

Pipestone

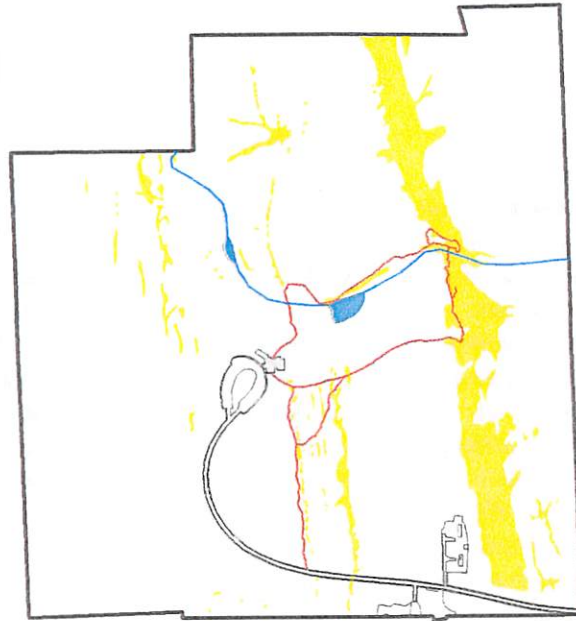
National Park Service
U.S. Department of the Interior
Pipestone National Monument



Flora of the Sioux Quartzite Prairie

Sioux quartzite prairie is considered by the Nature Conservancy a unique and rare habitat, limited to a small region in the upper Midwest. The Nature Conservancy cites Pipestone National Monument as having one of the few intact examples of this — distinct geologic feature—the Sioux quartzite formation.

Established in 1937, Pipestone National Monument comprises 301 acres on the Prairie Coteau. Sioux quartzite's extreme resistance to erosion ensured the survival of the Sioux quartzite outcroppings from glaciers, wind, and water. Most of the plants listed may be sighted as you walk the 3/4 mile circle trail that begins in the visitor center. Parts of the Sioux quartzite can be viewed from the Oracle and the trail running along the cliffs by the Nicollet marker. The Sioux-quartzite prairie is a sensitive and fragile habitat, so please stay on the trail to avoid disturbing and damaging the community.



Sioux quartzite outcrops are found as narrow angular ridges forming a prominent escarpment running at a slight southeast-northwest angle near the eastern park boundary. Smaller outcrops are located in the southern part of the monument and along Pipestone Creek. This unique geologic feature provides habitat for a variety of species. On the surface of and between the quartzite rock formations, small pools form during the spring season, creating habitat for aquatic and semi-aquatic plant species. Drought resistant plants like cactus and prairie grasses occupy areas of shallow soil among the rock outcrops. One hundred fifty-four species of plants have been recorded on the rock outcrop formations. Of those 154 species, 133 are native species and 21 are exotic and/or invasive species.

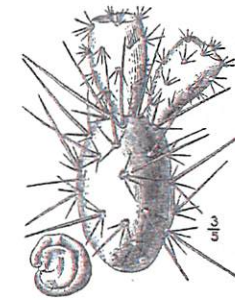
Native Plant Species

Sideoats grama (*Bouteloua curtipendula*)
Often found on rocky, open slopes, sideoats grama is a medium-size perennial bunchgrass. Ranging from 15 to 30 inches in height, this is the largest grama grass. Blue-green coloration turns purplish in spring and reddish brown in the fall. Blooms in mid-spring.



White heath aster (*Aster ericoides*)
This white-flowered plant is a source of nectar and shelter for butterflies. It is a perennial with an extensive root system and can grow to 0.5 to 1 meter tall. One plant can produce up to 100 flower heads between August and November.

Brittle prickly pear (*Opuntia fragilis*)
This cactus grows to a height of ten centimeters and produces yellow flowers in the late spring. The plant's joints are fragile and detached stem segments aid in plant dispersal. The spines are taller on older segments.



Disk waterhyssop (*Bacopa rotundifolia*)
This aquatic plant is found in the Sioux quartzite vernal pools in the spring and summer. You can find the yellow-throated white flowers in mid-spring. The leaves are round, one to three centimeters wide, with six longitudinal veins.



Western snowberry (*Symphoricarpos occidentalis*)
The woody plant is a native member of the honeysuckle family. The stems are hollow and form thickets. White flowers are bell-shaped and are visible in the late spring. The berries are spherical, white, and form in the summer.

