

TECHNICAL NOTE

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COMMONLY OCCURRING WETLAND PLANT SPECIES FOR IDAHO AND UTAH NRCS WETLAND DELINEATORS

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This Technical Note provides photographic and descriptive information on some of the more commonly occurring plants encountered by Idaho and Utah NRCS wetland delineators.

Introduction

Plant identification for the purpose of wetland delineation can be extremely daunting when one considers the vast diversity of obligate and facultative wetland species present in Idaho and Utah. For example, there are over 90 species of sedge (*Carex* sp.) described in the Intermountain Flora (Cronquist et al., 1977). Add to that the numerous grasses, rushes, bulrushes, and additional dicots, and it is easy for new delineators to become overwhelmed by the seemingly endless list of species.

Memorizing the defining characters of each species is nearly impossible to all but the most passionate. Likewise, running each specimen through a botanical key from start to finish is prohibitively time consuming. This Technical Note is designed to break down the possible plant species into functional groups of shared features. Each group is represented with photographs and descriptions of the most commonly encountered Idaho and Utah wetland species. Wetland status for the Arid West Region is also provided.

Users of this Technical Note are encouraged to follow up initial determinations with keys or herbarium specimens to get to the species level. It would also be beneficial to make pressed specimens and/or high-quality photographs of all defining plant parts for NRCS records (See Idaho Plant Materials Technical Note 70: Collecting and Processing Botanical Voucher Specimens).

For additional information on botanical terminology, see *Plant Identification Terminology: An Illustrated Glossary* (Harris and Harris, 1997).

References

Cronquist, A., Holmgren, A.H., Holmgren, N.H., Reveal, J.L. and P.K. Holmgren. 1977. *Intermountain Flora: Vascular Plants of the Intermountain West, U.S.A. Volume 6: Monocotyledons*. The New York Botanical Garden, Columbia University Press, New York. 584p.

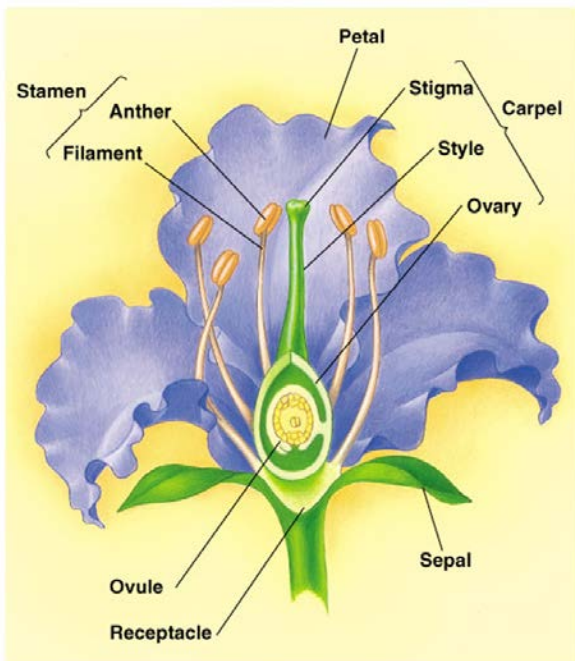
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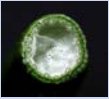


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MONOCOTS



- Flower parts in 3's
- Petals and sepals may be similar (tepals)
- Parallel veination

Separation of Grass and Grass-Like Plants

Poaceae (Grasses)	Cyperaceae (Sedges)	Juncaceae (Rushes)
<p>Stems round</p> 	<p>Stems usually 3-angled (or round, 4-angled, lenticular)</p> 	<p>Stems round</p> 
<p>Stems with solid nodes and hollow internodes</p>	<p>Stems usually with solid pith</p>	<p>Stems with solid pith</p>
<p>Leaf sheaths open</p>	<p>Leaf sheaths closed</p>	<p>Leaf sheaths open</p>
<p>Leaves 2-ranked (arising from alternating sides)</p> 	<p>Leaves 3-ranked or spiral (arising from 3 sides)</p> 	<p>Leaves 2-ranked</p>
<p>Fruit a grain with papery scales (palea, lemma, and glumes)</p>	<p>Fruit an achene with bristles, bracts, may have a tubercle</p>	<p>Fruit a capsule with many, tiny dust-like seeds</p>

