

Plants (Vascular)

By Dennis Skadsen

The Great Plains Flora Association's "Atlas of the Flora of the Great Plains" lists over six hundred species and varieties of vascular plants that occur in the counties of Day, Grant, Marshall and Roberts of northeast South Dakota. It would be impractical for a guide like this to list every one of these plants. Listed and shown below are just a few of the hundreds of species growing on the areas tallgrass prairies, woodlands, and aquatic habitats that the casual observer or naturalist can identify in the field with little knowledge of plant taxonomy. Most of the plant species listed in this publication are depicted in several field guides written for this area. Those interested in pursuing a greater knowledge of plant identification and taxonomy will need to study Harris (2001) and utilize the plant identification manuals listed on page 21.

The scientific names of plants frequently change, and common names vary from region to region. The nomenclature used here is from the most recent Minnesota guide (Chadde 2013) which utilizes the latest nomenclature from "The Flora of North America", and the "Biota of North America". Some of the scientific names used in this guide may be listed as "synonyms" in other guides and manuals. Typically, these synonyms are found in these books indexes.

This list is compiled from observations and collections of the author and Dave Ode - SD Dept. Game, Fish, and Parks Botanist, and species listed as occurring in the area by Larson (1993), Van Bruggen (1976), and the Great Plains Flora Association (1977).

Plants Observed in Day, Grant, Marshall, and Roberts Counties, South Dakota.

❖ Tallgrass Prairie Wildflowers and Grasses



Native tallgrass prairie near Blue Dog Lake
(photo by Dennis Skadsen)

Some of the largest contiguous tracts of native tallgrass prairie remaining in the state are found in northeast South Dakota. What you'll find is largely dependent on how these prairies are managed.

On overgrazed native pastures, you may only find plant species tolerant of grazing. Many forbs, like the purple coneflower, decrease with grazing pressure due to the fact cattle apparently like the taste or possibly need the nutrients, vitamins, and other compounds these plants may provide. Some species, like the goldenrods, increase with grazing pressure as other species disappear. These plants are not as palatable to livestock and thrive as competition with other species decrease. Many landowners, especially in the Crandall-Crocker Hills of western Day County, have implemented grazing rotations that strive to protect the

diversity of plants and animals on native tallgrass prairies. By rotating the time of year these pastures are grazed and allowing rest periods with no grazing, many of the plant species that typically disappear with grazing pressure are preserved.

Prairies managed by fall haying have some of the most diverse plant communities. Some of the best hay prairies are located on tribal trust lands managed by the Sisseton Wahpeton Oyate. The diversity of these prairies is important to tribal members who utilize native forbs and grasses for ceremonial and medicinal purposes.

Many native tallgrass prairies owned by state and federal agencies are being managed to improve the diversity and abundance of native flora and fauna. Prairie remnants at Hartford Beach State Park and Pickerel Lake State Recreation Area are good examples that are readily accessible to the public. Prescribed fire, fall haying, and shrub control have been implemented at these sites in efforts to preserve floristic diversity and abundance. Remember it is illegal to disturb or remove plants and animals from state and federal property.

Native Grasses

Andropogon gerardii **Big Bluestem**
Bouteloua curtipendula **Side-Oats Grama**
Bouteloua gracilis **Blue Grama**
Bouteloua hirsuta **Hairy Grama**
Buchloe dactyloides **Buffalograss**
Calamovilfa longifolia (Prairie) **Sandreed**
Elymus canadensis (Canada wildrye)
Nodding Wild Rye
Elymus trachycaulus **Slender Wild Rye**
(wheatgrass)
Hesperostipa comata **Needle-and-Thread**
Hesperostipa spartea **Porcupine Grass**
Koeleria macrantha **Prairie Junegrass**
Panicum virgatum **Switchgrass**

Pascopyrum smithii **Western Wheatgrass**
Phalaris arundinacea **Reed Canary-Grass**
Schizachyrium scoparium **Little Bluestem**
Sorghastrum nutans **Yellow Indiangrass**
Spartina pectinata **Freshwater** (Prairie)
Cord-Grass
Sporobolus heterolepis **Prairie Dropseed**
Nassella viridula **Green Needlegrass**

Wildflowers



Common Blanket Flower (photo by Dennis Skadsen)

Obviously the best and most enjoyable times to observe wildflowers are during the season in which they are in bloom. In northeast South Dakota most of our native prairie forbs blossom from mid-June through early September. These are the warm season species that take advantage of cool wet springs to develop and mature during the usually warm dry days of summer. Most of these warm season species are in bloom by early July. These include some of the showiest and easiest species to identify; yarrow, leadplant, yellow evening primrose, prairie clovers, coneflowers, and the wild lily. As these species fade by late July, whole new sets of plants begin to color the prairie. By late August the milkweeds, goldenrods, asters, gentians, and gayfeathers are in bloom. During May and early June,

the cool season forbs and grasses appear. One of the first wildflowers to bloom in the spring is the pasqueflower, followed in late May and early June by blue-eyed grasses, prairie smoke, prairie violets, and puccoons. Listed and shown below are some of the more common wildflowers found on northeast South Dakota's tallgrass prairies.

