Flora of Oregon, Volume 1
Additions, Changes, and Corrections to the Treatments of *Allium*, Grasses, Sedges, and *Juncus*

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by the *Carex* Working Group

This document covers errors, changes, and additions only in the taxonomic groups written by the *Carex* Working Group and colleagues. For corrections (but not additions) for the other groups, see the errata at http://www.oregonflora.org/errata_Vol1.pdf.

Key to Grass Genera (Poaceae), Subkey 1, p. 331. *Pleuropogon* has mostly closed sheaths and should come out under lead 4, with *Bromus* and *Melica*. *Pleuropogon* is a distinctive genus. The spikelets are 20-40 mm long, each attached directly to the inflorescence axis by a short pedicel; the inflorescences are one-sided racemes. Lemmas are awned. In our species, the palea keels have either a triangular appendage or an awn originating at about mid length.

Key to Grass Genera (Poaceae), Subkey 1, p. 333. Lead 39' should direct the reader to Subkey 1a (p. 334).

Key to Grass Genera (Poaceae). Page 336, subkey 3, lead 3' reads "plants 20-900 cm tall." *Zizania* is tall, but not that tall. It should read "plants 20-300 cm tall."

Key to Grass Genera (Poaceae). Page 336, subkey 3, lead 4 sends the reader to Subkey 5, couplet 4. That may be too late. Modify it to send the reader to Subkey 5.

Key to Grass Genera (Poaceae). Page 340, lead 22 reads "awn of lower lemma distinctly different from awn of upper lemma." This is intended to include cases where the upper lemma is awned and the lower lemma is awnless.

Key to Grass Genera (Poaceae). Specimens of the following genera have now been found in Oregon: *Ehrharta, Zizania*. They cannot be identified using the key as written. See notes in the alphabetical list below.

Key to Sedge Genera (Cyperaceae): Lead 14, p. 168, has a problem. It should read as follows:

14. Inflorescence bracts several, spreading, leaf-like; bracts and leaf blades flat (folded if wilted), with prominent midrib forming keel; inflorescences obviously terminal 15
14' Inflorescence bract 1, erect, looking like an extension of the stem; leaf blades tubular, triangular, V-shaped, or curved to flat in cross section but not prominently keeled; inflorescences terminal or appearing lateral 16

p. 477. The labels of *Schedonorus arundinaceus* and *Sclerochloa dura* drawings were switched.

Achnatherum, Needlegrasses. In the Achnatherum key on p. 342, lead 5', "Awns 3-20 mm" should be replaced with "Awns 3-6 mm." Also, the process of splitting *Stipa* into smaller, more coherent genera continues. Most recently, *Achnatherum* is treated as an entirely Old World species, and our *Achnatherum* have been transferred to *Eriocoma*, as follows:

Achnatherum x *bloomeri*	*Eriocoma bloomeri* (Bolander) Romasch.
Achnatherum hendersonii	*Eriocoma hendersonii* (Vasey) Romasch.
Achnatherum hymenoides	*Eriocoma hymenoides* (Roem. & Schult.) Rydb.
Achnatherum lemmonii	*Eriocoma lemmonii* (Vasey) Romasch.
Achnatherum lettermanii	*Eriocoma lettermanii* (Vasey) Romasch.
Achnatherum nelsonii	*Eriocoma nelsonii* (Scribn.) Romasch.
Achnatherum n. ssp. *dorei*	*Eriocoma nelsonii* ssp. *dorei* (Barkworth & J. Maze) Romasch.
Achnatherum nevadense	*Eriocoma nevadensis* (B.L. Johnson) Romasch.
Achnatherum occidentalis	*Eriocoma occidentalis* (Thurb. ex S. Watson) Romasch.
Achnatherum o. ssp. *californica*	*Eriocoma o.* ssp. *californica* (Merr. & Burtt Davy) Romasch.
Achnatherum o. ssp. *pubescens*	*Eriocoma o.* ssp. *pubescens* (Vasey) Romasch.
Achnatherum pinetorum	*Eriocoma pinetorum* (M.E. Jones) Romasch.
Achnatherum richardsonii	*Eriocoma richardsonii* (Link) Romasch.
Achnatherum thurberiana	*Eriocoma thurberiana* (Piper) Romasch.
Achnatherum wallowaensis	*Eriocoma wallowaensis* (J. Maze & K. Robson) Romasch.
Achnatherum webberi	*Eriocoma webberi* Thurb.

Achnatherum hymenoides (Roem. & Schult.) Barkworth, Indian Ricegrass. In the descriptions, "lemma awns 3-20 mm" should be replaced with "lemma awns 3-6 mm."

Achnatherum wallowaense Maze & K. A. Robson, Wallowa Needlegrass. Our description says ligules of upper leaves are 3-8 mm long. It should say, ligules to 1.6 mm.

Aegilops cylindrica Host, Jointed Goatgrass. Our descriptions says, "...lemma awns of lower spikelets 10-50 mm..." It should say, "...lemma awns of lower spikelets 1-5 mm..."

Agrostis blasdalei Hitchcock, Blasdale's Bent, has been found in Curry County. It is a small, cespitose plant with a dense basal tuft of very narrow leaves (usually less than 1 mm wide and inrolled) and a narrow panicle with the branches erect. It looks a bit like *A. variabilis*, but it grows near the coast. Modify the key in two places.

After lead 14, add:

14.5. Leaves < 1 mm wide, inrolled; growing near coast ..... *A. blasdalei*

14.5' Leaves (1)2-6 mm wide, flat or becoming inrolled; growing near coast or not

After lead 17, add:

17.5. Habitat alpine and subalpine zones of mountains; lemma veins not extending beyond membranous part of lemma; anthers 0.4-1 mm ..... *A. variabilits*

17.5' Habitat coastal cliffs, bluffs, and shrublands; lemma veins extending up to 0.2 mm beyond membranous part of lemma; anthers 0.7-2 mm ..... *A. blasdalei*

Agrostis oregonensis Vasey, Oregon Bentgrass. All descriptions we've read, including ours, say that this species is cespitose. Unfortunately, the grasses did not read the books. Although *A. oregonensis* can be cespitose, it can also be short-stoloniferous (or short-rhizomatous; it's not picky) and one specimen we've seen is long-stoloniferous (or rhizomatous). The key should work, except modify lead 15' to read "Plant usually cespitose, sometimes short-stoloniferous or short-rhizomatous."

***Allium* Key to Species.** The key leads 20 (p. 134) and the descriptions for the relevant species are inconsistent. We believe the error is in the key, which should be changed as follows:

20. Tepals usually less than 7 mm long, rigid in fruit, tips strongly involute, usually with a pronounced keel; leaves commonly withering by flowering time .....***A. campanulatum***
20' Tepals usually more than 7 mm long, usually papery in fruit, the tips rarely with strongly involute margins or a pronounced keel; leaves usually green at flowering time ***A. bisceptrum***

Allium acuminatum Hook.: The description says each umbel has 10-40 flowers, but it should say each has (10)20-60(90) flowers.

