scribnerianum*
 - 2b. Spikelets rarely 2 mm long. *Panicum occidentale*

Panicum capillare L.
Common Witchgrass

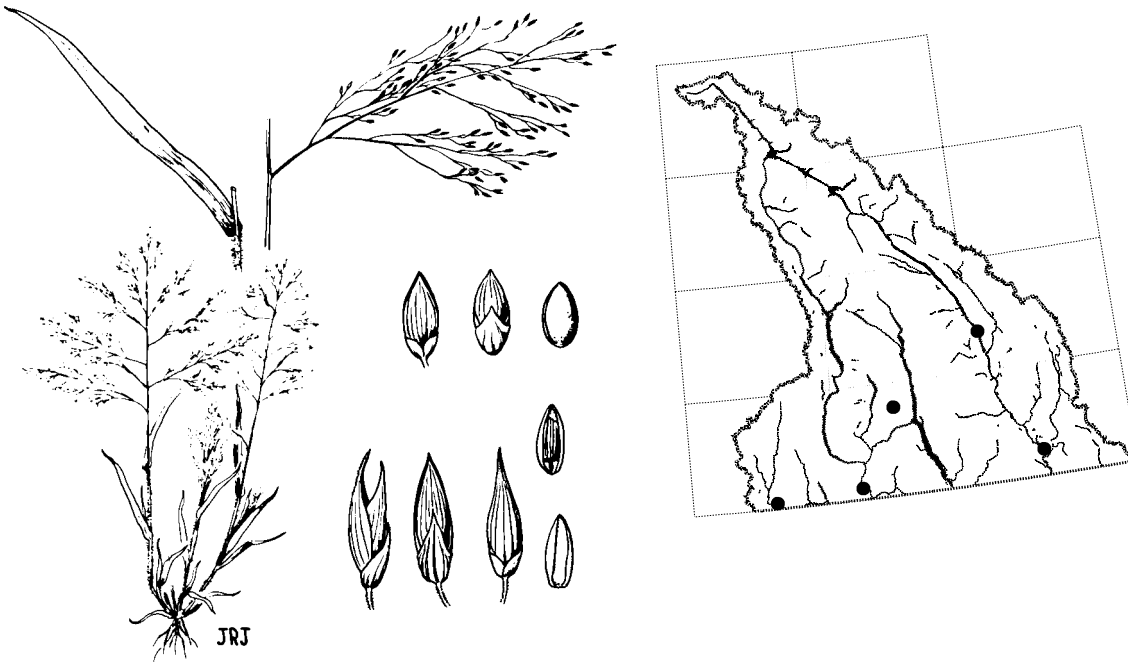
Plant: *Panicum capillare* is a native species that grows 20–70 cm tall. It is an annual that appears to be bent at the base. The flowerhead is open and repeatedly branched, with single, small spikelets at the end of each branch.

Leaves and Stem: The stem and open sheaths have 2- to 4-mm-long hairs spread abundantly throughout. The ligules are 1.5–2 mm long and consist entirely of hairs. Flat leaf blades are 5–12 mm wide. There are no auricles.

Flowerhead and Flowers: The open flowerhead has widely separated branches, and their length is 10–30 cm. The first glume is three-nerved and 1/2 as long as the spikelet. The pointed second glume is seven-nerved and as long as the sterile lemma, which is nine-nerved; both exceed the fertile lemma. The first lemma is sterile and the second lemma is hardened and fertile.

Habitat: Common Witchgrass occupies moist to dry roadsides, railway embankments, gravelly slopes, and fields in lowland to montane zones. In the Columbia Basin region it occurs at Midway, Kokanee Glacier Park, Trail, Hidden Lake, and Mud Lake.

Similar Species: Common Witchgrass differs from other *Panicum* species in that the first glume is 1/2 as long as the spikelet, and the tip of the glume is pointed.