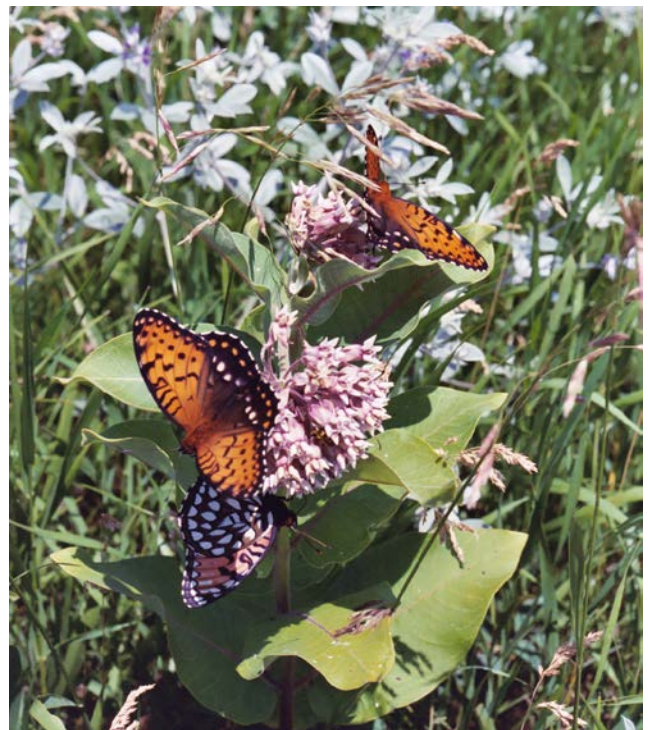
- Achillea millefolium* **Common Yarrow**
- Allium cernuum* **Nodding Onion**
- Allium stellatum* **Autumn Onion**
- Allium textile* **Textile Onion**
- Amorpha canescens* **Leadplant**
- Anemone canadensis* **Round-Leaf Thimbleweed** (Canada anemone)
- Anemone cylindrica* **Long-Head Thimbleweed**



Pasque-Flower (photo by Dennis Skadsen)
Anemone patens **Pasque-Flower**

Our state flower is one of the earliest blooming wildflowers. Flowers can appear as early as late March (often covered by snow) through mid-May. This species can tolerate and even proliferate in overgrazed prairies.

- Anticlea elegans* **Mountain Death-Camas** (White camas)
- Apocynum cannabinum* **Indian-Hemp**
- Artemisia frigida* **Prairie Sagewort**



Regal fritillaries nectaring on Common Milkweed (photo by Dennis Skadsen)

- Asclepias ovalifolia* **Dwarf Milkweed**
- Asclepias speciosa* **Showy Milkweed**
- Asclepias syriaca* **Common Milkweed**
- Asclepias verticillata* **Whorled Milkweed**
- Asclepias viridiflora* **Green Comet Milkweed**

Milkweeds are named after the white sap found in their leaves and stems. The sap contains glycosides, a chemical substance

poisonous to animals. Several insects that feed on milkweed plants, the most familiar being the Monarch butterfly, have developed immunity to glycosides and have incorporated this chemical into their bodies. This makes insects like the Monarch unpalatable or poisonous to predators.

One species of milkweed, the Side-Cluster (Woolly) Milkweed (*Asclepias lanuginosa*), shown below, has not been collected in northeast South Dakota since the early 1970s. Historical records exist of plants collected near Bitter and Blue Dog Lakes in Day County, and near Sica Hollow in Marshall County. This milkweed may now be extirpated from northeast SD.



Side-Cluster Milkweed (photo by Dave Ode)

Astragalus absurgens **Prairie Milk-Vetch**

Astragalus agrestis **Purple Milk-Vetch**

Astragalus crassicaarpus **Ground-Plum**

Brickellia eupatorioides **False Boneset**

Calylophus serrulatus **Yellow Sundrops**
(toothed-leaved primrose)

Castilleja sessiliflora **Great Plains Indian-Paintbrush**

Cerastium arvense **Field Chickweed**

Comandra umbellata **Bastard toadflax**



Spiny Star Cactus (photo by Dennis Skadsen)

Escobaria vivipara **Spiny Star Cactus**

The only cactus found in northeast South Dakota occurs on dry native prairie hilltops with sandy soils. Because of the plants low profile and surrounding taller vegetation, it is hard to observe and is often overlooked except when in bloom. Plants flower from late May through mid-June. This cactus apparently does not tolerate over-grazing and is considered an indicator of good prairie health and diversity.

