WHITE LAKE Property Owners Association
Environment Volunteers

ENVIRONMENT BULLETIN

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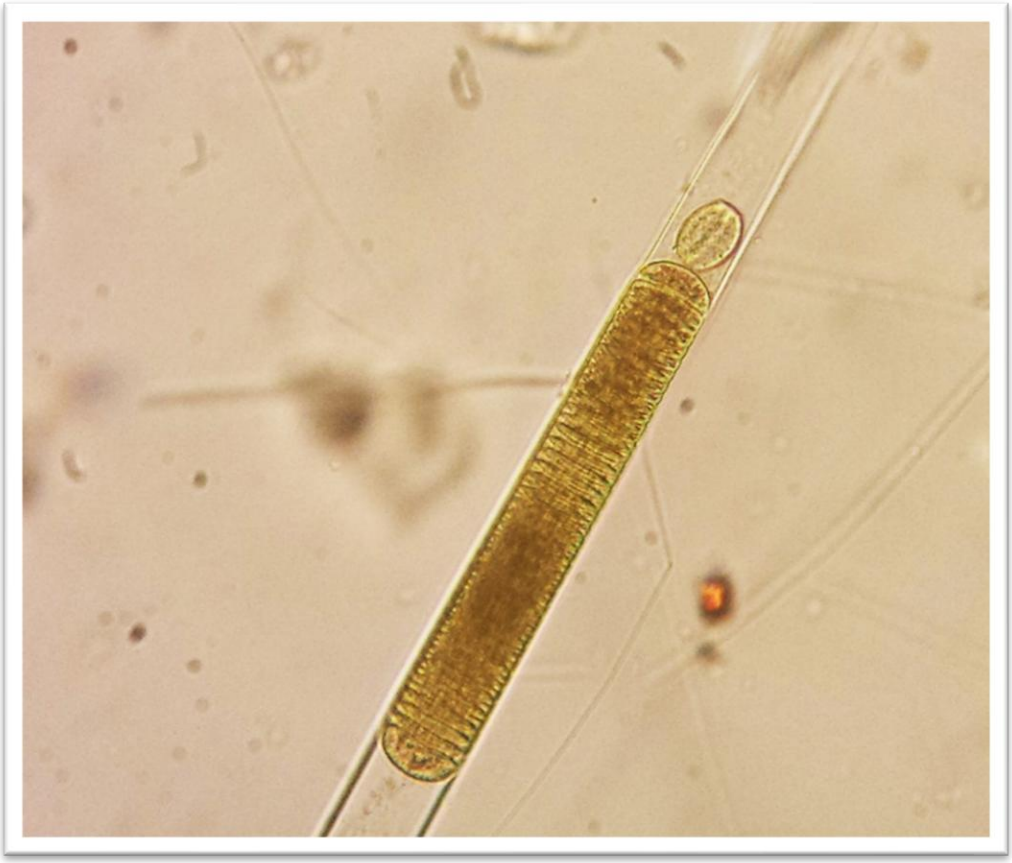
Lyngbya: A Blue Green Alga of White Lake

Since the arrival of zebra mussels in large numbers in 2016 we have witnessed their capacity to filter suspended matter from White Lake, leading to a marked increase in water transparency. One alga impacted by this was the blue-green alga traditionally called Lyngbya (Figure 1).

Fig 1



Lyngbya filaments require magnification to be seen but sometimes when swimming with the aid of a dive mask you can see miniscule glints of sunlight reflecting off the surface of the algae.

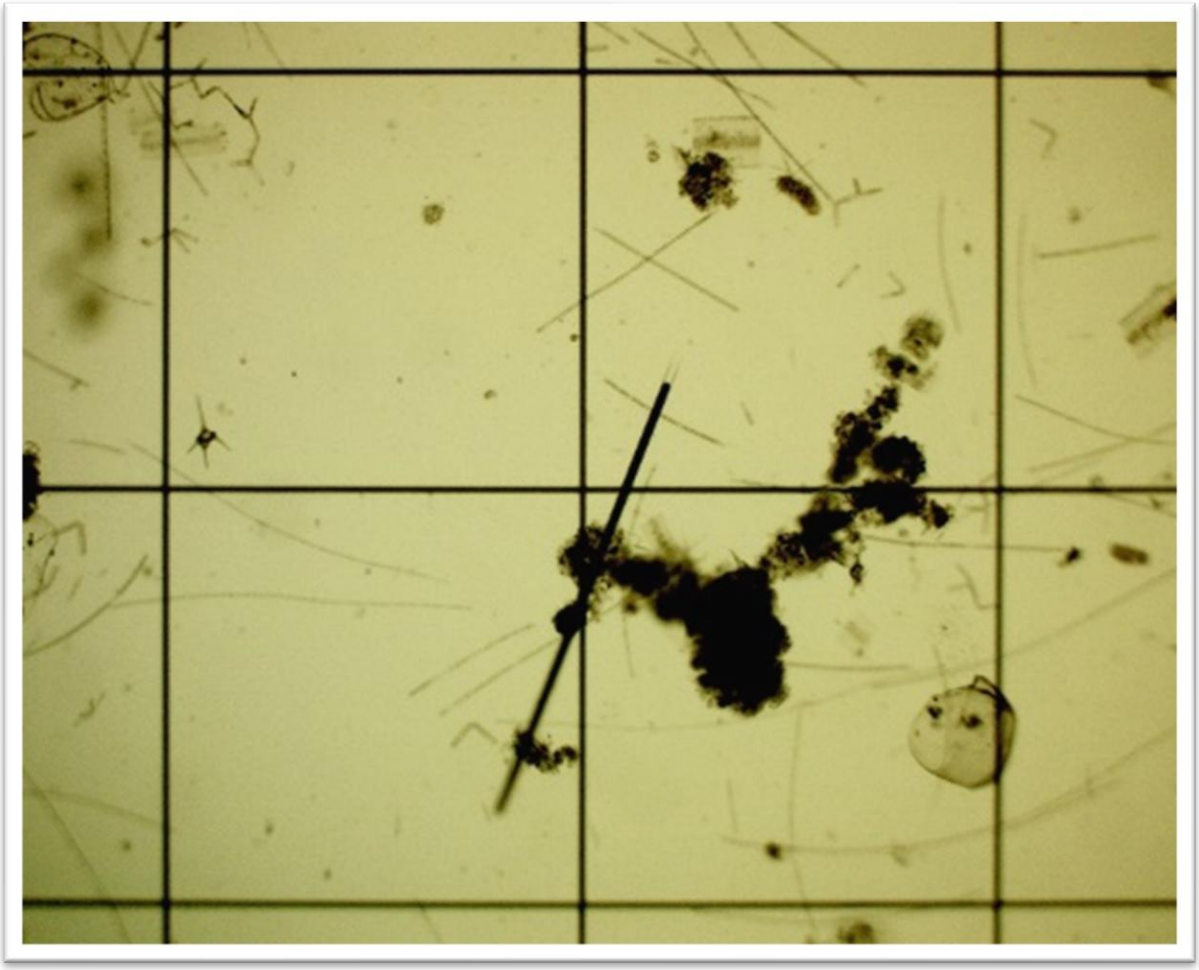
Our casual observations prior to the zebra mussel invasion verified the presence of lyngbya in large numbers with filaments many millimeters in length as seen here in 2015 (Figure 2).

