



# FACT SHEET

Freshwater Aquatic Invasive Species in Rhode Island

November 2017

## Spiny Naiad



Spiny naiad leaves form “tufts” at the growing tip



Leaves are serrated (dashes indicate  $\frac{1}{16}$  inch lines on a ruler)



Plants may grow up to the surface of the water



Spiny naiad plants carpet the bottom of a lake

### Species Description and General Information

Spiny naiad (*Najas minor*) is an invasive aquatic plant that is found under water in slow-moving streams, ponds and lakes. Spiny naiad also may be referred to as slender, brittle, European or bushy naiad. Individual spiny naiad leaves are thin and spikey, 1-1.5 in long, and obviously serrated (not smooth) along the side. Leaves are attached to the stem (oppositely, but can appear whorled) and often bunch, forming “tufts” at the growing tip, giving the plant a bushy appearance (like pom-poms). Leaves are stiff and maintain their shape out of the water, arching backwards. Spiny naiad may be confused with native slender naiad, however, the serrations (spines) on spiny naiad are visible to the naked eye, whereas spines on slender naiad are only visible under significant magnification. The heavily-branched stems of the plant may reach up to 4 feet in length. Flowers are very inconspicuous, and emerge from leaf axils during spring and summer, then one-seeded fruits appear in the fall. Spiny naiad is an annual but can spread by fragmentation during the growing season. It is tolerant of turbidity and nutrient-rich conditions.

### Why is Spiny Naiad Considered a Nuisance Species?

Once introduced, spiny naiad spreads rapidly and may completely cover the lake bottom, out-competing native plant species for space. It may grow along with other invasive plants, or form dense monotypic (single species) stands. If this plant becomes dominant, it may create conditions that are detrimental to native fish and waterfowl. Spiny naiad may also interfere with recreational activities such as boating, swimming and fishing.

### How Did Spiny Naiad Become Established in Rhode Island?

Spiny naiad is native to Europe, and was first introduced to the United States in the 1930s. It has since spread rapidly throughout the Midwest and east coast. Movement to new water bodies has been attributed to natural flow throughout watersheds, migrating waterfowl, boating and fishing activities. The brittleness of this plant allows it to break easily into fragments that may become attached to boats, trailers or equipment. The small seeds can easily become attached to waterfowl or taken up in the bilge water of boats. As a result, spiny naiad infestations can spread very quickly.

## What Methods Can Be Used to Control Spiny Naiad?

Because of its ability to spread through fragmentation, physical control is generally not recommended. Hand-pulling may be effective for short-term relief for small patches if all fragments are collected. By law, the manual removal of submerged aquatic vegetation is restricted to that area adjacent to, but no more than fifteen feet from, existing or permitted docks, beaches or swimming areas under the RI Fresh Water Wetlands Regulations (Rule 6.02). Manual plant removal outside this area or physical control of larger patches via mechanical cutting or harvesting may require a DEM wetlands permit (for more information, contact the Water Quality and Wetlands Restoration Team noted below).

Chemical control may be effective for large populations. The DEM Division of Agriculture licenses the applicators that can apply the regulated herbicides to treat invasive plants. Each herbicide treatment requires a specific permit from the Division of Agriculture to ensure proper use. The most appropriate means of selecting a specific treatment plan is to consult a lake manager or licensed herbicide applicator, who can provide targeted treatment options and estimate associated costs. A more detailed survey of the entire water body will likely be needed to assess the severity of the infestation and develop the most effective and cost efficient long-term management plan.

## Please Help Prevent the Spread of Spiny Naiad in Rhode Island!

Learn to identify invasive plant species and be on the lookout for new plants in your lake.

It is much easier to manage a small patch of invasive plants than an entire lake covered with plants, so early detection is key! Identification resources are available on the RIDEM website at <http://www.dem.ri.gov/programs/benviron/water/quality/surfwq/pdfs/identify.pdf>.

### Be a GREAT Boater! Check, Clean, Drain & Dry!

RIDEM encourages the use of clean boat hygiene practices. **CHECK** boats (trailers, gear and motors too) for plant fragments before launching in the water AND after boats have been hauled out of the water. **CLEAN** any plant fragments, and dispose of them away from the water, and **DRAIN** your motor and bilge. Allow boats to **DRY** overnight at least 24 hours before putting in at another lake. See posted reminders at state boat ramps.

### Where is Spiny Naiad found in Rhode Island?

As of November 2017, spiny naiad has been documented by the Rhode Island Department of Environmental Management in 9 ponds. The distribution map on the right shows locations where it has been found in red. A larger map can be found online @ <http://www.dem.ri.gov/programs/benviron/water/quality/surfwq/aismaps/najmin.pdf>