Another species, the little prickly pear cactus, grows on the granite outcrops found along the Minnesota River located in the Big Stone National Wildlife Refuge just a few miles downstream of Big Stone Lake in Grant County.



Small White Lady's-Slipper (Photo by Dennis Skadsen)

Cypripedium candidum **Small White Lady's-Slipper**

This small rare orchid grows in low wet native prairies with calcareous soils, often near the edges of wetlands and fens. Much of the habitat this species favors have been converted to cropland. Areas where this orchid occurs should be protected. Small White Lady's-Slippers bloom from late May through mid-June. Populations of this orchid should be reported to the S.D. Dept. of Game, Fish, and Park's Natural Heritage Program staff.

- Dalea candida* **White Prairie-Clover**
- Dalia purpurea* **Purple Prairie-Clover**
- Delphinium carolinianum* **Caroline Larkspur**

Drymocallis arguta **Tall Wood Beauty** (tall cinquefoil)



Narrow-Leaved Purple Coneflower (photo by Dennis Skadsen)

Echinacea angustifolia **Narrow-Leaved Purple Coneflower**

The Narrow-Leaved Purple Coneflower, which blooms in early July, is well known by ethno-botanists for its medicinal qualities. Kindscher (1992) reported this coneflower was the most widely used medicinal plant of the Plains Indians. Many people purchase Echinacea extracts as a preventative for colds, although science has not conclusively shown any benefits from the plant for this ailment. Scientists however, are investigating the plant for compounds useful in developing antibiotics, anti-cancer drugs, and insecticides. Unfortunately, the purple coneflower is one

species that does not tolerate grazing pressure. This plant decreases or disappears altogether from grazed pastures, quite possibly because livestock like its taste or benefit from some of the same medicinal properties being studied by scientists.

Erigeron strigosus **Rough Fleabane**

(Daisy)

Gaillardia aristata **Common Blanket-Flower**

Gaura coccinea **Scarlet Beeblossom**
(gaura)



Downy Gentian (photo by Dennis Skadsen)



Bottle-Gentian (photo by Dennis Skadsen)

Gentiana andrewsii **Bottle-Gentian**

Gentiana puberulenta **Downy gentian**

Two of our showiest wildflowers, the Downy Gentian is found on drier upland prairie sites while the Bottle-Gentian is found on wet prairies. The flowers of the Bottle-Gentian can only be pollinated by bumblebees that are strong enough to push the petals apart to reach the stamens.

Both gentians are indicators of high quality prairie and may become extirpated due to overgrazing or a lack of disturbance like fire or haying. These two flowers bloom August through September.

Geum triflorum **Prairie Smoke**

Glycyrrhiza lepidota **American Licorice**

Grindelia squarrosa **Curly-Top Gumweed**

Helianthus maximiliani **Maximilian Sunflower**

Helianthus pauciflorus **Stiff Sunflower**

Heliopsis helianthoides **Sunflower-Everlasting (Ox-eye)**

Heterotheca villosa **Golden Aster**

Heuchera richardsonii **Prairie Alum Root**



Prairie Smoke (photo by Dennis Skadsen)



Monarch on Tall Gayfeather (photo by Dennis Skadsen)

- Liatrix aspera* **Tall Gayfeather**
- Liatrix punctata* **Dotted Gayfeather**
- Liatrix pycnostachya* **Thick-Spike Blazing Star**
- Hypoxis hirsuta* **Eastern Yellow Star-Grass**



Wood Lily (photo by Dennis Skadsen)

- Lilium philadelphicum* **Wood Lily**
- Lithospermum canescens* **Hoary Puccoon**

- Lithospermum incisum* **Narrow-Leaved Puccoon**
- Lithospermum onosmodium* **False Gromwell**
- Lobelia spicata* **Spiked Lobelia**
- Lygodesmia juncea* **Rush Skeleton-Plant**
- Monarda fistulosa* **Wild Bergamot**
- Oenothera biennis* **Common Evening-Primrose**
- Oxalis violacea* **Violet Wood-Sorrel**
- Oxytropis lambertii* **Purple Locoweed**
- Packera plattensis* **Prairie Groundsel (ragwort)**
- Pedicularis canadensis* **Wood Betony**
- Penstemon albidus* **White Penstemon**
- Penstemon gracilis* **Slender Beardtongue**



Large-Flower Beardtongue (photo by Dennis Skadsen)