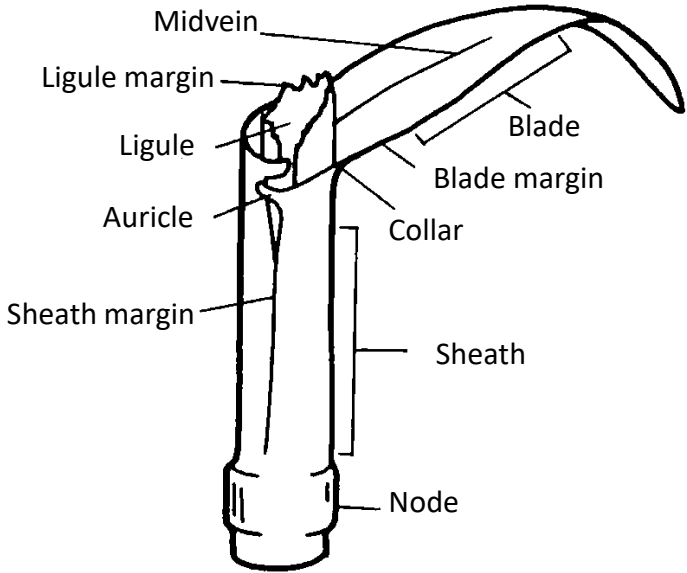
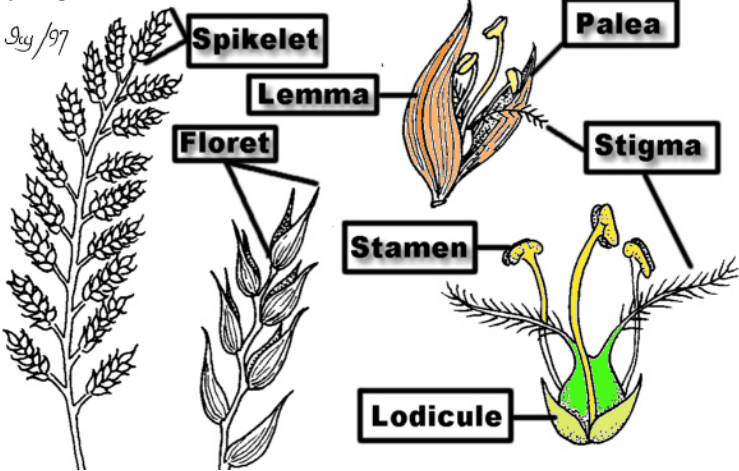


Grasses (Poaceae)

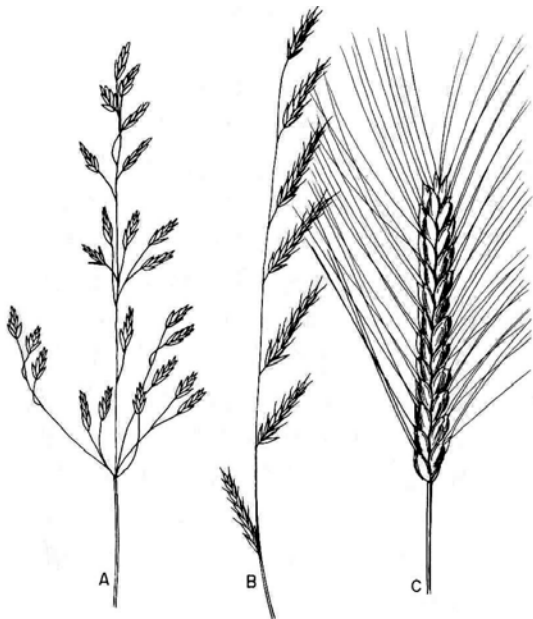


Grass Terminology

Ivy Livingston © BIODIDAC



- A. Panicle
- B. Raceme
- C. Spike, or spicate raceme



Open panicle, smaller spikelets

Common Species

- Kentucky bluegrass
- Redtop bentgrass
- Tufted hairgrass
- Bluejoint reedgrass
- Fowl managrass
- Prairie wedgegrass
- Alkali muhly
- Alkali sacaton
- Lemmon's alkaligrass
- Weeping alkaligrass
- Beckmannia



