

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

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by the *Carex* Working Group

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). 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 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 Sedge Genera (Cyperaceae): Lead 14 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 terminal15
- 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 lateral16

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

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 shriveled bulb coats; inner bulb coats 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*

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 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 will distinguish them.

2.5. Glume tips parallel or convergent; lemma tips acute *A. pratensis*

2.5' Glume tips divergent; lemma tips 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.

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!

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."

Carex agastachys L. f. This species has been collected in Oregon and Washington. See key leads under *C. pendula*, below.

Carex pendula Hudson. This giant ornamental sedge has been split taxonomically, and two species have been found in the Pacific Northwest. Confirmed specimens 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 Pedro Jiménez-Mejías, 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*

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

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 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*
 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*

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 North America, though the other two are planted frequently and tend to escape, sometimes showing up in apparently natural habitats. The key published in Flora of Oregon is by far the best current, readily available key to them. Don't use keys in other resources such as Hitcock & Cronquist or Flora of North America; they lack some common taxa that 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. lacatus*
- 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. *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, uncommon.....*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; range W of Cascades *J. e.* subsp. *solutus*

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. Apparently it can be perennial at times.

Muhlenbergia richardsonis (Trin.) Rydb., Mat Muhly; the inflorescence is 1-15 cm long (not 1-1.5 cm as written).

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.

Poa, key to species, subkey 1. Leads 6 to 9 are incorrectly ordered. The correct version 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*

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 cusickii Vasey, Cusick's Bluegrass. There is a small mistake on p. 456, in the description of *P. cusickii* ssp. *purpurascens*. It says that this subspecies has “both intra- and extravaginal branching.” It should read, “mostly extravaginal branching.”

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
Loer 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

Polypogon maritima Willd., Mediterranean Beardgrass. The text says "glumes 1.8-8.2 mm" but should say, "glumes 1.8-3.2 mm." We suspect that this plant more common than 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.

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. nuttalliana*

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 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.....4

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

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. The inflorescences are fluffy with hairs, superficially similar to those of *Phragmites australis*, which grows nearby. *Phragmites* is strongly rhizomatous. *T. ravennae* is densely cespitose. *Tripidium ravennae* differs from all our other huge grasses in having a large, dense tuft of hairs on the upper side of the leaf blade near the base.

More generally, *T. ravennae* resembles huge ornamental grasses in the genera *Cortaderia* and *Miscanthus*. These grasses lack the dense hairs near the base of the upper leaf surface. In addition, *Miscanthus* panicle branches are unbranched, whereas they are branched in *Tripsidium*, *Cortaderia*, and *Phragmites*.

Triticum aestivum L., Wheat. In the description the lemma awn length is given as 8(-12) mm. It should be _____ 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 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.