



Aquatic Nuisance Series: Chara

Chara (also referred to as Muskgrass; Stonewart; Skunkweed; Sandgrass) is not a plant, but is a type of native green algae. Nitella is a similar type of green algae and can easily be confused with chara, but they are both alike and can be considered the same for the purpose of this article.



Clump of Chara. Source: The Pond Guy®, Inc.

These aquatic algae look like regular vascular plants because they form stem-like, leaf-like, and root-like structures. Chara is gray green, with a crisp, gritty texture, a musky or garlicky odor, and whorls of needlelike structures that resemble leaves.

Description and Habitat

All species of chara are native to North America. As a native plant, chara is an important part of the natural ecosystem for New Jersey lakes. Chara is consumed by many species of ducks and can be an important source of nutrients. Submerged portions of plants provide habitats for many micro and macro invertebrates which form the base of the lake's food chain.

Unlike many of the other aquatic nuisance vegetation covered in this series, chara can be beneficial to the lake. First, it is considered a filter alga as it will take up nutrients that otherwise might be available for more

problematic plants and algae. This can lead to improved water quality. It can also compete with non-native invasive species and keep them from becoming dominant in your lake.

Chara will start at the bottom of your lake, where sunlight is still able to reach. It prefers hard water and the nickname, stonewart, comes from the crusty calcium deposits that can form on the stems and "leaves." The nicknames, muskgrass and skunkweed, come from the alga's distinctive garlicky smell.

Management and Control

Lake managers should be very cautious when attempting to control chara. It is a native plant that offers many benefits to its host waterbody. Unlike many non-native invasives, even thick stands of Chara will not entangle swimmers and boats since it will break apart easily. If you successfully eliminate chara, a more harmful aquatic vegetation may take its place.

Control for chara should be kept to a specific location, such as a swimming area or boat launch. Mechanical removal works well for nuisance spots as you do not need to be overly concerned about the spread of the fragments. Since it is a type of algae, liquid copper sulfate can work well. If using copper, it should be applied early in the growth cycle as accumulating calcium on the algae may inhibit absorption of copper. A benthic barrier can also prevent chara in targeted areas.

Please consult your lake management professional when chara reaches nuisance levels. Avoid any recommendation that promotes a whole lake treatment. In New Jersey, control of chara may end up being a side effect of your general planktonic control regimen.

Additional Resources

<https://aquaplant.tamu.edu/plant-identification/alphabetical-index/muskgrass/>

https://wric.ucdavis.edu/information/crop/natural%20a reas/wr_C/Chara-Nitella.pdf