



Natural Heritage & Endangered Species Program

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River Bulrush *Bolboschoenus fluviatilis* (Torr.) Sajak

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

Description: River Bulrush (*Bolboschoenus fluviatilis*) is a robust, leafy, perennial sedge (family Cyperaceae) of river shores, inland marshes, and freshwater to brackish tidal wetlands. It often grows in dense, sometimes entirely vegetative stands.

Aids to identification: River Bulrush has a sharply triangular stem, or culm, 0.6 to 1.5 m (2–5 ft.) in height, which arises from an elongate rhizome, and bears numerous leaves. The leaf blades are 6 to 22 mm (0.24–0.9 in.) in width, and have a sheath with a papery convex (or sometimes concave) orifice. The reduced flowers are each subtended by overlapping translucent scales, arranged in brown, ovoid (egg-shaped) to lance-ovoid spikelets, 12 to 25 mm (0.5–1 in.) in length. The inflorescence is umbel-like, with 10 to 40 terminal spikelets; most are borne on 4 to 7 slender, drooping rays, but some are sessile, forming a central cluster. Leafy bracts subtend the inflorescence. The fruits are equilaterally trigonous achenes (a dry, one-seeded fruit), 3 to 5 mm (0.12–.2 in.) in length, with strongly persistent bristles. Fruits mature from early August to late September.

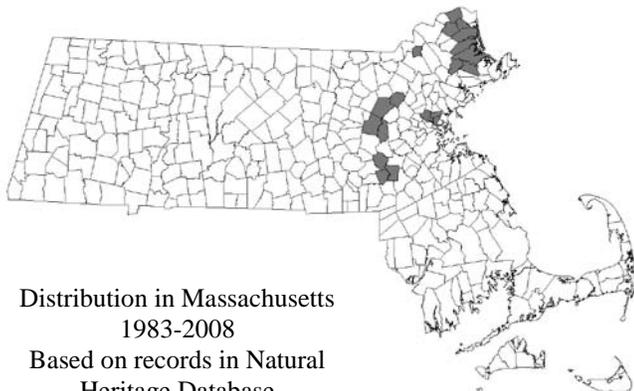
Similar species: River Bulrush may be confused with Seaside Bulrush (*B. maritimus*) and Saltmarsh Bulrush (*B. robustus*). However, Seaside and Saltmarsh Bulrush have fewer pedicelate spikelets (i.e., many are sessile), and compressed trigonous or biconvex achenes, with weakly persistent or non-persistent bristles. Furthermore, these species are found in brackish to saline wetlands, whereas River Bulrush is found primarily in freshwater to slightly brackish wetlands.



USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1: 333.

Habitat: River Bulrush habitats include shallow freshwater or mildly brackish wetlands, including inland and tidal freshwater marshes, and the shallow regions of lakes, ponds, and river edges. In Massachusetts, River Bulrush inhabits floodplain marshes and meadows, and a boggy, tidal river flat. Associated species include Common Cat-tail (*Typha latifolia*), Prairie Cordgrass (*Spartina pectinata*), Softstem Bulrush (*Schoenoplectus tabernaemontani*), Wild Rice (*Zizania aquatica*), Wool-grass (*Scirpus cyperinus*), Jewelweed (*Impatiens capensis*), and Bur-reeds (*Sparganium* spp.)

Threats: Threats to River Bulrush include disruption of the natural hydrologic regime, and habitat loss or degradation. Inputs of nutrients (e.g., from fertilizers, septic systems) can degrade water quality and may increase the success of invading exotic plants such as Purple Loosestrife (*Lythrum salicaria*), Common Reed (*Phragmites australis* ssp. *australis*), and Reed Canary Grass (*Phalaris arundinacea*). These species can become established and take over River Bulrush habitat.



Mature Achenes Present in Massachusetts:

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

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.

Range: The documented range of River Bulrush spans much of North America, from New Brunswick to British Columbia, south to Virginia, and west to California. It is a rare species in Alberta, British Columbia, Idaho, Illinois, Kentucky, New Brunswick, New Jersey, Pennsylvania, Quebec, Tennessee, Virginia, and Utah.

Population in Massachusetts: River Bulrush is not listed as a rare species in Massachusetts. River Bulrush is currently known from Essex, Middlesex, and Norfolk Counties, and is historically known from Hampshire County.

Management guidelines: Preservation of River Bulrush requires protection of the natural hydrology and water quality of its habitat. River Bulrush habitat should be protected from excess nutrient input from nearby lawns, golf courses, agriculture, and septic systems. River Bulrush populations should be monitored regularly to identify possible threats, particularly exotic plant invasions. Early identification of an exotic species invasion enables more effective control.

Updated March 2012