

Summertime, and the living is... green?

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Like the return of migrating loons, the reappearance of algae heralds the start of another growing season in Wisconsin's lakes. Mention "algae" and many people think of blue-green algae, which are photosynthetic bacteria also known as cyanobacteria. However, there are many different kinds of algae in lakes, and they play an important role as the base of aquatic food webs.

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filamentous green algae such as *Spirogyra* usually appear in lakes in early spring through early summer. They are distinguished from cyanobacteria by their long, hair-like texture. At the end of their lives they form floating mats that turn brown and smelly as they decompose. These mats are often mistaken for cyanobacteria, but the hair-like strands indicate that the mats are filamentous green algae.

Cyanobacteria - Blue-green Algae

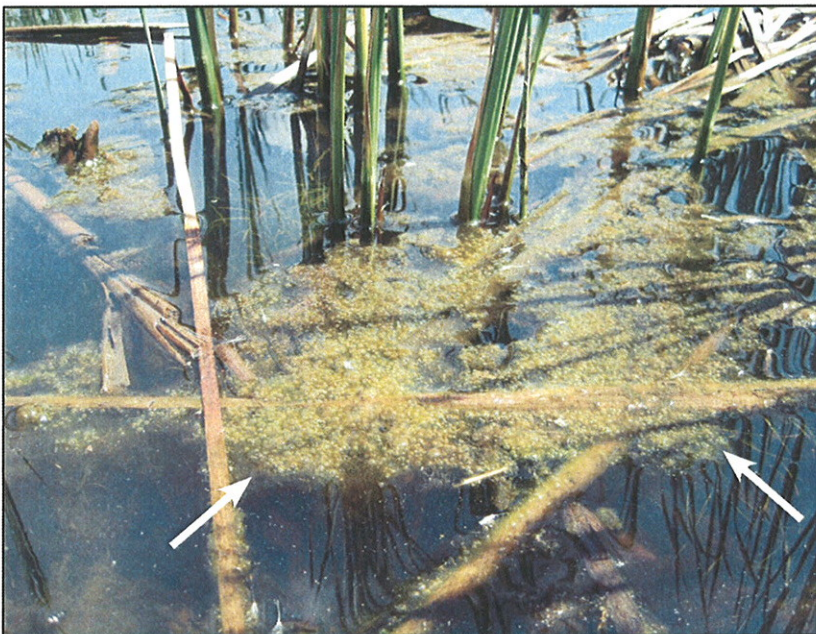
Cyanobacteria become more numerous as lake water warms in mid-summer. Common planktonic cyanobacteria are very small and resemble pale green dust on the water's surface, pinhead-sized balls, irregular green blobs, or tiny clumps of grass clippings.

Cyanobacteria or blue-green algae aren't always blue-green in color. Cyanobacteria are usually green when actively growing, but when they accumulate in surface scums or start to decompose, colors such as teal, sky blue, white, purple, and brown may appear. Images of cyanobacterial blooms are available in the presentation linked at the end of this article.

Cyanobacteria are in every water body in Wisconsin, but they are only problematic when excess nutrients support their growth in nuisance blooms that appear as colorful scums, foams, or opaque pea soup-like water. Some bloom-forming species may produce toxins that cause illness in people and animals if they ingest them. Skin contact with cyanobacteria can also cause rashes, especially in people with allergies or other underlying health issues.

In 2009-2013 the Wisconsin Department of Health Services (DHS) received funding from the Centers for Disease Control to evaluate illnesses from cyanobacterial exposure in humans and animals in Wisconsin. The DHS received 146 illness complaints, with gastrointestinal illness, cold and flu-like symptoms, and dermal rashes as the most common symptoms. The DHS is continuing to seek illness reports via their website at www.dhs.wisconsin.gov/eh/bluegreenalgae/index.htm, in order to track where illnesses from cyanobacterial exposure continue to be a problem.

Photo by Gina LaLiberte



Filamentous green algae (*Spirogyra*) can be distinguished from blue-green algae (cyanobacteria) by its hair-like strands.



Stay Safe

Common-sense measures can help you to safely enjoy Wisconsin's many opportunities for lake recreation.

- Use the "knee deep" test to gauge cyanobacteria levels in lake water. If adults wade into knee-deep water and can still see their feet, there is low to moderate risk of illness from swallowing cyanobacteria or inhaling them in water droplets. You should still avoid swallowing untreated surface water as other bacteria, viruses, or parasites may be present.
- If you can't see your feet in knee-deep water, there is a high risk of illness from swallowing cyanobacteria or inhaling them in water droplets. If the water has an opaque, pea soup-like appearance, or if surface scums or foams are present, avoid swimming in these conditions. Keep small children and dogs out of the water!
- Avoid boating, water skiing, or jet skiing through waters that are opaque pea soup-like green, or if surface scums or foams are present, to avoid inhalation of blue-green algae in water droplets.

- Shower after swimming in any body of water, and wash off dogs too.
- Eutrophic lakes which offer good fishing may experience cyanobacterial blooms. Algal toxins are more likely to accumulate in the viscera and guts of fish, so discard those parts and eat only the fillet. Wash your hands after handling fish, and rinse fillets thoroughly before cooking or freezing.

For more information about cyanobacteria or blue-green algae, please visit <http://dnr.wi.gov/lakes/bluegreenalgae/> and <http://www.dhs.wisconsin.gov/eh/bluegreenalgae/index.htm>. To view the presentation "Harmful Algal Blooms in Wisconsin Waters 2009-2013" from this year's Lakes Convention, go to www.uwsp.edu/uwexlakes, click on "Convention" at the left, then scroll down to the Thursday afternoon agenda and click on "Special Technical Sessions."



This heavy mat of filamentous green algae (Spirgyra) on Lake Mendota is at the end of its life and is starting to decompose.

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