

**Fanwort: An Invasive Aquatic Plant**  
*Cabomba caroliniana*  
Common Name: Fanwort, Carolina fanwort

**Biology**

Fanwort is a submersed, rhizomatous, rooted perennial, which can grow to lengths of 6 feet. Its tubular stem serves as a central axis to submersed and floating leaves. Arranged on opposite sides of the stem, the submersed leaves are attached by a single petiole. From the single petiole, the leaf is repeatedly divided into filiform segments, giving them a fan-like appearance. Occasionally, a few small, oval floating leaves with a basal notch may develop from the stem. Flowering occurs in May to September, creating flowers small white petals with a yellow center. The flowers arise from the stem and are situated on the surface of the water.

**Reproduction**

Fanwort can reproduce asexually by vegetative reproduction and sexually by seed formation. Of the two, vegetative reproduction is more common. It occurs by stem (rhizome) fragmentation, which allows this species to re-sprout and grow into new plants. Although less common, seed formation does produce viable seed; however, it's questionable whether the seeds can germinate in northern US.

**Habitat**

Historically, this plant species is native to the southern part of the US and some parts of South America. Human introductions have allowed this species to expand its range to include northern parts of the US. In New England, Fanwort has invaded every state except Vermont and Maine. Fanwort is a generalist species; therefore, it has a wide range of environmental tolerances. It is commonly found in slow-moving water, such as lakes and ponds, but occasionally has been found in rivers. Also, it can tolerate a wide range of water chemistry conditions. Nearly, unaffected by temperature gradients, this aquatic species is "cold-hardy" and can overwinter in frozen lakes and ponds.

**Impacts and Threats Posed by Fanwort**

Fanwort forms extremely dense mats on the subsurface, which outcompetes and shades out native vegetation. Species that depend on the native vegetation must relocate or perish; thereby, leading to a reduction in the local biodiversity. In the fall, the dense mats decay. This decaying event causes a reduction in the oxygen levels. Substantial depletion of oxygen can result in anoxic conditions, which kill fish and other organisms in the waterbody. Furthermore, invasions impose limitations on water use for recreational purposes, such as boating and fishing, which leads to negative impacts on real estate values and tourism.

## **Management Methods**

General management methods include:

- mechanical harvesting
- drawdowns
- hand harvesting
- suction harvesting
- benthic barrier
- herbicides

## **Literature Cited**

1. <http://nbii-nin.ciesin.columbia.edu/ipane/icat/browse.do?specieId=42>
2. <http://www.mass.gov/dcr/watersupply/lakepond/factsheet/Fanwort.pdf>
3. [http://aquaplant.tamu.edu/database/submerged\\_plants/fanwort.htm](http://aquaplant.tamu.edu/database/submerged_plants/fanwort.htm)