

Grass Identification Primer
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Grasses loom large in ecology, agriculture, reclamation and recreation, but they are notoriously difficult to identify. There are hundreds of different grass species found in British Columbia and the US Pacific Northwest. Fortunately, the bulk of our common species fit into four groups (“tribes”) which makes the task of identification somewhat easier.

Grass identification is based on the mature seedhead (“inflorescence”). Attempting to identify a grass by the leaves alone is pretty much a hopeless exercise. There are two basic inflorescence types: panicle, which is branched, and spike, which is unbranched. Some panicle-type grasses can be very “crowded” and appear to be a spike, so bend the inflorescence and examine the main stem closely. If there is any branching at all, it is a panicle. If the seeds are attached directly to a single, unbranched main stem, then it is a spike.

Now comes the tricky part: the seeds. Just to be nerdy, we’re going to call seeds by their botanical term, “florets.” Individual florets are grouped together in “spikelets.” A spikelet can have just one, or many, florets. When there are multiple florets in a spikelet, they are tightly packed, one above the other.

At the very base of every spikelet are two papery and cup-like structures called “glumes.” So depending on the species, a spikelet can consist of two glumes and one floret, or two glumes and several florets. The height of the glumes, relative to the height of the first floret, is an identifying characteristic.

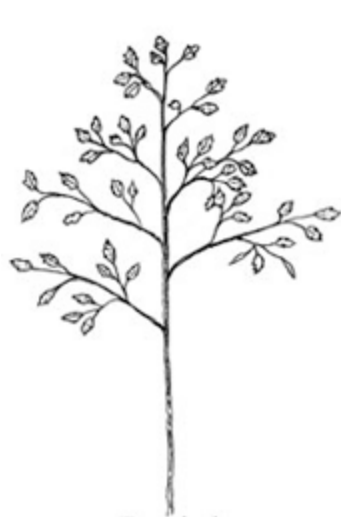
Okay, those are the absolute basics that will allow you to make sense of the identification key on the following page, which will get you down to one of four grass tribes. Once you have identified your mystery grass to tribe, you can go to the appropriate section of the book, **Plants of Southern Interior British Columbia and the Inland Northwest** (Lone Pine Publishing) and look at the pictures and descriptions, to identify your grass down to genus and species.

Two other taxonomic details are important for identification. “Awns” are the short or long whiskers that are attached to the tops of the florets of some grasses. Grasses are also divided by their rooting pattern: bunchgrasses have fine roots that tend to grow downward in the soil. Creeping rooted (rhizomatous) grasses have thick roots that tend to grow horizontally.

Grasses are also divided by their origin, as native to our region, or introduced. Within the introduced species there are “cultivated” grasses, used in agriculture and recreation, and there are weed grasses. Most of the grasses you will see along roadsides, heavily grazed or disturbed areas will be introduced species, not native.

Most of our native grasses are perennial. Some introduced species are perennials, others are annuals.

