

LITTLE BLUESTEM – PORCUPINE GRASS DRY-MESIC PRAIRIE

Site Characteristics: This little bluestem, dry-mesic, prairie grassland community occurs on rocky, loamy south-facing slopes, with inclines ranging from 20 to 30 degrees. Depending on slope position, angle, aspect, and soil type, conditions vary from dry to dry-mesic. Stands are typically small and occur on valley sideslopes of glacial till and steeper slopes of moraines. Soils are Mollisols, but with shallow organic-rich horizons. Soil textures vary from loam, silt loam, clay loam to sandy loam. Cobbles and boulders are common and gravelly inclusions may be present. Soils are excessively drained to well drained.

Vegetation Characteristics: The vegetation, consisting of graminoids (>30% cover) and forbs (10-25% cover) averages 25-50 cm tall, is moderately open with approximately 5-15% of the ground remaining bare. Mid-height grasses dominant this community, with the most abundant species being *Little Bluestem* (25-60% cover), *Sideoats Grama* (25-60% cover), *Big Bluestem*, *Western Wheatgrass*, and *Porcupine Grass*. Other typical grasses include *Hairy Grama*, *Blue Grama*, *Canada Wildrye*, *Few-flowered Aristida*, *Buffalograss*, *Prairie Sandreed*, *Sand Bluestem* (on sandier soils), *Needleleaf Sedge*, *Sun Sedge*, *Threadleaf Sedge*, *Prairie Junegrass*, *Plains Muhly*, *Sand Dropseed*, *Rough Rush Grass*, *Needle-and-Thread*, and *Prairie Dropseed*. There are a great number of forbs that occur in this community, although they do not make up a large part of the herbaceous canopy. Common forbs include *Leadplant*, *Rigid Goldenrod*, *Western Ragweed*, *Blacksamson Echinacea*, *White Prairie Clover*, species of the Aster Family (*Asteracea spp.*), *Sensitive Briar*, *Large-flowered Beardtongue*, *Long-headed Coneflower*, *Ground Plum*, *Windflower*, *Lacy Tansyaster*, *Scarlet Gaura*, *Whorled Milkweed*, *Aromatic Aster*, *White Heath Aster*, *Purple Prairie Clover*, *Dotted Blazingstar*, *skeletonweed* (Loess Hills), and *Scarlet Mallow*. Shrubs are not abundant, but *Buckbrush*, *Soapweed*, *Rose spp.*, and *Prairie Sagewort* may be scattered among the herbaceous species.

Range:

Conservation Status: G3 – Vulnerable

Management Considerations: Fire is important to prevent the invasion of woody species into stands. However, fire is not as important as in more mesic grasslands, because drought conditions slow encroachment by woody species. These slopes have thinner soils, greater insolation, and greater runoff than surrounding areas. These factors inhibit the growth of taller grasses and woody species and allow the maintenance of midgrass communities. Tall grasses and short grasses contribute substantially to the vegetation cover, with the proportions of these two life forms typically negatively correlated with each other and vary by site. The tall grasses are more prevalent on sandier soils and on moderate or gentle lower slopes. The short grasses tend to be more common on flat uplands or steep slopes with heavier soils. Heavily grazed stands may resemble sand-gravel prairie, see the Midwest Dry Gravel Prairie for comparison.

Iowa NRCS Plant Community Description

This community description is a compilation of the Community Association and it's over-riding Community Alliance descriptions as provided by NatureServe (www.natureserve.org/explorer). Where necessary, community descriptions were adapted as recommended by Iowa plant community experts.

