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Recommended Citation

Smith, James P. Jr, "Grasses of the Conterminous United States: Persons after Whom Grasses Have Been Named" (2019). *Botanical Studies*. 60.

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GRASSES ENDEMIC TO THE CONTERMINOUS UNITED STATES

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26 December 2019

INTRODUCTION

For a grass to be an endemic, it must be native and be restricted to the area specified, in this case the conterminous United States. Native plants cultivated or introduced outside their natural range are still treated as endemic. There are degrees of endemism. A grass may be known from a single historical collection, one or a few extant populations, a county, a state, a few contiguous states, a region (e. g., the southeastern U. S.), or it may occur widely in many states - but no where else. These grasses seem to have been reluctant to wander into Canada, Mexico, or the Carribean.

Judgement is sometimes required. For instance, maps and herbarium specimens show a particular grass is found in two adjacent states. Of the 250 records available, 249 are from one state and only one from the other... and it was collected in 1906. I have ignored the 1906 specimen.

Many of our grasses are found in only one or a few states, where I show them by their 2-letter postal codes. Others are more widespread. They are coded as follows:

W • West Coast (WA, OR, & CA)
M • mountain states (ID and MT south to AZ & NM)
C • central states (ND & MN south to TX)
G • Great Lakes (WI & MI south to OH & KY)
N • Northeast (New England south to WV & VA)
S • Southeast (AR to NC south to LA to FL)

By my count, there are eight genera and 352 grasses endemic to the conterminous United States.

ENDEMIC GENERA

Amphicarpum (2 species)
Anthraentia (3 species)
Chasmanthium (5 species)
Neostapfia (1 species • California)
Redfieldia (1 species)
Scribneria (1 species) (1 specimen from Baja California)
Swallenia (1 species • California)
Vaseyochloa (1 species • Texas)

ALMOST ENDEMIC GENERA

Orcuttia (1 of 5 in Baja California)
Schedonnardus (1 of 1 in Canada and Mexico)
Tuctoria (1 of 3 in Baja California)

ENDEMIC PLANTS

Achnatherum wallowaensis • OR
Agrostis blasdalei • CA

Agrostis densiflora • CA, OR
Agrostis hallii • CA, OR
Agrostis hendersonii • CA, OR
Agrostis hooveri • CA
Agrostis howellii • OR
Agrostis lacuna-vernalis: CA (Monterey Co.)
Agrostis rossiae • WY
Alopecurus aequalis var. *sonomensis* • CA
Alopecurus saccatus • CA, ID, OR, WA
Ammophila champlainensis • NY, VT
Amphicarpum amphicarpon • N, S
Amphicarpum muhlenbergianum • AL, FL, GA, NC, SC
Andropogon arctatus • AL, FL, NC
Andropogon brachystachyus • FL, GA, NC, SC
Andropogon cumulicola • FL
Andropogon floridanus • AL, FL, GA
Andropogon glomeratus var. *glaucopsis* • TX, N, S
Andropogon glomeratus var. *hirsutior* • C, G, N, S
Andropogon gyrans var. *stenophyllus* • TX, N, S
Andropogon liebmannii var. *pungensis* • N, S
Andropogon miamiensis • FL
Andropogon ternarius var. *cabanisii* • FL
Andropogon tracyi • AL, FL, GA, MS, NC, SC
Andropogon virginicus var. *decipiens* • FL, NC, SC, VA
Andropogon virginicus var. *glaucus* • NJ to TX
Anthraentia rufa • TX, S
Anthraentia texana • AR, LA, TX
Anthraentia villosa • TX, S
Anthoxanthum occidentale • CA, OR, WA
Aristida condensata • AL, FL, GA, MS, NC, SC
Aristida desmantha • C, IL, MI, LA
Aristida dichotoma var. *curtissii* • M, C, G, N, S
Aristida gyrans • FL, GA
Aristida lanosa • C, G, N, S
Aristida mohrii • AL, FL, GA, SC
Aristida palustris • TX, KY, NC, S
Aristida patula • FL
Aristida purpurascens var. *tenuispica* • S
Aristida purpurascens var. *virgata* • TX, N, S
Aristida ramosissima • C, G, S
Aristida rhizomorpha • FL
Aristida simpliciflora • AL, FL, GA, MS, NC
Aristida stricta • NC, SC
Aristida tuberculosa • C, G, N, S
Arundinaria appalachiana • AL, GA, NC, SC, TN
Arundinaria gigantea • C, G, N, S
Arundinaria tecta • OK, TX, N, S
Axonopus furcatus • C, N, S