Allium dictuon H. St. John, Blue Mountain Onion, has been confirmed as growing wild in Wallowa Co., Oregon, just south of the Washington border. This is a globally rare species with a restricted range. *Allium dictuon* would probably key to *A. acuminatum.* Here are the relevant key leads from Flora of North America, modified by addition of the inner bulb coats:

10.5. Bulb forming 1-3 renewal bulbs borne terminally on rhizomes outside coats of parent bulb; parent bulb disappearing by anthesis except for still-functional roots and shriveleled bulb coats; inner bulb coats with cells intricately contorted; near Weller Butte, Blue Mountains, se Washington (and ne Oregon) ..... ***A. dictuon***
10.5' Bulbs not forming rhizomes, renewal bulbs formed within coats of parent bulb; inner bulb coats with obscure quadrate cells that are not obviously contorted; widespread ***A. acuminatum***

Allium membranaceum Ownbey ex Traub, has been reported from southern Jackson County. It will key to *A. bisceptrum* at lead 20. Tepals are 7-12 mm, usually pink (or white), and become papery (not rigid) in fruit. This find is unexpected because *A. membranaceum* is considered endemic to the foothills of the Sierra Nevada in central California. We have questions about the identification of the plants found (including whether they can be reliably distinguished from *A. bisceptrum* without considering geography), and about how they got to Oregon. However, a key is provided:

20. Leaves usually beginning to wither from tip by anthesis; tepals rigid (not papery), more or less shiny in fruit, strongly involute at tip, keeled ..... ***A. campanulatum***
20' Leaves usually green at anthesis; tepals papery (not rigid or shiny) in fruit, not strongly involute, not keeled
20.5. Tepals ovate to elliptic, apex acute to acuminate; foothills of Sierra Nevada in central California .....***A. membranaceum***
20.5' Tepals lanceolate, apex acuminate; California, Idaho, and south and central Oregon ..... ***A. bisceptrum***

Allium subhirsutum L., Hairy Garlic, has been found escaped from cultivation at one site in western Oregon. It may spread. Flowers are white. Add this lead to the beginning of the *Allium* key:

1. Leaf margins with hairs (10X) ..... *A. subhirsutum*
1' Leaf margins glabrous .....[to the rest of the key]

***Alopecurus aequalis*:** The authority for this name is incorrect. It should be Sobolewsky.

Alopecurus arundinaceus Poir., Creeping Meadow Foxtail or Garrison Grass, has been found in eastern Oregon. It is probably growing throughout at least the east side of the state, but is probably less common than the very similar *A. pratensis*. It does best in wet meadows and it tolerates alkaline or saline conditions. Its inflorescences may turn blackish when old. This grass will key to *A. pratensis.* The leads below (developed by Jerry Tiehm) will distinguish them.

2.5. Awns readily evident without magnification, well exserted from the glumes; glume tips not spreading; lemmas acute ..... *A. pratensis*
2.5' Awns not readily evident even with magnification, enclosed in the glumes or slightly exserted; glume tips spreading with age giving the glumes an urn shape; lemmas obtuse to truncate .....*A. arundinaceus*

Aristida oligantha Michx., Prairie Three-awn. Lemma awns length is given as (8)12-64(7-0) mm. It should read (8)12-64(70) mm.

Arundo donax L., Giant Reed, is still not really established in Oregon, fortunately, but two populations in western Oregon are known to be established from yard debris or are spreading very locally from cultivation. *Arundo* is a serious weed in wet areas of California from the Redding area south. It is a huge rhizomatous grass, (2)3-10 meters tall (yes, to 30 feet tall!). Panicles are like those of Common Reed, *Phragmites australis*, but larger, 30-60 cm long. Leaves can be a meter long.

Briza minor L., Little Quaking Grass, has not been found east of the Cascades, despite what the map shows.

***Bromus sitchensis*:** This is a native species!

Butomus umbellatus L., Flowering Rush, isn't really a rush but this is as good a place as any to explain how to identify it in Oregon (and Idaho and Washington). This beautiful but invasive weed has recently been discovered along the Columbia River in eastern Oregon. Please report populations to the noxious weed board -- and collect a sample for the herbarium at Oregon State University. Distinctive though the flowering plants are, this plant would be passed over as just another cattail or sedge when not flowering, and populations often don't flower.

Plants are rhizomatous with linear leaves up to 2.7 meters long. Blades are more or less triangular near the base but flattened distally. They may grow entirely underwater, may float, or may stand erect. Inflorescences are umbels or umbel-like, on top an emergent culm to 150 cm tall. Flowers are pink, 2-3 cm wide, with 3 sepals, 3 petals, 6-9 stamens, and 6-9 capels that are slightly united at the base. Each pistil matures into a follicle (dry fruit) about 1 cm long, with numerous seeds.

Plants grow in still or slow-moving water, including backwaters of the Columbia River, in water up to 6 feet deep. A single rhizomatous plant can form a huge stand. Plants in deep water don't flower, and those in shallower water may or may not flower.

In the key to monocots (p. 127), *Butomus* should key to Alismataceae. *Butomus* is actually the only genus in the Butomaceae, but probably the easiest way to add it to the Flora of Oregon key is to modify the Alismataceae key (p. 130) as follows:

1. Pistils and fruits fused at base; flowers bisexual; stamens 6-9
   1.5. Sepals green, hooded; petals white or pink; ovules 1 per pistil; stamens 6; in fruit star-like with spreading beaks; leaves linear to ovate ..... *Damasonium*
   1.5'. Sepals pink, somewhat cupped but not hooded; petals pink; ovules many per pistil; stamens 6-9; in fruit not star-like, beaks not strongly spreading; leaves linear ..... *Butomus* (Butomaceae)
1. Pistils and fruits free, in one whorl on margin of flat receptacle or spirals on convex receptacle; flowers bisexual or unisexual; stamens 6 or 7-30
   2. Pistils and fruits in 1 whorl on margin of flat receptacle; stamens 6; flowers bisexual ..... *Alisma*
   2' Pistils and fruits spiraled on convex receptacle; stamens 7-30; proximal flowers unisexual ..... *Sagittaria*

Calamagrostis, key to species. Lead 2' should read, "Lemma awns 3.4-11 mm."

Calamagrostis stricta (Timm) Koeler ssp. ***inexpansa*** (A. Gray) C.W. Greene occasionally grows at the coast, as well as inland locations.

Calamagrostis stricta (Timm) Koeler ssp. ***stricta*** anther length should say 1.1-1.4(-1.7) mm. Habitat should say, "moist meadows and fens, less often in marshes and bogs, not coastal."

