Natural Heritage &
Endangered Species
Program

Commonwealth of Massachusetts
Division of Fisheries & Wildlife
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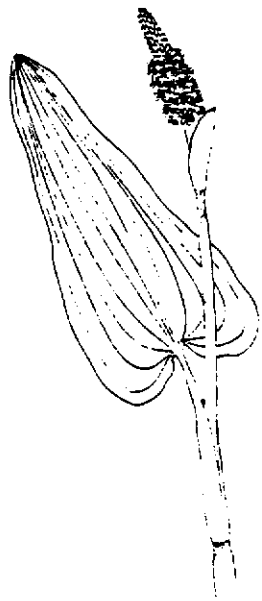
THREATENED PLANTS OF MASSACHUSETTS

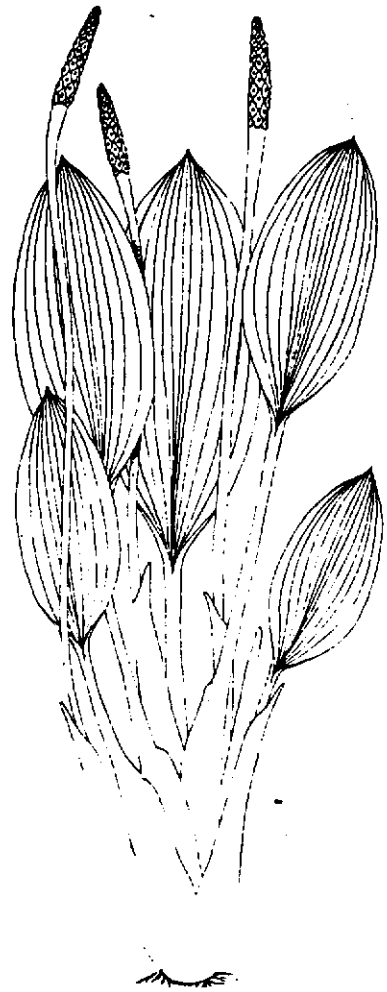
Golden Club
(*Orontium aquaticum* L.)

GENERAL DESCRIPTION: Golden club is an aquatic, perennial with long, golden-tipped, white-stemmed flowering stalks. This member of the predominately tropical Arum family (Araceae) is found in shallow water of ponds, bogs and slow-moving rivers.

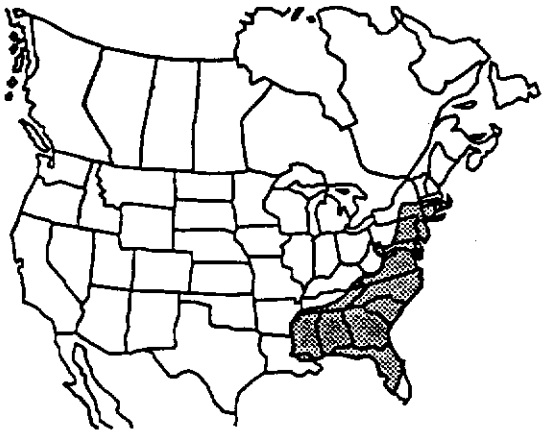
AIDS TO IDENTIFICATION: Golden club has blue-green, 13-30 cm (5-12 in.) long leaves that are long-stemmed, oblong-elliptic and entire. The upper leaf surfaces have a sheen and veins are prominent. Golden club has stout rhizomes that are deeply sunken in the substrate. When growing in water, its leaves often float, but if the plant is exposed, they are erect. As its name implies, Golden club has a golden yellow, clublike inforescence (spathe) with female flowers occurring at the base and male flowers at the tip. Plants flower in April and May. After flowering, the flower stems arch over so that the flowering tip is completely under water during fruit production. Fruits are blue-green berries that ripen by mid-June and are fully dispersed by the end of August.

SIMILAR SPECIES: Pickerelweed (*Pontederia cordata*) is superficially similar in that it grows in a similar habitat and has large, long-stalked leaves. However, pickerelweed has heart-shaped leaves and violet-blue flowers. In Massachusetts, it has been observed that pickerelweed is absent from ponds where Golden club occurs and vice versa.