Redtop, Creeping bentgrass
(*A. stolonifera*, *A. gigantea*)
FACW



Kentucky bluegrass (*Poa pratensis*)
FAC



Alkali muhly (*Muhlenbergia asperifolia*)
FACW



Alkali sacaton (*Sporobolus airoides*)
Note hairy ligule. FAC



Bluejoint reedgrass
(*Calamagrostis canadensis*)
FACW



Weeping alkaligrass (*Puccinellia distans*)
FACW



Fowl mannagrass (*Glyceria striata*)
OBL

Open panicle, larger spikelets



Tall fescue
(*Schedonorus arundinaceus*)
FACU



Barnyardgrass (*Echinochloa crus-gali*)
FACW

Large stature, compressed panicle

Common Species

- Orchardgrass
- Reed canarygrass
- Common reed



Orchard grass (*Dactylis glomerata*)
Curved spikelet, compressed stems
FACU

Reed canarygrass (*Phalaris arundinacea*)
FACW



Common reed (*Phragmites australis*)
>6ft tall, dense stands. FACW

Foxtails

Common species

- Shortawn foxtail
- Creeping meadow foxtail
- Timothy
- Rabbitsfoot grass
- Meadow barley
- Foxtail barley
- Mouse barley



Timothy (*Phleum pretense*)
Glumes awned. Not easily shattered
FACU



Creeping meadow foxtail "Garrison"
(*Alopecurus arundinacea*)
Seeds black at maturity, readily falling off the stem. Seed awned.
FAC





Green foxtail (*Setaria viridis*)
Hairs are bristles, stay on the inflorescence. Ligule hairy. Wetland status not available.



Rabbit's-foot grass (*Polypogon monspeliensis*)
Hairs are glumes, disarticulate w/seed
Ligule a membrane. FACW



Meadow barley (*Hordeum brachyantherum*)
All *Hordeum* have 3 spikelets/node. FACW

Foxtail barley (*Hordeum jubatum*)
Compare to mouse barley (not shown). FAC

Narrow spike/raceme

- Quackgrass
- Inland saltgrass
- Alkali cordgrass



Quackgrass
(*Agropyron repens*)
Highly rhizomatous,
dense sod; not awned
FAC



Alkali cordgrass (*Spartina gracilis*)
“eye lash” like seed head.
Ligule hairy. FACW



Inland saltgrass (*Distichlis spicata*)
Low statured. Creeping, sod-forming.
Dioecious (separate male and female plants).
FAC





Western wheatgrass (*Pascopyrum smithii*)
Rhizomatous; loose sod-forming; bluish
leaves; short awns. FAC

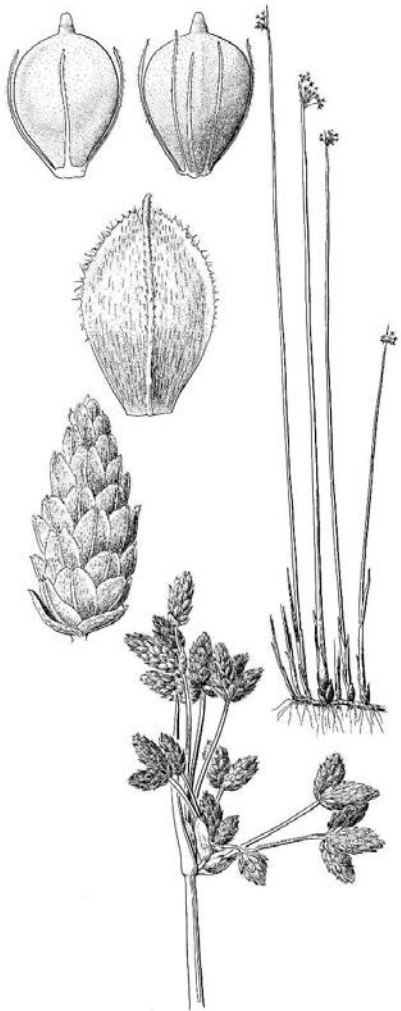


Slender wheatgrass (*Elymus trachycaulus*)
Bunchgrass; greenish leaves; short to long
awned. FACU