- Penstemon grandiflorus* **Large-Flower Beardtongue**
- Polygala alba* **White Milkwort**

Pediomelum argophyllum **Silver-Leaf
Indian Breadroot**
Pediomelum esculentum **Large Indian-
Breadroot** (Prairie turnip)



Dusted skipper feeding on Indian Breadroot
(photo by Dennis Skadsen)



Columnar Coneflower (photo by Dennis
Skadsen)

Ratibida columnifera **Columnar** (Prairie)
Coneflower
Rosa arkansana **Dwarf Prairie-Rose**
Rudbeckia hirta **Black-Eye Susan**
Sisyrinchium angustifolium **Narrow-Leaf
Blue-Eyed-Grass**
Sisyrinchium campestre **Prairie Blue-Eyed
Grass**

Solidago canadensis **Canada Goldenrod**
Solidago gigantea **Smooth Goldenrod**
Solidago missouriensis **Missouri
Goldenrod**
Solidago mollis **Velvet Goldenrod**
Solidago nemoralis **Gray Goldenrod**
Solidago rigida **Stiff Goldenrod**



New England Aster (photo by Dennis Skadsen)

Symphyotrichum ericoides **White Heath
Aster**
Symphyotrichum novae-angliae **New
England Aster**
Symphyotrichum oblongifolium **Aromatic-
Aster**
Symphyotrichum urophyllum **Arrow-
Leaved Aster**
Symphyotrichum sericeum **Western Silvery
Aster**



White Heath Aster (photo by Doug Backlund)



Ladie's-Tresses (photo by Dennis Skadsen)

Spiranthes cernua **White Nodding Ladies'-Tresses**

Spiranthes magnicamporum **Great Plains Ladies'-Tresses**

Spiranthes romanzoffiana **Hooded Ladies'-Tresses**

Brown (2006) lists three species of *Spiranthes* as occurring in northeast SD. All bloom from late August through September. First two listed species often hybridize making identification to species difficult.



Scarlet Globemallow (photo by Doug Backlund)

Sphaeralcea coccinea **Scarlet Globemallow**



Spiderwort (photo by Dennis Skadsen)

Tradescantia bracteata **Long-Bract Spiderwort**

Tradescantia occidentalis **Prairie Spiderwort**

Tragopogon dubius **Meadow Goats-Beard**

Verbena stricta **Hoary Vervain**

Vicia americana **American Vetch**



Crow-Foot Violet (photo by Dennis Skadsen)

Viola nuttallii **Nuttall's Violet**

Viola pedatifida **Crow-Foot (Prairie) Violet**

These two violets are important larval food for several species of fritillary butterflies, including the rare Regal fritillary. Female Regal fritillaries can detect dormant violet plants in late summer and lay eggs on nearby vegetation. When fritillary larvae hatch in the spring they feed on the emerging violet plants. In many areas of the United States, the loss of native prairie has led to the decline of both violets and fritillaries. The nuttall's and prairie violets bloom from May into June.



Nuttall's Violet (photo by Dennis Skadsen)

Viola pratincola **Meadow Violet**

Zizia aptera **Heart-Leaf Alexanders**

Zizia aurea **Golden Alexanders**

❖ Woodland Plants



Ostrich Ferns, Munson Gulch (photo by Dennis Skadsen)

The plants listed and shown below occur in the woodlands and forests of northeast South Dakota. Ecologists have classified the larger forest communities of northeast South Dakota as Northern Bur Oak Mesic and Plains Basswood forests. These two forest communities are found in the coulees located along the eastern slope of the coteau in Marshall and Roberts Counties including Sica Hollow State Park. Smaller forests with these plant communities are found at Hartford Beach State Park, and the Hatchery Creek Public Access on Pickerel Lake. Another forest community Bur Oak Savannah is found on the Waubay National Wildlife Refuge. Most woodland wildflowers bloom from late April through May before the trees canopy.

Actaea rubra **Red Baneberry**
Ageratina altissima **White Snakeroot**
Allium tricoccum **Wild Leek**
Aquilegia canadensis **Red Columbine**
Aralia nudicaulis **Wild Sarsaparilla**



Jack-In-The-Pulpit (photo by Dennis Skadsen)

Arisaema triphyllum **Jack-In-The-Pulpit**



Canadian Wild Ginger (photo by Dennis Skadsen)

Asarum canadense **Canadian Wild Ginger**
Botrychium virginianus **Rattlesnake Fern**
Cardamine concatenata **Cut-Leaf
Toothwort**

Celastrus scandens **American Bittersweet**



American Bittersweet (photo by Dennis Skadsen)

Corydalis aurea **Golden Corydalis**



Red Columbine (photo by Doug Backlund)



Yellow Lady's-Slipper (photo by Dave Ode)

Cypripedium parviflorum **Yellow Lady's-Slipper**

Our largest orchid occurs in the rich woods of Sica Hollow and a few other undisturbed coulees located in Marshall and Roberts Counties. It may also grow along the edges of wetlands and fens where it was once known to occur on the Waubay National Wildlife Refuge and a few wetland sites in Grant County. The yellow lady's slipper blooms mid-May.