Fig. 2: Lyngbya in Three Mile Bay, August 2015

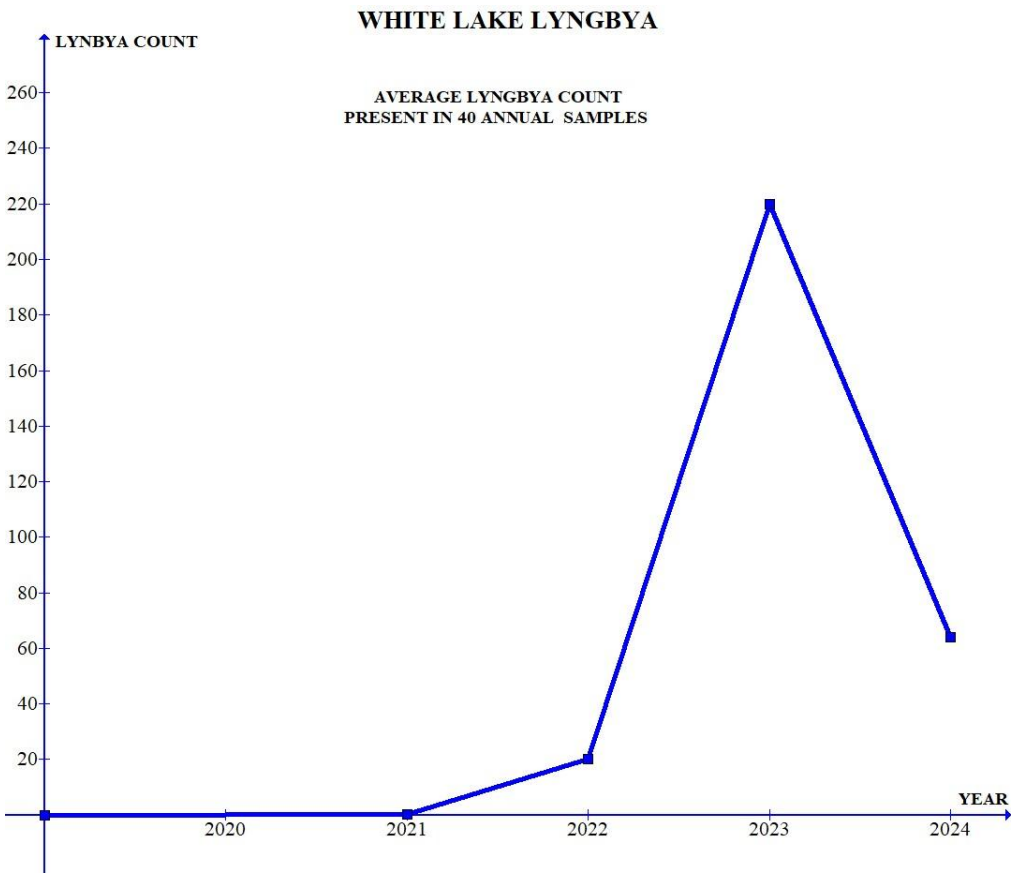
Lyngbya remained absent in our samples for the next two years after the impact by zebra mussels in 2016. It returned in 2019, but only two examples were found in the 40 samples we took during that year.

Figure 3 shows a 1mm filament of Lyngbya seen late in the summer of 2019. The finer filaments you see nearby are likely a type of green alga.

Figure 3 September 1, 2019
Lyngbya appears again in White Lake after a two-year absence



Our observations up to 2024 indicate lyngbya has returned and has on one occasion been present in large numbers, as shown in the graph below for the year 2023.



Why Record Lyngbya in White Lake?

Lyngbya can form dense concentrations and are known to produce toxins. There is evidence certain Lyngbya species commonly found in the American Southeast have arrived in Eastern Canada, likely the result of a warming climate, human transportation or both. The University of Montreal currently monitors the upper St Lawrence and lower Ottawa River for *Lyngbya*, while numerous reports describe its rapid spread into Lake St. Clair, Lake Erie and Lake Ontario.

At the moment, Lyngbya in White Lake may not pose a health threat to us, but understanding how it can quickly change over time can help us anticipate its effects on the lake.