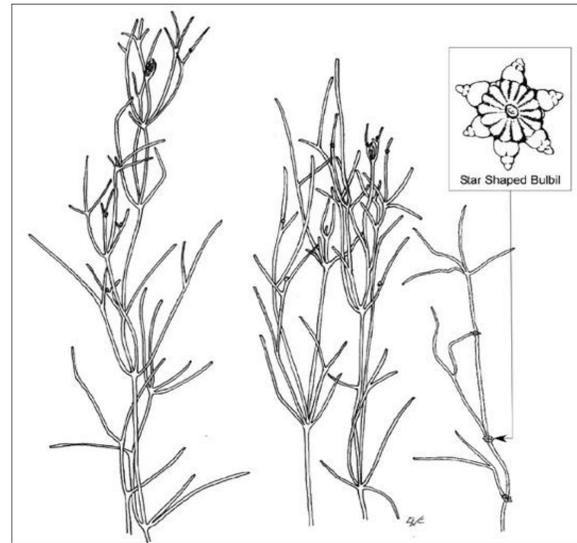


STARRY STONEWORT (*Nitellopsis obtusa* L.)

INVADES CANANDAIGUA LAKE

Bruce Gilman
 Department of Environmental Conservation and Horticulture
 Finger Lakes Community College
 3325 Marvin Sands Drive, Canandaigua, New York 14424

Canandaigua Lake can now add a new name to its growing list of invasive aquatic species – starry stonewort. Observed during an aquatic vegetation training event along a northern shoreline two years ago and this year at the south end of the lake, starry stonewort is now estimated to be covering at least 15 hectares of the lake bottom. Native to Europe and western Asia, this invasive species was first observed in the St. Lawrence River in 1978, presumably released in ballast water. It was discovered in the Great Lakes in 1983 and spread to inland lakes shortly thereafter.



Kingdom – Protista
 Phylum – Chlorophyta
 Class – Charophyceae
 Order – Charales
 Family – Characeae
 Genus – *Nitellopsis*
 Species – *obtusa*

Starry stonewort is a macro-algae, a simple multi-celled organism descended from some of the earliest lifeforms on the planet. It resembles a vascular plant but the main body consists of large stem-like cells, up to 30 cm long, together with branch whorls resembling leaves that radiate upward from nodes of smaller cells. It is anchored by colorless rhizoids that contain several star-shaped bulbils, vegetative propagules with a long dormancy. Rhizoids as well as the entire surface of the organism can absorb nutrients. Starry stonewort can grow to 2 meters in height but is often smaller creating dense, mounded colonies in the littoral zone of lakes and slow flowing rivers. Dispersal to adjacent waters is likely by fragments moved on boats as well as oocytes attached to bird feathers and fur of aquatic mammals. Local spread after establishment is likely by bulbils.

Starry stonewort has been observed by the authors in Sodus Bay, Oneida Lake, Keuka Lake, Cayuga Lake, and Owasco Lake. It should be searched for elsewhere and documented on *iMapInvasives*. Accurate distributional records are critical for future management.



Emily Staychock
 Invasive Species/Watershed Educator
 Yates County Cooperative Extension
 417 Liberty Street, Penn Yan, New York 14527



Scientific studies report that starry stonewort releases allelopathic substances that reduce the occurrence of native submerged vegetation. Dense colonies impede fish movement, alter their spawning beds and fry habitat. Water flow may be restricted, and passage by recreational vessels negatively impacted.

Control by manual pulling is difficult due to fragile nature of the plant. Dormant bulbils left in sediment after hand pulling will rapidly recolonize the site. Chemical herbicides will only kill the upper portions of dense stands, allowing regrowth from beneath. No effective biological controls are known at this time.