

Coontail: A Potential Invasive Aquatic Plant

Ceratophyllum demersum

Common Name: Coontail

Biology

Coontail is a perennial plant growing beneath the water surface. Plants produce only one branch per node. They lack roots but branches are sometimes modified as "rhizoids" giving the plants a rooted appearance. The leaves are sessile, whorled, ca. 3 cm long, 5 or more at a node, rigid and often brittle. The leaves are 1-2 (sometimes 3) times forked into 2-4 filiform or linear segments. Minute teeth occur along 1 margin of each ultimate segment. The flowers are unisexual, very small, solitary in the axial of a leaf of a given whorl, each subtended by an 8-10 parted, 1-2-mm-long involucre. Sepals and petals are absent. The fruit is one-seeded with a spiny base.

Reproduction

Coontail can reproduce asexually by vegetative reproduction and sexually by seed formation. Of the two, vegetative reproduction is more common. It occurs by stem fragmentation, which allows this species to re-sprout and grow into new plants. Stem fragments may overwinter, allowing for a long-term persistence in a water body. Although less common, fruit or seed formation produces viable winter buds, which may overwinter and remain dormant in the sediment for long periods of time.

Habitat

Coontail is found in quiet water of lakes, ponds, marshes, and streams, where it is common, and often abundant. A good pond oxygenator, it usually grows submerged in the water but is sometimes found floating on the surface. All *Ceratophyllum* species are obligately submerged aquatics and cannot tolerate periods of emergence. Typically found in neutral or alkaline waters but can adapt and grow at relatively low light intensities and therefore may be expected to tolerate shade better than most submerged aquatic plants. Commonly found in plant communities that include species of the genera *Elodea* (Waterweeds) and *Potamogeton* (Pondweeds)

Impacts and Threats Posed by Coontail

Coontail is a competitive plant that has the potential to displace other species, reduce biodiversity, hamper recreational uses, reduce real estate value, diminish aesthetic values, and decrease water quality.

- Once established, Coontail may negatively impact and out-compete native vegetation. Fish and animals that were dependent on the native vegetation must relocate or perish, leading to a decline in biodiversity.
- Floating mats of Coontail can greatly impede boaters, fisherman, water skiers and swimmers, and these limitations on water use can negatively impact real estate values.

- The dense large mats of vegetation on the water surface may also intercept sunlight to the exclusion of other submerged plants.
- Sediment levels may increase with increasing Coontail abundance.
- When dense mats of Coontail decay, the available oxygen in the water may be depleted. The resulting low oxygen conditions (anoxic) can lead to fish kills and harm other aquatic organisms.

Management Methods

General management methods include:

- mechanical harvesting
- drawdown
- hand harvesting
- suction harvesting
- herbicides

Literature Cited

1. <http://plants.ifas.ufl.edu/node/278>
2. <http://www.mass.gov/dcr/waterSupply/lakepond/factsheet/Eurasian%20Milfoil.pdf>
3. <http://nbii-nin.ciesin.columbia.edu/ipane/icat/browse.do?specieId=78#repro>