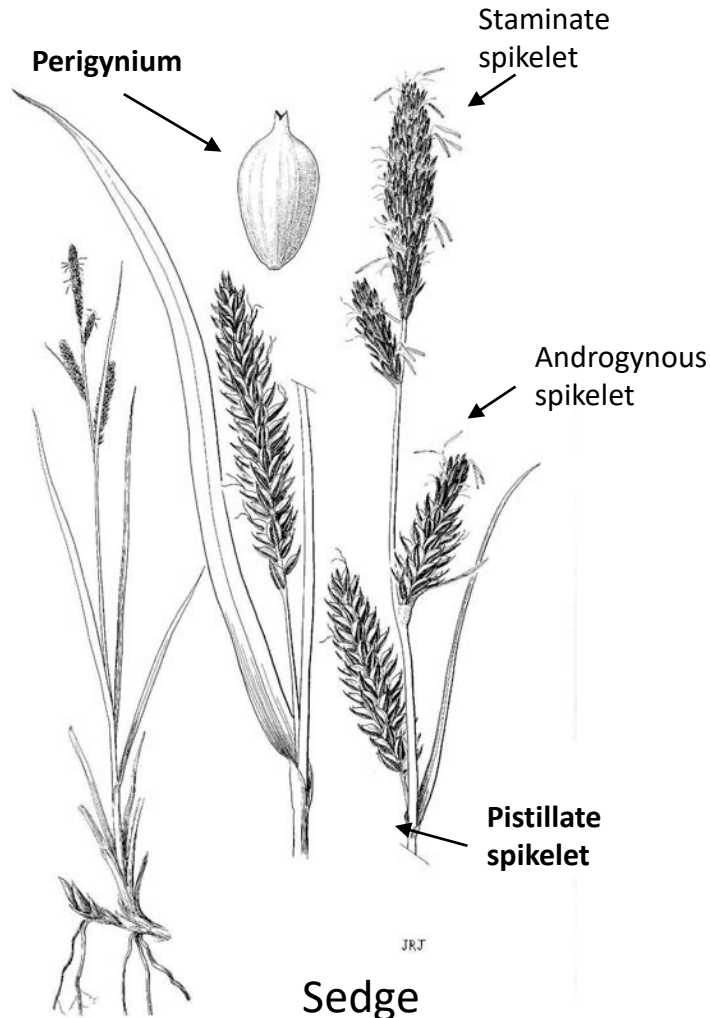


Beardless wildrye
(*Leymus triticoides*)
Sod forming. Awl-shaped
(needle-like) glumes. FAC

Sedges (Cyperaceae)



Bulrush (*Scirpus* or *Schoenoplectus* spp)



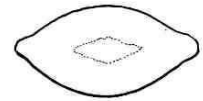
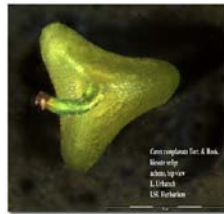
Sedge
(*Carex* spp)

Slichter 2010



Carex spp

- Three sided stems (triquetrous)
- Achene enclosed in a perigynium
- Spike shapes – cylindrical, ovoid, oblong
- Achenes trigonous (left) or lenticular (right)
- If 3 stigma lobes then trigonous, if 2 stigma lobes then lenticular



Nebraska sedge (*Carex nebrascensis*)
 Compare to water sedge
 2 stigma lobes/lenticular
 achenes
 OBL

Water sedge (*Carex aquatilis*)
 2 stigma lobes/lenticular achenes
 Very similar to Nebraska sedge, but greener
 with narrower black scales.
 OBL





Clustered field sedge (*Carex praegracilis*). Stigmas 2, achenes lenticular. Can be found in drier sagebrush habitat as well as wet areas
FACW



2016 © Peter M. Dzubik

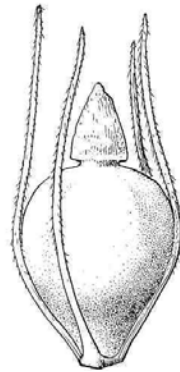


Beaked sedge (*Carex rostrata*, *C. utriculata*). Stigmas 3, achenes trigonous. Achenes diverging from stem at nearly 90° angle. OBL



Woolly sedge (*Carex lanuginosa*)
Visibly hairy perigynium. Stigmas 3, achenes trigonous. OBL

Creeping Spikerush (*Eleocharis palustris*)



Seed tipped with tubercle

- Round stems so easy to mistake for a rush
- Single spike-like inflorescence
- No discernable leaves coming off the stem
- OBL



Bullrushes (*Scirpus* or *Schoenoplectus*)



Hardstem bulrush
(*Schoenoplectus acutus*)
OBL

- No perigynium
- No tubercle
- Plants taller (3-5 ft)



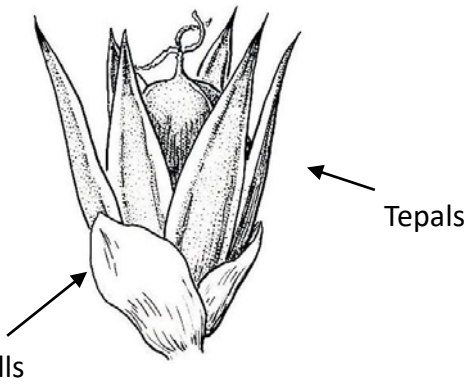
Three-square bulrush
(*Schoenoplectus americanus*)
OBL



