



Natural Heritage & Endangered Species Program

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Massachusetts Division of Fisheries & Wildlife

Fen Sedge *Carex tetanica* Schkuhr ex Willd.

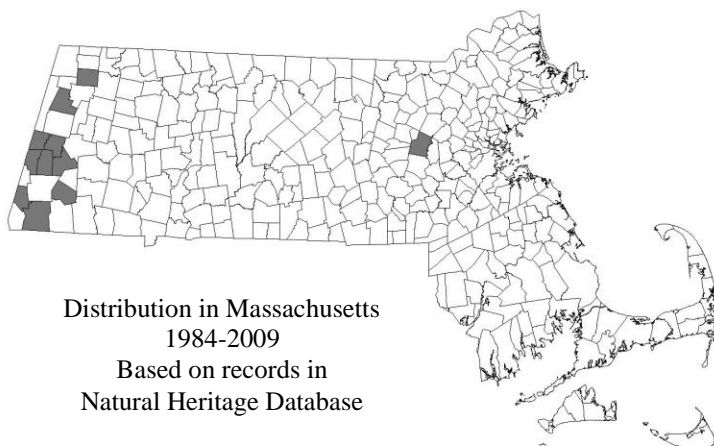
State Status: **Special Concern**

Federal Status: **None**

GENERAL DESCRIPTION: Fen Sedge, a member of the Sedge family (Cyperaceae), is a perennial, herbaceous, grass-like plant of calcareous meadows and fens. It is a slender plant between 1.2 to 6 dm (about 5 inches to 2 feet) in height. Its vegetative shoots are loosely scattered and arise from long, underground stems, called “rhizomes.”

AIDS TO IDENTIFICATION: To positively identify the Fen Sedge and other members of the genus *Carex*, a technical manual should be consulted. Species in this genus have tiny, wind-pollinated flowers that are borne in spikes. Each flower is unisexual and closely subtended by small, flat scales that largely conceal the flowers. The staminate (i.e., pollen-bearing) flowers are subtended by a single scale. The pistillate (i.e., ovule-bearing) flowers are subtended by two scales, an outer flat scale (“pistillate scale”) and an inner, sac-like scale, called a “perigynium”, that encloses the flower and, later, the fruit.

The Fen Sedge is fairly distinctive because of its two-toned pistillate scales (purplish-brown margins and green centers), the absence of slender prolonged tips



Distribution in Massachusetts
1984-2009
Based on records in
Natural Heritage Database



Holmgren, Noel H. 1998. *The Illustrated Companion to Gleason and Cronquist's Manual*. New York Botanical Garden.

known as “beaks” on the perigynia, and two prominent lateral perigynia ribs. Achenes are trigonous (three-sided). The uppermost spike bears only staminate flowers, while the one to three lower spikes bear only pistillate flowers. The spikes of flowers are long-cylindric and well-separated. At least the lowest spike is on a long, slender stalk. The bracts, or leaf-like structures found below the flower spikes, are long and leaf-like.

SIMILAR SPECIES: One sedge of fen habitat that resembles the Fen Sedge early in the season is the Golden Sedge (*Carex aurea*), but that sedge may be distinguished by the presence of two stigmas (compared to three in the Fen Sedge) with more glaucous-white perigynia in the early summer. Another sedge of fens that could be confused with the Fen Sedge in

A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

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Massachusetts is the Endangered Glaucous Sedge (*Carex livida*); however, its leaves are narrower, inrolled or channeled, leathery in texture, and pale in color. The Millet Sedge (*Carex panicea*) is an introduced species of meadows in our region; however, it usually grows in drier conditions than the Fen Sedge. The Millet Sedge can be distinguished by its smooth texture at the top of the stem (rough in the Fen Sedge) and by the rounded base of its achenes (tapered to the base in Fen Sedge).

HABITAT: In Massachusetts, the Fen Sedge grows primarily in open, wet fens and meadows where there is calcareous groundwater seepage. It also occurs in openings within large calcareous seepage swamps. The Fen Sedge typically grows in association with other sedges and herbs. Associated sedges include Yellow Sedge (*C. flava*), Porcupine Sedge (*C. hystericina*), Delicate Sedge (*C. leptalea*), Yellow Fox-sedge (*C. annectens*), and Inland Prickly Sedge (*C. interior*).

Associated herb and grass species are Grass-of-Parnassus (*Parnassia glauca*), Marsh Muhly (*Muhlenbergia glomerata*), Robin’s Plantain (*Erigeron pulchellus*), Tall Meadow-rue (*Thalictrum pubescens*), and invasive weeds like Purple Loosestrife (*Lythrum salicaria*). Shrubby Cinquefoil (*Dasiphora floribunda*), Hoary Willow (*Salix candida*), and Autumn Willow (*Salix serissima*) are associated shrub species. The fen communities in which Fen Sedge occurs often contain other state-protected rare plant species, including Dioecious Sedge (*Carex sterilis*, Threatened) and Capillary Beak-sedge (*Rhynchospora capillacea*, Endangered).

RANGE: The documented range of Fen Sedge extends from Massachusetts to Virginia and westward, across the northern midwest to Saskatchewan and as far west as the Dakotas, Missouri and Iowa in the United States.

POPULATION STATUS IN MASSACHUSETTS: Fen Sedge is listed as Special Concern under the Massachusetts Endangered Species Act. 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. Fen Sedge is, in part, rare in the state because of the scarcity of suitable habitat. The calcareous fens in which Fen Sedge grows occur primarily in western Massachusetts.

MANAGEMENT RECOMMENDATIONS: As for many rare species, exact needs for management of Fen Sedge are not known. The following comments are based mainly on observations of Massachusetts populations. Fen Sedge prefers open habitats and full sun. Several of the known populations in Massachusetts are kept open by mowing or grazing, which prevents succession to shrubs and trees. However, over-mowing or over-grazing may threaten the populations. At one site, it was noted that plants were being trampled by excessive grazing. More information is needed to determine what level of grazing is appropriate. Annual mowing seems to be best suited for maintaining an open habitat without damaging the existing plant population. In addition to maintaining an open habitat, it is necessary to maintain the natural hydrologic regime of the natural community.

MATURE PERIGYNIA PRESENT:

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

Updated 2015

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