

## Updates and Corrections for Field Guide to the Grasses of Oregon and Washington

October 6, 2019

These pages report additional grasses found recently in Oregon and Washington and name changes for the taxa in field guide. Errors are corrected as we find them. Keys to subtaxa, omitted from the guide to save space, are presented here.

***Achnatherum***, Needlegrasses. 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 occidentale* = *Eriocoma occidentale* (Thurb. ex S. Watson) Romasch.  
*Achnatherum* o. ssp. *californica* = *Eriocoma* o. ssp. *californica* (Merr. & Burt 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***, Indian Ricegrass. Change awn length from 3-20 mm to 3-6 mm on pp. 36 (key) and 92.

***Anemanthele lessonii*** (Steud.) Veldkamp, also known as *Stipa arundinacea* (Hook.f.) Benth., is sold as an ornamental grass under the names gossamer grass, New Zealand wind grass, and pheasant's tail grass. It is spreading very locally at one site in Seattle but may show up elsewhere. It is a densely tufted, wiry perennial to about a meter tall, with leaves drooping above and delicate nodding inflorescences. Spikelets consist of two glumes 2.5-3 mm long, longer than the single floret (about 2-2.5 mm). The awn is wavy, delicate, and up to 8 mm long. It arises from the tip of the lemma.

*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

*Poa glauca* Vahl. A second subspecies of *P. glauca* has been collected in the Wallowa Mountains. The following key distinguishes 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	<i>Poa bulbosa</i>	<i>Poa iconia</i> var. <i>iconia</i>
Basal leaves	tuft, sometimes < 3 cm	Longer, leaf blades always slender
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	retroscabrous	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 cusickii*** Vasey, Cusick's Bluegrass, key to subspecies.

- 1a Cauline leaf blades usually < 1.5 mm wide; panicle branches moderately to densely scabrous; all vegetative shoots intravaginal; lemmas glabrous; calluses glabrous; functional anthers present or absent
  - 2a Longest panicle branches usually 1.7–4(5) cm, stout to slender, with 2–15 spikelets; functional anthers sometimes present; habitat riparian meadows and swales in upper sagebrush zone to alpine slopes and ridges; range widespread E of the Cascades  
..... ***P. c. ssp. cusickii***
  - 2b Longest panicle branches 0.5–2 cm, stout, with 2–5 spikelets; functional anthers generally absent; habitat alpine grasslands and ridges; range mountains E of the Cascades  
..... ***P. c. ssp. pallida***
- 1b Some cauline blades 1.5–3.5 mm wide; panicle branches smooth to moderately scabrous; some vegetative shoots extravaginal; lemmas glabrous or sparsely pubescent on the keel and marginal veins; calluses sometimes with a few short hairs; functional anthers absent
  - 3a Lemmas and calluses of all florets glabrous; panicles erect, contracted; panicle branches smooth or with very sparse, long scabers; habitat subalpine to lower alpine, openings and meadows; range Olympic Mts., WA and in and E of the Cascades ..... ***P. c. ssp. epilis***
  - 3b Lemmas of lower florets in each spikelet usually sparsely pubescent at least on the lower marginal veins, lemmas of upper florets glabrous; calluses sometimes with sparse, short hairs; panicles somewhat lax and loosely contracted; panicle branches usually sparsely scabrous; habitat subalpine to alpine meadows and open forest; range Olympic Mts. and Cascades, and Mt. Ashland, OR. .... ***P. c. ssp. purpurascens***

***Poa pratensis*** L., Kentucky Bluegrass, key to subspecies. Note that nearly all *Poa pratensis* in our area are hybrids of the introduced subspecies. Trying to sort them out isn't worth the effort.

- 1a Panicle branches smooth or nearly so
  - 2a Basal branches primarily extravaginal; blades flat or folded, soft, upper surfaces usually glabrous, sometimes sparsely hairy; habitat alpine; range Steens Mt., OR; native  
..... ***P. p. ssp. alpigena***
  - 2b Basal branches both intra- and extravaginal; blades folded or involute, somewhat firm, upper surfaces often sparsely hairy; habitat not alpine; SE OR (possibly overlooked and more widespread); perhaps native but so far inadequately studied ..... ***P. p. ssp. agassizensis***
- 1b Panicle branches ± scabrous; introduced subspecies that have been crossed to produce cultivated Kentucky bluegrass; most plants are hybrids that cannot be identified to subspecies
  - 3a Intravaginal innovation shoots present; blades of innovation shoots 0.4–1 mm wide, folded to involute, somewhat firm, upper surfaces often sparsely and softly hairy; habitat dry meadows and forests; range N WA, likely elsewhere in PNW ..... ***P. p. ssp. angustifolia***
  - 3b Intravaginal innovation shoots present or absent; blades of at least some innovation shoots 1.5–4.5 mm wide, flat or folded, upper surfaces rarely hairy; habitat mesic to moist grasslands
    - 4a Culms 8–30(50) cm; plants often somewhat glaucous, especially the glumes; blades flat; intravaginal shoots absent or present and with blades similar to those of the extravaginal shoots; panicles with few spikelets per branch and 1–2(5) branches per node; habitat lowlands; range W OR and WA ..... ***P. p. ssp. irrigata***
    - 4b Culms to 100 cm; plants not glaucous; blades flat or folded; intravaginal shoots present, with blades similar to those of the extravaginal shoots or distinctly narrower; panicles with several to many spikelets per branch and 3–5(7) branches per node; habitat lowlands to montane; range widespread..... ***P. p. ssp. pratensis***

*Poa secunda* J. Presl usually sets seed apomictically (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. Gillespie. 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.] Here is a key to these subtaxa, in case you want it:

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. Presl 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 maturity, 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 pubescent 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**

*Podagrostis humilis*, p. 376, reads "rachilla prolonged 0-0.1 mm. Anthers 0.4-1 mm beyond the base of the floret." It should read, "rachilla prolonged 0-0.1 mm. Anthers 0.4-1 mm beyond the base of the floret."

*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 alternifolius* (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

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