Panicum occidentale Scribn.
Dicanthelium lanuginosum (Elliot) Gould
Panicum pacificum Hitch.& Chase
Panicum thermale Boland
 Western Witchgrass

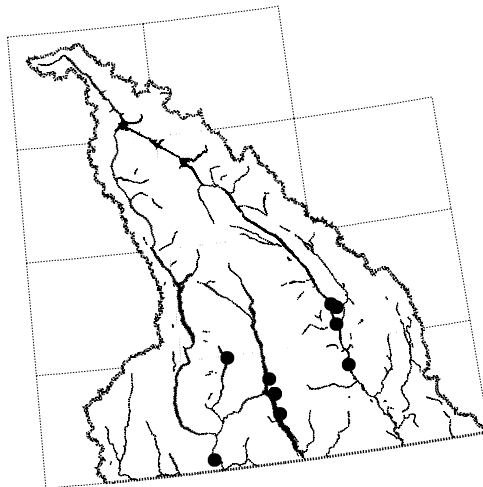
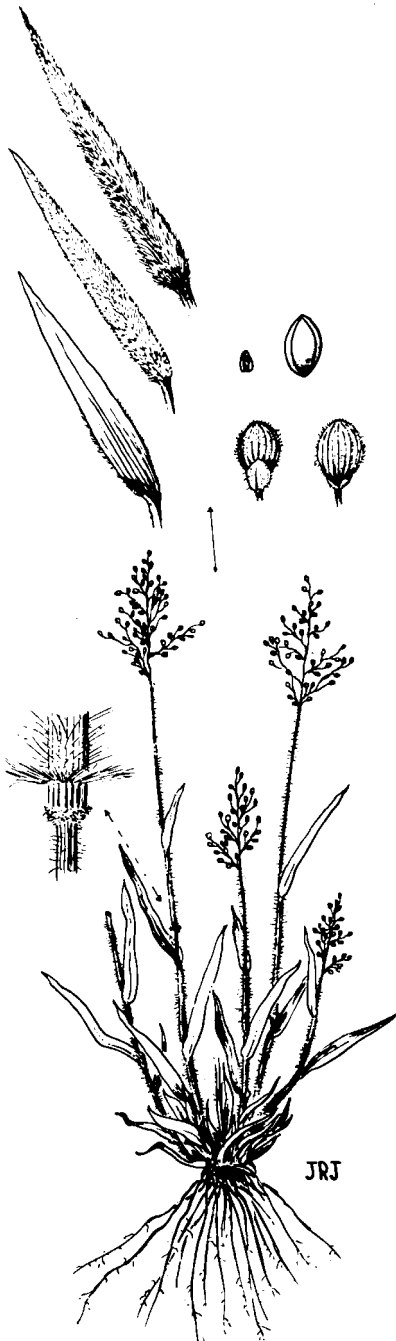
Plant: *Panicum occidentale* is a native species that grows 15–40 cm tall. It is a tufted, velvety, greyish green perennial with an open, branching flowerhead.

Leaves and Stem: The open sheaths are densely hairy and there are no auricles. The ligule is 3–4 mm long and consists of a ring of hairs. The flat, firm leaves are 5–10 mm wide and have a hairy lower surface. The upper leaves are slightly larger than the basal leaves.

Flowerhead and Flowers: The flowerhead is open, 3–9 cm long, and almost as wide as it is long. Elliptic or oblong spikelets with short hairs contain two flowers in each spikelet. The spikelets are rarely 2 mm long. The glumes are much shorter than the first flower. The lower flower is sterile, whereas the upper flower is fertile and the lemma hardened. The sterile lemma and the second glume are both rounded at the tip.

Habitat: Western Witchgrass grows on moist to dry shores, beaches, open woods, meadows, and bogs in the lowland to montane zones. In the Columbia Basin region it occurs at Castlegar, Christina Lake, Wasa Lake, Fairmont Hot Springs, Windermere Lake, Canal Flats, Kootenay Lake, and Hahas Lake.

Similar Species: Few-flowered Witchgrass (*P. oligosanthos*) resembles Western Witchgrass, but prefers drier habitats, and has shorter ligules, longer spikelets, and fewer branches. Western Witchgrass is variable in the West, and a complete description of the complex in western North America is contained in Hitchcock et al. (1969).