Blepharidachne kingii • CA, ID, UT, NV
Bouteloua hirsuta ssp. *pectinata* • OK, TX
Bouteloua kayi • TX (Brewster Co.)
Bromus frondosus • AZ, CO, NM, UT
Bromus hallii • CA

Bromus laevipes · CA, NV, OR, WA
Bromus maritimus · CA, OR
Bromus orcuttianus · CA, AZ, NV, OR, WA
Bromus pseudolaevipes · CA
Bromus suksdorfii · CA, ID, NV, OR, WA

Calamagrostis bolanderi · CA
Calamagrostis breweri · CA, OR
Calamagrostis cainii · NC, TN
Calamagrostis foliosa · CA
Calamagrostis howellii · OR, WA
Calamagrostis koelerioides · CA, ID, MT, OR, WA, WY
Calamagrostis muiriana · CA
Calamagrostis ophiditis · CA
Calamagrostis perplexa · NY (Thompkins Co.)
Calamagrostis porteri ssp. *insperata* · C, G, S
Calamagrostis porteri ssp. *porteri* · G, N, S
Calamagrostis scopulorum · AZ, CO, MT, NM, UT, WY
Calamagrostis tacomensis · OR, WA
Calamagrostis utsuensis · OR (Harney Co.)
X Calammophila don-hensonii · MI
Calamovilfa arcuata · AL, AR, OK, TN
Calamovilfa brevipilis · NC, NJ, SC, VA
Calamovilfa curtissii · FL
Calamovilfa gigantea · M, C
Chasmanthium latifolium · M, C, N, S
Chasmanthium laxum · C, G, N, S
Chasmanthium nitidum · AL, FL, GA, NC, SC
Chasmanthium ornithorhynchum · AL, FL, LA, MS, NC, SC
Chasmanthium sessiliflorum · C, N, S
Chloris x subdolichostachya · AZ, KS, LA, NM, TX
Chloris texensis · TX
Cinna bolanderi · CA
Coelorachis cylindrica · C, S
Coelorachis rugosa · TX, N, S
Coelorachis tessellata · AL, FL, GA, LA, MS
Coelorachis tuberculosa · AL, FL, GA
Ctenium aromaticum · N, S
Ctenium floridanum · FL, GA

Danthonia epilis · GA, NC, NJ, SC, TN, VA
Danthonia sericea · C, G, N, S
Diarrhena americana · C, G, N, S
Digitaria arenicola · TX
Digitaria floridana · FL
Digitaria gracillima · FL
Digitaria leucocoma · FL (Lake Co.)
Digitaria pauciflora · FL
Digitaria simpsonii · FL
Digitaria texana · FL, TX

Echinochloa paludigena · FL, TX
X Elyhordeum californicum · CA
X Elyhordeum dakotense · SD (Brookings Co.)
X Elyhordeum iowense · IA, MT, ND, NE
X Elyhordeum piperi · OR, WA
X Elyhordeum stebbinsianum · CA, OR, WA
Elymus ambiguus ssp. *ambiguus* · CO, MT, NM, WY
Elymus ambiguus ssp. *salmonis* · ID, NV, UT
Elymus x aristatus · CA, CO, ID, NV, OR, WA, WY
Elymus bakeri · W, M
Elymus californicus · CA
Elymus churchii · AR, MO, OK
Elymus elymoides ssp. *hordeoides* · CA, ID, NV, OR, WA
Elymus flavescens · ID, OR, SD, WA
Elymus glabriflorus · C, G, N, S
Elymus glaucus ssp. *mackenzii* · AK, MO, OK
Elymus hystrix var. *bigelovianus* · C, G, N, NC
Elymus hystrix var. *pedmontanus* · NC (Chatham Co.)
Elymus x pinaloensis · AZ (Graham Co.)