Calamagrostis utsutsuensis Otting & B.L. Wilson, Steens Reedgrass, has recently been described. This is the Steens Mountain species that has been misidentified as *Calamagrostis purpurascens, C. koelerioides,* and more recently *C. tacomensis*. None of these other species occur on Steens Mt. *Calamagrostis utsutsuensis* is cespitose or short-rhizomatous, forming mounds of blue-green leaves. Its inflorescences are narrow, pale to brown panicles. It grows along waterways from the top of the cirques to their mouths. In Flora of Oregon, *C. utsutsuensis* keys to *C. tacomensis*. Simply replace "*C. tacomensis*" with *"C. utsutsuensis*" and all will be well.

Carex agastachys L. f. This species has been collected in Oregon and Washington. It is very similar to *C. pendula* and will key to it in Flora of Oregon. See key leads under *C. pendula*, below, to distinguish the two.

Carex brevicaulis Mackenzie has had its name changed to *Carex zikae* E.H. Roalson & M.J. Waterway. This name change became necessary when the related genus *Uncinia* was merged into *Carex* because one of the *Uncinia* species had previously been named *Carex brevicaulis*.

Carex divulsa Stokes, Grassland Sedge, is a European species commonly planted around buildings and in constructed swales for rainwater control. A prolific seeder, it readily escapes. Now it has been

found escaped in the Portland area. It may well become a problem weed in wildlands; some escaped populations in California are now understory dominants in coastal forests.

Unfortunately, *Carex divulsa* is usually planted by people who want to plant a native ground cover and request native *C. tumulicola*. The names have been confused in the horticultural trade. Both species can grow in grasslands and have androgynous spikes and perigynia about 3.5-5.5 mm long. *Carex divulsa* is a much leafier plant.

Comparison of *Carex divulsa* and *C. tumulicola*.

Trait	***C. divulsa***	***C. tumulicola***
Habit	cespitose	short-rhizomatous
Height	25-90 cm	20-80 cm
Inflorescences, length	5-18 cm	1-5 cm
Inflorescences, lowest internodes	usually at least 2 times as long as the lowest spike or side branch	shorter than to less than 2 times as long as the lowest spike
Infl., lowest node	usually with 2+ spikes	1 spike/node, but crowded
Pistillate scales, length	2.8-3.7(-4) mm	3.3-5.2 mm
Perigynia, width	2-2.6 mm	1.5-2 mm
Perigynia	spreading	ascending
Perigynia, beak length	0.8-1.5 mm	1-3 mm
Perigynia, beaks	somewhat winged	not winged

To add *Carex divulsa* to the key modify lead 16' (p. 181) as follows:

16' Inflorescence elongate, the lower spikes remove to overlapping but easily distinguished; perigynia brown to tan, sometimes with narrow green margins, not darker over the achene

16.5. Lower spikes crowded, lowest internodes shorter than to less than 2 times as long as the lowest spike; perigynia 1.5-2 mm wide, beak not winged; plants short-rhizomatous ..... ***C. tumulicola***

16.5' Lower spikes remote, lowest internodes more than 2 times as long as the lowest spike; perigynia 2-2.6 mm wide; beak more or less winged; plants cespitose ..... *C. divulsa*

Carex myosuroides Villars, Bellard's Bog Sedge, is now the name for what we have been calling *Kobresia myosuroides* (Villars) Fiori. The change is required by recent expansion of *Carex* to include the closely related genus *Kobresia*.

Carex pendula Hudson. This giant ornamental sedge has been split taxonomically. At this point, the split is being tentatively accepted by sedge biologists, but it is controversial. Two species, if they are species, have been found in the Pacific Northwest. Confirmed specmens of *C. pendula* were collected in California and the Portland, Oregon, area. Apparently *C. agastachys* is the more common, based on identifications of PNW specimens by Pedro Jiménez-Mejias, the expert in the group. The key below may distinguish them, though we suspect it needs more work.

1. Ligules on inflorescence bracts with reddish borders; peduncles of pistillate spikes scabrous; achenes obovate; range eastern Europe, the Caucasus and northern Iran west to Germany ..... *C. agastachys*

1' Ligules on inflorescence bracts with whitish borders; peduncles of pistillate spikes smooth; achenes elliptic; range western Europe, Great Britain, east to Germany, Greece and Cyprus

(with an "uncertainly delimited contact zone between both taxa in central Europe across Germany, Austria, Hungary and the former Yugoslavia") .....*C. pendula*

Carex simpliciuscula Wahlenberg, Simple Bog Sedge, is now the name for what we have been calling *Kobresia simpliciuscula* (Wahlenberg) Mackenzie. The change is required by recent expansion of *Carex* to include the closely related genus *Kobresia*.

Carex zikae E.H.Roalson & M.J.Waterway replaces the name *Carex brevicaulis*. This name change was necessitated by bringing members of the related genus *Uncinia* into *Carex.*

Coleanthus subtilis (Tratt.) Seidel, Mossgrass. The description reads should read "1-5 cm panicles" without a width.

Crypsis species are being moved into *Sporobolus*. No doubt a phylogenetically accurate move, but we like the genus name *Crypsis* and are not pleased by this change. Here are the new names:

Crypsis alopecuroides = *Sporobolus alopecuroides* (Piller & Mitterp.) P.M. Peterson
Crypsis schoenoides = *Sporobolus schoenoides* (L.) P.M. Peterson
Crypsis vaginiflora = *Sporobolus niliacus* (Fig. & De Not.) P.M.Peterson

Cyperus aristulatus (Coville) Bauters replaces *Lipocarpha aristulata* (Coville) Tucker, if you agree that *Lipocarpha* should be included in *Cyperus*.

Cyperus fuscus L., Brown Flatsedge or Brown Galingale, was collected along the Columbia River in Portland during 2016. The plants are tufted annuals to 30 cm tall. The inflorescence consists of several small, head-like clusters of spikelets. Spikelets are flat and dark brown with yellowish edges. Modifying the OFP key as follows will permit its identification:

6' Plants annual, tufted, lacking corm-like bases
7. Floral scales (1.2)1.3-1.8(2.2) mm long, with strongly outcurved awn-like tip an additional 0.5-1(1.3) mm long, (5)7-9(11)-ribbed ..... ***C. squarrosus***
7' Floral scales 0.6-1.1 mm long, with or without a short apical point to 0.3 mm long, 3-veined
7.5. Spikelets 30-120 per head; floral scales 0.6-0.8 mm; styles 0.1 mm ..... *C. difformis*
7.5' Spikelets 3-12 per head; floral scales 0.9-1.1 mm; styles 0.3-0.4 mm ..... *C. fuscus*

Cyperus hemioccidentalis Goetgh. replaces *Lipocarpha occidentalis* (Gray) Tucker, if you agree that *Lipocarpha* should be included in *Cyperus.*

Cyperus subsquarrosus (Muhl.) Bauters replaces *Lipocarpha micrantha* (Vahl) Tucker, if you agree that *Lipocarpha* should be included in *Cyperus.*

Ehrharta erecta Lam., Panic Veldgrass, has been found as a garden weed near Reedsport. It is a sprawling, untidy grass of shady, moist sites, introduced to western California and spreading north. Its auricles consist of a flap with marginal hairs. The inflorescence is a panicle. The most characteristic feature is that the biggest lemma is wrinkled crosswise. There are no awns. The glabrous spikelets, 3-5 mm long, are oval and somewhat blunt. Each spikelet consists of two glumes and three florets, though only two of the florets are easily seen. The lowest lemma is

sterile and smooth. The second is sterile and cross-wrinkled. It slightly exceeds the third, which is fertile and firmer, and may be cross-wrinkled or not. This grass will key to Subkey 5 and perhaps also to Subkey 2.

