



Natural Heritage & Endangered Species Program

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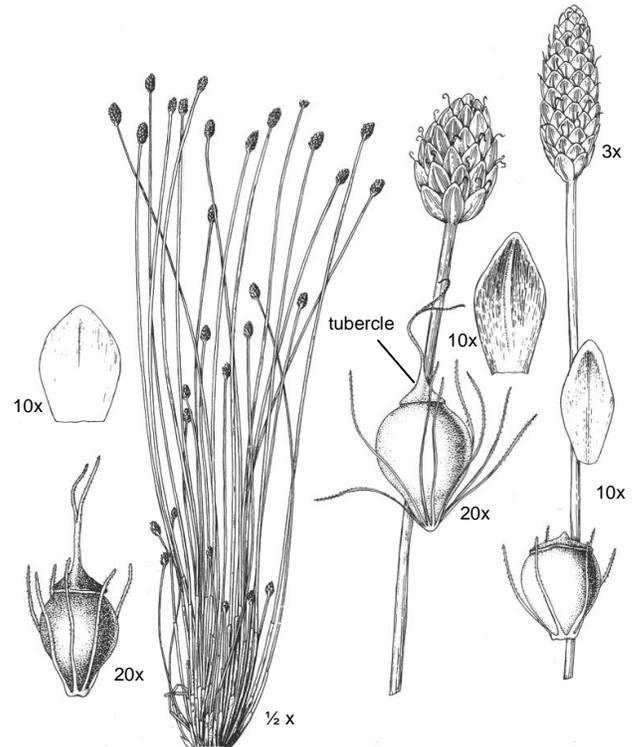
Massachusetts Division of Fisheries & Wildlife

Ovate Spike-sedge *Eleocharis ovata* (Roth) Roemer & Schultes

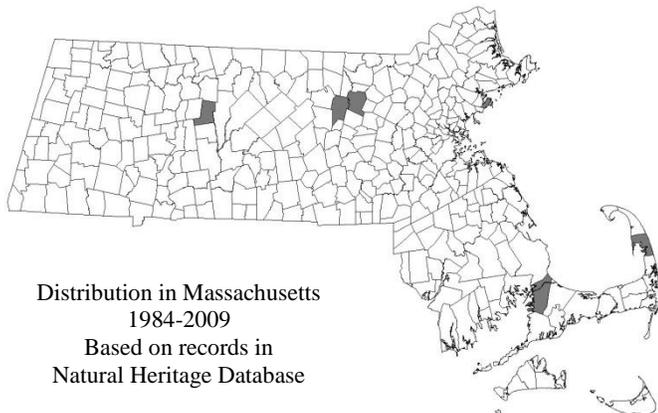
State Status: **Endangered**
Federal Status: **None**

DESCRIPTION: In Massachusetts, the Ovate Spike-sedge (*Eleocharis ovata*) is a low (2-6 inches or about 5 to 15 cm), tufted, annual herb with straight, ascending, deep-green stems. Although the Ovate Spike-sedge and the other spike-sedges (also called spike-rushes) superficially resemble the group of plants called “rushes,” they do not belong to the Rush Family, and are actually members of the Sedge Family (Cyperaceae). The spike-sedges have a single, tight cluster of inconspicuous flowers (a “spike”) at the apex of each stem. The stems of spike-sedges appear leafless, and in fact these plants do not have leaf blades (the expanded part of the leaf), only leaf sheaths (the part which surrounds the stem).

AIDS TO IDENTIFICATION: To positively identify the Ovate Spike-sedge and other spike-sedges (genus *Eleocharis*), a technical manual should be consulted. It is usually necessary to look at the tiny fruits of the plant under magnification to distinguish the species of spike-sedge. Members of this genus possess a



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



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

type of fruit called an “achene,” which is hard and nut-like and does not split open to release its single seed. Achenes in the spike-sedges are topped by a protuberance (called a “tubercle”), which varies in shape, size, and texture among species.

It should be noted that *Eleocharis ovata* (syn. *E. obtusa* var. *ovata*) is a member of a taxonomically controversial complex within the genus *Eleocharis*. Some authors (i.e., Gleason and Cronquist, 1991) have not recognized *Eleocharis ovata* as a separate entity from the more common *Eleocharis obtusa*. There is yet additional controversy as to whether another taxon, *E. diandra*, is a

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

Massachusetts Division of Fisheries & Wildlife

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separate entity from *E. ovata*. Currently, based on the recent Flora of North America treatment, the Massachusetts Natural Heritage & Endangered Species Program recognizes *E. ovata* as a distinct species from both *E. obtusa* and *E. diandra*.

The achene of the Ovate Spike-sedge matures in mid to late summer, and is olive to light brown to dark brown in color. It is two-sided (like a tiny lentil), smooth, and glossy. The tubercle hugs the top of the achene closely (there is no constriction separating it from the achene).

SIMILAR SPECIES: There are many common spike-sedges that could be confused with the Ovate Spike-sedge, and a technical manual should be consulted when trying to distinguish members of this genus. Of particular concern is separating this spike-sedge from its close relative, the Soft-stemmed Spike-sedge (*Eleocharis obtusa*), which can be difficult. In the Soft-stemmed Spike-sedge, the tubercle is relatively short and squat with a wide base covering almost the entire top of the achene. The base of the tubercle in the Ovate Spike-sedge is usually narrower, not quite covering the entire summit of the achene. Technically, a tubercle 0.5-0.8 mm wide is found in the Soft-stemmed Spike-sedge, while a tubercle 0.3-0.5 mm wide is found in the rare Ovate Spike-sedge.

Eleocharis diandra is a rare spike-sedge known only from a few local areas in the Northeastern U.S. and Ontario, Canada. It is distinguished from *E. ovata* by its lack of “perianth bristles,” a whorl of bristles emanating from the base of the achene in most species of *Eleocharis*. In contrast, *E. ovata* usually has six or seven perianth bristles which overtop the achene and tubercle.

RANGE: The Ovate Spike-sedge occurs from Newfoundland, south to Connecticut, west to New York and Indiana, north to Minnesota.

HABITAT: The Ovate Spike-sedge can be found growing on sandy freshwater margins, including lake, pond and river shores. It has been documented to occur with the following species in Massachusetts: Soft-stemmed Spike-sedge (*Eleocharis obtusa*), Threeway Sedge (*Dulichium arundinaceum*), Buttonbush (*Cephalanthus occidentalis*), Soft Rush (*Juncus effusus*), Wool-grass (*Scirpus cyperinus*), and Common Bur-reed (*Sparganium americanum*).

POPULATION STATUS IN MASSACHUSETTS:

The Ovate Spike-sedge 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. The Ovate Spike-sedge was known historically from six counties in the Commonwealth, but is currently reported only from Barnstable, Worcester, and Franklin Counties.

MANAGEMENT RECOMMENDATIONS: As for many rare species, exact needs for management of Ovate Spike-sedge are not known. The following comments are based primarily on observations of populations in Massachusetts. Since the Ovate Spike-sedge inhabits relatively open, sandy, freshwater margins, it is important to maintain these conditions where populations exist. Threats to the species include nutrient enrichment of freshwater bodies, which is likely to encourage growth of weed species, and permanent flooding.

Mature Fruit Present

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

Updated 2015

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