



Legal status: State threatened

Global and state rank: G5/S2

Family: Asclepiadaceae (milkweed family)

Other common names: prairie milkweed

Synonyms: *Acerates hirtella* Pennell; *Asclepias floridana* Lam.; *Acerates* f. (Lam.) A.S. Hitchc.

Taxonomy: This species was included by some early authors (Gray, Britton & Brown) with *A. longifolia* and *A. floridana*. Woodson (1954), however, separated these taxa on the basis of range and distinctness in the field, and modern treatments follow Woodson’s interpretation.

Total range: This milkweed ranges from Virginia north to southern Ontario and Michigan, ranging west to southern Minnesota, northern Iowa, Oklahoma, and Arkansas. It is considered threatened in Minnesota and rare in Ontario and Louisiana.

State distribution: Tall green milkweed is known principally from the prairies of southwestern and southeastern Michigan, including the remnant tallgrass prairies that fringe Saginaw Bay. Of the approximately 20 Michigan sites for this species, twelve have been discovered or confirmed extant since 1980. Tuscola and

Muskegon County records date from the turn of the century. Most colonies consist of only one or a few plants and/or grow in very small, vulnerable habitats. At least two occurrences are considered to be extirpated.

Recognition: Tall green milkweed is a stout, erect (4-10 dm) plant that produces numerous, long (1-2 dm), narrow to linear (.4-1.2 cm), alternate leaves that are densely covered with small, stiff hairs. Like other milkweed species, the sap is milky latex that bleeds from cut foliage and stems. The flowers are greenish white to slightly purple-tinged, and are borne in dense, spherical umbels of approximately 30-100 flowers from the leaf axils. There are 2 - 10 umbels per plant. Tall green milkweed is our only alternate leaved milkweed whose flowers lack a “horn”, a slender, curving, pointed structure that in other *Asclepias* species emerges from within what is known as a corolla hood. The fruit produced by this milkweed species is a smooth follicle. The pod-like fruits contain numerous, densely packed milkweed seeds with their long, characteristic silky hairs that enable wind dispersal as well as buoyancy in water (Woodson 1954).

The somewhat similar-looking green milkweed, *Aclepias viridiflora*, is Michigan’s only other milkweed species whose flowers lack horns within their corolla hoods. However, in contrast to *A. hirtella*, *A. viridiflora* has markedly broader, smoother, mostly opposite leaves,



and is often partly leaning or reclining. *A. verticillata* has white to pale greenish-white flowers, but is a much more delicate plant with extremely narrow, grass-like leaves (less than .25 cm - .4cm) that are nearly whorled, and produces flowers that have horns within their corolla hoods.

Best survey time/phenology: Tall green milkweed is most easily recognized when in flower, and is thus best sought from approximately early July to mid or even late August. Fruiting plants have been collected up to early September.

Habitat: Tall green milkweed has been found in both lakeplain wet-mesic prairies, such as the tallgrass prairies that remain in Saginaw Bay, and in mesic sand prairies. In southwest Michigan this species grows in mesic to relatively dry, well-drained sandy loam soils with such species as *Baptisia leucantha* (white false indigo), *Andropogon scoparius* (little bluestem), *A. gerardii* (big bluestem) and *Carex bicknellii* (Bicknell's sedge). In the lakeplain prairies along Saginaw Bay, tall green milkweed occurs in mesic to wet-mesic prairies on moist, alkaline clay or fine sandy loam, where it is associated with such species as *Sorghastrum nutans* (Indian grass), big bluestem, *Calamagrostis canadensis* (bluejoint), *Liatris spicata* (blazing star), *Coreopsis tripteris* (tall tickseed), *Potentilla fruticosa* (shrubby cinquefoil), *Carex stricta* (strict sedge), and *Pycnanthemum virginianum* (mountain mint). In Monroe County, it grows in mesic to dry-mesic prairie on Gilford sandy loam (pH 5.4) dominated by *Andropogon scoparius*.

Biology: This perennial blooms primarily from mid-July to mid-August in Michigan. Several species of bees and wasps (and one beetle) pollinate *A. hirtella* and other milkweeds. Pollination is accomplished through the attachment of pollinia (pollen sacs) to claws (tarsi) or leg bristles during nectar gathering; once the pollinia are attached, visits to other flowers subsequently deposit these sacs onto the receptive stigmatic discs of other individual plants (Woodson 1954).

Conservation/management: Conservation of remaining native prairie remnants is needed to ensure the survival of this rare milkweed in Michigan. Though much of its habitat was destroyed by the plowing of prairies during the turn of the century (1900), habitats for this species are now threatened by plant succession as well as the herbiciding of prairie remnants, especially along roads and railroad rights-of-way. Proper management of its habitat would require periodic burning, and the protection of local hydrological regime. Degraded

sites will also likely require the control of competitive woody plants, particularly aggressive native shrubs such as dogwoods (*Cornus* species) that tend to shade out many prairie forbs.

Only three of the known sites of this species are on protected land, including one Michigan Nature Association preserve; this species also occurs in two State Game Areas.

Comments: The seed floss ("fluff") of plants in this genus was used by American colonists as pillow stuffing, and was extensively collected by school children during World War II for use in stuffing life-preservers (Woodson 1954). Almost 200 tons of milkweed pods were harvested from Emmet Co., MI in 1943 (Voss 1996). Milkweed has other commercial uses such as latex (rubber), fiber, or even fuel.

Research needs: Experimental restoration management of prairies and oak savannas to determine the most appropriate treatments (e.g. prescribed burning, brush cutting) is perhaps the most urgent area for research. Demographic work on populations and life history studies would also assist land managers and others in conserving this rare prairie forb.

Related abstracts: Lakeplain wet prairie, lakeplain wet-mesic prairie, appressed bog clubmoss, eastern prairie fringed orchid, prairie Indian-plantain, purple milkweed, Sullivant's milkweed, blazing star borer, culver's root borer, and red-legged spittlebug.

Selected references:

- Voss, E.G. 1996. Michigan Flora. Part III. Dicots (Pyrolaceae-Compositae). Bull. Cranbrook Inst. Sci. 61 & Univ. of Michigan Herbarium. xix + 622 pp.
- Woodson, R.E. 1954. The North American species of *Asclepias* (L.). Ann. Missouri Bot. Gard. 41(1): 1-171.

Abstract citation:

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