Subkey 2: We don't really think the panicle branches are spike-like, so we doubt you'd key *Ehrharta* in subkey 2. If you do, it keys well to lead 9. Add these leads:

9.5. Auricles absent; plant annual; spikelets 4-10 mm, crowded and overlapping, with 5-12 florets ..... *Desmazeria rigida*

9.5' Auricles present, with hairs; plant weakly perennial; spikelets 3-5 mm, many of them not overlapping, with 3 florets .....*Ehrharta erecta*

Subkey 5: We're not sure which way to take this plant out. We suspect it needs to come out in two places. The hairs on auricles will bring it out at lead 9. Therefore, modify the key starting after lead 13:

13.5. Auricle a definite flap with hairs on the margins; ligules membranous, lacking hairs, to 3 mm; lemmas veinless or obscurely 5-7 veined; spikelets with 3 florets, two lower sterile and hiding the uppermost, fertile floret; one of the sterile florets usually conspicuously cross-wrinkled; often in partial shade, often a weed in gardens, so far known west of the Coast Range .....*Ehrharta erecta*, Panic Veldgrass

13.5' Auricle essentially replaced by a tuft of hairs; ligules membranous, ciliate, or of hairs, to 1.3 mm; lemmas 3-veined; spikelets with (1)2-60 florets, all fertile or the upper sterile; none of the florets cross-wrinkled

14. Spikelets with 3-40 florets; rachilla not prolonged beyond the distal floret; collars not marked with a line or ridge; leaf blades not disarticulating from sheaths; plants annual or perennial, often with saucer-shaped glands or glandular bands; range widespread ..... *Eragrostis*

14' Spikelets with (1)2-5 florets; rachilla often prolonged beyond the distal floret and terminating in a much reduced, rudimentary floret; collars marked with a line or narrow ridge; leaf blades eventually disarticulating from sheaths; plants perennial, lacking glands; introduced ornamental rarely escaping W of the Cascades .....*Molinia caerulea*, Purple Moorgrass

However, the auricles are flaps with hairy margins, and so may not be interpreted as "a distinct tuft of long hairs." Therefore, add this lead after lead 20:

20.5. Glumes clearly shorter than the florets; auricles ciliate; lemma of 2nd floret rugose in distal 50%; exceeding the upper floret; known from one location near the coast in Douglas County, OR; established in coastal N CA and likely to occur elsewhere in coastal SW OR ..... *Ehrharta erecta*

20.5' Glumes slightly shorter to longer than the florets; auricles lacking; lemma of 2nd floret smooth in distal 50%, exceeding the upper floret or not, sometimes modified and much and reduced; range widespread

Festuca lemanii Bastard, Confused Fescue, Bastard's Fescue, Hard Fescue. Just what we don't need is another introduced fescue that looks like *F. idahoensis* but has smaller inflorescences. *Festuca lemanii* is a bunchgrass in the hard and sheep fescue group. Like *F. trachyphylla*, it is hexaploid (e.g., it has 6 sets of chromosomes; *F. valesiaca* has 2 and *F. idahoensis* and *F. roemeri* have 4).

Upper glumes are (2.8-)3.5-4(5.2) mm; lemmas are (3.5-)4.2-4.6(-5.5) mm. *Festuca lemanii* is used for soil erosion control and on roadsides, and some forms are sold as ornamentals. Perhaps *F. lemanii* is more common than *F. trachyphylla* itself, though that's hard to know at this point. Modify the *Festuca* key as follows:

23. Leaf sclerenchyma forming a continuous or nearly continuous band, uniform in thickness; inner surface of folded leaf with 2-4 grooves; leaves smooth to finely scabridulous; lower leaf sheaths usually loose; used for roadside revegetation; scattered in OR and WA ..... *F. lemanii*

23' Leaf sclerenchyma forming 3 or more distinct bundles, rarely continuous but if so uneven in thickness; inner surface of folded leaf with 4-6 grooves; leaves often rough; lower leaf sheaths tight; range various

24. Leaf blades (0.2)0.3-0.5(0.6) mm wide; upper glumes 2.5-3.9 mm; lemmas 3.4-4.9(5.2) mm; leaf sclerenchyma forming 3 bundles, on midrib and margins, sometimes with much smaller bundles between; range mostly E of the Cascades and SW OR, expected elsewhere ..... *F. valesiaca*

24' Leaf blades (0.5)0.6-1.1 mm wide; upper glumes 3.4-4.5 mm; lemmas 4.2-5(6.5) mm; leaf sclerenchyma usually forming more than 3 bundles, on midrib and margins and in between, sometimes continuous but uneven in thickness; range widespread ..... *F. trachyphylla*

Glyceria, key to species. Lead 2 is correct, but unnecessarily difficult. Modify it as follows or simplify the key to just include the leaf sheath surface:

2. Leaf sheaths smooth; veins of 1 or both glumes extending to the tips; lema tips near flat; anthers 3 ..... *G. grandis* var. *grandis*

2' Leaf sheaths scabrous; veins of glumes terminating below the tips; lemma tips prow-tipped; anthers 2

Juncus effusus L., Common Rush. The key to subspecies got mangled. Modified versions of the *Juncus* key and of the key to subspecies of *J. effusus* are show here. Only *J. e.* ssp. *pacificus*, Pacific Rush, is native in western North America, though the other two show up as weeds in many natural habitats, on both sides of the Cascades. They are also planted as ornamentals or in restoration projects. They easily escape garden settings into adjacent wetlands.

By far the two best keys to this group are both by Peter Zika, one in the new Flora of the Pacific Northwest (published in 2018) and one in the Flora of Oregon -- once the latter is corrected as follows. Don't use keys in other resources such as the original Hitcock & Cronquist or Flora of North America; they lack some common taxa now known to occur here.