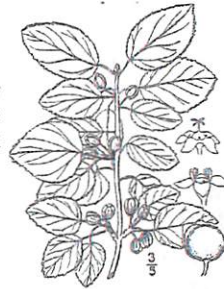


Exotic, Invasive Plant Species



Cheatgrass (*Bromus tectorum*)
This exotic, invasive grass has infested over 100 million acres in western states. The seeds have barbed awns which stick to fur or clothing. The plant is highly resistant to fire, and its extremely flammable foliage can alter the natural fire regime.

Common buckthorn (*Rhamnus cathartica*)
Common buckthorn is an exotic, invasive woody plant originally from Europe. There are separate male and female plants, the latter produces a black fruit which causes diarrhea in birds. The plant is especially invasive because it grows virtually anywhere and it leafs out before native plants.



Field bindweed (*Convolvulus arvensis*)
This climbing or creeping herbaceous plant is exotic and invasive. The plant forms dense mats which crowd out native plants and crops, causing hundreds of millions of dollars worth of damage each year. The flowers are white and trumpet shaped. Arrowhead-shaped leaves are two to five centimeters long.



Sweetclover (*Melilotus officinalis* or *alba*)
This biennial, exotic, invasive legume grows to four to six feet tall. Flowers are white or yellow and very fragrant. The plant is a major source of nectar for the apiculture. Sweetclover is drought resistant and produces large amounts of seed, resulting in a very invasive weed.



Plant Checklist Helpful Characteristics:

Season occurrence: SS = flowering spring/summer

SF = flowering summer/fall

I = Introduced species

* = Aquatic/semi-aquatic species

Flower (if present) Coloration

B = Blue **G = Green** **Y = Yellow**

K = Pink **P = Purple** **W = White**

V = Violet

Scientific Name Common Name Details

Grasses

<i>Agrostis scabra</i>	rough bentgrass	SS
<i>Alopecurus carolinianus</i>	Carolina foxtail	SF *
<i>Andropogon gerardii</i>	big bluestem	SF
<i>Aristida basiramea</i>	forked threeawn	SF
<i>Aristida dichotoma</i>	churchmouse threeawn	SF
<i>Beckmannia szigachne</i>	American sloughgrass	SF *
<i>Bouteloua curtipendula</i>	sideoats grama	SF
<i>Bouteloua gracilis</i>	blue grama	SF
<i>Bouteloua hirsute</i>	hairy grama	SS
<i>Bromus inermis</i>	smooth brome	SS I
<i>Bromus japonicus</i>	Japanese brome	SS I
<i>Bromus tectorum</i>	cheatgrass	SF I
<i>Buchloe dactyloides</i>	buffalo grass	SS
<i>Dichanthelium acuminatum</i>	panic grass	SS
<i>Dichanthelium leibergii</i>	Leiberg's panicum	SS
<i>Dichanthelium oligosanthes</i>	Heller's rosette grass	SS
<i>Dichanthelium wilcoxian</i>	fall rosette grass	SF
<i>Echinochloa muricata</i>	rough barnyardgrass	SS I
<i>Hordeum jubatum</i>	foxtail barley	SS
<i>Hodeum pusillum</i>	little barley	SS
<i>Koeleria macrantha</i>	prairie junegrass	SF
<i>Muhlenbergia cuspidate</i>	plains muhly	SF
<i>Panicum capillare</i>	witch grass	SF
<i>Panicum virgatum</i>	switchgrass	SS
<i>Pascopyron smithii</i>	western wheatgrass	SF
<i>Pennisetum glaucum</i>	pearl millet	SS I
<i>Poa compressa</i>	Canada bluegrass	SS I
<i>Poa pratensi</i>	Kentucky bluegrass	SF I
<i>Schedonardus paniculatus</i>	tumblegrass	SF

<i>Schizachyrium scoparium</i>	little bluestem	SF
<i>Setria viridis</i>	green bristlegrass	SF I
<i>Sorghastrum nutans</i>	indiangrass	SF
<i>Spartina pectinata</i>	prairie cordgrass	SF
<i>Sporobolus asper</i>	composite dropseed	SF
<i>Sporobolus heterolepis</i>	prairie dropseed	SF
<i>Sporobolus vaginiflorus</i>	poverty dropseed	SS
<i>Stipa comate</i>	needle and thread	SS
<i>Stipa spartea</i>	porcupinegrass	SS
<i>Stipa viridula</i>	green needlegrass	SS