Elymus pacificus · CA
Elymus salina · CA, M
Elymus x saundersii · W, C
Elymus sierrae · CA, NV
Elymus simplex · AZ, CA, CO, NV, OR, UT, WY
Elymus stebbinsii · CA
Elymus svensonii · AR, KY, MO, OK, TN
Elymus texensis · TX
Elymus wawawaiensis · ID, MT, OR, WA, WY
Eragrostis lutescens · W, M
Eragrostis pectinacea var. *tracyi* · FL
Eragrostis refracta · C, VA, S
Eragrostis trichodes · M, C, G, N, S
Eriochloa michauxii var. *michauxii* · AL, FL, GA, SC
Eriochloa michauxii var. *simpsonii* · FL
Eustachys floridana · AL, FL, GA
Eustachys glauca · AL, FL, GA, MS, NC, SC
Eustachys neglecta · AL, FL, TX

Festuca brachyphylla ssp. *breviculmis* · CA
Festuca brachyphylla ssp. *coloradensis* · W, M
Festuca californica var. *californica* · OR, CA
Festuca californica var. *hitchcockiana* · CA
Festuca californica var. *parishii* · CA
Festuca calligera · AZ, CO, NM, UT, WY
Festuca dasyclada · UT, CO
Festuca earlei · AZ, CO, UT, NM
Festuca elmeri · WA, OR, CA
Festuca kingii · W, M, C
Festuca sciurea · C, G, N, S
Festuca sororia · AZ, CA, CO, MO, NM, UT
Festuca thurberi · AZ, CO, NM, SC, UT, WY
Festuca versuta · AR, KS, OK, TN, TX
Festuca washingtoniana · WA

Glyceria acutiflora · C, G, N, S
Glyceria nubigena · NC, TN
Glyceria septentrionalis var. *arkansana* · C, G, N, S
Greeneochloa tweedyi · ID, MT, WA
Gymnopogon brevifolius · C, N, S
Gymnopogon chapmanianus · GA, FL

Helictotrichon mortonianum · CO, NM, UT, WY
Hilaria jamesii · W, M, C
Hordeum brachyantherum ssp. *californicum* · CA, NV

Leersia hexandra · TX, VA, S
Leersia lenticularis · C, G, N, S
Leptoloma pubiflorum var. *syrticola* · TX

Melica aristata · CA, KY, NV, OR, WA
Melica californica · CA, OR
Melica geyeri var. *aristulata* · CA (Marin Co.)
Melica geyeri var. *geyeri* · CA, OR
Melica mutica · C, G, N, S
Melica stricta var. *albicaulis* · CA
Melica stricta var. *stricta* · CA, NV, OR, UT
Melica torreyana · CA
Muhlenbergia bushii · C, G, N, S
Muhlenbergia californica · CA
Muhlenbergia curtifolia · AZ, NV, UT
Muhlenbergia expansa · TX, G, N, S
Muhlenbergia filiculmis · AZ, CO, ND, NM, UT, WY
Muhlenbergia glabrifloris · C, G, N, S
Muhlenbergia x involuta · TX
Muhlenbergia jonesii · CA
Muhlenbergia pungens · M, C
Muhlenbergia reverchonii · OK, TX
Muhlenbergia sericea · AL, FL, GA, MS
Muhlenbergia straminea · AZ, NM, TX

Muhlenbergia tenuiflora • AZ, NM, TX
Muhlenbergia thurberi • AZ, CO, NM, NV, UT
Muhlenbergia torreyana • N, S
Muhlenbergia villiflora var. *villosa* • NM, TX