The key to *Juncus* on p. 268 should be modified as follows:

11. Upper sheath apices usually strongly asymmetrical on fruiting stems.

12. Sheath apices thickened, with raised (convex) rims; sheaths usually dark brown to black; fruiting stems stout, usually 2–3.5 mm diameter above sheath ... ***J. effusus* ssp. *pacificus***

12' Sheath apices thin with broad membranous wings, flattened and lacking raised rims; sheaths green (fresh) to pale or medium brown (dried); fruiting stems slender, usually 0.8–1.9 mm diameter above sheath ..... ***J. hesperius***

11' Upper sheath apices usually symmetrical on fruiting stems.
13. Visible stem ridges 6–16 per side (10×), low and relatively coarse or wide when dried; proximal sheaths smooth (10×); fruiting stems slender, 0.6–2.6 mm diameter above sheath; tepals usually with medium to dark brown stripes; native.
14. Distal half of distal sheaths green to pale brown, thin, dull, nerves prominent, apices thin, slightly inrolled towards stem ..... ***J. exiguus***
14' Distal half of distal sheaths medium brown, dark brown or black, thick and glossy, nerves obscure, apices thickened, not inrolled ..... ***J. laccatus***
13' Visible stem ridges usually 18–26 per side (10×), slender and relatively inconspicuous when dried; proximal sheaths papillose (10×); fruiting stems stout, 2.2–4.9 mm diameter above sheath; tepals usually pale brown; introduced.
15. Tepals spreading or curving away from capsules; upper sheaths 6–14 cm long, margins often dark-banded; sheaths clasping stems, sheath margins overlapping 2–4 cm from apices ..... *J. effusus* ssp. *effusus*
15' Tepals erect, pressed to capsules; upper sheaths usually 15–27 cm, margins pale; sheaths often not clasping stems, margins often split to base and not overlapping, loose, flattened or unrolled ..... *J. effusus* ssp. *solutus*

The key to subspecies of *Juncus effusus* should be modified as follows:

1. Upper sheath apices usually strongly asymmetrical on fruiting stems, usually dark brown; range W of Cascades and E to Jefferson and Wasco cos.; very common ..... ***J. e.* ssp. *pacificus***
1' Upper sheath apices usually symmetrical on fruiting stems, not dark brown throughout
2. Tepals spreading or curving away from capsules; upper sheaths 6–14 cm long, margins often dark-banded; sheaths clasping stems, sheath margins overlapping 2–4 cm from apices; widespread, common, especially W of Cascades .....*J. e.* subsp. *effusus*
2' Tepals erect, pressed to capsules; upper sheaths usually 15–27 cm, margins pale; sheaths often not clasping stems, margins often split to base and not overlapping, loose, flattened or unrolled; widespread but uncommon ..... *J. e.* subsp. *solutus*

Kobresia myosuroides (Villars) A. Fiori (Bellard's Bog Sedge), reverts to its original name, *Carex myosuroides* Villars, now that *Kobresia* has been brought into *Carex.*

Kobresia simpliciuscula (Wahlenberg) Mackenzie (Simple Bog Sedge), reverts to its original name, *Carex simpliciuscula* Wahlenberg now that *Kobresia* has been brought into *Carex.*

Leymus flavescens (Scribn. & J.G. Sm.) Pilg., Yellow Wildrye; the current text referring to spikelets says, ". . . the other pedicellate, pedicels up to 15 cm." It should say, "pedicels up to 15 mm."

Lipocarpha may be transferred into ***Cyperus***. We're not yet convinced that this is a good idea. In case it is, here are the future names for the Oregon *Lipocarpha* species:

Lipocarpha aristulata (Coville) Tucker = *Cyperus aristulatus* (Coville) Bauters
Lipocarpha occidentalis (Gray) Tucker = *Cyperus hemioccidentalis* Goetgh.
Lipocarpha micrantha (Vahl) Tucker = *Cyperus subsquarrosus* (Muhl.) Bauters

Muhlenbergia filiformis (Thurb. ex S. Watson) Rydb., Pullup Muhly, was described as annual because all the individuals we have seen were annual. We've been told it can be perennial.

Muhlenbergia minutissima (Steudel) Swallen, Annual Muhly, has a wider range than was known in Oregon. Plants have been found in southern Oregon from Klamath through Malheur Counties, including a population on Steens Mountain. This inconspicuous grass grows in seepy spots, including shallow, seasonally wet soil on rocks.

Muhlenbergia richardsonis (Trin.) Rydb., Mat Muhly; the inflorescence is 1-15 cm long (not 11.5 cm as written).

Phalaris key to species has a problem starting at lead 4'. It should read:

4' Glume keels winged, the wings 0.2-0.6 mm wide
6. Plants perennial; glumes 4-7.5 x 1.2-1.5 mm; glume keels with wings 0.2-0.4 mm wide ..... *P. aquatica*
6' Plants annual; glumes 7-10 x 2-2.5 mm; glume keels with wings to 0.6 mm wide ..... *P. canariensis*

Phalaris arundinacea L., Reed Canarygrass, should be treated as introduced in Oregon. Some boreal populations may be native in North America, but this is not an issue here.

Phalaris californica Hook. & Arn., California Canarygrass, is cespitose, not rhizomatous.

***Poa,* key to species, subkey 1** has two problems. First, leads 6 to 9 are incorrectly ordered. Second, the recent discovery of *P. glauca* ssp. *glauca* in northeast Oregon necessitates changes in lead 10. (For distinguishing the subspecies, see the *P. glauca* entry, a page or two ahead.) The correct version of leads 6 to 9 is as follows:

6. Calluses and/or lemmas scabrous or with hairs, at least on nerves.
7. Calluses with a crown of hairs 0.1–0.2 mm long; lemmas short-hairy on keels and marginal veins for the proximal 33–50% of their length, intercostal area glabrous or with very short hairs near the base ..... ***P. unilateralis* ssp. *pachypholis***
7' Calluses glabrous or with a crown of hairs 0.1–0.5 mm long; lemmas glabrous or the keels and marginal veins scabrous to short-hairy, intercostal regions similar to veins ..... ***P. secunda***
6' Calluses glabrous; lemmas usually glabrous.
8. Lemmas 2.5–3 mm long and usually glabrous; keels and marginal veins rarely sparsely puberulent near the base, usually glabrous; glumes often equaling or exceeding upper florets; anthers 0.2–0.8 mm ..... ***P. lettermanii***
8' Lemmas 3–5.8 mm long, if less than 3 mm long lemmas short- to long-villous on the keels and marginal veins; glumes rarely equaling the upper florets; anthers (0.6)0.8– 1.2(1.7) mm.
9. Lemmas 4.1–5.8 mm, glabrous to puberulent, narrowly lanceolate ..... ***P. suksdorfii***
9' Lemmas 3–4.6 mm, short- to long-villous on keels and marginal veins, lanceolate . ***P. laxa***

Change to lead 10:

10. Upper 67% of culm lacking nodes; lemmas glabrous to fairly evenly but sometimes sparsely pubescent across the lower back between the keel and lateral veins; calluses glabrous or with cobwebby hairs; dry alpine slopes and ridges ..... ***P. glauca***

10' Uppe 67% of culm with nodes; lemmas pubescent only onthe keel and marginal veins; calluses with cobwebby hairs, which may be well developed or minute; lowlands to alpine