Panicum oligosanthos Schult. var. *scribnerianum* (Nash) Fern.
Dichanthelium oligosanthos (Schult.) Gould
Few-flowered Witchgrass

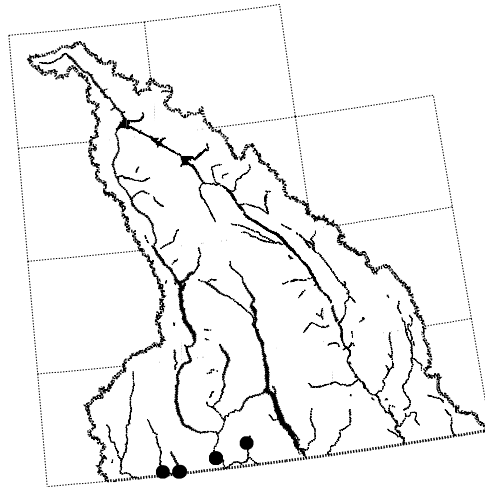
Plant: *Panicum oligosanthos* is a native species that grows 15–20 cm tall. It is a hairy perennial with an open, but very short, flowerhead.

Leaves and Stem: The open sheaths are hairy and there are no auricles. Ligules stand about 1.5 mm high. The upper leaf blades are larger than the basal leaf blades, averaging 5–15 mm wide.

Flowerhead and Flowers: The flowerhead is open and 3–8 cm long, and contains hairy spikelets that are 3.2 mm long. The first glume is about 1.5 mm long and forms a hardened cup-like base for the rest of the spikelet. The second glume and the sterile lemma are rounded at the tip and barely exceed the fertile flower.

Habitat: Few-flowered Witchgrass grows on dry, open sandy flats, gravelly knolls, and rocky bluffs in lowland to montane zones. In the Columbia Basin region, Few-flowered Witchgrass occurs at Cascade, Trail, and Grand Forks.

Similar Species: Few-flowered Witchgrass resembles Western Witchgrass but prefers drier habitats and has shorter ligules, longer spikelets, and fewer branches. Both species have dense short hairs covering the second glume and the sterile lemma. Both species also have basal leaves that are distinctly different from those along the stem.



Pascopyrum is one of the new genera created by splitting up *Agropyron* to match genetic evidence (Barkworth and Dewey 1985). The name comes from the Latin *pascuum*, meaning pasture, and the Greek *pyros*, meaning wheat. The genus contains one species, *Pascopyrum smithii*, which is endemic to North America. *Pascopyrum* is very similar to *Elymus*, and is the result of a hybrid cross between *Leymus triticoides* and *Elymus lanceolatus*. In Hickman (1993), *Pascopyrum* is separated from *Elymus* because of its sharp-pointed glumes that are widest at the middle and curved to one side. *Pascopyrum* also has a blue-green colour on the leaves as well as the flowerhead. In contrast, *Elymus* has straight glumes that are widest below the middle, and the tip of the glume ranges from pointed to blunt.

Pascopyrum smithii (Rydb.) A. Love
Agropyron smithii Rydb.
 Western Wheatgrass

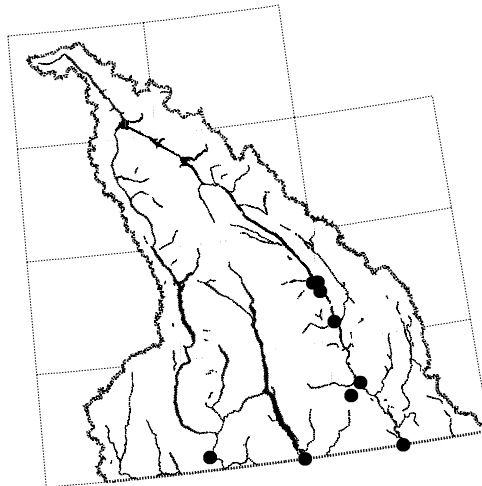
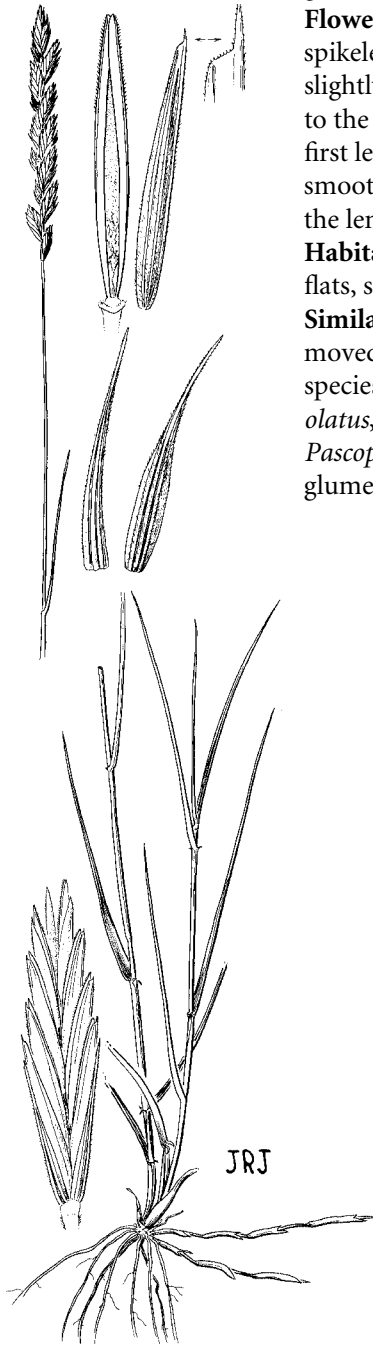
Plant: *Pascopyrum smithii* is a native species that grows 20–100 cm tall. It is a bluish perennial that forms large clumps, and it has a spike-like flowerhead consisting of usually one, but occasionally two, spikelets per node.

