WORCESTER CYANOBACTERIA MONITORING COLABORATIVE
Monthly Report
May 2019

On Saturday, May 18th, the Worcester Cyanobacteria Monitoring Collaborative commenced its 2019 sampling program in its brand new location: The Blackstone Heritage Corridor Visitor Center. Volunteers from seven waterbodies brought samples from lakes both in and around Worcester to be examined for plankton in order to measure lake health. This month, volunteers participated from Burncoat Pond, Coes Reservoir, Cooks Pond, Indian Lake, and Lake Quinsigamond; in addition to Cedar Meadow Lake (Leicester), and Manchaug Pond (Sutton). Even while it was some participants' first time using the microscopes in many years, the group was successful in finding and photographing many interesting organisms, including diatoms, green and golden algae, cyanobacteria, and zooplankton.

Our citizen scientists in the new laboratory at the Blackstone Heritage Corridor Visitor Center.

Sampling Weather: This Saturday was a beautiful spring day with few clouds in the sky. All volunteer water samples were taken between 8:30 and 11:00 am. During this window, air temperature in the area increased from around 55 degrees F to 70 degrees F. Surface water temperature was between 55 and 58 degrees F.

Diatoms made up the majority of the creatures that we witnessed and photographed this past May, in line with what we have seen in the past.

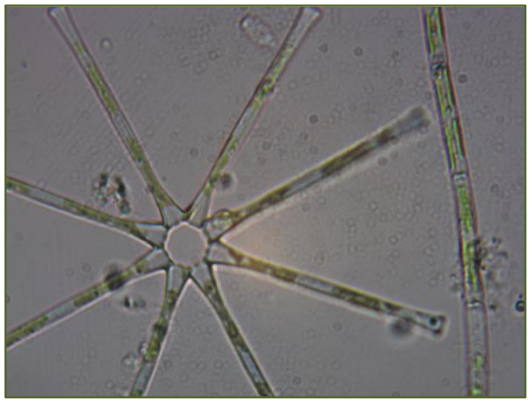
General Findings: This month, the largest group of plankton represented in our findings was diatoms, or organisms with silica-containing cell walls. They can live as discrete cells or in geometric colonies. Diatoms are an important group of plankton, responsible for generating about 20% of the oxygen generated on the planet through photosynthesis. We found three genera of diatoms: *Asterionella, Tabellaria,* and *Fragilaria.*

While not at all prominent, we did see two instances of cyanobacteria, the blue-green algae that we are attempting to better understand with our research. These observations included *Woronichinia* and *Aphanizomenon.* Additionally we saw green and golden algae, and some charismatic zoo plankton.

What it means: In our region, it is normal that diatoms dominate the plankton community in the spring and early summer. As the summer progresses, we will likely see a shift to more green and golden algae, and perhaps a rise of cyanobacteria in mid- to late-summer. It's good to keep an eye on how and when the community shifts, as it can give us clues to the propensity of a lake to a cyanobacteria bloom. Locally, we use these results to complement other water quality parameters at our lakes and ponds, and so far, everything is looking good!

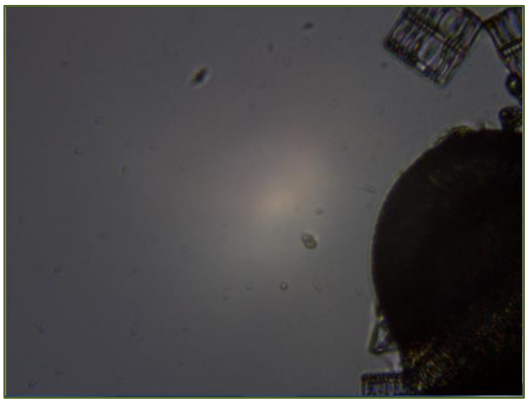
Thanks again to Joy Trahan-Liptak, and all the volunteers for their support!

DIATOMS

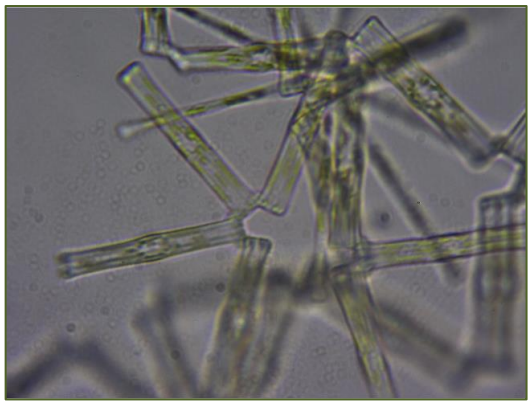


Asterionella at Burncoat Pond (40x)

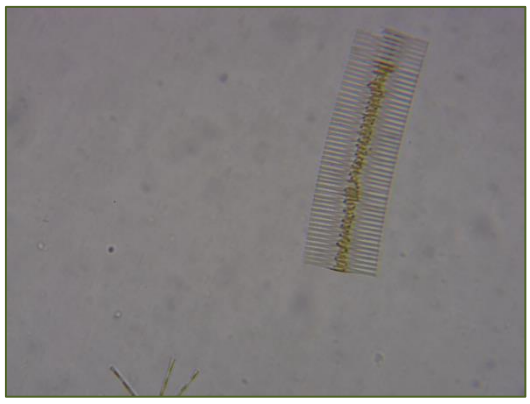
Asterionella at Coes Reservoir (10x)