Brittle Bladder Fern (photo by Dennis Skadsen)

Cystopteris fragilis **Brittle Bladder Fern**
Dicentra cucullaria **Dutchman's-Breeches**
Hydrophyllum virginianum **Eastern**
 (Virginia) **Waterleaf**
Maianthemum canadense **False Lily-Of-**
The-Valley
Maianthemum stellatum **Starry False**
Solomon's-Seal

Matteuccia struthiopteris **Ostrich Fern**

There are four species of native ferns found in northeast South Dakota woodlands including the rattlesnake fern, brittle bladder fern, ostrich fern, and the rarer bulblet bladder fern. Another species the marsh fern, is found growing in calcareous bogs and fens

Polygonatum biflorum **Kings Solomon's-Seal**

Sanguinaria canadensis **Bloodroot**
Solidago flexicaulis **Zigzag Goldenrod**
Symphyotrichum ciliolatum **Northern**
Heart-Leaved Aster



Bloodroot (photo by Dennis Skadsen)



Whip-Poor-Will-Flower (Nodding trillium)
 (photo by Dennis Skadsen)

Trillium cernuum **Whip-Poor-Will-Flower**
 (Nodding trillium)

The word trillium, or *tres* in Latin, means three. Trillium plants have three leaves, three petals, and three sepals. The nodding trillium is named due to the blossom that

hangs downward below three large leaves. This plant is found in rich woods having acidic soils. It has been observed in several of the wooded coulees including Sica Hollow, Munson's Gulch, and Red Iron Springs. Nodding trillium blooms from May into early June.



Large-Flower Bellwort (photo by Dennis Skadsen)

Uvularia grandiflora **Large-Flower Bellwort**

Viola canadensis **Tall White Violet**

Viola pubescens **Yellow Forest Violet**

❖ Native Woodland Trees, Shrubs and Vines



Fall Sugar Maples, Sica Hollow State Park (photo by Dennis Skadsen)

The trees, shrubs, and vines listed below are all native to northeast South Dakota and can be found growing in wooded coulees and riparian forests along the shores of lakes, streams, and wetlands.

Acer negundo **Boxelder**

Acer saccharum **Sugar Maple**

Amelanchier alnifolia **Saskatoon**

Serviceberry (Juneberry)

Amorpha nana **Dwarf False Indigo**

Betula papyrifera **Paper Birch**

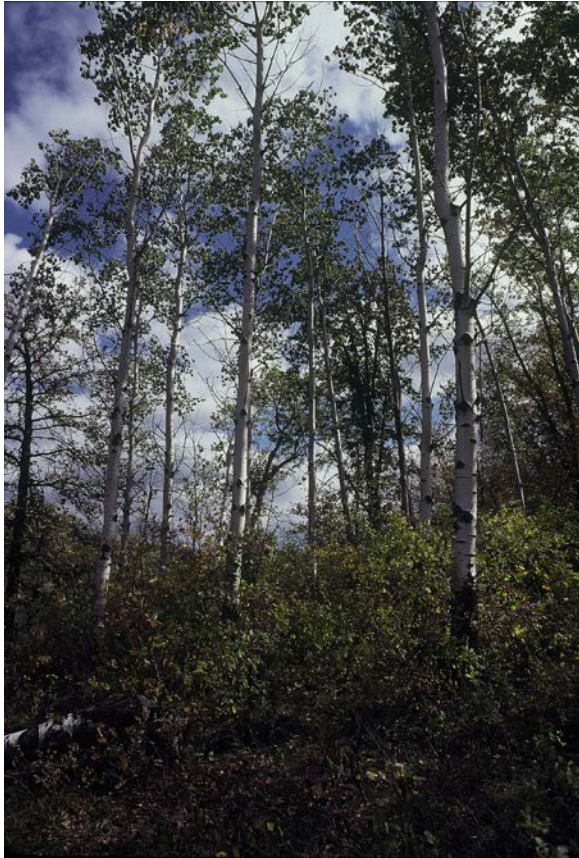
Celtis occidentalis **Common Hackberry**