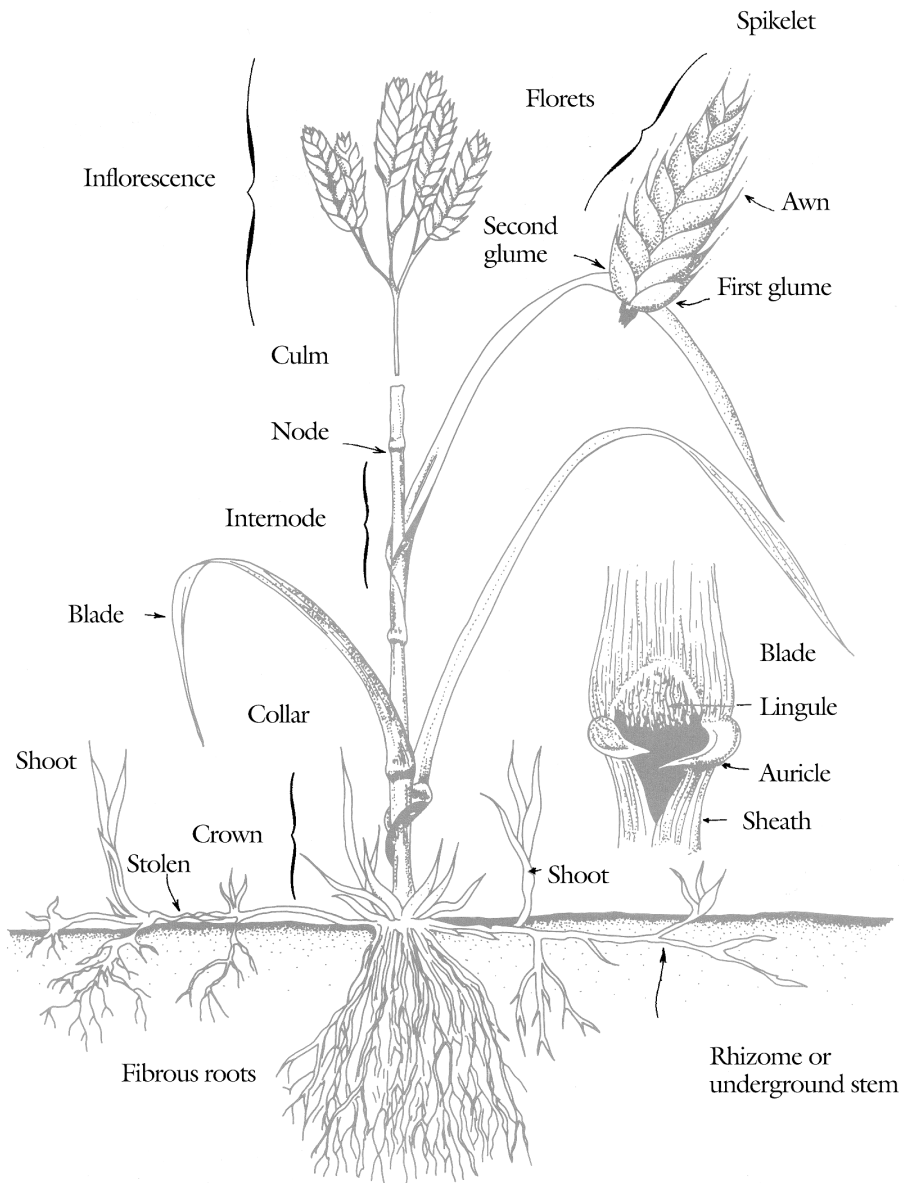
GRASS PARTS: THE GORY DETAILS



Panicle



Spike



GAYTON'S TAXONOMIC CHEATSHEET TO THE 4 MAIN GRASS TRIBES
(see p. 309, Plants of the Southern Interior, by Parish, Coupe and Lloyd)

Inflorescence is a spike (yes) →
(no)



Hordeae (p. 313-316)

Inflorescence is a panicle



Only one floret per spikelet (yes) →
(no)



Agrostideae (p. 319 bottom to 327 top)

Glumes shorter than 1st floret (yes) →
(no)



Festuceae (p. 327 bottom to 337 top)

Glumes = or longer than 1st floret →

Aveneae (p. 317-319 top)

Recent Changes to Scientific Names in the Poaceae (ref: Illustrated Flora of BC, vol. 7)

New Name	Old Name	Common Name
<i>Achnatherum hymenoides</i>	<i>Oryzopsis hymenoides</i>	Indian ricegrass
<i>Achnatherum richardsonii</i>	<i>Stipa richardsonii</i>	Spreading needlegrass
<i>Achnatherum nelsonii</i>	<i>Stipa nelsonii</i>	Columbia needlegrass
<i>Achnatherum occidentale</i>	<i>Stipa occidentalis</i>	Stiff needlegrass
<i>Elymus trachycaulus</i>	<i>Agropyron trachycaulum</i>	Slender wheatgrass
<i>Hesperostipa comate</i>	<i>Stipa comata</i>	Needle-and-thread grass
<i>Hesperostipa curtisetata</i>	<i>Stipa curtisetata</i>	Short-awned porcupinegrass
<i>Hesperostipa spartea</i>	<i>Stipa spartea</i>	porcupinegrass
<i>Leymus cinereus</i>	<i>Elymus cinereus</i>	Giant wildrye
<i>Leymus innovates</i>	<i>Elymus innovatus</i>	Fuzzy-spiked wildrye
<i>Leymus mollis</i>	<i>Elymus mollis</i>	Dune wildrye
<i>Pascopyrum smithii</i>	<i>Agropyron smithii</i>	Western bluegrass
<i>Piptatherum micranthum</i>	<i>Oryzopsis micrantha</i>	Little ricegrass
<i>Pseudoregneria spicata</i>	<i>Elymus spicatus</i> , <i>Agropyron spicatum</i>	Bluebunch wheatgrass
<i>Thinopyrum intermedium</i>	<i>Agropyron intermedium</i> , <i>Elymus hispidus</i> , <i>Elytrigia intermedia</i>	Intermediate wheatgrass
<i>Thinopyrum ponticum</i>	<i>Agropyron elongatus</i> , <i>Elymus elongatus</i> , <i>Elytrigia pontica</i>	Tall wheatgrass

Note: **Plants of the Southern Interior of British Columbia** (Parish, Coupe and Lloyd, 1996) uses the old nomenclature. The new scientific names can be pencilled into that book to bring it up to date.

GRASS INFORMATION RESOURCES

E-flora BC (searchable database with maps and pictures)

<http://www.geog.ubc.ca/biodiversity/eflora/>

Illustrated Flora of British Columbia (8 volume set, available as a pdf):

http://www.for.gov.bc.ca/hfd/pubs/docs/Mr/MR_IllustratedFlora.htm

Washington Native Plant Society (plant lists by county)

www.wnps.org

Gayton, Don (2003) *British Columbia Grasslands: Monitoring Vegetation Change*

FORREX Series 7, 49 pages

http://www.forrex.org/publications/forrexseries/fs7_Part1.pdf

http://www.forrex.org/publications/forrexseries/fs7_Part2.pdf

Gayton, Don (2004) *Native and non-native Species in Grazed Grasslands of British Columbia's Southern Interior*. *Journal of Ecosystems and Management* 5(1) 51-59

http://www.forrex.org/publications/jem/ISS25/vol5_no1_art6.pdf

Gayton, Don (2003) *Ground Work: Basic Concepts of Ecological Restoration in British Columbia*. FORREX Series 3, 25

pages. <http://www.forrex.org/publications/forrexseries/ss3.pdf>