***Poa,* key to species, subkey 2,** p. 452. Leads 15-18 are not correctly arranged. The correct version is as follows:

15. Leaf sheaths, including collars, glabrous and not scabrous, even on the lower leaves (check collars)
16. Panicles dense; anthers lacking or aborted; plants densely cespitose ..... ***P. cusickii*** (in part)
16' Panicles loosely contracted; anthers usually well developed on at least some plants in the population, occasionally aborted; plants distinctly rhizomatous
17. Lemmas 5-7 mm long; habitat monane to alpine ..... ***P. chambersii***
17' Lemmas 2.5-4.5 mm long; habitat wet to moist alkaline meadows, usually in sagebrush steppe ..... ***P. × limosa***

15' Leaf sheaths hairy or retrorsely scabrous on or near the collar (at least on the lower leaves)
18. Collars hairy, at least near the front margins, collar margin hairs distinctly longer than those elsewhere on the sheaths; plants never all pistillate .....***P. nervosa***
18' Collars glabrous or hairy, collar margin hairs, if present, equaling or shorter than those elsewhere on the sheaths; plants all pistillate (rarely some individuals bisexual) ***P. wheeleri***

Poa chambersii Soreng, Chamber's Bluegrass, has been split. The plants in the Cascades keep the name *P. chambersii*. The Steens Mountain plants are now *P. mansfieldii*. A key to separate them is provided below, under the name *P. mansfieldii*.

Poa glauca Vahl. A second subspecies of *P. glauca* has been collected in the Wallowa Mountains. The following key distiguishes them. The two taxa can be found near one another.

1. Calluses glabrous; lemmas hairy between the veins ..... ***P. glauca* ssp. *rupicola***, Timberline Bluegrass

1' Calluses with cobwebby hairs; lemmas glabrous or hairy between the veins ..... ***P. glauca* ssp. *glauca***, Glaucous Bluegrass

Poa iconia Azn. from Turkey has been collected in Oregon. This plant looks like *Poa bulbosa*. We're told it's definitely, certainly a distinct species. What information we have about how to identify it is presented in the table below. We are told that *Poa iconia* is common in the western states. Please send specimens of *P. iconia* to the herbarium at Oregon State University or your local herbarium.

Trait	**Poa bulbosa**	**Poa inconia var. iconia**
Basal leaves	tuft, sometimes < 3 cm	Longer, leaf blades always slender

Trait	Poa bulbosa	Poa inconia var. iconia
Lower ligules	< or > 1 mm, but if shorter mostly smooth on back	always < 1 mm
Lower ligules	mostly smooth on back, often decurrent	scabrous dorsally, not decurrent
Lower ligules	often decurrent	not decurrent
Leaf blade keels	smooth (if ligules short?)	scabrous
Leaf blade surfaces		often scabrous
Keels of prophylls	retrorsely scabrous	antrorsely scabrous
Sheaths of some lower leaf around the lower collars	smooth and glabrous	scabrous (or hairy) on margins or more widely
Panicles	more or less contracted	Loosely contracted or loose
Bulbils	relatively large, robust	relatively delicate
Leaves of bulbils	Short	long, slender
Ligules of bulbil leaves	Decurrent	not decurrent
Normal fertile spikelets	sometimes present	always absent
Lowest florets of any spikelet	Sometimes +/- normal and fertile	deformed
Lowest lemmas of spikelets	sometimes with webs on callus	lacking webs on callus

Poa laxa Haenke, Mt. Washington Bluegrass, is circumboreal. Recent research shows that the Oregon from the Wallowa Mts. and Steens Mt. that have been called *P. laxa* are best treated as a distinct native species, *P. wallowensis* Soreng, Wallowa Bluegrass. The key in Flora of Oregon works as written, but the Oregon plants that key to *P. laxa* are actually *P. wallowensis*.

Poa leibergii Scribn., Leiberg's Bluegrass. The description says the leaf sheath is closed 40-60% its length. Actually, it is closed 40-80% its length.

Poa mansfieldii Otting & B.L. Wilson, Mansfield's Bluegrass, has recently been described from Steens Mountain. This is a Steens version of the plant that is treated as *P. chambersii* in Flora of Oregon. The name *P. chambersii* is now limited to plants from the Cascades. The two species can be separated as follows:

11. Upper culm blades 32–66(73) mm; calluses with sparse cobwebby hairs 0.4–1.9 mm (rarely glabrous); lemma keels and marginal veins scabrous to soft-hairy on lower 30%; plants dioecious; habitat openings in montane conifer forests; range crest and w side of Cascade Mts., Oregon ..... ***P. chambersii***

11. Upper culm blades (7.5)15–31(47) mm; calluses glabrous; lemma keel and marginal veins glabrous or minutely scaberulous; plants gynodioecious; habitat alpine slopes and meadows where snowbanks persist; range Steens Mt., southeast Oregon ..... ***P. mansfieldii***

On Steens Mountain, *P. mansfieldii* is most likely to be confused with *P. cusickii* and *P. pratensis* ssp. *alpigena*. *Poa mansfieldii* and *P. pratensis* are both rhizomatous, but their spikelets differ. In

P. mansfieldii, calluses and lemmas are glabrous and smooth to scaberulous. In *P. pratensis,* the callus has cobwebby hairs and the lemmas are more or less hairy on main veins.

The forms of *P. cusickii* occurring on Steens Mountain differ from *P. mansfieldii* in being densely cespitose, with branching strictly intravaginal. If a small tuft of *P. mansfieldii* is collected without its rhizomes, this difference in habit may be overlooked. *Poa cusickii* is also a taller plant with shorter ligules, those on culms 1–3(6) mm and those on innovations 0.2–0.5(2.5) mm, and its lower glumes are 3-veined. All alpine plants of *P. cusickii* are pistillate; the majority of *P. mansfieldii* plants have bisexual spikelets. *Poa cusickii* grows in mesic meadows and dry rocky slopes, in drier locations than *P. mansfieldii,* though the two may grow near each other.

Poa secunda J. Presl usually sets seed apomicticly (without sex). As a result, it has split into many different lineages that are actually widespread clones. Two or more lineages may grow in one area and they don't usually interbreed – but even *P. secunda* plants that look alike don't usually interbreed, so that doesn't help us decide where to draw the lines among taxa. What to do? Recently, they have been lumped into two subspecies. However, smaller lineages differ ecologically as well as morphologically, so for restoration purposes it may be useful to recognize these lineages. Recently, the traditional species most important to ecologists have been recognized as varieties within the two subspecies. [See Soreng, Robert, and Lynn. J. Gillespe. 2018. *Poa secunda* J. Presl (Poaceae): A modern summary of infraspecific taxonomy, chromosome numbers, related species and infrageneric placement based on DNA. Phytokeys 110: 101-121. DOI: 10.3897/phytokeys.110.27750.]