Neostapfia colusana • CA

Orcuttia inaequalis • CA
Orcuttia pilosa • CA
Orcuttia tenuis • CA
Orcuttia viscida • CA (Sacramento Co.)
Oryzopsis swallenii • ID, WY

Panicum aculeatum • G, N, S
Panicum acuminatum var. *columbianum* • G, N
Panicum acuminatum var. *thermale* • CA (Sonoma Co.)
Panicum anceps var. *anceps* • C, G, N, S
Panicum anceps var. *rhizomatum* • TX, N, S
Panicum boscii • C, G, N, S
Panicum brachyanthum • AR, LA, MS, OK, TX
Panicum chamaelonche var. *breve* • FL
Panicum chamaelonche var. *chamalonche* • C, G, N, S
Panicum consanguineum • C, G, N, S
Panicum dichotomum var. *lucidum* • C, G, N, S
Panicum dichotomum var. *mattamuskeetense* • N, S
Panicum dichotomum var. *yadkinense* • C, G, N, S
Panicum ensifolium var. *curtifolium* • TX, S
Panicum glabrifolium • FL
Panicum gymnocarpon • OK, TX, N, S
Panicum hillmanii • CA, CO, IA, KS, NM, OK, TX
Panicum hirstii • N, S
Panicum malacon • N, S
Panicum malacophyllum • OK, TX, N, S
Panicum microcarpon • C, G, N, S
Panicum mohavense • AZ, NM
Panicum mundum • AL, NC, TN, VA
Panicum nudicaule • AL, FL, LA, MS
Panicum philadelphicum ssp. *lithophilum* • GA, NC, SC
Panicum pinetorum • FL
Panicum polyanthes • C, G, N, S
Panicum ravenelii • C, G, N, S
Panicum recognitum • CT, NJ, RI, PA
Panicum rigidulum var. *abscissum* • FL
Panicum rigidulum var. *combsii* • TX, N, S
Panicum rigidulum var. *elongatum* • C, G, N, S
Panicum scabriusculum • TX, N, S
Panicum verrucosum • N, S
Paspalum bifidum • C, N, S
Paspalum floridanum • C, G, N, S
Paspalum laeve • C, G, N, S
Paspalum praecox • TX, IL, N, S
Paspalum separatum • TX
Phalaris californica • CA, OR
Phalaris lemmonii • CA
Pleuropogon californicus var. *californicus* • CA
Pleuropogon californicus var. *davyi* • CA
Pleuropogon hooverianus • CA
Pleuropogon oregonus • OR
Poa abbreviata ssp. *marshii* • CA, ID, MT, NV, WY
Poa arachnifera • NM, C, IL, S
Poa arctica ssp. *aperta* • CO, NM, WY
Poa arctica ssp. *grayana* • CO, MT, NM, UT, WY
Poa arnowiae • ID, UT
Poa atropurpurea • CA
Poa autumnalis • C, G, N, S
Poa chambersii • OR
Poa chapmaniana • C, G, N, S
Poa curtifolia • WA
Poa cusickii ssp. *cusickii* • WA, OR, CA, MT, ID, NV
Poa cuspidata • G, N, S

Poa diaboli • CA (San Luis Obispo Co.)
Poa douglasii • CA
Poa keckii • CA
Poa kelloggii • CA
Poa liebergii • ID, NV, OR, WA
Poa mansfieldii • OR (Harney Co.)
Poa x multnomae • OR
Poa napensis • CA (Napa Co.)
Poa occidentalis • AZ, CO, NM, TX
Poa paludigena • C, G, N, S
Poa piperi • CA, OR
Poa pringlei • CA, NV, OR
Poa reflexa • W, M
Poa rhizomata • CA, OR
Poa sierrae • CA
Poa stebbinsii • CA
Poa tenerrima • CA
Poa tracyi • CO, NM
Poa unilateralis ssp. *pachypholis* • OR, WA
Poa unilateralis ssp. *unilateralis* • CA, OR
Poa wallowensis • OR
Poa wolfii • AR, IA, IL, IN, MN, MO, OH, VA, WI
Puccinellia howellii • CA (Shasta Co.)
Puccinellia lemmonii • W, M
Puccinellia parishii • CA, AZ, NM, TX
Puccinellia simplex • CA, UT

