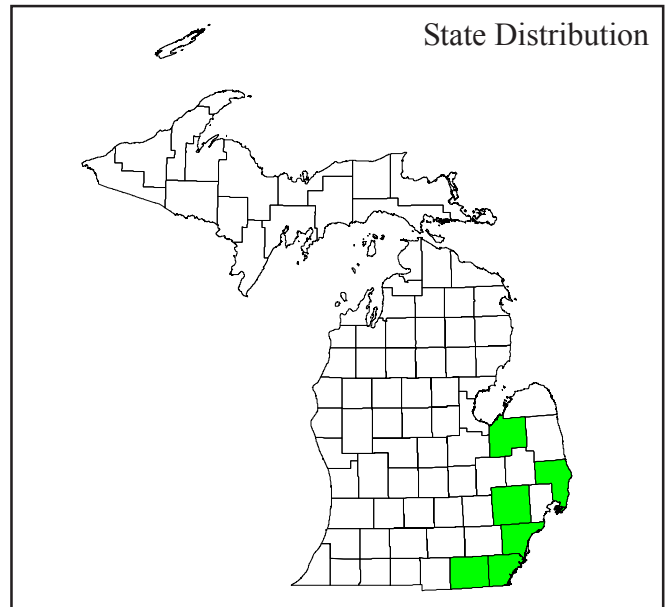
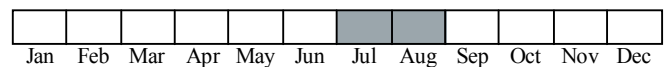




Photo by Michael R. Penskar



Best Survey Period



Legal status: State threatened

Global and state rank: G5/S2

Other common names: smooth milkweed, prairie milkweed

Family: Asclepiadaceae (milkweed)

Total range: This prairie species is concentrated in the Midwest, ranging north to Minnesota, east to southern Ontario and Ohio, west to Nebraska, Kansas, and south to Oklahoma. It is considered rare in Minnesota, Wisconsin, and Ontario, and is known only from historical records in North Dakota.

State distribution: Sullivant's milkweed is known from a total of 16 sites, with the majority of localities occurring in Monroe and St. Clair counties. Oakland, Wayne, Lenawee, and Tuscola counties all tally a single occurrence each. Although this species was reported by Davis (1906) to be "very abundant" in the lakeplain prairies of Tuscola County, extensive surveys there in recent years have failed to discover a single surviving colony. A Berrien County report (M. Kohring, pers. comm.) remains unconfirmed. Several of Michigan's colonies consist of small numbers of individuals persisting in highly disturbed sites, such as roadsides and railroad rights-of-way.

Recognition: Stems of *A. sullivantii*, which arise from deep, fleshy rhizomes, reach 4-11 dm in height. This species strongly resembles common milkweed, *A. syriaca* (also a native species but mistakenly consid-

ered exotic), both having broadly **ovate, opposite leaves, milky sap**, and dense, **globe-like clusters of flowers** borne from upper leaf axils. However, mature leaves of *A. sullivantii* are distinguished by their **reddish midveins, slightly undulate margins, somewhat acute tips, and complete lack of hair on the leaf underside**. In addition, the leaves of Sullivant's milkweed are usually **strongly upswept (see photo)**. In contrast, common milkweed has relatively blunt-tipped leaves that are densely pubescent beneath and remain roughly perpendicular to the stem. The flowers of *A. sullivantii* are also **larger, fewer, and pale to strongly pink-purple in color**, whereas those of *A. syriaca* are pink to dark purple, markedly smaller, and tend to be much more numerous in very dense inflorescences. The fruit of Sullivant's milkweed, a greenish-capsule termed a **follicle**, is relatively smooth in contrast to the warty follicle produced by common milkweed.

Sullivant's milkweed could be confused with stems of common dogbane (*Apocynum*), especially the species known as Indian hemp (*A. cannabinum*). Dogbane can be distinguished by its less robust growth habit, narrower leaves, dark stem, and especially its fruit, which consists of pairs of long, dangling, skinny follicles joined at their apex.

Habitat: Michigan colonies of this plant occur primarily in disturbed habitats such as old-fields with secondary prairies, and moist, grassy rights-of-way. At one St. Clair county locality, *Andropogon scoparius* (little bluestem) and *Hypericum kalmianum* (shrubby



cinquefoil) dominate a secondary prairie with *Scleria triglomerata* (tall nut-rush), *Calopogon tuberosus* (grass pink), *Baptisia tinctoria* (yellow wild indigo), *Polygala sanguinea* (milkwort), *Aletris farinosa* (colic root), and *Aster dumosus*. Sullivant's milkweed also grows in an undisturbed habitat is a small lakeplain wet prairie remnant of the St. Clair River delta, dominated by *Andropogon gerardii* (big bluestem), *A. scoparius*, and *Panicum virgatum* (switchgrass). (Hayes 1964). A large population of this species – perhaps the state's biggest — was recently discovered on the outskirts of the city of Monroe, when a disturbed lakeplain prairie remnant was inventoried. Common associates at several sites include *Spartina pectinata* (prairie slough grass), *Pycnanthemum virginianum* (mountain mint), *Liatris spicata* (blazing star), *Solidago riddellii* (Riddell's goldenrod), *Coreopsis tripteris* (tall coreopsis), *Rudbeckia hirta* (black-eyed Susan), and many other typical prairie species. Soils are typically moist sandy clay or sandy loam.

Elsewhere in its range, *A. sullivantii* is primarily a plant of moist prairies. In the Chicago region, it grows with such species as *Andropogon gerardii*, *Aster ericoides* (heath aster), *Eryngium yuccifolium* (rattlesnake master), *Ratibida pinnata* (yellow coneflower), *Silphium laciniatum* (compass plant), and *Spartina pectinata* (Swink and Wilhelm 1979).

Biology: This species is a perennial from deep, fleshy rhizomes, and vegetative reproduction is common. Flowers are produced by mid-July with fruits maturing through August. As in other species of *Asclepias*, the flowers are highly modified for insect pollination. Sullivant's milkweed may hybridize with common milkweed, these two species having been isolated in presettlement times by habitat specificity. However, the highly disturbed condition of remaining prairie remnants has allowed the opportunistic common milkweed to colonize, bringing these two taxa into greater contact. One Michigan population of over 100 *A. sullivantii* stems appears to have been genetically degraded through hybridization and introgression (i.e. backcrossing) with common milkweed.

Conservation/management: Small populations that persist in degraded, disturbed, and/or marginal habitats are difficult to manage. Also, the low numbers of individuals present at these sites may not be enough to maintain viable populations. Possible hybridization with *A. syriaca* may further genetically erode and diminish poorly insulated populations in disturbed habitats. However, small surviving colonies may be valuable as a source of stock for establishment or enhancement of sustainable populations.

Michigan's most viable colonies lie on State Park and Game Area lands in St. Clair County. A large set of colonies occurs within a state park that is being actively managed for prairie restoration. Prescribed

burning is probably the best way to favorably manage habitat for this species. Applications of herbicides should be avoided along rights-of-way where this milkweed grows, although this species appears to be persisting along heavily maintained road rights-of-way.

Comments: This species of milkweed has been reputed to have a particularly high content of rubber in its milky latex, and has been investigated for usefulness in rubber production (Fox 1944).

Research needs: The principal need at present is the identification of viable colonies and the implementation of restoration management programs to perpetuate and maintain this species. Demographic and breeding systems studies

Related abstracts: eastern prairie fringed-orchid

Selected references

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Abstract citation

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