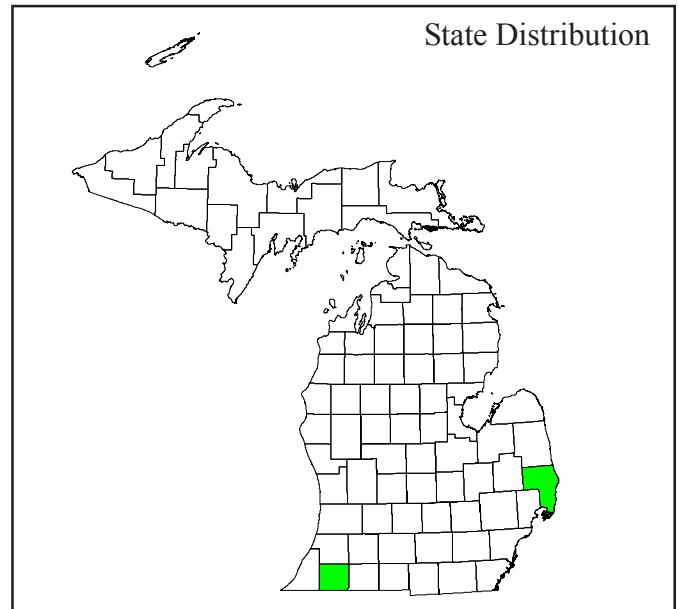
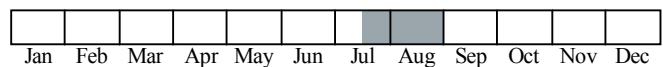




Photo by Robert H. Read, courtesy of Wisconsin DNR



Best Survey Period



**Status:** State extirpated

**Global and state rank:** G5/SX

**Other common names:** sedge

**Synonyms:** *Fimbristylis caroliniana* (Lam.) Fern., *F. drummondii* (Torrey and Hooker) Boeckl., *F. spadicea* (L.) Vahl, and *Scirpus puberulus* Michaux

**Family:** Cyperaceae (sedge family)

**Taxonomy:** As noted above, this plant has previously been assigned to several species. Kral (1971) distinguished *F. puberula* from *F. caroliniana*, and included our plants in var. *puberula* of the former species. According to Kral, *F. puberula* may be the most widespread species of this genus in North America.

**Total range:** *Fimbristylis puberula* in the broad sense occurs primarily on the southeastern coastal plain, ranging from New Jersey to Florida and west to Texas and the Gulf states. It also has a strong center of distribution in the eastern Great Plains, occurring to Nebraska, Kansas, and Missouri, and disjunct occurrences in Illinois, Indiana, Michigan, and southern Ontario. This species is considered rare in Indiana, Kentucky, Nebraska, Tennessee, Virginia, Wisconsin,

and Ontario, and is classified as extirpated in New York and Pennsylvania (NatureServe 2003).

**State distribution:** This species is represented in the Michigan flora by an 1838 collection by the First Geological Survey from Cass County and a 1904 collection from Harsen’s Island, St. Clair County, where it was noted as abundant.

**Recognition:** Shoots of this perennial graminoid, which arise singly or as tufts from hard knotty rhizomes with persistent former leaf bases, are 2-7 dm or more in height and round to oval in cross section, and have **stiffly erect, linear basal leaves** that are 1-3 mm wide and have inrolled margins. The stems terminate in a single open to compact inflorescence that is **umbel-like** and bears several ovoid to ellipsoid spikelets on slender stalks that are much longer than the basal (subtending) leaf-like bracts. The tiny obovate achenes are **white to dark brown, 2-sided (lenticular) and ca. 1.5 mm long, with neither a persistent tubercle at the summit, nor bristles below.**

The more common and generally much shorter *F. autumnalis*, a widespread species of many wetland habitats throughout the state, has 3-sided (trigonous), smaller achenes (0.7 mm long), much smaller anthers (0.3 mm versus 1.5 mm in *F. puberula*) and is an annual. *Psilocarya scirpoides* (bald-rush), a rare



species similar in overall aspect, and which could occur in the same habitats, can be distinguished by its leafy stems and the achenes, which have a tubercle at the base.

**Best survey time/phenology:** This species was collected in Michigan in mid-July and late August; in the Chicago region, the flowering period is cited as approximately the same (Swink and Wilhelm 1994). Mid-July through August is thus assumed to be the optimal period to seek this species, although it is likely that it could be sought considerably later than this period, owing to late drawdowns in wet prairie habitats where it may occur.

**Habitat:** Chestnut sedge was collected in St. Clair County on “prairie-like” ground, probably referring to lakeplain wet prairies which are now highly fragmented and persist in relatively small remnants there, although it is plausible that most of these sites are now destroyed. This sedge typically inhabits moist savannas and meadows on the Atlantic Coastal Plain, and mid- to tall-grass prairie in its central North American range. In the Chicago region, it grows in moist, sandy prairies near Lake Michigan with *Andropogon gerardii* (big bluestem), *Aster oolentangiensis* (sky blue aster), *A. ericoides* (heath aster), *Dodecatheon meadia* (shooting star), *Gentiana puberula* (downy gentian), *Hypoxis hirsuta* (yellow-eyed-grass), *Potentilla arguta* (prairie cinquefoil), *Scleria triglomerata* (nut-rush), and *Sisyrinchium albidum* (blue-eyed grass).

**Biology:** *F. puberula* is a perennial with thick rhizomes that are considered to be advantageous for survival in fire-controlled ecosystems and savannas (Kral 1971). Fertile Michigan collections were made on July 10 and August 20.

**Conservation/management:** No extant populations of this sedge are known in Michigan; however, it should be sought in remnant prairie habitats on Harsen’s and Dickinson Islands and in the vicinity of Algonac, particularly in sites where there is now active management (e.g. shrub removal and prescribed burns) for the restoration of lakeplain prairie communities. This species still grows in the mesic savannas that persist on Walpole Island (Ontario) as a result of fire management, which enables this species and many other rare associates to persist. It should also be sought in southwestern Michigan, particularly in lakeplain wet-

mesic prairies, as the plant associates within these communities appear to be very similar to those listed above for habitat in the Chicago region.

**Research needs:** The primary need for this species at present is dedicated inventories to identify extant populations, focusing on lakeplain prairies undergoing active management. Large complexes of oak barrens that contain lakeplain wet-mesic prairies and well known Atlantic Coastal Plain disjunct species, such as those that occur in Allegan County in southwestern Michigan, are potential areas for rediscovering this regionally rare sedge.

**Related abstracts:** Coastal plain marsh, lakeplain wet prairie, lakeplain wet-mesic prairie, oak barrens, Gattinger’s gerardia, Skinner’s gerardia, three-awned grass, Leiberg’s panic grass, smooth beard tongue, few-flowered nut-rush, purple milkweed, Sullivant’s milkweed, Hill’s thistle, northern appressed clubmoss, eastern prairie fringed orchid, Allegany plum, meadow-beauty, blazing star borer, culver’s root borer, eastern box turtle, red-legged spittlebug, Silphium borer.

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