



Natural Heritage & Endangered Species Program

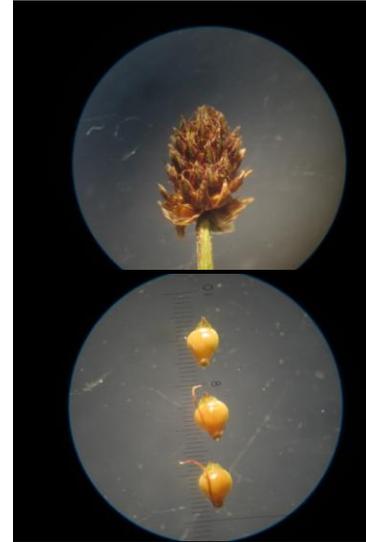
Massachusetts Division of Fisheries & Wildlife
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Wright's Spike-rush *Eleocharis diandra* C. Wright

State Status: Endangered
Federal Status: None

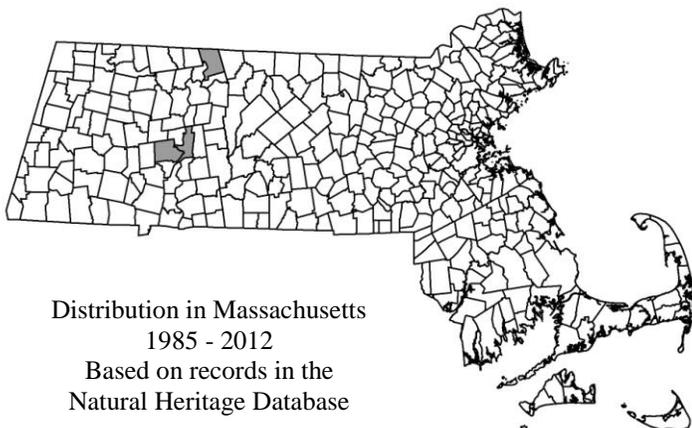
Description: Wright's Spike-rush is a densely tufted annual member of the Sedge family (Cyperaceae), one of several short (2–25 cm), annual *Eleocharis* species in New England. Wright's Spike-rush has plump terminal spikelets with achenes that have short triangular caps (tubercles). This species emerges in the summer along the shores of large lakes and rivers after the spring floods recede.

Aids to Identification: The slender, soft stems are 0.3 to 1 mm wide, and often spreading or reclining. The leaf sheaths are pointed and sometimes toothed. The spikelets are ovoid, 2 to 7 mm long, and many-flowered. Flower scales are orange to purple-brown, acute, and 1–1.5 mm wide x 8 mm long. Achenes (nutlets) are lens-shaped (obovoid) and 0.7 to 1.0 mm long, with a short triangular tubercle. The achenes typically lack perianth bristles.



Wright's Spike-rush has an ovoid terminal spikelet (top) and obovoid achenes with short triangular tubercles (bottom).
Photos by William Moorehead.

Similar species: A technical manual should be consulted to identify *Eleocharis* species. Wright's Spike-rush, Ovate Spike-rush (*E. ovata*) and Bay Spike-rush (*E. aestuum*) are similar, all having ovoid spikelets. They can be distinguished by examining the floral scales, perianth bristles, and tubercles. The tips of the floral scales are rounded in *E. aestuum* and acute in the other two species. Both *E. diandra* and *E. aestuum* lack (or have reduced) perianth bristles, whereas *E. ovata* has bristles that typically exceed the length of the achene. The three species also have differing tubercle heights: *E. ovata* has the tallest tubercle (0.3–0.5 mm), followed by *E. aestuum* (0.2–0.3 mm) and *E. diandra* (0.1–0.2 mm). While *E. ovata* occurs in a wide range of wetland types, *E. diandra* is found in non-tidal (or minimally tidal) habitats, and *E. aestuum* typically occurs along fresh-tidal shorelines.



Distribution in Massachusetts
1985 - 2012
Based on records in the
Natural Heritage Database

Fruiting in Massachusetts

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

Population Status in Massachusetts: Wright's Spike-rush 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. Wright's Spike-rush is known in Massachusetts from the shorelines of the Connecticut River in Hampshire and Franklin Counties.

Range: Wright's Spike-rush has a limited range: it occurs from southern New York north to Ontario and Quebec. It has also been reported from Pennsylvania and New Jersey.

Habitat: Wright's Spike-rush is found along gently sloping freshwater shorelines and marshes. It commonly occurs in disturbed, saturated soils of river edges, often in small depressions. It is typically found in the zone along the water's edge that undergoes spring flooding and is exposed in the summer. Associated species include Water Purslane (*Ludwigia palustris*), rushes (*Juncus* spp.), Sandbar-lovegrass (*Eragrostis hypnoides*), Purple Loosestrife (*Lythrum salicaria*), Blunt Spike-rush (*Eleocharis obtusa*), and Slender Flatsedge (*Cyperus bipartitus*).

Threats and Management Recommendations:

One of the major threats to extant populations of Wright's Spike-rush is trampling by recreational users of shoreline habitat, including walkers, anglers, dogs, and occasional ATVs. Populations should be monitored, and recreational use re-directed where trampling is likely. Wright's Spike-rush may also be threatened by shading of open shoreline habitat by woody species. Invasive species are present in some locations and should be monitored, but may not pose an immediate threat because of periodic inundation of the habitat. Changes to water regimes could drastically alter the habitat for Wright's Spike-rush, and care should be taken to maintain hydrological conditions at documented populations. 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.

References and Additional Information:

Haines, A. 2001. *Eleocharis aestuum* (Cyperaceae), a new tidal river shore spikesege of the Eastern United States. *Novon* 11: 45-49.

Haines, A. 2011. *Flora Novae Angliae – a Manual for the Identification of Native and Naturalized Higher Vascular Plants of New England*. New England Wildflower Society, Yale Univ. Press, New Haven, CT.

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Updated 2012
Map Updated 2012