Leaves and Stem: The smooth, open sheath has auricles that are 0.2–1 mm long, and clasp the stem. There is a short, membrane-like ligule. The leaf blades are 2–6 mm wide, strongly nerved and inrolled, stiff, and a pale blue-green colour.

Flowerhead and Flowers: The spike-like flowerhead bears one or two spikelets per node. The almost overlapping spikelets have 6–10 flowers. The slightly curved glumes are widest at the middle and are tapered from the base to the middle and tapered again to a sharp tip. The longer glume equals the first lemma. The lemmas are lance-shaped, rounded on the back, and either smooth or hairy, with an awn tip up to 5–15 mm long. The palea is as long as the lemma.

Habitat: Western Wheatgrass is a common grass of dry, alkaline soils and flats, such as those around Cranbrook, Canal Flats, and Fort Steele.

Similar Species: This species was part of the *Agropyron* complex. It has been moved out of that genus and put into *Pascopyrum*, which has only one species. Western Wheatgrass is very similar to *Elymus lanceolatus* ssp. *lanceolatus*, especially in a vegetative state. The differences between the genera *Pascopyrum* and *Elymus* are the shape of the glumes, the acute tip of the glume vs the obtuse tip, and the strongly hairy vs hairy inflorescence.



This wide-ranging genus consists of almost 20 species, mostly of the temperate regions. Its name derives from the Greek word *phalaris*, meaning a type of grass. There are two species of *Phalaris* in British Columbia, *Phalaris arundinacea* and *P. canariensis*, which has not been collected in the Columbia Basin region.

***Phalaris arundinacea* L.**

Reed Canary Grass

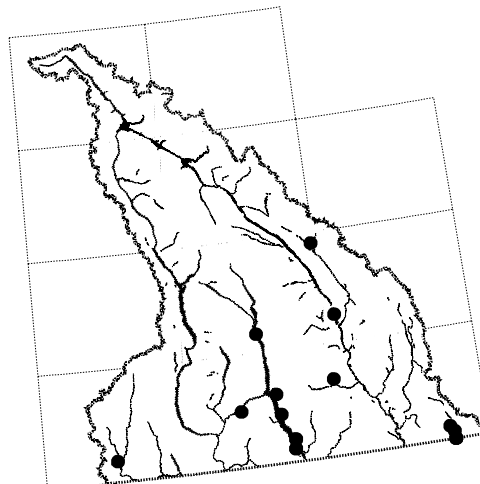
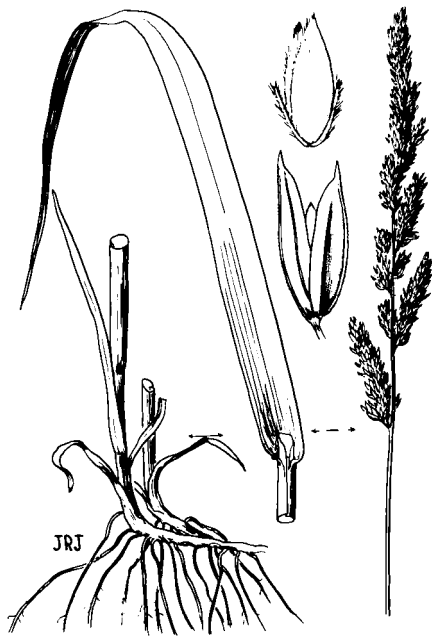
Plant: *Phalaris arundinacea* is a native species that grows to over 200 cm tall. It is a robust, wide-leaved, colony-forming perennial with a rhizome and a prominent spike-shaped head.