Forbs

<i>Achillea millefolium</i>	common yarrow	SS I W
<i>Allium stellatum</i>	autumn onion	SS K
<i>Ambrosia artemisifolia</i>	annual ragweed	SF G
<i>Ambrosia psilostachya</i>	Cuman ragweed	SF G
<i>Amorpha canescens</i>	lead plant	SS P
<i>Amorpha fruticosa</i>	desert false indigo	SS P
<i>Androsace occidentalis</i>	western rockjasmine	SS W
<i>Anemone caroliniana</i>	Carolina anemone	SS W
<i>Antennaria neglecta</i>	field pussytoes	SS W
<i>Arabis hirsute</i>	hairy rockcress	SS W
<i>Artemisia campestris</i>	field sagewort	SF Y
<i>Artemisia frigid</i>	prairie sagewort	SF Y
<i>Artemisia ludoviciana</i>	white sagebrush	SF Y
<i>Asclepias syriaca</i>	common milkweed	SS P
<i>Asclepias verticillata</i>	whorled milkweed	SS W
<i>Asparagus officinalis</i>	garden asparagus	SS I G
<i>Aster ericoides</i>	white heath aster	SF W
<i>Aster laevis</i>	smooth blue aster	SF B
<i>Aster oblongifolius</i>	aromatic aster	SF B
<i>Aster sericeus</i>	western silky aster	SF P
<i>Cerastium arvense</i>	field chickweed	SS W
<i>Cerastium nutans</i>	nodding chickweed	SS W
<i>Chamaesyce serpyllifolia</i>	thymeleaf sandmat	SF G
<i>Chenopodium album</i>	lambsquarters	SF I G
<i>Chenopodium berlandieri</i>	pitseed goosefoot	SF G
<i>Collomia linearis</i>	tiny trumpet	SS K
<i>Commandra umbellata</i>	bastard toadflax	SS W
<i>Confolvolulus arvensis</i>	field bindweed	SS I W
<i>Conyza canadensis</i>	Canadian horseweed	SF W
<i>Delphinium carolinianum</i>	Carolina larkspur	SS B
<i>Dianthus armeria</i>	Deptford pink	SS I K
<i>Draba nemorosa</i>	woodland draba	SS Y
<i>Draba reptans</i>	Carolina draba	SS W
<i>Erigeron strigosus</i>	prairie fleabane	SS W

<i>Draba reptans</i>	Carolina draba	SS W
<i>Erigeron strigosus</i>	prairie fleabane	SF W
<i>Erysimum cheiranthoides</i>	wormseed wallflower	SS I Y
<i>Euphorbia cyathophoa</i>	fire on the mountain	SF G
<i>Euphorbia esula</i>	leafy spurge	SS I G
<i>Euphorbia spathulata</i>	warty spurge	SS G
<i>Gallium aparine</i>	stickywilly	SS W
<i>Gernaum carolinianum</i>	Carolina geranium	SS K
<i>Geum triflorum</i>	old man's whiskers	SS K
<i>Grindeila squarrosa</i>	curlycup gumweed	SF Y
<i>Hedeoma hispida</i>	rough false pennyroyal	SS B
<i>Helianthus maximillani</i>	Maximillian sunflower	SF Y
<i>Helianthus pauciflorus</i>	stiff sunflower	SF Y
<i>Heuchera richardsonii</i>	Richardson's alumroot	SS G
<i>Lactuca tatarica</i>	blue lettuce	SF B
<i>Lappula occidentalis</i>	flatspine stickweed	SS B
<i>Lappula squarrosa</i>	European stickweed	SS B
<i>Lepidium campestre</i>	field pepperweed	SS I W
<i>Lepidium densiflorum</i>	common pepperweed	SS W
<i>Linum sulcatum</i>	groved flax	SS Y
<i>Lomatium orientale</i>	Northern Idaho biscuitroot	SS W
<i>Lotus unifoliatius</i>	American bird's-foot trefoil	SS W
<i>Medicago lupulina</i>	black medick	SS I Y
<i>Melilotus officinalis</i>	yellow sweetclover	SS I Y/W
<i>Mirabilis hirsute</i>	hairy flour o'clock	SS K
<i>Mirabilis nyctaginea</i>	heartleaf four o'clock	SS K
<i>Myosotis verna</i>	spring forget-me-not	SS W
<i>Oenothera villosa</i>	hairy evening primrose	SS Y
<i>Opuntia fragilis</i>	brittle prickly pear	SS Y
<i>Opuntia macrorrhiza</i>	twistspine prickly pear	SS Y
<i>Oxalis dilenii</i>	southern yellow wood-sorrel	SS Y
<i>Oxalis stricta</i>	common yellow wood-sorrel	SS Y
<i>Oxalis violacea</i>	violet wood-sorrel	SS P
<i>Penstemon grandiflorus</i>	large beardtongue	SS P
<i>Physalis virginiana</i>	Virginia groundcherry	SS Y
<i>Plantago patagonica</i>	wooly plantain	SS W
<i>Polygonum hydropiper</i>	marshpepper knotweed	SF K
<i>Polygonum pennsylvanicum</i>	Pennsylvania smartweed	SF K
<i>Polygonum ramosissimum</i>	bushy knotweed	SF Y
<i>Polygonum tenue</i>	pleatleaf knotweed	SF K
<i>Portulaca oleoracea</i>	common purslane	SF Y
<i>Potentilla arguta</i>	tall cinquefoil	SS W
<i>Potentilla pensylvanica</i>	Pennsylvania cinquefoil	SS Y
<i>Ranunculus rhomboideus</i>	Labrador buttercup	SS Y
<i>Rorippa sinuate</i>	spreading yellowcress	SS Y
<i>Rumex crispus</i>	curly dock	SS I G