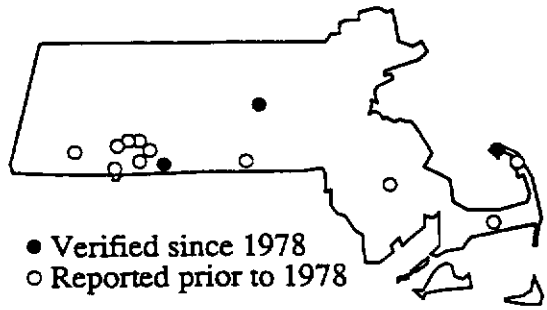




Tiner, R.W., Jr. Field Guide to Nontidal Wetland Identification. Maryland Department of Natural Resources, 1988.



Documented Range
of Golden Club



Distribution in Massachusetts

RANGE: The documented range of Golden club extends from Massachusetts to Louisiana, primarily along the coastal plain. Plants occur locally in central New York, West Virginia and Kentucky.

HABITAT & ASSOCIATED SPECIES: Golden club prefers silty, muddy or peaty bottoms in shallow water of ponds, bogs, marshes and slow rivers. Specific habitats in Massachusetts include the zone of shallow water (<1.5-2 feet deep) of a small kettlehole pond with fragrant water-lily (*Nymphaea odorata*), bullhead-lily (*Nuphar variegata*), purple wen-dock (*Brasenia schreberi*), pondweed (*Potamogeton* sp.), and bladderwort (*Utricularia* sp.); shallow ponds between sand dunes in oak-beech forest where it occurs as virtually the only aquatic plant; and on the *Sphagnum* mat of an acid bog with leather leaf (*Chamaedaphne calyculata*), sweet gale (*Myrica gale*), narrow-leaved laurel (*Kalmia angustifolia*), pitcher plant (*Sarracenia purpurea*), and young white pine (*Pinus strobus*). The acid bog site is the northernmost locality of Golden club in New England, and it is unusual habitat for the species that typically occurs in shallow ponds.

POPULATION STATUS IN MASSACHUSETTS: Golden club is presently listed as Threatened in Massachusetts. As with all species listed in Massachusetts, individuals of the species are protected from take (picking, collecting, killing...) and sale under the Massachusetts Endangered Species Act. Eleven current stations of Golden club are known in the Commonwealth. The current stations are protected; however, all but two are located in a small area of interdunal ponds in Provincetown. Many historical stations, including all 6 stations from the Connecticut River Valley, are no longer extant. The rarity of Golden club in Massachusetts is in part due to the state's location at the northern extent of the species range; however, Golden club's decline within the state is due to a loss of habitat from pondshore development and subsequent changes in water levels and water and substrate quality. Despite the loss of most historical populations, Golden Club is considered relatively secure in the Commonwealth due to active protection of populations by the Massachusetts Metropolitan District Commission, Cape Cod National Seashore and the U.S. Army Corps of Engineers.

MANAGEMENT RECOMMENDATIONS: As for many rare species, exact needs for management of Golden club are not known. The following comments are based primarily on observations of populations in Massachusetts. Golden club has specific water level requirements; it is typically found in shallow ponds in water levels up to 1.5 to 2 ft. deep. Population declines and loss of plant vigor (i.e. absence of flowering stalks) have been observed both with increases and decreases in water level. Increases in water level may prevent seedling establishment, while decreases may prevent flower development and successful seed dispersal. Raising or lowering of water levels in ponds in which Golden club occurs should be avoided. Pond eutrophication (nutrient enrichment) due to runoff from landfills and agricultural fields negatively impacts Golden club by increasing algal growth and by increasing organic matter accumulation in the substrate. Golden club grows in open habitats; selective cutting and removal of tall, shrubby plants such as leatherleaf and sweet gale can favor Golden club populations. Canadian geese browse Golden club's young shoots and pose a potentially serious threat due to their growing numbers. Management techniques to reduce Canadian geese numbers in areas where Golden club occur would benefit the species.

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