

Nature Notes, August 2023

Duckweed and algae can paint a pond green

By Bill MacKenzie

Green-covered ponds may be still or stagnant to the eye but there is no lack of activity. In fact, often the green covering is a collection of thousands of individual floating common duckweed plants.

Contrary to there being no movement in the pond, duckweed grows at an astonishing rate. In the right conditions, the area covered can double in size every second day until the pond is covered by a carpet of individual plants.

What happens when the pond is fully covered with duckweed? As fall approaches, the plants will die off and form overwintering buds that sink and become part of the vegetation on the bottom. This process will quicken if the pond dries up as summer progresses. Too much decaying matter produces tannins which raises the acidity in the pond. Over the winter, the pond will receive a fresh supply of water reducing the acidity, and the cycle continues.

Not all ponds have duckweed. The amount of covering has to do with the availability of nutrients in the water, the rate of movement in the water and the temperature of the air and water. A nutrient-rich pond literally teems with life.

One of our smallest plants, duckweed is an important food source for - you guessed it - ducks, as they scoop it up from the surface. The next time you have a chance, grab a few duckweed plants and appreciate the beauty of these amazing native plants.

Some ponds have a green covering of algae. Algae are a diverse group of



A pair of mallards feed on duckweed at the water's surface.

Photo by Tom Koerner USFWS

generally microscopic plants. Ponds with a covering of algae often are green, but colours can range through red, yellow and brown. An algae-covered pond will be home to floating or drifting types of algae. Bottom-dwelling algae may also be present. In the southern Prairies in nutrient-rich warmer waters, blue-green algae can become hazardous, interfering with fisheries, recreation and livestock production. A bloom of blue-green algae produces toxic compounds as it dies, which can be harmful to animals. Livestock producers need to monitor their dugouts if cattle have access.

An algae-covered pond is caused by warm water temperature and high nutrient load, often due to agricultural runoff. Light, water depth and water movement are other contributing factors.

Water lilies, arrowhead and pondweed are other plants that may be noticeable on our ponds. Often a green-covered pond is very close to a pond that isn't covered at all. Take a close look over the summer and see if you can figure out why each pond is different.

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