Corylus americana **American Hazelnut**

Corylus cornuta **Beaked Hazelnut**

Cornus obliqua **Silky Dogwood**
Cornus stolonifera **Red Osier-Dogwood**
Crataegus succulenta **Fleshy Hawthorn**
Fraxinus pennsylvanica **Green Ash**
Ostrya virginiana **Hop-Hornbeam**
 (Ironwood)
Parthenocissus vitacea **Thicket-Creeper**
 (Woodbine)
Populus deltoids **Plains Cottonwood**

Ribes missouriense **Missouri Gooseberry**
Rubus idaeus **Wild Red Raspberry**
Salix amygdaloides **Peach-Leaf Willow**
Salix bebbiana **Beaked willow**
Salix discolor **Pussy-Willow**
Salix eriocephala **Missouri (Diamond) Willow**
Salix interior **Sandbar Willow**
Salix petiolaris **Meadow Willow**



Quaking Aspen near Hartford Beach State Park
 (photo by Dennis Skadsen)

Populus tremuloides **Quaking Aspen**
Prunus americana **Wild Plum**
Prunus virginiana **Choke-Cherry**
Quercus macrocarpa **Bur-Oak**
Rhus glabra **Smooth Sumac**
Ribes americanum **Wild Black Currant**
Ribes cynosbati **Eastern Prickly
 Gooseberry**



Choke-Cherry fruit (photo by Dennis Skadsen)

Symphoricarpos occidentalis **Western
 Snowberry**
Tilia americana **Basswood (Linden)**
Toxicodendron rydbergii **Western Poison
 Ivy**
Ulmus americana **American Elm**
Ulmus rubra **Slippery Elm**



Nanny-Berry (photo by Dennis Skadsen)

Viburnum lentago **Nanny-Berry**
Vitis riparia **River-Bank Grape**
Zanthoxylum americanum **Prickly Ash**

❖ Aquatic Plants

Aquatic plants grow in a wide variety of habitats that include wetlands, lakes, streams and rivers. Listed below are species found in area lakes and streams, important wildlife species, and wetland wildflowers.

Many lake property owners consider emergent and submersed aquatic plants a nuisance when growing along their shorelines, and when lakes are over-enriched by nutrients (hypereutrophic) submersed plants like coontail can become overabundant and impair the recreational use of a waterbody. These plants however, are an important component of a lakes ecosystem providing food and habitat for fish and other aquatic organisms and under most conditions should be allowed to thrive and grow.

Few field guides cover aquatic plants. Chadde (2012) is the best publication for identifying aquatic plants in South Dakota.

The following list of aquatic plants were observed in northeast South Dakota lakes during recent surveys of Amsden Dam, Enemy Swim, Pickerel, Roy, and Minnewasta Lakes by the author and Dave German of the Water Resources Institute - South Dakota State University, observations and collections of Dave Ode, SD Dept. of Game, Fish, and Parks.

Emergent Aquatic Plants

Emergent aquatic plants grow in shallow water where the majority of the plants

vegetation can grow above the water line. Leaves and stems of these plants are made of spongy tissue with several air chambers making them very buoyant. Several species of birds like grebes and terns utilize this buoyant plant material to build nests that can float on the water's surface. Emergent plants also buffer shorelines from wave action that can cause shoreline erosion. Examples of emergent aquatic plants found growing along the shorelines of northeast South Dakota lakes are listed below.

Schoenoplectus acutus (Hardstem) **Bulrush**
Schoenoplectus tabernaemontani (Softstem) **Bulrush**
Typha angustifolia **Narrowleaf Cattail**
Typha latifolia **Common Cattail**
Zizania palustris **Annual Wildrice**

Floating-Leaf and Submerged Aquatic Plants

These plants live in water from a few feet to fifteen feet or deeper in certain lakes. The depth at which they can grow is limited by the amount of sunlight that penetrates to the bottom. Cleaner lakes like Enemy Swim that have excellent water clarity will have more abundant and deeper beds of these plants. Enemy Swim has one of the most diverse populations of submerged aquatic plants in northeast South Dakota due to its excellent water clarity. A recent survey found twenty-six species of submerged aquatic plants growing in the lake. A decline in water quality that would favor the development of algae blooms would decrease water clarity causing many of these plant species to become extirpated from the lakes flora. Floating-leaf and submerged aquatic plants found in northeast South Dakota lakes are listed below

Ceratophyllum demersum **Coontail**
Heteranthera dubia **Water Stargrass**
Myriophyllum sibiricum **Water Milfoil**
Najas flexilis **Naiad**



Floating Leaf Pondweed, Enemy Swim Lake
 (photo by Dennis Skadsen)



Yellow Pond-Lily (photo by Dennis Skadsen)

Nuphar lutea **Yellow Pond-Lily**

This is the only water lily known from northeast South Dakota and has been observed on Pickerel Lake, Chekapa Creek and Owen's Creek in Day County. The white-water lily may have occurred historically in eastern South Dakota but are now probably extirpated.

