Natural Heritage &
Endangered Species
Program

Commonwealth of Massachusetts
Division of Fisheries & Wildlife
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Westborough, MA 01581
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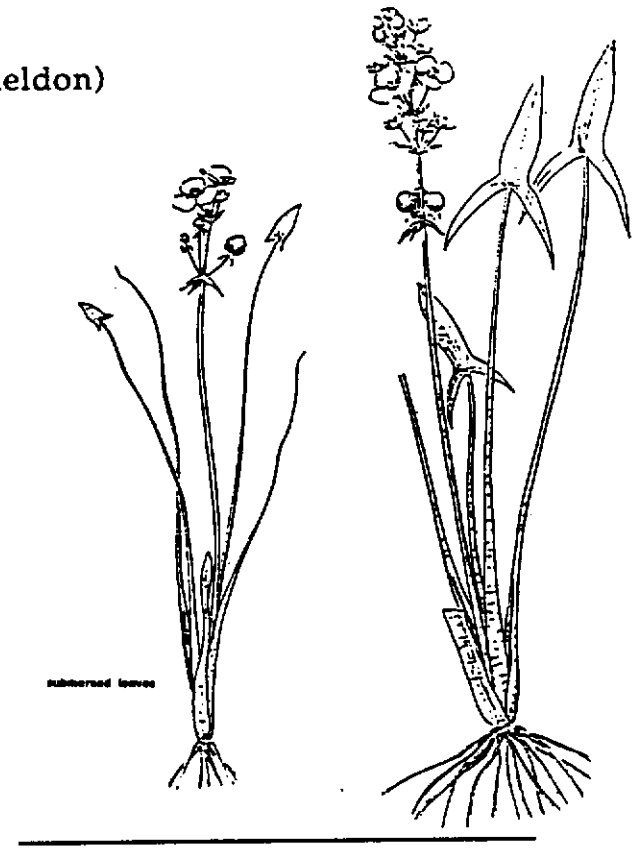
MASSACHUSETTS ENDANGERED PLANTS

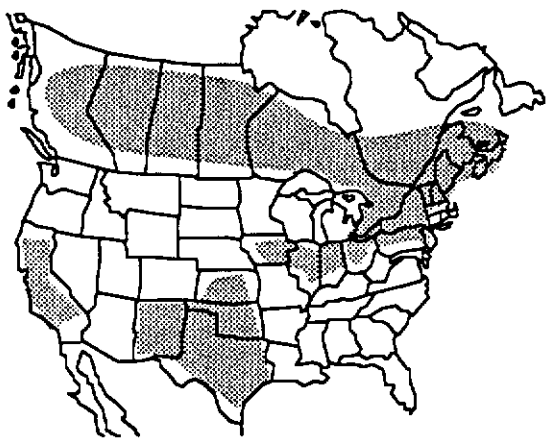
WAPATO
(*Sagittaria cuneata* Sheldon)



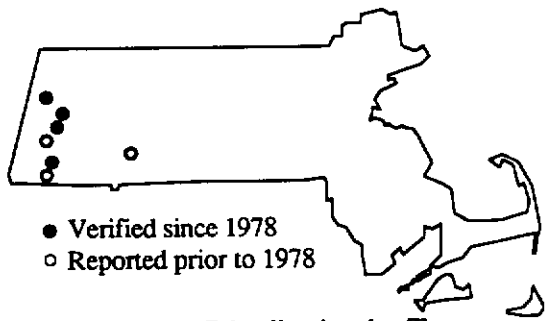
Cronquist, A., et al. Intermountain Flora. v. VI. New York Botanical Garden. New York.

Description

Wapato, or northern arrowhead, is an aquatic, herbaceous perennial in the Water-plantain or Arrowhead family (Alismataceae). It may grow either entirely submersed or, more commonly, with its leaves and flower clusters at least partly above the water's surface. Wapato is highly variable, ranging in form from plants with entirely submersed, bladeless, ribbon-like leaves to plants with three-lobed, arrowhead-shaped leaves that are entirely out of the water. However, all leaves are basally attached. Wapato has large tubers on its rhizomes (horizontal, underground stems). Its unisexual flowers have three sepals and three white, 7-10 mm (3/10 - 4/10 in.) long, roundish petals. These flowers are borne in 2-10 whorls on a 1-5 dm (1/3 - 1 3/4 ft.) high stalk. (If the plant is submersed, the stalk may be somewhat longer.) The uppermost flowers on this stalk are male



Documented Range of Wapato



Massachusetts Distribution by Town

and the lower ones female. Wapato flowers from mid July to early September and later forms globose clusters of flattish achenes (dry, one-seeded fruits).

Range

Wapato is common throughout northern New England, but is rare and scattered southwards. Its documented range extends from Nova Scotia to British Columbia, and south to New Jersey, Indiana, Texas, New Mexico and California.

Similar Species

Like wapato, common arrowhead (*Sagittaria latifolia*) is extremely variable, and its sagittate leaves may resemble those of wapato. The leaves of common arrowhead are always erect; in contrast, when above the water's surface, the leaves of wapato tend to droop. In addition, the bracts of wapato are 1-4 cm (4/10 - 1 6/10 in.) long; those of common arrowhead are always less than 1 cm. When its leaves are ribbon-like, wapato might also be confused with water-celery (*Vallisneria americana*). Water-celery has a light-colored band down the center of its leaves, whereas wapato does not.

Habitat in Massachusetts

This species thrives in muddy shores of rivers, ponds, oxbows and marshes, preferring alkaline waters. In Massachusetts, habitats include backwater marshes along rivers, shallow pools in floodplain communities, and small, shallow lagoons near rivers. All these habitats are subject to periodic flooding. Among the plant species associated with wapato are silver maple (*Acer saccharinum*), red maple (*A. rubrum*) and various species of water-plantains (*Alisma* spp.) and pondweeds (*Potamogeton* spp.).

Population Status

Wapato is presently listed as "Endangered" in Massachusetts, where there are five current stations (discovered or relocated since 1978) in four towns and four historical stations (unverified since 1978). One town has both a current and an historical station. Wapato is also considered rare in New Hampshire, New Jersey, Ohio and Oklahoma. It was present historically in Connecticut.