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PRAIRIE, LITTLE BLUESTEM - PORCUPINE GRASS DRY-MESIC						
SCIENTIFIC NAME	COMMON NAME	STRATA	FUNCTIONAL GROUP	IA CofC	SEEDS /LB	STATE STATUS
Ambrosia psilostachya	Western ragweed	Herbaceous Layer	P-FORB	2	67429	
Amorpha canescens	Lead plant	Shrub Layer	SUB-SHRUB, LEGUME	8	256000	
Andropogon gerardii	Big bluestem	Herbaceous Layer, Dominant	P-GRASS, WARM SEASON	4	160000	
Andropogon hallii	Sand bluestem	Herbaceous Layer	P-GRASS, WARM SEASON	7	96640	SC
Anemone cylindrica	Windflower, thimbleweed	Herbaceous Layer	P-FORB	7	416000	
Aristida purpurea longiseta	Few-flowered aristata	Herbaceous Layer	P-GRASS, WARM SEASON	10		
Artemisia frigida	Prairie sagewort	Shrub Layer	SUB-SHRUB	4	4536000	SC
Asclepias verticillata	Whorled milkweed	Herbaceous Layer	P-FORB	0	176000	
Astragalus crassicaupus	Ground plum	Herbaceous Layer	P-FORB, LEGUME	9	83200	
Bouteloua curtipendula	Side-oats grama	Herbaceous Layer, Dominant	P-GRASS, WARM SEASON	6	96000	
Bouteloua dactyloides	Buffalo grass	Herbaceous Layer	P-GRASS, WARM SEASON	7		SC
Bouteloua gracilis	Blue grama	Herbaceous Layer	P-GRASS, WARM SEASON	8	640000	
Bouteloua hirsuta	Hairy grama	Herbaceous Layer	P-GRASS, WARM SEASON	7	1120000	
Calamovilfa longifolia	Prairie sandreed	Herbaceous Layer	P-GRASS, WARM SEASON	7	274000	
Carex duriuscula	Needleleaf sedge	Herbaceous Layer	P-SEDGE, COOL SEASON	10		
Carex inops	Sun Sedge	Herbaceous Layer	P-SEDGE, COOL SEASON	6		
Dalea candida	White prairie clover	Herbaceous Layer	P-FORB, LEGUME	10	304000	
Dalea purpurea	Purple prairie clover	Herbaceous Layer	P-FORB, LEGUME	8	288000	
Descurainia pinnata brachycarpa	Tansy mustard	Herbaceous Layer	A-FORB	1		
Echinacea angustifolia	Blacksamson Echinacea	Herbaceous Layer	P-FORB	8	112000	
Elymus canadensis	Canada wild rye	Herbaceous Layer	P-GRASS, COOL SEASON	5	83200	
Gaura coccinea	Scarlet Gaura	Herbaceous Layer	P-FORB	7	22400	
Hesperostipa comata	Needle-and-thread	Herbaceous Layer	P-GRASS, COOL SEASON	7	256000	SC
Hesperostipa spartea	Porcupine grass	Herbaceous Layer, Dominant	P-GRASS, COOL SEASON	6	10880	
Koeleria macrantha	June grass	Herbaceous Layer	P-GRASS, COOL SEASON	7	3200000	
Liatris punctata	Dotted blazing star	Herbaceous Layer	P-FORB	8	112000	
Lygodesmia juncea	Skeletonweed	Herbaceous Layer	P-FORB	7		

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<i>Mimosa nuttallii</i>	Sensitive brier	Herbaceous Layer	P-FORB, LEGUME	10		SC
<i>Muhlenbergia cuspidata</i>	Plains muhly	Herbaceous Layer	P-GRASS, WARM SEASON	10	2880000	
<i>Oligoneuron rigidum</i>	Stiff goldenrod	Herbaceous Layer	P-FORB	4	656000	
<i>Pascopyrum smithii</i>	Western wheatgrass	Herbaceous Layer, Dominant	P-GRASS, COOL SEASON	2	115008	
<i>Penstemon grandiflorus</i>	Large-flowered beardtongue	Herbaceous Layer	P-FORB	5	224000	
<i>Ratibida columnifera</i>	Long-headed coneflower	Herbaceous Layer	P-FORB	4	320000	
<i>Rosa</i> spp.	Wildrose	Shrub Layer	SUB-SHRUB			
<i>Schizachyrium scoparium</i>	Little bluestem	Herbaceous Layer, Dominant	P-GRASS, WARM SEASON	5	240000	
<i>Sphaeralcea coccinea</i>	Scarlet mallow	Herbaceous Layer	SUB-SHRUB	9	500000	T
<i>Sporobolus clandestinus</i>	Rough rush grass	Herbaceous Layer	P-GRASS, WARM SEASON	3	480000	SC
<i>Sporobolus cryptandrus</i>	Sand dropseed	Herbaceous Layer	P-GRASS, WARM SEASON	3	5600080	
<i>Sporobolus heterolepis</i>	Prairie dropseed	Herbaceous Layer	P-GRASS, WARM SEASON	9	256000	
<i>Symphoricarpos occidentalis</i>	Wolfberry, buckbrush	Shrub Layer	SHRUB	0	75033	
<i>Symphyotrichum ericoides</i>	Heath aster, frost weed	Herbaceous Layer	P-FORB	3	3200000	
<i>Symphyotrichum oblongifolium</i>	Aromatic aster	Herbaceous Layer	P-FORB	10	816000	
<i>Yucca glauca</i>	Soapweed	Shrub Layer	SUB-SHRUB	10	28800	

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