

An overview of TLA's 2021 Summer Internship Project

→ An assessment of snails as grazers on golden brown algae

One of several hypothesis for the root cause of the nuisance golden brown algae (GBA) in lakes in northern Michigan is that the organisms that normally graze on the benthic diatoms that make up GBA, such as snails, crayfish, and clams, may not be grazing on these assemblages as aggressively as needed to control GBA. Therefore an initial objective of TLA's Summer Internship Project is to determine the extent to which snails collected from Torch Lake and Lake Bellaire graze on readily available diatoms.

Other objectives of this project are to determine the snail species that are the most and least effective grazers, and to further determine if these snail species are selective or non-selective grazers. Grazing selectiveness will be gauged by microscopically examining snail feces for residual diatom shells, which pass through snails undigested.

Finally, since we have some snail abundance data for several locations in Torch Lake and Lake Bellaire from a 2019 study of swimmer's itch that involved snails, TLA's 2021 Summer Internship Project may also determine if snail abundance at these locations has changed since 2019.

The hypothesis of this project is that if the snails in these lakes do effectively consume the diatoms associated with GBA, then the populations of these snails should also be increasing. Aerial photos of GBA in these lakes suggest that the benthic algae (multiple species of diatoms that constitute golden brown algae) are increasing. Since the algae is increasing, logically this would mean that the population of organisms that consume the algae should also be increasing. This summer, we aim to find out.