Leaves and Stem: The stems are 70–200 cm tall and stout, and arise from long, scaly, pinkish rhizomes. The sheaths are open but the margins overlap. The leaf blades are 5–15 mm wide and flat, and feel rough. There are no auricles. The ligules are 4–10 mm long and often have a tattered, bent tip.

Flowerhead and Flowers: The flowerhead is up to 25 cm long, compact, and somewhat spike-shaped. Three-flowered spikelets are crowded onto side branches. Glumes are about the same size and enclose one fertile and two reduced, sterile flowers. Lemmas are rounded and smaller than the glumes.

Habitat: Reed Canary Grass grows widely in moist to seasonally wet sites, such as roadside ditches, the edges of swamps, marshes, and streams, wet meadows, and open seepage sites. It is common in wet areas of abandoned fields and pastures, and on disturbed sites. It is considered a native species, but introduced populations are suspected to be responsible for the weedy patches of this species. The distribution of this species circles the pole. In the Columbia Basin region it occurs at Creston, Columbia Lake, Kootenay Lake, and Kimberly, and in the Flathead area.

Similar Species: Overwintering plants form extensive beige-coloured colonies that are easy to spot in the winter and spring months. In a vegetative state, Reed Canary Grass may be confused with the other tall wetland grasses such as Common Reed (*Phragmites australis*). The ligule of Reed Canary Grass is pointed, long, and all membrane-like, whereas that of Common Reed has hair along the upper edge and is blunt rather than pointed.



There are about ten species of Timothy and all but one, *Phleum alpinum*, are Eurasian. The name *Phleum* is based on the Greek word *phleos*, the name given to a reedy grass.

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

- 1a.** Flowerhead a short wide cylinder (1–4.5 cm long); stem not bulbous at the base *Phleum alpinum*
- 1b.** Flowerhead a long narrow cylinder (4.5–13 cm long); stem bulbous at the base. *Phleum pratense*

***Phleum alpinum* L.**
Alpine Timothy

Plant: *Phleum alpinum* is a native species that grows 15–50 cm tall. It is a strongly tufted perennial, with stems that creep along the ground and appear rhizome-like. The flowerhead is 1–4.5 cm long, cylinder-like, and more than 1 cm wide when pressed.

Leaves and Stem: The stem does not have a bulbous base and often appears to bend and creep along the ground. The smooth, open sheaths often have small, rounded auricles. The ligules are 1–3 mm long, blunt, and somewhat smooth along the upper edge. The flat leaf blades reach 4–7 mm wide and are rough along the margins.

Flowerhead and Flowers: The flowerhead is 1–4.5 cm long, globular to cylinder-like, and more than 1 cm wide when pressed. The glumes have stiff hairs along the keels and are hairy along the sides. The glumes are longer than the single flower they enclose. The glumes have a somewhat distinctive rectangular body that tapers into a thick awn that is 1.5–2.5 mm long. The lemma is very short-haired and has a ragged, blunt tip.

Habitat: Alpine Timothy grows in moist meadows and along streambanks from the montane to alpine zone. In the Columbia Basin region it occurs at many locations, such as the Selkirk Range, Deadman's Pass, Yoho National Park, Meadow Mountain, Big White Mountain, Mount Broadwood, and Grizzly Mountain (to name a few).

Similar Species: Alpine Timothy is similar to Common Timothy, but it differs by its lack of a stem with a bulbous base. The flowerhead of Alpine Timothy consists of a short cylinder rather than a slender, long cylinder.

