
BWSR FEATURED PLANT

MINNESOTA'S MILKWEEDS

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Milkweeds play a key role in wetlands, prairies, savannas and forests in Minnesota. The genus (*Asclepias*) is particularly important as a nectar and larval food source for a wide range of insect species. The best known example is the monarch butterfly whose larvae appear to feed only on milkweeds. Milkweeds have a unique pollination mechanism where pollen grains are enclosed in waxy sacs called “pollinia” that attach to the legs of butterflies, moths, bees, ants and wasps and are then deposited in another milkweed flower if they step into a specialized anther opening. Most milkweeds are toxic to vertebrate herbivores due to cardiac glycosides that are in their plant cells. In addition to supporting insect populations, milkweeds also provide other landscape benefits due to their extensive root systems (sometimes deep roots, sometimes horizontal) that decrease compaction, add organic material to the soil and improve water infiltration.



Butterfly Milkweed

Photos by Dave Hanson
unless otherwise stated

Common milkweed is probably the best known milkweed species as it is found in all counties of the state and was included on some county prohibited noxious weed lists. The species was considered a common agricultural weed as its extensive root network made it difficult to remove from agricultural fields with cultivators. Now the species is effectively removed from genetically modified corn and soybean fields that are sprayed with herbicide. This practice has contributed to significant declines in milkweed species, with an estimated 58% decline in the Midwest between 1999 and 2010 and a corresponding 81% decline in monarch butterfly production (Pleasants & Oberhauser, 2013). To support monarchs and other insect populations many efforts are underway to plant milkweed species in different habitat types across Minnesota, and to prevent their loss as a part of landscape management activities.

Identification

There are many species of milkweeds in Minnesota and several features that are consistent between them. They are perennial plants with milky latex juice. Their leaves are usually opposite, entire and simple. Their flowers are in terminal umbel-like clusters with 5 swept-back petals with raised hoods and curved horns. Fruits are a pod that opens to disperse many seeds with fluffy fibers adaptive to wind dispersal.

Any vine that looks like a milkweed in Minnesota is likely the invasive black swallowwort and should be reported to MDA.

Orange Flowers

Butterfly Milkweed (*Asclepias tuberosa*) – Orange flowers in erect umbels, leaves lance shaped; dry to mesic prairies and savannas.

Pink Flowers, Drooping Umbels

Common Milkweed (*Asclepias syriaca*) – Pink flowers in drooping umbels, short stalked, hairy leaves, rough seed pods; common in disturbed areas.



Common Milkweed

Pink to Purple Flowers, Erect Umbels

Sullivant's Milkweed (*Asclepias sullivantii*) – Pink to cream flowers in erect umbels, leaves are smooth and somewhat clasping; mesic to moist prairies, **State Threatened**.

Purple Milkweed (*Asclepias purpurascens*) – Purple to red flowers in erect umbels, leaves downy beneath; prairie and woods with sandy soil.

Swamp Milkweed (*Asclepias incarnate*) – Pink to purple flowers in erect umbels, leaves lance shaped; moist shores and meadows.

Showy Milkweed (*Asclepias speciosa*) – Pink to purple flowers on erect umbels, leaves oval, hairy beneath; moist prairies (introduced).

Clasping Milkweed (*Asclepias amplexicaulis*) – Pink to greenish flowers and upright umbels, large oval leaves with wavy edges; dry prairies and woods, **State Special Concern**.

Greenish-white Flowers, Drooping Umbels

Green Milkweed (*Asclepias viridiflora*) – Greenish to white flowers in drooping umbels, narrow leaves downy beneath; prairies and woods with sandy soils.

Woolly Milkweed (*Asclepias lanuginosa*) – Greenish to yellow solitary drooping umbels, lance shaped alternate hairy leaves; dry woods and prairies.

Greenish-white Flowers, Erect Umbels

Prairie Milkweed (*Asclepias hirtella*) – Green to white erect umbels; many rough, linear, pointed leaves; dry prairies and fields, **State Threatened**.

Oval-leaf Milkweed (*Asclepias ovalifolia*) – Greenish white flowers on upright umbels; leaves oval but pointed; Dry prairies and fields.

Narrow-leaved Milkweed (*Asclepias stenophylla*) – Greenish-white flowers in erect umbels, narrow, linear leaves; rocky or sandy limestone soils, **State Endangered**.

White Flowers Erect Umbels

Whorled Milkweed (*Asclepias verticillata*) – White flowers in erect umbels, leaves narrow and whorled in groups of 3-6; dry prairies roadsides and woods.

Poke Milkweed (*Asclepias exaltata*) – White flowers (few) in drooping umbels, broad, stalked leaves with pointed tips; moist woods.

Uses

Milkweeds are commonly used in native gardens and BMPs for their aesthetic value and to provide habitat for pollinators. Milkweed species are also commonly used in restoration projects as well as projects to reclaim degraded land. Milkweeds attract spiders and beetles that eat other insects, so they can be used for natural pest control near gardens.

The nectar from milkweed flowers are high in glucose and were used as a sweetener by Native Americans. The fibers that are attached to milkweed seed make a good insulation and are commercially used as a filling for pillows. Fibers in the plants stems have also been used to make rope, textiles, and other products.



Sullivant's Milkweed
Photo by Rich Perrine



Showy Milkweed



Green Milkweed



Swamp Milkweed



Oval-leaved Milkweed



Whorled Milkweed



Poke Milkweed

Planting Recommendations

Only a handful of milkweed species are commonly planted in gardens or as part of conservation projects but there is potential for spreading seed of other milkweed species as part of planting efforts. Generally, milkweed species need a few weeks of cold, moist stratification to promote germination. As a result, it is common to seed milkweeds later in the fall to allow them to naturally stratify over winter. Milkweeds have relatively large seed that should be incorporated into the soil with a harrow. Seed to soil contact is also important, so packing with a roller can also be beneficial. After germination, some species such as marsh and common milkweed grow relatively quickly, while other species such as butterfly milkweed develop relatively slowly as it establishes its deep taproot. As with other forbs, mowing above the height of the seedlings through the first season and possibly into the second season will help provide sufficient sunlight and moisture. Several milkweed species are available in containers. As different milkweed species can have a wide range of moisture tolerances it is important that they are installed in suitable growing conditions and provided with suitable amounts of moisture after planting.

References

Robert W. Freckman Herbarium: <http://wisplants.uwsp.edu/scripts/SearchResults.asp?Common=milkweed>

Minnesota Wildflowers: <http://www.minnesotawildflowers.info/search?kw=milkweed>

North American Monarch Conservation Plan http://www.mlmp.org/Resources/pdf/5431_Monarch_en.pdf

Pleasants, J. M. and Oberhauser, K. S. (2013), *Milkweed loss in agricultural fields because of herbicide use: effect on the monarch butterfly population*. *Insect Conservation and Diversity*, 6: 135–144. doi: 10.1111/j.1752-4598.2012.00196.