Potamogeton friesii **Pondweed**
Potamogeton gramineus **Variable Pondweed**
Potamogeton illinoensis **Illinois Pondweed**
Potamogeton natans **Floating Leaf Pondweed**
Potamogeton pectinata **Sago Pondweed**
Potamogeton praelongus **Whitestem Pondweed**
Potamogeton richardsonii **Clasping Leaf Pondweed**
Potamogeton zosteriformis **Flatstem Pondweed**
Ruppia cirrhosa **Ditch-Grass, Widgeon-Grass**
Utricularia vulgaris **Common Bladderwort**

Wetland Wildflowers and Plants

Some of the most beautiful and unusual looking wildflowers and plants grow along the shores of, or in, streams, wetlands, bogs and fens. Unfortunately, due to wetland drainage and habitat destruction many of the plants listed below are becoming increasingly rare.

Acorus calamus **Sweet Flag**



Swamp Milkweed (photo by Dennis Skadsen)

Asclepias incarnata **Swamp Milkweed**

The Swamp Milkweed and Joe-Pye Weed (pg. 19) grow along the edges of permanent wetlands and streams. Both species bloom July through August.



Marsh Marigold (photo by Dennis Skadsen)

Caltha palustris **Marsh Marigold**

The Marsh Marigold is found growing along spring fed creeks in Sica Hollow and Hartford Beach State Park and elsewhere. One of the earliest wildflowers to bloom in northeast South Dakota, late April through early May.



Sweetflag (photo by Dennis Skadsen)



Fringed Gentian (photo by Dave Ode)

Gentianopsis procera **Fringed Gentian**

This flower, the twayblade (pg.19), bogbean (pg.20), and grass-of-parnassus (pg.20), grow along calcareous fens, springs, and bogs. These habitats are extremely rare, and due to nutrient enrichment from nearby croplands are being invaded by phragmites and narrow-leaf cattails that eventually crowd out these native wildflowers. Changes in groundwater flow due to well drilling and spring development and grazing of these sites by livestock; all cause irreversible damage to these sensitive ecosystems. The Fringed Gentian blooms in late summer.



Narrowleaf Cottonsedge (photo by Dennis Skadsen)

Eriophorum angustifolium **Narrowleaf Cottonsedge**

The Narrowleaf Cottongrass is a species of sedge that grows along the edges of fens, bogs, and springs. Due to the large seed head that resembles a ball of cotton, it is easily observed when in bloom June through July.

Eupatorium maculatum **Joe-Pye Weed**

Impatiens capensis **Spotted Touch-Me-Not**
Impatiens pallida **Pale Touch-Me-Not**

The touch-me-nots grow along the edges of woodland streams and springs. Ruby-throated hummingbirds are often observed sipping nectar from these flowers at Sica Hollow and Hartford Beach State Parks, July through September.



Joe-Pye Weed (photo by Dennis Skadsen)



Twayblade (photo by Elizabeth Hill)

Liparis loeselii **Twayblade**
Lobelia kalmii **Kalm's Lobelia**



Blue Cardinal-Flower (photo by Dennis Skadsen)

Lobelia siphilitica **Blue Cardinal-Flower**



Buckbean (photo by Dennis Skadsen)

Menyanthes trifoliata **Buckbean**



Grass-Of-Parnassus (photo by Dave Ode)

Parnassia glauca **Grass-Of-Parnassus**



Northern Green Orchid (photo by Dennis Skadsen)

Platanthera aquilonis **Northern Green Orchid**

The Northern Green Orchid and Twayblade (pg.19) are two very inconspicuous native orchids, which could be easily overlooked in the field. In fact, the Twayblade was only recently discovered to be growing in northeast South Dakota in the 1990s. The Twayblade grows in calcareous fens, the Northern Green Orchid has been observed in the same habitats as the Twayblade but may also grow along the wet margins of streams and wetlands.

Sagittaria cuneata **Arrowhead, Duck Potato**

Sparganium eurycarpum **Giant Burreed**

❖ Endangered and Threatened Species

None of the above species are currently listed as state or federally endangered at this time. However, one federally threatened species, the Western Prairie Fringed Orchid (shown at right), may possibly occur in the area. Any observations of this plant should be reported to the S.D. Dept. of Game, Fish, and Park's Natural Heritage Program or the U.S. Fish and Wildlife Service.

The South Dakota Natural Heritage Program managed by the SD Dept. of Game, Fish, and Parks monitors a total of 213 species of rare and uncommon plants. A complete list can be viewed at:

<https://gfp.sd.gov/rare-plants/>



Western Prairie Fringed Orchid (photo by Dennis Skadsen)

❖ Suggested References

Plant Identification Field Guides

Some of the guides listed below are out-of-date and may not have the latest common and scientific names. Refer to Chadde's two guides listed below for the latest taxonomic information.