1. Lemmas usually glabrous or scabrous on the lower half, the keels and marginal veins occasionally sparsely puberulent at the base; basal branching mainly extravaginal; leaves slightly lax to firm, remaining intact through the growing season; ligules of innovations to 1 mm long (except *P. nevadensis*) .....***P. secunda*** J. Prel **ssp. *juncifolia* (Scribn.) Soreng**
   2. Leaf sheaths minutely scabrous; ligules long (to 6 mm), decurrent; habitat moister areas of sagebrush valleys to ponderosa pine or lower montane forest .....***Poa secunda* subsp. *juncifolia* var. *nevadensis* (Vasey ex Scribn.) Soreng, Nevada Bluegrass**
   2' Leaf sheaths glabrous; ligules short (usually to 2 mm)
      3. Leaf blades involute, rarely over 1.5 mm wide, those of the innovations mostly less than 15 cm long; plants not rhizomatous, 2.5-7 dm tall; habitat pine forests and steppe, riparian and alkali meadows, in well-drained to poorly-drained, light to heavy, often alkaline or saline soils; widespread, but infrequent in the California Floristic Province and south-western states .....***Poa secunda* subsp. *juncifolia* var. *juncifolia* (Scribn.) Soreng, Alkali Bluegrass**
      3' Leaf blades flat, mostly 1.5-3 mm wide, those of the innovations often 15-30 cm long; plants often rhizomatous, mostly 6-12 dm tall; habitat mostly sagebrush slopes and ponderosa pine forest, where dry but not alkaline; not west of Cascade/Sierra axis .....***Poa secunda* subsp. *juncifolia* var. *ampla* (Merr.) Soreng, Big Bluegrass**
1' Lemmas sparsely to densely puberulent or short-villous on the lower 2/3; basal branching mixed intra- and extravaginal or mainly intravaginal; leaves usually lax, withering with age; ligules of innovation leaves usually longer than 2 mm ..... ***P. secunda*** J. Presl **ssp. *secunda***
   4. Leaf sheaths strongly scabrous; ligules scabrous; habitat open pine forests, coastal scrub and coastal and Central Valley grasslands, in well-drained or heavier soils, mainly in the California Floristic Province, but extending northwards in the Pacific North West and southeast into the Mojave Desert

.....***Poa secunda* subsp. *secunda* var. *scabrella* (Thurb.) Soreng, Pine Bluegrass**

4' Leaf sheaths smooth; ligules smooth or lightly scabrous; mainly of the eastern slope of the Cascades and Sierra Nevada and eastward

5. Panicles open, the branches spreading, diverging more than 45° at anthesis and remaining open with spikelets absent in the lower half; plants of moist, often shady forests, moist cliffs and rocks, and subalpine to alpine meadows, in well-drained acid soils that are consistently moist through its growing season; Pacific Northwest and northern California .....***Poa secunda* subsp. *secunda* var. *gracillima* (Vasey) Soreng, Pacific Bluegrass**

5' Panicles loosely to tightly contracted at maurtity, branches divergent less than 45°, with spikelets from near the base or lower third; plants mostly of more open forests, steppe, and alpine zones, generally in light, well-drained soils; widespread, but mostly replaced by var. *scabrella* on west side of the Sierra Nevada and westwards and in the Mojave Desert ..... ***Poa secunda* subsp. *secunda* var. *secunda*, Sandberg's Bluegrass**

Poa secunda secunda secunda is best interpreted as a single, widespread, variable taxon. However, in case you have a masochistic streak and want to distinguish additional forms that are probably recurrent ecotypes rather than taxa, here's a key to variations within *P. secunda secunda secunda*. Have fun.

6. Plants flowering mostly in late April to June; leaves short, involute; culms much longer than the basal leaves but rarely over 30 cm tall; plants of the sagebrush valleys and dry or exposed areas of lower mountains, scablands, rocks with thin soil layers ..... ***Poa secunda* subsp. *secunda* var. *secunda*, Sandberg's Bluegrass**

6' Plants flowering mostly in late June to August; leaves usually elongate, often 10-30 cm long; culms often more than 30 cm tall; plants primarily montane

7. Culms mostly 15-30 cm tall; lemmas usually pubescent only at the base; habitat alpine and subalpine, talus, rocky ridges ..... ***P. incurva*** Scribn. & T.A. Williams, **Curly Bluegrass**

7' Culms mostly more than 30 cm tall; lemmas usually pubsecent over the lower half; ponderosa pine forest to midmontane (at lower elevations than *C. incurva*);, usually flowering July-August but sometimes as early as May .....***P. canbyi*** (Scribn.) Howell, **Canby Bluegrass**

Poa wallowensis Soreng, Wallowa Bluegrass, has recently been described from the Wallowa Mountains and Steens Mountain. These plants had been called *P. laxa*. The identification key in Flora of Oregon should work but will give the name *P. laxa*; change this to *P. wallowensis*. It is possible that parts of the description should be changed because it applies to circumboreal *P. laxa* rather than *P. wallowensis*. If we ever figure this out, more updates will be added.

Polypogon maritima Willd., Mediterranean Beardgrass. The text says "glumes 1.8-8.2 mm" but should says, "glumes 1.8-3.2 mm." We suspect that this plant is more common than currently known along southwest Oregon waterways, but overlooked because it looks like a poor quality *P. monspeliensis* until the spikelets are seen individually. Get in the habit of squeezing a few spikelets out of any wimpy *Polypogon* you see in the area and you'll find it. (2018 update: It has now been found near Roseburg.)

Puccinellia simplex Scribn., California Alkali Grass, has been found in Morrow County, Oregon, in a shallow, alkaline, seasonally wet spot. It is apparently introduced from California, where it is native. Although it can theoretically grow to 25 cm tall, the plants observed were 8 cm tall at most. Lemmas lack awns. The following leads may allow its identification:

1. Lemmas 1.5-2(-2.2) mm; anthers 0.4-0.8 mm; lowest panicle branches horizontal to descending ..... *P. distans*

1' Lemmas (2-)2.2-5 mm; anthers 0.5-2.6 mm; lowest panicle branches ascending to descending

2. Range coastal; not *P. simplex* (as far as we know)

[leads 3-5 omitted here; they do not need updating at this time]

2' Range east of the Cascades

6. Plants annual; callus hairy; lemma with short (0.1 mm) hairs sparsely and evenly arranged between veins, often with longer hairs on the veins, the basal hairs often longest, twisted, tangled ..... *P. simplex*

6' Plants perennial; callus with few hairs; lemmas usually glabrous or sparsely hairy in the proximal half, mainly on the veins

7. Leaves concentrated near the base of the plant, very narrow, involute, 1.2-1.9 mm wide when flattened; lemma tips acute; lemma apical margins smooth to scabrous ..... ***P. lemmonii***

7' Leaves either concentrated near the base of the plant or distributed along the stem, involute or flat, usually wider, 1-4 mm wide when flattened; lemma tips usually obtuse, sometimes acute; lemma apical margins densely scabrous ..... ***P. nuttallii***

Schedonorus arundinaceus (Schreb.) Dumort., Tall Fescue – We don't know what brain fart inserted [N] (native) instead of [E] (exotic, introduced) for this plant. This grass is definitely introduced and tends to be invasive, although it is also cultivated for seed and used for pasture and erosion control.