Redfieldia flexuosa • M, C, IL

Saccharum alopecuroides • C, G, N, S
Saccharum baldwinii • C, G, N, S
Saccharum brevibarbe var. *brevibarbe* • C, IL, N, S
Saccharum brevibarbe var. *contortum* • C, G, N, S
Saccharum coarctatum • TX, N, S
Schizachyrium littorale • C, G, N, S
Schizachyrium maritimum • AL, FL, LA, MS
Schizachyrium niveum • FL, GA
Schizachyrium rhizomatum • FL
Schizachyrium scoparium var. *divergens* • TX, G, N, S
Schizachyrium scoparium var. *stoloniferum* • S
Scribneria bolanderi • CA, OR, WA († ?)
Setaria reverchonii ssp. *firmula* • OK, TX
Sorghastrum elliottii • OK, TX, IN, N, S
Sorghastrum secundum • KS, S
Spartina bakeri • FL, GA, SC, TX
Spartina cynosuroides • TX, N, S
Sphenopholis filiformis • OK, TX, NC, S
Sphenopholis longiflora • AR, LA, TX
Sphenopholis x pallens • G, N, S
Sphenopholis pennsylvanica • C, G, N, S
Sporobolus clandestinus • C, G, N, S
Sporobolus compositus var. *drummondii* • C, S
Sporobolus compositus var. *macer* • C, LA
Sporobolus curtissii • AL, FL, GA, SC
Sporobolus floridanus • AL, FL, GA, SC
Sporobolus interruptus • AZ
Sporobolus pinetorum • GA, NC, SC
Sporobolus silveanus • LA, OK, TX
Sporobolus teretifolius • AL, GA, NC, SC
Sporobolus texanus • M, C
Sporobolus tharpianii • TX
Stipa arida • AZ, CA, CO, NM, NV, TX, UT
Stipa arnowiae • UT, AZ, CO
Stipa avenacioides • FL
Stipa x bloomeri • W, M
Stipa contracta • CO, MT, UT, WY
Stipa hendersonii • ID, OR, WA
Stipa kingii • CA
Stipa x latiglumis • CA
Stipa lemmonii var. *pubescens* • CA

Stipa lettermanii • W, M
Stipa lobata • AZ, NM, TX
Stipa nevadensis • W, M
Stipa occidentalis var. *occidentalis* • CA
Stipa perplexa • AZ, NM, TX, UT
Stipa pinetorum • W, M
Stipa porteri • CO, NM
Stipa scribneri • CO, NM, OK, TX, WY
Stipa shoshoneana • ID, NV
Stipa stillmanii • CA
Stipa thurberiana • W, M
Stipa webberi • CA, CO, ID, NV, OR, SD, UT
Swallenia alexandrae • CA (Inyo Co.)

Torreyochloa erecta • CA, OR, NV
Tridens ambiguus • AL, FL, GA, LA, MS, NC, SC, TX
Tridens buckleyanus • TX
Tridens carolinianus • AL, FL, GA, LA, MS, NC, SC
Tridens congestus • AZ, TX
Tridens flavus var. *chapmanii* • C, N, S
Tridens muticus var. *elongatus* • M, C, AR, LA
Tridens strictus • C, IL, N, S
Triplasis americana • AL, FL, GA, LA, MS, NC, SC
Trisetum orthochaetum • MT (Missoula Co.)
Trisetum spicatum var. *projectum* • CA, MT, NV
Tuctoria greenii • CA
Tuctoria mucronata • CA (Solano Co.)

Urochloa ciliatissima • AR, NM, OK, TX

Vaseyochloa multinervosa • TX

Willkommia texana var. *texana* • OK, TX

Zizania texana • TX (Hays Co.)

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