Field Guide to Wildflowers of Nebraska and the Great Plains, 2nd Ed.

By Jon Farrar

2011, University of Iowa Press, Iowa City.

Grassland Plants of South Dakota and the Northern Great Plains

By James R. Johnson and Gary E. Larson
1999, South Dakota State University,
Brookings.

Northland Wildflowers, The Comprehensive Guide for the Minnesota Region, Rev. Ed.

By John B. and Evelyn W. Moyle
2001, University of Minnesota Press,
Minneapolis.

Peterson Field Guides to Trees, 2nd Ed.

By George A. Petrides and Janet Wehr
1998. Houghton Mifflin Co., Boston.

Peterson Field Guide to Wildflowers, Northeastern/Northcentral North America, Rev. Ed.

By Roger Tory Peterson and Margaret McKenny
1998. Houghton Mifflin Co., Boston.

Tallgrass Prairie Wildflowers, A Field Guide to Common Wildflowers and Plants of the Prairie Midwest. 2nd Ed.

By Doug Ladd and Frank Oberle
2005. Falcon Press, Helena.

Wildflowers of the Tallgrass Prairie: The Upper Midwest 2nd Ed. (Bur Oak Guide)

By Sylvan T. Runkel and Dean M. Roosa
2009. University of Iowa Press, Iowa City.

Wildflowers of Iowa Woodlands, 2nd Ed.

By Sylvan T. Runkel and Alvin F. Bull
2009, University of Iowa Press, Iowa City.

Wild Orchids of the Prairies and Great Plains Region of North America

By Paul Martin Brown
2006. University Press of Florida

Plant Identification Manuals & Taxonomic Keys

Minnesota Flora, an illustrated guide to the vascular plants of Minnesota.

By Steve Chadde. 2013

Wetland Plants of the Northern Great Plains, a complete guide to the wetland and aquatic plants of North and South Dakota, Nebraska, eastern Montana and eastern Wyoming.

By Steve Chadde. 2012

Plant Identification Terminology, an Illustrated Glossary, 2nd ed.

By James and Melinda Harris
2001. Spring Lake Publishing, Spring Lake.

Natural History

Dakota Flora, a seasonal sampler

By David J. Ode
2006. SD State Historical Society Press,
Pierre.

The Elemental Prairie: Sixty Tallgrass Plants (Bur Oak Books)

By John Madson
2005. University of Iowa Press, Iowa City.

Ethnobotany

Edible Wild Plants of the Prairie

By Kelly Kindscher
1987. University Press of Kansas,
Lawrence.

Medicinal Wild Plants of the Prairie

By Kelly Kindscher
1992. University Press of Kansas,
Lawrence.

❖ Literature Cited

- Brown, Paul Martin. 2006. Wild Orchids of the Prairies and Great Plains Region of North America. University Press of Florida. 352 pp.
- Chadde, Steve. W. 2013. Minnesota Flora, an Illustrated Guide to the Vascular Plants of Minnesota. Chadde. 781 pp.
- Great Plains Flora Association. 1977. Atlas of the Flora of the Great Plains. Iowa State University Press, Ames. 600 pp.
- Great Plains Flora Association. 1986. Flora of the Great Plains. University Press of Kansas, Lawrence. 1402 pp.
- Harris, James and Melinda. 2001. Plant Identification Terminology, an Illustrated Glossary, 2nd ed. Spring Lake Publishing, Spring Lake. 216 pp.
- Johnson, James R. and Gary E. Larson. 1999. Grassland Plants of South Dakota and the Northern Great Plains. South Dakota State University, Brookings. 288 pp.
- Kindscher, Kelly. 1992. Medicinal Wild Plants of the Prairie. University Press of Kansas, Lawrence. 336 pp.
- Larson, Gary E. 1993. Aquatic and Wetland Vascular Plants of the Northern Great Plains. Gen. Tech. Rep. RM-238. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Forest and Range Experiment Station. 681 pp.
- Moyle, John B. and Evelyn W. 2001. Northland Wildflowers, the Comprehensive Guide for the Minnesota Region, Rev. Ed. University of Minnesota Press, Minneapolis. 228 pp.
- Ode, David J. 1999. Vascular Plants of Sica Hollow State Park, Roberts and Marshall Counties, South Dakota. Unpublished checklist. S.D. Dept. Game, Fish, and Parks, Pierre. 6 pp.
- Van Bruggen, Theodore. 1996. The Vascular Plants of South Dakota, 3rd edition. University of South Dakota, Vermillion. 293 pp.