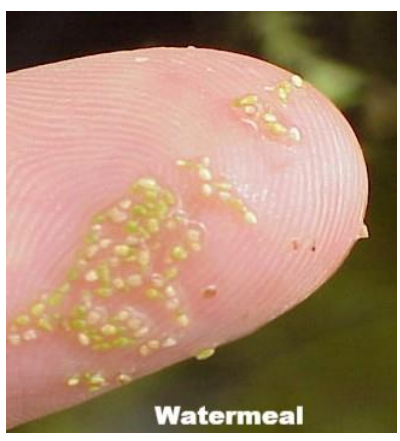
May's Tip 2017

What's That Floating on My Lake?
Plants, algae, pollen, bacteria and foam

As summer, and our lakes, heat up, you might notice a variety of stuff—in addition to the beach balls—floating on the surface of your lake. The most common lake floaters are small plants, algae, pollen, bacteria and foam. This month's "Tip" will help you get started identifying just what that floating stuff might be.

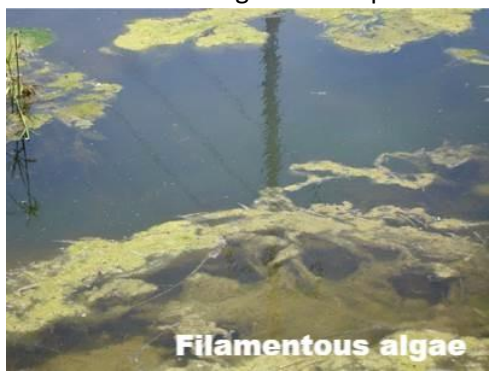
Duckweed and Watermeal

Duckweed and watermeal are small aquatic plants that float on the water surface during the summer months. They are often found growing together in calm or stagnant, nutrient-rich waters. Duckweed is between 1/8 to 1/4 inch wide and has a fine root extending into the water. Watermeal is less than 1/16 inch wide, has no root, and can feel gritty when rubbed between your fingers. Duckweed and watermeal reproduce by budding and can form a new plant in 24 hours under ideal conditions (Purdue University Extension).



Algae

Algae are single-celled, naturally-occurring organisms found in surface waters. Algae are important organisms in the food-chain, providing a food source for insects, zooplankton (tiny water animals) and fish. Algae thrive in warm, calm waters with high nutrient levels. Filamentous algae grow attached to substrate and have been described as resembling threads or wet wool. Filamentous algae can create nuisance conditions (such as floating mats and odors) when they dislodge and float to the surface. Planktonic, or free-floating, algae are found suspended in the water column. One group of free-floating algae, called blue-green algae or cyanobacteria, are of particular concern in waters due to their ability to produce toxins. Blue-green algae can look like spilled paint or pea soup—but not always. The Ohio EPA Visual Identification of Cyanobacteria Blooms guide is a good place to start to help you recognize blue-green algae. If you suspect you may have a blue-green algal bloom in your lake, keep your family and pets out of the water until the bloom has cleared.



Pollen

During the spring and summer months, pollen from plants, especially trees like pines and cottonwood (Michigan Department of Environmental Quality), can fall on the lake surface and create a visible yellow-green film. The pollen will not cause water quality impairments and will eventually sink to the lake bottom. To help determine if a surface film is pollen, look at areas away from the lake to see if a yellow film is evident on other surfaces. In addition, pollen will feel course, not slimy, to the touch.

Bacteria

Bacteria naturally occur in wet areas. Many bacteria are harmless to humans and have been transforming minerals to different chemical forms for eons (Michigan Department of Environmental Quality). A colored film or slime along a shoreline or riverbank might indicate bacterial activity. Different colors are produced by bacteria in the presence of certain minerals. The following is a general guide:

- Turquoise or blue: copper
- Green or purple: sulfur
- Reddish or brown: iron
- White: aluminum, sulfur or calcium

Bacteria can also produce a sheen resembling a petroleum spill on surface waters. To determine if the sheen is naturally-occurring (bacteria) or human-induced, stir the sheen around with a stick. A bacterial sheen will break apart and not re-form, while a petroleum sheen will flow back together. An odor may also indicate a petroleum-based sheen.

Foam

Some foam on the surface of lakes and rivers is naturally-occurring. Foam forms as organic materials (plants and animals) decompose in the water column releasing fatty acids (oils) which then mix with air. Foams are often found accumulating near windswept shorelines or on the banks of fast-flowing rivers and streams. To determine if a foam is natural or a result of human activity, use the following as a guide (Indiana Department of Environmental Management):

- Natural: tan or brown; earthy or fishy odor; dissipates quickly
- Human-induced: white; perfume or soapy odor; more persistent

What if I'm still not sure what the floaters are?

If you have concerns about potential pollution in your water body, please report it to the State of Michigan's Pollution Emergency Alerting System (PEAS) hotline at 1-800-292-4706.

You can also call **Mark** at **Kieser & Associates** to help answer any of your other lake questions.

To learn how K&A can assist you, visit us at: www.kieser-associates.com
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