<i>Senecio integerrimus</i>	lambstongue ragwort	SF Y
<i>Senecio plattensis</i>	prairie groundsel	SS Y
<i>Silene antirrhina</i>	sleepy silene	SS W
<i>Solidago missouriensis</i>	Missouri goldenrod	SF Y
<i>Solidago nemoralis</i>	gray goldenrod	SF Y
<i>Talinum parviflorum</i>	sunbright	SS K
<i>Taraacum officinale</i>	common dandelion	SS I Y
<i>Tradescantia braceata</i>	longbract spiderwort	SS V
<i>Tragopogon dubius</i>	goat's bear	SS I Y
<i>Trichostema brachiatum</i>	fluxweed	SS B
<i>Veronica arvensis</i>	corn speedwell	SS B
<i>Veronica peregrina</i>	neckweed	SS W
<i>Viola pedatifida</i>	prairie violet	SS V
<i>Viola pratincola</i>	northern bog violet	SS V

Aquatic/Semi-Aquatic

<i>Bacopa rotundifolia</i>	disk waterhyssop	SS * W
<i>Callitriche palustris</i>	vernal water-starwort	SF * W
<i>Gratiola neglecta</i>	clammy hedgehyssop	SS * W
<i>Heteranthera limosa</i>	blue mudplantain	SS * Y
<i>Limosella aquatica</i>	water mudwort	SF * W
<i>Marsilea vestita</i>	hairy watercress	SF * W
<i>Myosurus minimus</i>	tiny mouse-tail	SF * Y

Woody Plants

<i>Parthenocissus vitacea</i>	woodbine	SS G
<i>Prunus Americana</i>	American plum	SS W
<i>Prunus pumila</i>	sandcherry	SS W
<i>Prunus virginiana</i>	chokecherry	SS W
<i>Rhamnus cathartica</i>	common buckthorn	SS I Y
<i>Rhus glabra</i>	smooth sumac	SS W
<i>Rosa arkansana</i>	prairie rose	SS K
<i>Symphoricarpos occidentalis</i>	western snowberry	SS W
<i>Zanthoxylum americanum</i>	common prickly ash	SS Y

Miscellaneous Genera

<i>Carex diriuscula</i>	needleleaf sedge	SS
<i>Cyperus squarrosus</i>	squarrose sedge	SS
<i>Cystopteris fragillis</i>	brittle bladderfern	SS
<i>Eleocharis acicularis</i>	needle spikerush	SS
<i>Isoetes melanopoda</i>	blackfoot quillwort	SS *
<i>Juncus interior</i>	inland rush	SS
<i>Selaginella rupestris</i>	northern selaginella	

If you would like more information on any of these plants, please visit the United States Department of Agriculture - Natural Resources Conservation Service's webpage at <http://plants.usda.gov/>.