Fragilaria at Cooks Pond (40x)



Tabellaria at Lake Quinsigamond (40x)

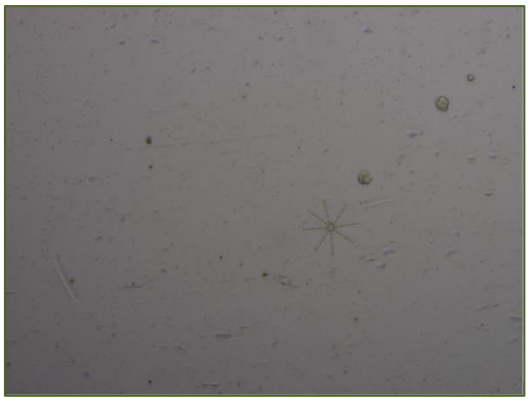


Fragilaria at Lake Quinsigamond (10x)

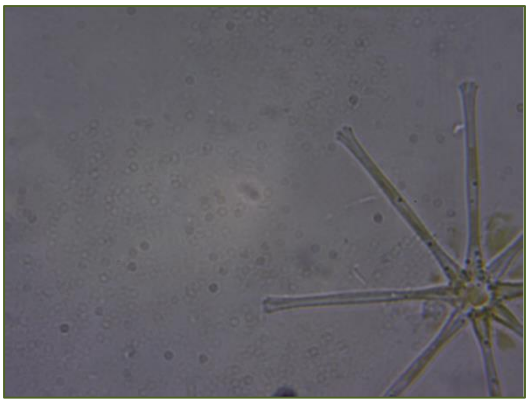
Tabellaria at Lake Quinsigamond (10x)

Thanks again to Joy Trahan-Liptak, and all the volunteers for their support!

DIATOMS cont.

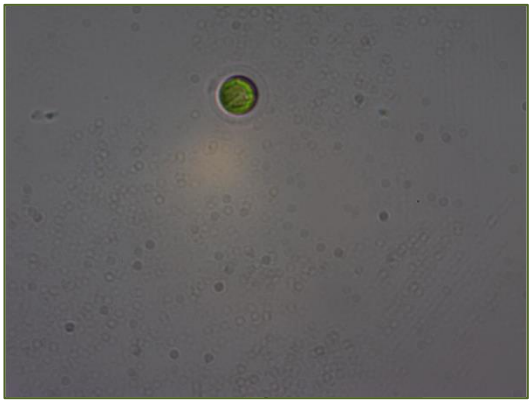


Asterionella at Manchaug Pond



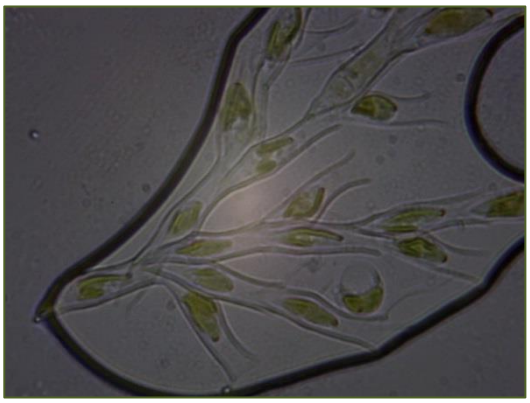
Asterionella at Lake Quinsigamond (40x)

GREEN ALGAE



Perhaps a *Gloeocystis* or *Asterococcusat* at Burncoat Pond (40x)

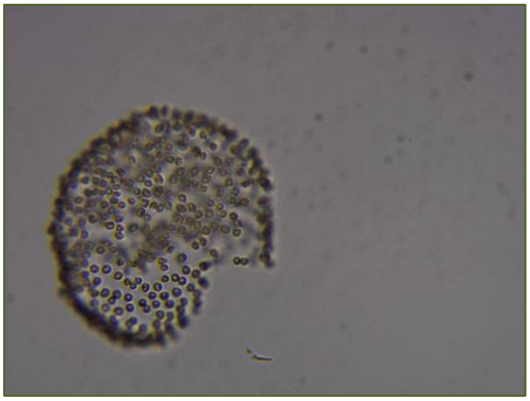
GOLDEN ALGAE



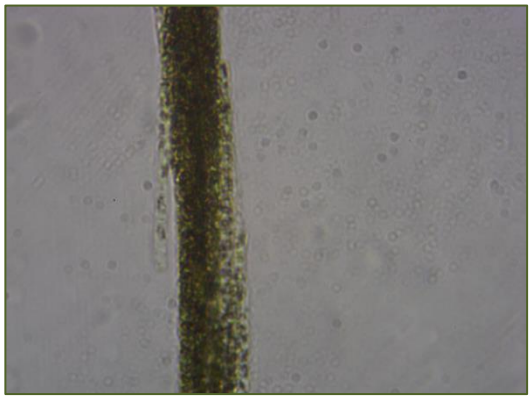
Dinobryon at Cooks Pond (40x)

Thanks again to Joy Trahan-Liptak, and all the volunteers for their support!

