



Natural Heritage & Endangered Species Program

Massachusetts Division of Fisheries & Wildlife
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Engelmann's Umbrella-sedge

Cyperus engelmannii Steudel

State Status: Threatened

Federal Status: None

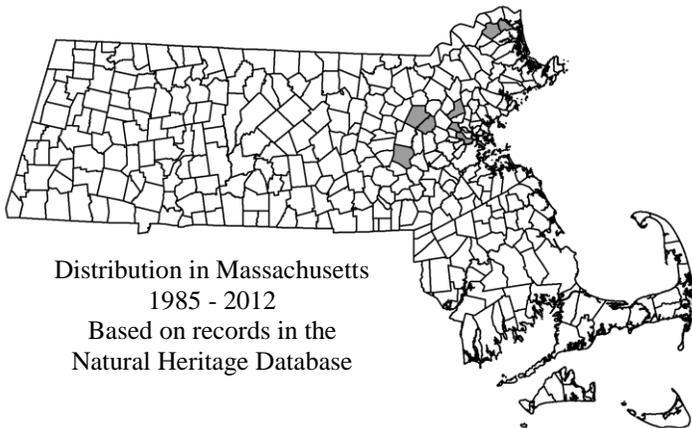
Description: Engelmann's Umbrella-sedge is an annual member of the Sedge family (Cyperaceae) found on pond shores and disturbed muddy areas. It stands 10 to 50 cm (4–20 in.) tall, with leaves that are 2 to 10 mm wide, 5 to 30 cm long, and V- or M-shaped in cross-section. The species is named for German-American botanist George Engelmann (1809-1884).

Aids to Identification: Identification of species in the genus *Cyperus* can be difficult, and a technical manual should be consulted. Like other *Cyperus* species, Engelmann's Umbrella-sedge has "spikelets" comprised of elongate clusters of small, inconspicuous flowers and subtending scales. The flowers and scales are arranged in two vertical rows along the axis of the inflorescence, giving the flowering stems a flattened appearance. Engelmann's Umbrella-sedge is one of a few annual *Cyperus* species with three-cleft styles and three-sided achenes (dry, one-seeded fruits). Annuals can be recognized by their soft stem bases and fibrous root systems, lacking the underground nutrient-storing structures (rhizomes, tubers, or corms) and firm stem bases characteristic of perennials. The floral scales of Engelmann's Umbrella-sedge are appressed (not outcurved at the tips), have seven or more nerves, are generally 2 to 2.8 mm long, and do not overlap (the tip of each scale does not reach the base of the next scale on the same side of the spikelet).



Engelmann's Umbrella-sedge is an annual species found along pond shores; its spikelets have appressed scales that do not overlap. Photo by Anton Reznicek.

Similar species: The two species most likely to be confused with Engelmann's Umbrella-sedge are Straw-colored Flatsedge (*Cyperus strigosus*) and Saltmarsh Flatsedge (*C. odoratus*). Straw-colored Flatsedge is a common, short-lived perennial without well-developed rhizomes; it sometimes flowers in its first year, and may be mistaken for an annual. Its stems usually have a swollen, corm-like base, and it has longer floral scales (usually 3.2-4.5 mm) than Engelmann's Umbrella-sedge or Saltmarsh Flatsedge. In addition, mature spikelets of the latter two species disarticulate into segments, whereas those of Straw-colored Flatsedge disarticulate from the base and fall from the plant in one piece. Saltmarsh Flatsedge, which is on the Massachusetts Watch List, has floral scales that overlap and achenes that are shorter (avg. 1.2 mm) than Engelmann's Umbrella-sedge (1.8 mm). The floral scales of Saltmarsh Flatsedge are also often papery in texture, whereas they are leathery in Engelmann's Umbrella-sedge.



Fruiting in Massachusetts

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Population Status in Massachusetts: Engelmann's Umbrella-sedge is listed under the Massachusetts Endangered Species Act as Threatened. All listed species are protected from killing, collecting, possessing, or sale and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. Engelmann's Umbrella-sedge occurs in Middlesex and Essex Counties.

Range: Engelmann's Umbrella-sedge occurs from Minnesota to Massachusetts, south to Nebraska, Tennessee, and Virginia. It is listed as Rare in Pennsylvania, Threatened in Massachusetts, and Special Concern in Tennessee.

Habitat: Most occurrences of Engelmann's Umbrella-sedge in Massachusetts are along wet pond shores, which may be muddy, sandy, or pebbly. It also is found on the muddy tidal shores of the Merrimack River, and in one case in the soft, black mud of a pond bottom. It often grows along with other, more common, *Cyperus* species, including Straw-colored Flatsedge.

Threats and Management Recommendations:

As for many rare species, exact needs for management of Engelmann's Umbrella-sedge are not known. Trampling and invasive exotic plants have been noted at some sites where this species occurs in Massachusetts. Alteration of hydrological conditions may threaten existing populations. All active management of rare plant populations (including invasive species removal) is subject to review under the Massachusetts Endangered Species Act, and should be planned in close consultation with the Massachusetts Natural Heritage & Endangered Species Program.

References and Additional Information:

Gleason, H. A., and A. Cronquist. 1991. *Manual of Vascular Plants of Northeastern United States and Adjacent Canada*, 2nd edition. The New York Botanical Garden, Bronx, NY.

Haines, A. 2011. *Flora Novae Angliae – a Manual for the Identification of Native and Naturalized Higher Vascular Plants of New England*. New England Wildflower Society, Yale Univ. Press, New Haven, CT.

Mears, R. L., and G. W. Libby. 1995. New Records of *Cyperus* (Cyperaceae) from Kentucky. *Castanea* 60: 79–82.

Michigan Flora Online. A. A. Reznicek, E. G. Voss, & B. S. Walters. February 2011. University of Michigan. <http://michiganflora.net/information.aspx>

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