



Natural Heritage & Endangered Species Program

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Massachusetts Division of Fisheries & Wildlife

Dwarf Bulrush *Lipocarpus micrantha* (Vahl.) G. Tucker

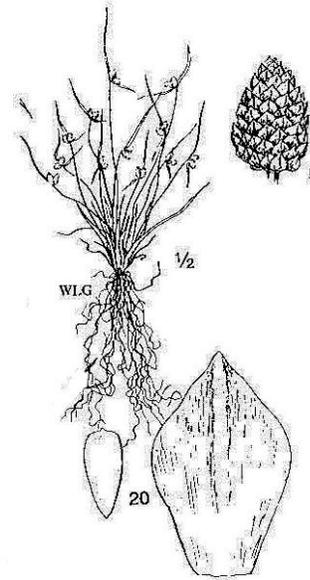
State Status: **Threatened**

Federal Status: **None**

DESCRIPTION: Dwarf Bulrush (*Lipocarpus micrantha*) is a tiny, wiry annual sedge (family Cyperaceae), which inhabits sandy to peaty shores of low-nutrient ponds and lakes.

AIDS TO IDENTIFICATION: Reaching just 2 to 20 cm (<0.1–8 in.) in height, this tiny bulrush grows in small tufts, and has very slender stems, leaves, and bracts. The leaves are up to 10 cm (4 in.) in length, and just 0.5 mm wide. The terminal bract appears to be a continuation of the stem, and the inflorescence appears lateral. The stem bears 1 to 3 egg-shaped spikelets, each with numerous spirally-arranged, overlapping scales. The scales are 1 to 2 mm long, and narrowly rounded with a small awn (sharp tip). The flowers, which develop beneath the scales, have both female and male parts, and no bristles. The fruit, an achene, is cylindric, iridescent brown, and 0.5 to 0.7 mm long.

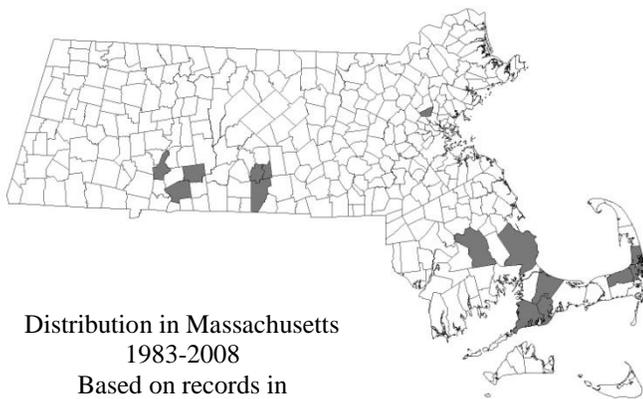
SIMILAR SPECIES: When examined at maturity, Dwarf Bulrush is not likely to be confused with other bulrushes in Massachusetts, due to its dwarf size and slender foliage.



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

HABITAT: Dwarf Bulrush inhabits sandy to peaty, gently sloping shores of acidic, low-nutrient freshwater ponds with dramatic water-level fluctuation. This annual sedge germinates in a band of shore exposed following late season water-level recession. In Massachusetts, it is found along the shores of coastal plain ponds, and of ponds outside of the coastal plain that have similar hydrology, and water chemistry.

Associated species include several species of flatsedge (*Cyperus* spp.), Autumn Fimbry (*Fimbristylis autumnalis*), Canadian St. John's-wort (*Hypericum canadense*), Golden Hedge-hyssop (*Gratiola aurea*), and several species of spike-sedge (*Eleocharis* spp.).



Distribution in Massachusetts
1983-2008
Based on records in
Natural Heritage Database

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

Massachusetts Division of Fisheries & Wildlife

1 Rabbit Hill Rd., Westborough, MA; tel: 508-389-6300; fax: 508-389-7890; www.mass.gov/dfw

Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form, as these donations comprise a significant portion of our operating budget.

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THREATS: Threats to Dwarf Bulrush include any activities that change the natural hydrology, water quality, or soil integrity of its habitat. Examples include water table drawdown from local wells, eutrophication resulting from nutrient inputs from septic systems and lawns, and trampling and soil disturbance due to recreational use of pondshores (i.e., hiking, sunbathing, swimming, fishing, boat-launching, and raking or digging).

RANGE: The range of Dwarf Bulrush is broad, encompassing nearly all of the eastern and midwestern states, Quebec and Ontario, and a portion of the west. It is rare or extirpated throughout most of New England.

POPULATION IN MASSACHUSETTS: Dwarf Bulrush is listed under the Massachusetts Endangered Species Act as Threatened. All listed species are legally protected from killing, collection, possession, or sale, and from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. Dwarf Bulrush is currently known from Barnstable, Hampden, Middlesex, Plymouth, and Worcester Counties, and is historically known from Dukes, Essex, Hampshire, and Norfolk Counties.

MANAGEMENT RECOMMENDATIONS: Preservation of Dwarf Bulrush requires protection of the natural hydrology, water quality, and soil integrity of its habitat. Like other pondshore plant species that inhabit late-season exposed shores, it requires pronounced water-level fluctuations, and acidic, nutrient-poor water and substrate, free from major soil disturbance.

Dwarf Bulrush populations should be monitored regularly to identify possible threats. This species is best surveyed when mature fruit are present, mid-August to late September, depending on when water levels recede.

Protection of Dwarf Bulrush may require exclusion of new wells and septic systems, prohibitions on fertilizer use, and restrictions on recreational use of the pondshores. Recreational activities such as swimming, fishing, and boat-launching should be diverted from plant population locations by providing alternative locations for these activities.

Also, habitat should be monitored for exotic plant species invasions. The nature of coastal plain ponds makes them generally inhospitable to many exotic plants, but they can become established at sites that have major soil disturbance or heavy nutrient inputs. Exotic species that could establish along the shoreline of coastal plain ponds include Common Reed (*Phragmites australis* ssp. *australis*), Gray Willow (*Salix cinerea*), and Purple Loosestrife (*Lythrum salicaria*). 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.

Fruiting time in Massachusetts

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

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