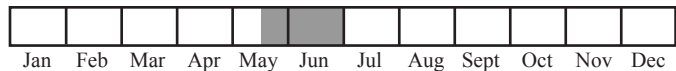


Best Survey Period



Status: State endangered

Global and state rank: G5/S1

Other common names: blue satin sedge

Family: Cyperaceae (sedge family)

Total range: This main range of this North American sedge is primarily Appalachian in distribution, ranging from extreme southern Quebec and southern Ontario to northern Georgia. In addition to this mostly continuous eastern range, a set of outlying or moderately disjunct sites occur around the Lake Michigan basin in western Lower Michigan and northeastern Wisconsin (Cochrane 1998). This species is considered rare in Georgia, Illinois, Maine, North Carolina, Quebec, and Wisconsin (NatureServe 2003).

State distribution: *Carex platyphylla* is known from four Michigan localities, with one site each in Berrien and Van Buren counties, one St. Clair County record within a State Game Area, and a relatively recent discovery in 1988 in Leelanau County in Sleeping Bear Dunes National Lakeshore. Most of these populations were observed to be very sparse and localized, with the exception of the occurrence in Van Buren County, where plants were recorded as being locally frequent on steep, forested dunes in 1984.

Recognition: Sterile individuals of this tufted sedge have unusually **broad basal leaves ranging from 1-4 cm in width**. *Carex platyphylla* can be distinguished from other broad-leaved woodland sedges with which it commonly grows, especially *C. plantaginea* and *C. albursina*, by its **strongly glaucous (bluish-white) leaves**. **These leaves are evergreen. The stem bases are pale or brownish, not reddish as in *C. plantaginea*.** Fertile plants of *C. platyphylla*, which reach about 2-4 dm in height, have **stem leaves with blades as well as sheaths**. The terminal spikelet is staminate. The pistillate spikelets are well separated on the stem, the lower ones nearly basal **and barely extending beyond the summit of the sheath**. The **pistillate scales are ovate to acuminate** and the perigynia are **sharply triangular, 2.6-4.2 mm long**, and have many distinct nerves and a short beak that curves outward. *Carex albursina*, which *C. platyphylla* most closely resembles, lacks glaucous leaves and can be further distinguished from *C. platyphylla* by its winged stems, blunt pistillate scales, and sessile (stalkless) to nearly sessile staminate spikelets. *C. plantaginea* is also similar and can be expected in the same habitats, but in addition to lacking glaucous leaves and being reddish at the base, tends to have larger perigynia. In summarizing the distinguishing characteristics of *C. platyphylla*, Cochrane (1998) notes its strikingly glaucous appearance, the presence of numerous weak culms, and the rather short stature.



Best survey time/phenology: This spring flowering sedge is best identified when in fruit and perigynia are fully developed. Michigan collection and observation records indicate that flowering and fruiting plants have been observed from approximately mid-May through June.

Habitat: At two of its Michigan stations, *C. platyphylla* inhabits shady north and east-facing slopes in rich, mesic southern forests. At the Berrien County locality, sugar maple (*Acer saccharum*) and red oak (*Quercus rubra*) dominate in a young to medium age dune forest; herbaceous associates there include *Dryopteris marginalis* (marginal shield fern), *Asplenium platyneuron* (ebony spleenwort), *Uvularia grandiflora* (bellwort), *Smilacina racemosa* (starry false Solomon-seal), *Trillium grandiflorum* (large-flowered trillium), *Aquilegia canadensis* (columbine), and *Pedicularis canadensis* (lousewort). At the Van Buren county locality, *C. platyphylla* was observed to be frequent on wooded dunes dominated by an overstory of *Acer saccharum* and *Tsuga canadensis* (Eastern hemlock). In the St. Clair County localities, *C. platyphylla* occurs in rich woods on steep slopes above the Black River with a very similar list of woodland plant associates. Over its broader range, this sedge prefers well-drained to rocky slopes in rich deciduous woods.

Biology: A perennial and spring-flowering sedge, *C. platyphylla* fruits by mid-June. It persists in vegetative condition throughout the summer, producing evergreen rosettes that persist through the winter.

Conservation/management: This woodland sedge is undoubtedly vulnerable to the removal of forest canopy, although selective cutting techniques, such as management for high quality hardwoods, may be compatible with maintenance of adequate habitat. The Berrien County station occupies lakefront property of high value for residential development and some sand dunes in the vicinity have been mined out. However, most of that site has been acquired by the Department of Natural Resources for the establishment of a State Park. Status surveys of the known occurrences should also be conducted periodically to monitor the condition of populations, particularly because they occur in areas desirable for development along the Lake Michigan shoreline.

Comments: This species may sometimes be overlooked by botanists because of its strong resemblance to the common and widespread sedges, *C. plantaginea* and *C. albursina*, which occur throughout the state in rich hardwoods.

Research needs: Continued inventory may result in the identification of additional occurrences of this species, which is moderately disjunct from the main range. Because of its disjunction, this species may be of interest with regard to plant geography and genetic studies.

Related abstracts: Mesic northern forest, mesic southern forest, goblin fern, Assiniboia sedge, showy orchis, goldenseal, ginseng, painted trillium, Cooper's hawk, northern goshawk, red-shouldered hawk, cerulean warbler, eastern box turtle

Selected references:

- Cochrane, T.S. 1998. The distribution of *Carex platyphylla* (Cyperaceae: Sect. Careyanae) with emphasis on the Western Great Lakes region. *Mich. Bot. Vol. 37:* 3-11.
- Deam, C. C. 1940. *Flora of Indiana*. Indiana Dept. of Conservation, Indianapolis. 1236 pp.
- Flora of North America Editorial Committee. 2002. *Flora of North America North of Mexico. Volume 23. Magnoliophyta: Commelinidae (in part): Cyperaceae.* 608 pp.
- NatureServe. 2003. NatureServe Explorer: An Online encyclopedia of life [web application]. Version 1.8. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: November 11, 2003).
- Voss, E. G. 1972. Michigan Flora. Part I. Gymnosperms and Monocots. *Bull. Cranbrook Inst. Sci. 55* and *Univ. of Michigan Herbarium.* xv + 488 pp.



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