

**What is that golden brown “stuff” on my sand?**



**Lake Charlevoix**



**Torch Lake**



**Lake Charlevoix sand**



### **Grand Traverse Bay**

As Spring rapidly approaches many lake residents will begin to see dense mats of golden brown “stuff” form on the sand in front of their cottages.

Residents have noticed it for the last 2-3 years. I spent some time discussing this “stuff” with Dr. Meg Wohler-Skar and Dr. Rex Lowe. Dr. Wohler-Skar is an Associate Professor of Biology at GVSU; she and her students are very active in Leelanau County studying various aspects of our respective lake’s water quality. Dr. Lowe is Professor Emeritus of Biology at Bowling Green State University and visiting Professor at U of M’s Biological Station in Pellston. He has been actively studying the diatom growth in Torch and Burt lakes.

This “stuff” is actually made up of many, many single-celled algae called diatoms. They live in round cell glass walls made of silica. Chlorophylls a and c are contained within their glass houses. Carotenoid pigments give them their golden brown color. They convert carbon dioxide to oxygen. They produce 25% of the air we breathe. They are a key source of fatty acids for the entire food web, from zooplankton to fish. They are good to have and harmless, if not a bit unsightly.

Many northern Michigan lakes have recently been experiencing these algal blooms including all Leelanau County lakes, Grand Traverse Bay, Lakes Charlevoix, Walloon, Elk, Torch, etc...

Why do we have blooms now when we cannot remember having experienced them in the past?  
Dr Lowe theorizes the following:

For many years our lakes have been colonized by Zebra Mussels. These mussels have been so successful at spreading that they have outgrown their food supply. The dead and dying mussels have left their nutrient by-products in our littoral zone, the sand.

These nutrients include phosphorous. As opportunistic feeders the diatom population has grown dramatically. Their growth is jump-started by the sun and the warmer water that Spring brings with it. Add some phosphorous to the mix and it's off to the races. They are a cold water species so they tend to die-off as the water warms through the Summer

Remember that diatoms are good. Zooplankton, snails, crayfish, etc... devour them. Smallmouth Bass eat crayfish, this is one of the reasons we have one of the best Smallmouth fishing lakes in northern Michigan, let's keep that a secret. They are a sign of a healthy lake.

Will they go away? Probably not, this may be the new normal. There is nothing that can be done about them.

Please feel free to contact LTLPOA's Water Quality Committee chairperson Kris Race at [kristinrace@gmail.com](mailto:kristinrace@gmail.com) or myself at [jeff1shutz@gmail.com](mailto:jeff1shutz@gmail.com) if you have any questions, comments, observations, etc...