Natural Heritage & Endangered Species Program

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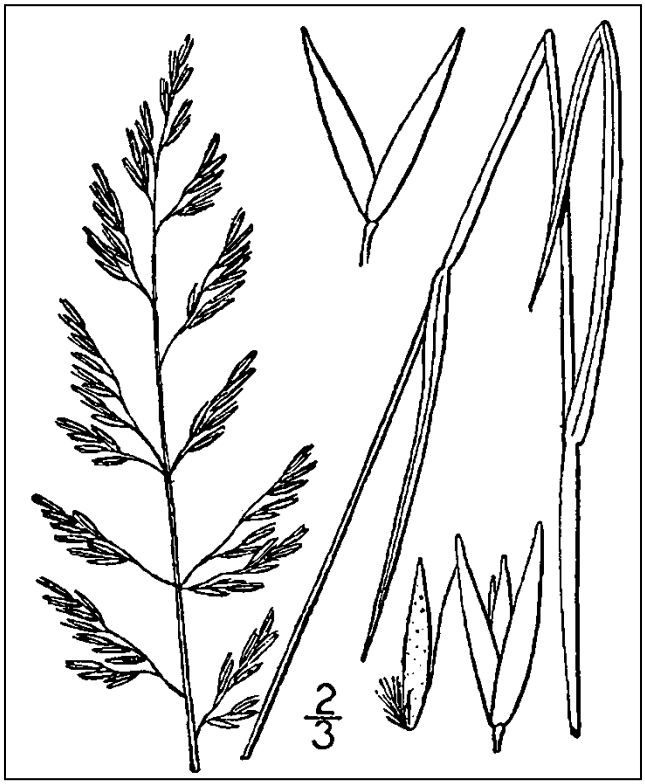
Massachusetts Division of Fisheries & Wildlife

Pickering's Reedgrass
Calamagrostis pickeringii
A. Gray

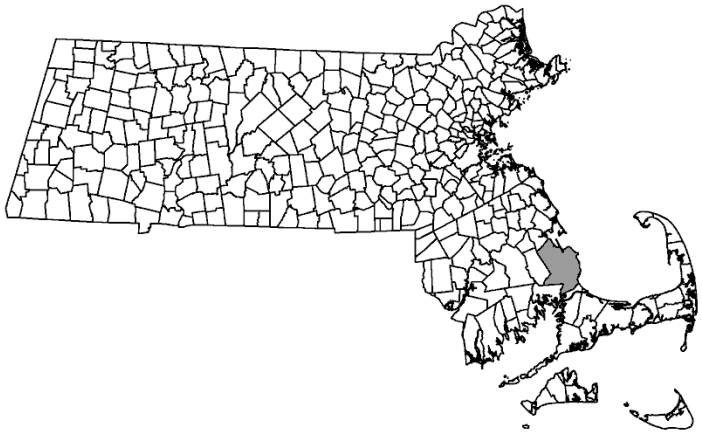
State Status: **Endangered**
Federal Status: **None**

DESCRIPTION: Pickering's Reedgrass is a perennial species in the Grass family (Poaceae) found in a variety of moist, sunny habitats. It grows to a height of 0.2 to 0.7 m, typically as solitary stems scattered along slender rhizomes; it may also form tussocks in fine-textured soils. The stems (culms) are often bluish and coated with a thin, waxy substance. The narrow leaves are smooth above and rough below, flat, and tapering at the base.

AIDS TO IDENTIFICATION: To identify Pickering's Reedgrass and other grass species, a technical manual should be consulted. In Pickering's Reedgrass, the glumes, or two lower bracts of the spikelet, are smooth to slightly rough, acute, and strongly tapering towards the tip. Glumes are up to 4.7 mm in length, with the second (upper) glume often shorter than the first. The lemma, the larger of the pair of bracts that surrounds the flower, is rough and rather thick. An awn (a stiff bristle) emerges from near the base of the lemma, and is about equal in length to the lemma. The callus, a hard protuberance at the base of the lemma, has sparse white hairs that are 20-30% as long as the lemma. The rachilla, the axis of the spikelet, is covered with hair for its entire length.



Pickering's Reedgrass has sparse white hairs on the callus at the base of the lemma, and awns that are about as long as the lemma. Illustration from: http://plants.usda.gov/java/largeImage?imageID=capi_001_avd.tif



SIMILAR SPECIES: *Calamagrostis canadensis* and *C. stricta* have more abundant callus hairs that are 50 to 120% the length of the lemma. In *C. cinnoides*, the awn is attached above the middle of the lemma, and the rachilla is covered in hair only at the apex. In *C. epigeios*, the callus pubescence is longer than the lemma and the rachilla is not prolonged.

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

Massachusetts Division of Fisheries & Wildlife

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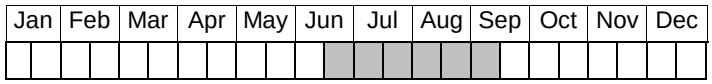
POPULATION STATUS IN MASSACHUSETTS: Pickering's Reedgrass is listed under the Massachusetts Endangered Species Act as Endangered. All listed species are protected from killing, collecting, possessing, or sale, and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. Pickering's Reedgrass is currently known from only three locations in Plymouth County. It also occurred historically in Middlesex and Essex Counties.

RANGE: Pickering's Reedgrass is found in northern New England, New York, Pennsylvania, and New Jersey, northwest to Ontario and northeast to Newfoundland.

HABITAT: In northern New England, Pickering's Reedgrass often occurs at mid to high elevations in a variety of open, moist sites, including alpine barrens, sub-alpine ledges, bogs and fens, sand or gravel riverbanks, damp openings in forests, and boulder-filled headwater streams. The species also occurs in lowland bogs and on pond shores. In Massachusetts, Pickering's Reedgrass has been found growing in frost bottoms and in peaty meadows.

THREATS AND MANAGEMENT RECOMMENDATIONS: Alteration of hydrological conditions, water quality, and substrate conditions in wetlands supporting Pickering's Reedgrass should be avoided, and hydrological conditions and water quality should be monitored. The spread of Purple Loosestrife (*Lythrum salicaria*) may have been responsible for the loss of Pickering's Reedgrass at one site where it formerly occurred. Increased shading by woody species may threaten populations in frost bottoms and other habitats. Extant populations of Pickering's Reedgrass should be monitored for Purple Loosestrife and other competing species and, where needed, a plan developed in consultation with the Natural Heritage & Endangered Species Program to control these species. All active management of state-listed 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.

Fruiting in Massachusetts



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