Alkali bulrush (*Scirpus maritimus*)
OBL

Rushes (Juncaceae)

- Round, pithy stems
- Fruit a capsule



Capsules with numerous seeds

Torrey's rush
(*Juncus torreyi*)

Globose head,
round leaves

FACW



Baltic rush (*Juncus balticus*). FACW



Swordleaf rush (*J. ensifolius*)

Flat, iris-like leaves

FACW



Other Monocots and Horsetails

Common Species

- Iris
- Blue-eyed grass
- False hellebore
- Camas
- Onion
- Brodiaea
- Arrowgrass
- Flowering rush
- Orchids
- Arrowleaf
- Duck potato
- Water plantain
- Cattail



Scouring rush (*Equisetum hyemale*).
FACW

Common horsetail (*Equisetum arvense*). Female (left), male (right).
FAC



Arrowgrass (*Triglochin maritima*)
OBL



Blue eyed grass (*Sisyrinchium idahoense*)
FACW

DICOTS



Wood's rose (*Rosa woodsii*). FACU

- Flower parts in 4's and 5's
- Reticulate or net-like venation
- Distinct petals and sepals

Dicots with non-showy flowers



Red goosefoot (*Chenopodium rubrum*)
FACW



Sumpweed
(*Iva axillaris*)
FAC



Curly dock (*Rumex crispus*)
FAC



Spear saltbush (*Atriplex patula*).
Looks like tall (>3 ft) lambsquarters. FACW

Smartweeds and Knotweeds (Polygonaceae)

Ocreae - a membranous sheath or sheathing stipule



Prostrate knotweed (*Polygonum aviculare*)
FAC



Willowweed (*Polygonum lapathifolium*)
No thumb print, white flowers, sheath
w/o bristles
FACW



Lady's thumb (*P. persicaria*)
Thumb print, pink flowers
Sheaths with bristles
FACW

Mint-like Dicots

- Purple flowers
- Opposite leaves



Teasel (*Dipsacus fullonum*)
Resembles a
thistle, but
leaves opposite
FAC



Blue vervain (*Verbena hastata*)
FAC



Prostrate vervain (*Verbena bracteata*)
FAC



Field mint (*Mentha arvensis*)
FACW



Water speedwell
(*Veronica anagallis-aquatica*)
OBL

Milkweeds (*Asclepias* spp)



Showy milkweed (*Asclepias speciosa*)
Broad leaves and fruit pods.
Flowers in globose clusters
FAC



Swamp milkweed
(*Asclepias incarnata*)
Narrow leaves and pods.
Flowers in loose clusters
OBL



Yellow, non-composites



Silverweed (*Potentilla anserina*)
Low growing, creeping, stoloniferous
Underside of leaves silver.
OBL



Shrubby cinquefoil (*Dasiphora fruticosa*)
FAC



Buttercup (*Ranunculus* spp)
There are several species of buttercup.
Wetland status varies. Consult a key.

Composites (Asteraceae)

Yellow flowers, without latex (milky juice)



Groundsel (*Senecio* spp)
Black-tipped flower bracts.
Wetland status varies.



Goldenrod (*Solidago canadensis*)
FACU



Western goldentop (*Euthamia occidentalis*)
FACW

Yellow flowers, with latex (milky juice)



Prickly lettuce (*Lactuca seriola*)
Spiny "comb" under leaves on mid-vein
Small flowers. FACU



Spiny sowthistle (*Sonchus asper*)
Larger flowers
Leaves and plants spiny, but no comb
Plants more succulent and less rigid
than prickly lettuce
Leaves clasping the stem. FAC

Non-yellow Composites



Pacific aster, Common aster
(*Symphyotrichum adscendens*
and *S. chilensis*). FAC



Chamomiles (*Matricaria
chamomilla* and *M.
maritima*). Wetland status
not available



Pineapple weed (*Matricaria
matricarioides*)
FACU

Thistles



Canada thistle (*Cirsium arvense*)
Spreading, rhizomatous perennial.
Smaller, violet flowers
FACU

Scotch thistle (*Onopordum acanthium*)
“winged” stem below flower.
Very large, >6 ft
Whitish foliage
Biennial
Wetland status not available



Musk thistle (*Carduus nutans*)
“naked” stem below flower. Biennial.
FACU



Bull thistle (*Cirsium vulgare*)
“winged” stem below flower
Biennial. Green foliage with rigid spines.
FACU