Schoenoplectus key to species: Lead 2. should read: Culms triangular in cross section; spikes 150+, sessile or on branches.

Schoenoplectus californicus (C.A. Meyer) Soják, California Bulrush. The last sentence of the discussion, p. 251, says "Hybrids of *S. californica* . . ." but should say "Hybrids of *S. californicus* . . ."

Schoenoplectus saximontanus (Fernald) J. Raynal, Rocky Mountain Bulrush, was collected in Klamath Marsh in July, 2017. It has a scattered distribution, probably transported by birds. To include it in the *Schoenoplectus* key, p. 249, add this lead after lead 3':

3.5. Leaves basal and 1(-2) cauline; floral scales entire; achenes (obscurely to) strongly horizontally ribbed; perianth usually lacking; probably rare (now known from Klamath Marsh) ..... ***S. saximontanus***

3.5' Leaves all basal; floral scales notched; achenes smooth; perianth present, strap-shaped or bristle-like

Setaria faberi Herrm., Giant Foxtail, was collected in Umatilla County in 2016. It will key to *Setaria*. It differs from the other species because the inflorescence is wider and always nods and because the

leaves (10-20 mm wide) are soft-hairy on top. This introduced grass is a serious weed in cultivated fields in the Great Plains. The one known Oregon population was killed, but we may not have seen the last of it. See *Setaria viridis* (below) for a key distinguishing its two varieties from *S. faberi*.

Setaria viridis (L.) P. Beauv. var. ***major*** (Gaudin) Pospichal, a variety of Green Foxtail, was collected in 2018 in Morrow County. Inflorescences are often lobed near the base, though the Oregon population lacked this trait. In this variety, the inflorescence may nod but only distally, not from near the base as in *S. faberi*. All *S. viridis* can be distinquished from *S. faberi* by their leaves, which are scabrous, not hairy, on top. Key leads to distinguish *S. v.* var. *major* from our more common variety:

1. Leaves with soft spreading hairs on upper side; bristles below each spikelet (1)3(6), about 10 mm; spikelets 2.5-3 mm; inflorescence nodding from near base.....*S. faberi*

1' Leaves scabrous; bristles below each spikelet 1-3, 5-10 mm; spikelets 1.8-2.2 mm; inflorescence erect or nodding from upper third ..... *S. viridis*, with 2 varieties

2. Culms 100-250 cm tall; blades 10-25 mm wide; panicles 10-20 cm long, often lobed at base .....*S. v.* var. *major*

2' Culms 20-100 cm tall; blades 4-12 mm wide; panicles 3-8 cm long, not lobed .....*S. v.* var. *viridis*

Spartina, Cordgrasses. The species, or most of them, are being transferred to *Sporobolus*. We are so not thrilled. Here are the new names that we've found so far:

Spartina anglica = *Sporobolus anglicus* (C. E. Hubb) P. M. Peterson & Saarela
Spartina alternifolia = *Sporobolus alterniflolius* (Loisel.) P. M. Peterson & Saarela
Spartina densiflora = *Sporobolus densiflorus* (Brongn.) P. M. Peterson & Saarela
Spartina gracilis = *Sporobolus hookerianus* P. M. Peterson & Saarela
Spartina × *townsendii* = *Sporobolus* × *townsendii* (H. Groves & J. Groves) P. M. Peterson & Saarela

Spartina densiflora Brongn., Denseflower Cordgrass, has been found in Coos Bay. It is a densely cespitose, coastal cordgrass with very narrow leaves. An attempt is underway to eradicate it. Here is a key to *Spartina* of Oregon and Washington:

1. Plants east of the Cascades, native
2. Upper glumes awnless, 6-10 mm; culms 40-100 cm, 1.5-5.5 mm thick; inflorescences with 3-12 branches ..... ***S. gracilis***
2' Upper glumes awned, 10-25 mm (including awn); culms 50-250 cm, 2.5-11 mm thick; inflorescences with 5-50 branches .....***S. pectinata***

1' Plants coastal, introduced, often invasive
3. Leaf blades inrolled when fresh, with strongly scabrous margins; panicle branch axes not prolonged
4. Rhizomes lacking or short; culms usually clumped; upper glumes 1-veined; panicle branches tightly appressed ..... ***S. densiflora***
4' Rhizomes present, well-developed, thin and wiry; culms usually solitary, sometimes a few together on the spreading rhizomes; upper glumes with 2 veins on the same side of the keel; panicle branches, appressed to strongly divergent ..... ***S. patens***

3’ Leaf blades flat when fresh, at least near the base, with smooth or slightly scabrous margins; panicle branch axes often prolonged beyond the spikelets
5. Glumes mostly glabrous on the sides, sometimes with appressed hairs near base; panicles with 3-25 branches; fresh culms with unpleasant, sulphurus odor, internodes fleshy; anthers 3-6 mm ..... ***S. alterniflora***
5’ Glumes usually appressed-hairy on the sides; panicles with 1-12 branches; fresh culms not with unpleasant sulphurous odor, internodes firm; anthers 5-13 mm
6. Ligules 2-3 mm; anthers (5)7-13 mm, well developed, dehiscent at maturity .. ***S. anglica***
6’ Ligules 1-1.8 mm; anthers 5-10 mm, sometimes poorly developed and indehiscent at maturity ..... ***S.* x *townsendii***

Sporobolus now includes species from the genera *Crypsis* and *Spartina*. See discussion under those genera.

Tripidium ravennae (L.) H. Scholz [formerly *Saccharum ravennae* (L.) L.], Ravenna Grass, has been found in eastern Oregon. It is introduced to a couple of spots along the Columbia River. Considered a noxious weed, it has the potential to be invasive. It is a cespitose grass, 2-4 meters tall. Yes, huge. The inflorescences are fluffy with hairs, superficially similar to those of *Phragmites australis,* which grows nearby. *Phragmites* is strongly rhizomatous, whereas *T. ravennae* is densely cespitose.

More generally, *T. ravennae* resembles huge ornamental grasses in the genera *Cortaderia* and *Miscanthus. Tripidium ravennae* differs from all our other huge grasses in having a large, dense patch of hairs on the upper side of the leaf blade near the base.

Triticum aestivum L., Wheat. In the description the lemma awn length is given as 8(-12) mm. It should be about 8(-12) cm. Also, the treatment says there are 2 florets per spikelet. It should say 3-9 florets per spikelet, of which 2-5 are seed-forming. However, we suspect that most wheat we can expect to see on roadsides around the Pacific Northwest has 2 fertile florets.

Zizania palustris L., Northern Wild Rice, is introduced and persisting in a lake in the Three Sisters Wilderness. It is easily recognized as an odd grass; it is very tall, emergent in the lake, and has a panicle with staminate flowers above and pistillate flowers below.