CYANOBACTERIA

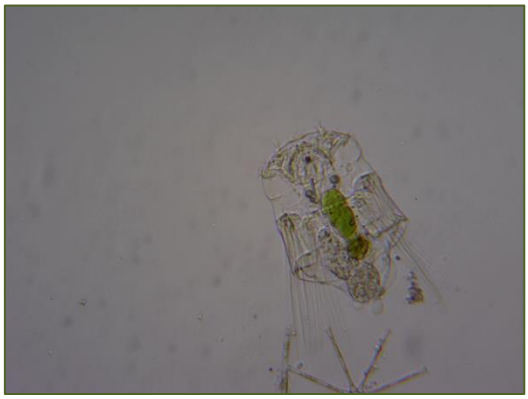


Woronichinia at Coes Reservoir (10x)



Aphanizomenon at Lake Quinsigamond (40x)

ZOOPLANKTON



Polyarthra at lake Quinsigamond (10x)

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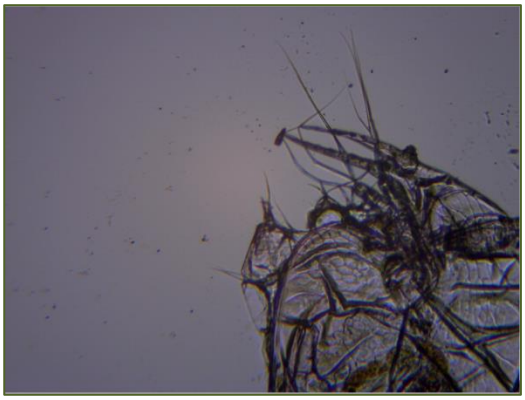
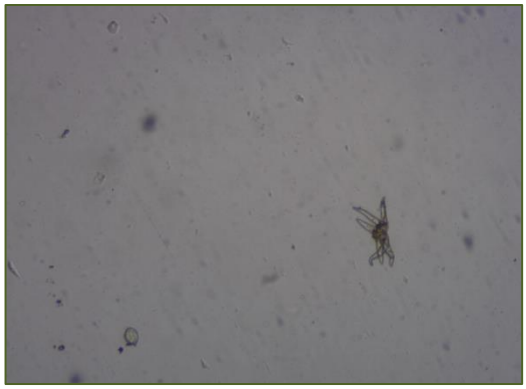


Bosmina at Cooks Pond (10x)

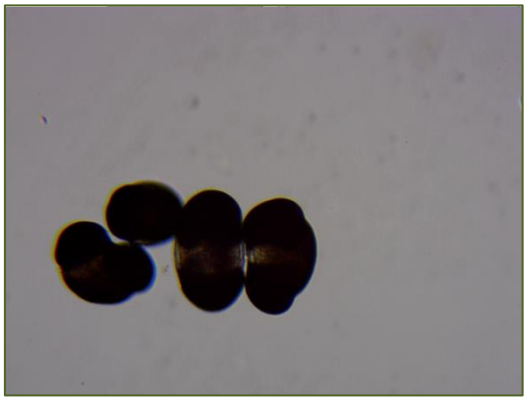
Bosmina at Manchaug Pond

Thanks again to Joy Trahan-Liptak, and all the volunteers for their support!

MISCELLANEOUS

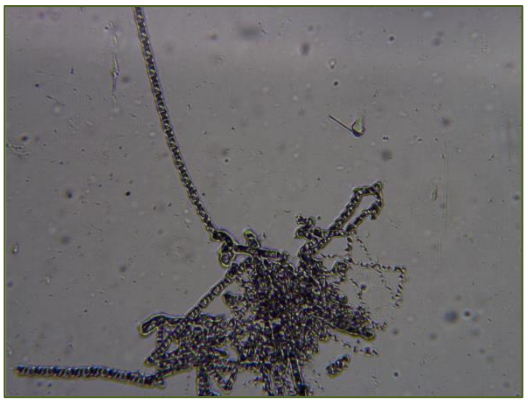


Trichome at Cedar Meadow (10x)

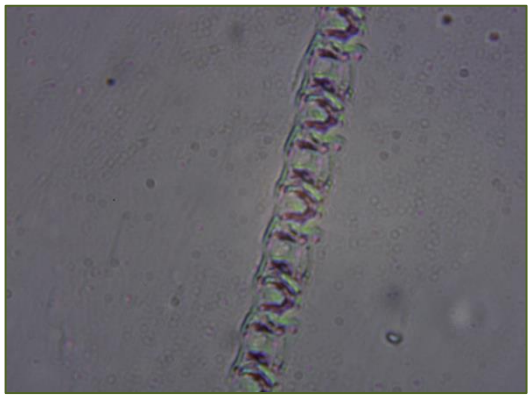


Pollen at Indian Lake (10x)

Pollen at Indian Lake (10x)



Detritus at Lake Quinsigamond (40x)



Cover slip scratch

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