



Natural Heritage & Endangered Species Program

Massachusetts Division of Fisheries & Wildlife
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Slender Cottongrass

Eriophorum gracile W.D.J. Koch

State Status: Threatened

Federal Status: None

Description: Slender Cottongrass--a narrow-stemmed, grass-like perennial in the Sedge family (Cyperaceae)-- is topped by a cluster of white, bristly inflorescences that resemble tufts of wool when seen from a distance. In fact, the genus name comes from the Greek words *erion* and *phorus*, meaning "wool" and "bearing" respectively. The weak, unbranched, 2-6 dm (8 - 24 in.) long stems are roughly circular in cross-section and rise from a creeping rhizome (underground horizontal stem).

Slender Cottongrass' narrow blades are 1-2 mm (1/25 - 2/25 in.) wide, and the uppermost is shorter than its sheath (the lower portion of a leaf that envelops the stem). There is one erect, foliaceous bract (modified leaf associated with an inflorescence) that is shorter than the inflorescence and, usually, blackish at its base. Cottongrass's woolly inflorescences occur as 2-5 spikelets (arrangements of reduced, stalkless flowers and bracts on an unbranched axis). Bristles are fully developed from early June to early July. The three-sided achenes (dry, one-seeded fruits) are brown and 2.5-3.5 mm (3/25 - 4/25 in.) long.

Similar Species: Plants that may be mistaken for Slender Cottongrass include various other species of *Eriophorum*. Rough Cottongrass (*E. tenellum*) can be distinguished by its uppermost leaf, the blade of which equals or exceeds its sheath in length. Both Tawny Cottongrass (*E. virginicum*) and Fen Cottongrass (*E. viridicarinatum*) have two or three foliaceous bracts, in contrast to the one of Slender Cottongrass. Finally, Tussock Cottongrass (*E. vaginatum*) has only one spikelet and no foliaceous bracts.

Habitats in Massachusetts: Slender Cottongrass is a plant of swamps and peatlands. Habitats in Massachusetts include acidic and calcareous fens (peatlands that receive nutrients from groundwater) and portions of seepage swamps. Regularly associated species include. Regularly associated species include Leatherleaf (*Chamaedaphne calyculata*), multiple species of sedges (*Carex* spp.), and Three-way Sedge (*Dulichium arundinaceum*) growing on Sphagnum moss, often with nearby Broad-leaved Cattails (*Typha latifolia*) and other species of marshes. In

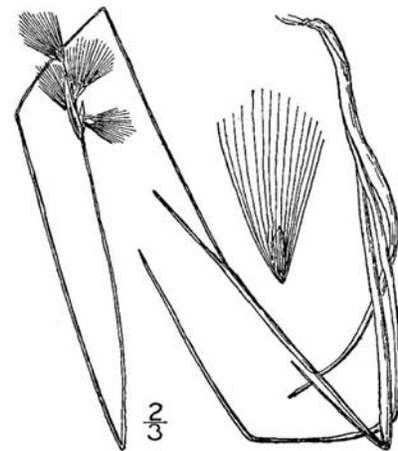


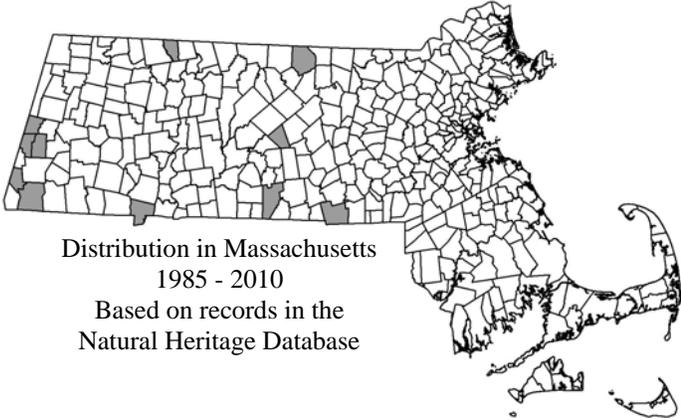
Photo: Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database / USDA NRCS. 1992. *Western wetland flora: Field office guide to plant species*. West Region, Sacramento.

Illustration: USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. 3 vols. Charles Scribner's Sons, New York. Vol. 1: 324.

calcareous sites, regular associates include Shrubby Cinfoil (*Dasiphora floribunda*).

Range

Slender Cottongrass is a circumboreal species. In North America, the documented range of Slender Cottongrass extends from Newfoundland to British Columbia, south to Pennsylvania, Indiana, Iowa, Colorado and California.



Distribution in Massachusetts
1985 - 2010
Based on records in the
Natural Heritage Database

Population Status: Slender Cottongrass 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. NHESP documents eleven current (1985-2010) occurrences and nineteen historical sites where the species is no longer found. One reason for its rarity in Massachusetts is because it is near the southern edge of its range. It is considered rare in many of the states on the southern edge of its distribution. Globally, Nature Serve ranks Slender Cottongrass as G5, Secure.

Management and Threats: Peatland species such as Slender Cottongrass depend on the sites receiving water of consistent quantity and quality. Degradation or interruption of water supplies could lead to habitat degradation, threatening the species. Competition from non-native invasive species can be a threat through shading and loss of space for native species. Monitoring and removal of competing vegetation should be considered as a management strategy where appropriate. 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.

For More Information See:

NatureServe. 2010. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: December 10, 2010).

USDA, NRCS. 2010. The PLANTS Database (<http://plants.usda.gov>, 10 December 2010). National Plant Data Center, Baton Rouge, LA 70874-4490 USA