

CLADOPHORA in LAKE MICHIGAN



Cladophora is easy to identify. It is green, branched, and filamentous, which means it grows in long strands. It is commonly found in mats of algae that float on the surface of the water and wash on shore.

Cladophora itself does not harm swimmers, but some of the bacteria associated with the algal decay could be harmful if swallowed.

Cladophora is not a blue-green alga and does not produce toxins.

For more information:

The University of Wisconsin-Milwaukee and the Wisconsin Department of Natural Resources are conducting studies to determine the factors that affect Cladophora growth. For more information, visit the UW – Milwaukee Great Lakes' Water Institute website at:

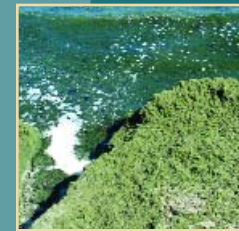
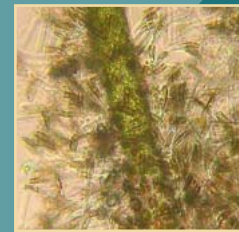
www.uwm.edu/Dept/GLWI/cladophora/

Questions can be directed to the WDNR Office of Great Lakes, (608) 267-7630



An unwelcome summer guest!

You might not recognize **Cladophora** on sight, but if you spend time along Lake Michigan's shoreline in summer you know from the odor that something isn't quite right.



Cladophora is a filamentous green alga found naturally along most Great Lakes' coastlines and in nearby streams. It grows on submerged rocks, logs or other hard surfaces. Wind and wave action cause the algae to break free from the lake bottom and push the plants on shore, where they decay and release a pungent septic odor that many people confuse with sewage. The odor is strongest in August and September.



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What's causing the problem?

In recent years, Cladophora growth has increased along the coastline of many of the Great Lakes including Lake Michigan. The reasons for the increased growth are not well understood. Some factors that may increase Cladophora growth include:

Zebra mussels: Zebra mussels are very abundant in the near shore waters of Lake Michigan. They eat by filtering suspended material out of the water, which then dramatically improves the clarity of the lake water. As water clarity improves, more sunlight penetrates deeper into the lake. This increases the available Cladophora habitat. Zebra mussels may also promote Cladophora growth by depositing nutrient-rich waste onto the lake bottom.

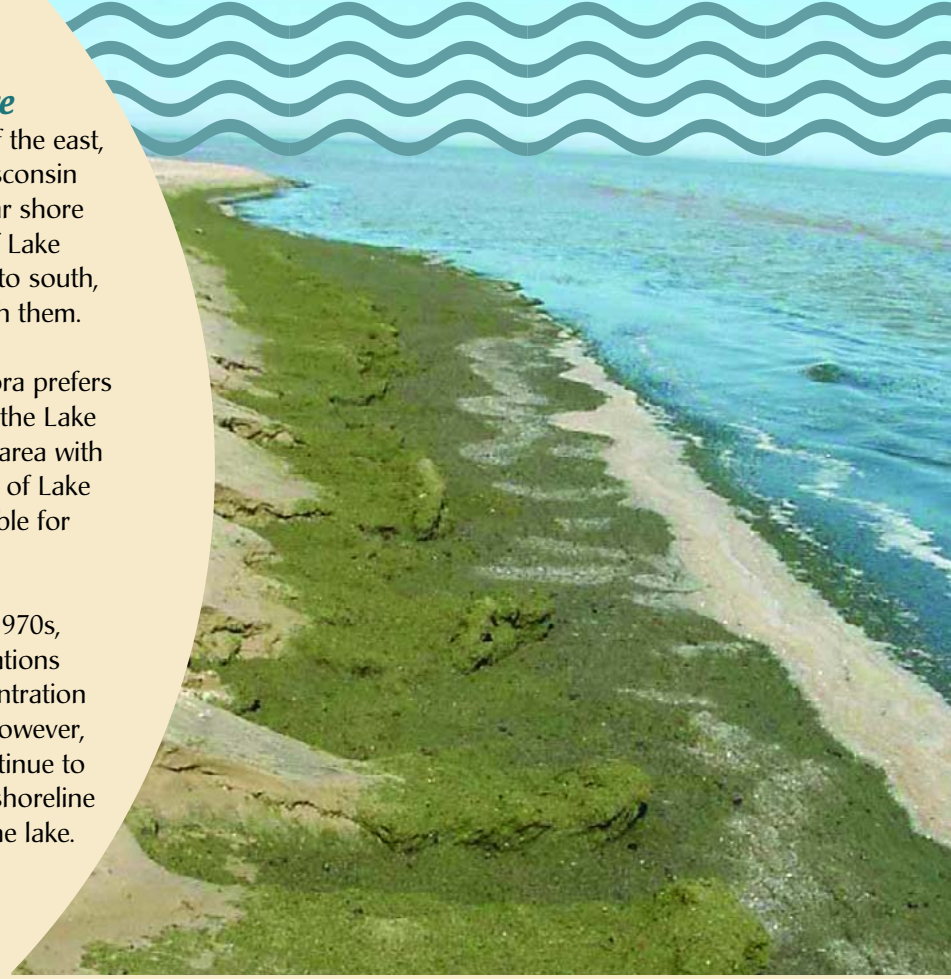
Warm water temperatures: Cladophora thrives at water temperatures between 50°F to 70°F. Therefore, warmer summers could lead to increased Cladophora growth.

Wind direction and near shore

currents: When the wind is out of the east, the algae are pushed toward the Wisconsin side of the Lake Michigan coast. Near shore currents along the Wisconsin side of Lake Michigan typically travel from north to south, and these currents pull the algae with them.

Declining lake levels: Cladophora prefers a shallow water environment. When the Lake Michigan water level is low, a larger area with suitable rocky habitat on the bottom of Lake Michigan may become more accessible for Cladophora growth.

Human activity: Starting in the 1970s, state and federal water quality regulations have dramatically reduced the concentration of phosphorus in the Great Lakes. However, phosphorus and other nutrients continue to wash into Lake Michigan along the shoreline or through streams that drain into the lake.



We can all help. . .

Stormwater runoff is now probably the greatest source of nutrients entering Lake Michigan. While killing or removing Cladophora from the shoreline will help solve the odor problem temporarily, the factors that fuel algae growth will still be present. In the long term, we can all play a role in reducing the "food" that fuels the growth of Cladophora and other nuisance algae.

Take these steps to decrease the amount of nutrients washing off our homes, neighborhoods and farms:

- Maintain your septic system.
- Prevent soil erosion on farms and construction sites.
- Keep livestock and manure out of waterways.
- Use phosphorus-free lawn fertilizers, and be careful not to spread fertilizer onto sidewalks and streets.
- Compost leaves and grass clippings.
- Install vegetated buffer strips along shorelines and river banks.
- Minimize domestic water use during heavy rains to help prevent overloading combined sewer systems such as the Milwaukee deep tunnel system.