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Bird flu and the Barred Owls



Over the long winter, close to sunset, I could hear the beautiful sounds of barred owls ringing out across the wetlands around Ripley Road. I would hear one to the north, and a moment later one to the south, close to the house. If you have ever heard a barred owl, you probably remember their distinct “who cooks for you” call. These owls have brown eyes, with horizontal bars across the chest and vertical stripes on the body. Barred owls can grow up to 25 inches tall and have a wingspan of 38 to 49 inches.

On the morning of April 9th, I was heading down my driveway and about halfway down I saw a dead bird lying in the middle of the drive with no visible injuries. I got out of my truck to investigate and realized it was a dead barred owl. I was shocked! It looked like it had died just recently. I wondered if we needed to report it or take it in for testing, so we called the DNR to ask for advice. A representative told us we didn't need to bring it in and that we could either put it in a bag and throw it in the garbage or bury it. We felt the best option was to bury it where it had died.

BIRD FLU CONTINUED

The DNR representative explained that the owl could have died from eating a poisoned rodent or from the H5N1 virus, also known as avian bird flu. Wisconsin is experiencing severe H5N1 bird flu outbreaks in Jefferson and Walworth counties, and it is possible the owl died from the virus. Bird flu is spread by migratory birds during the fall and spring as they travel through contaminated environments. As you may have seen on the local news earlier this year, more than 4.3 million chickens were euthanized across the two counties, in efforts to prevent the spread of the disease.

Barred owls are year round residents and often mate for life. That same night, I could hear the owl's mate calling for most of the night. The sound was especially haunting, knowing the other owl would never answer. I walked the drive the next morning and saw her sitting where the two always perched together in a large oak tree. It seemed like she never left, calling repeatedly for several days. According to Audobon, if a barred owl loses its mate during nesting season, it may form a new pair within several weeks. Just a few days ago, I noticed a pair, in a large oak with a broken limb and a hole in the upper trunk, and I hope they now have a nest there.

If you see a wild bird with swelling of the head or wattles, respiratory distress, or one that has died recently, the DNR asks that you report it to DNRswitchboard@wisconsin.gov or by calling (608) 267-0866. Do not come into contact with sick or dead birds, as there are cases where humans can

contract the disease. The DNR also cautions people to be mindful when using mouse and rat poison. These toxins can move up the food chain and unintentionally kill predators like owls and eagles, birds that play an important role in keeping rodent populations in balance.

More information about barred owls can be found in the National Audubon Society's Field Guide. For more information on H5N1 outbreaks in Wisconsin, visit the Department of Agriculture, Trade, and Consumer Protection website.

Chair,
Jimmy DeGidio



SPRING MIGRATION AND HOW YOU CAN HELP

As the snow melts and the buds begin to bloom, residents of Wisconsin can look forward to one of nature's most beautiful spectacles: the return of migratory birds. This spring, the District invites both seasoned bird enthusiasts and curious newcomers alike to celebrate this season of renewal.

The Mississippi River flyway and Great Lakes shorelines make Wisconsin an important place for more than 350 species of birds during spring migration. In addition, our state's diverse grasslands, marshes and forests provide key habitats for migratory birds.

"Spring migration brings hope and excitement for birdwatchers," said Ryan Brady, Wisconsin DNR conservation biologist. "But it's also a dangerous time for birds, many of which need our help."

As the days grow longer and warmer, nature lovers begin to anticipate the arrival of familiar faces such as warblers, orioles, thrushes, indigo buntings, hummingbirds, and shorebirds! These beautiful birds migrate primarily in response to increasing daylight, making this time of year particularly special for anyone who enjoys observing nature.

Despite the vibrant chorus of our avian friends, it's disheartening to know that native bird populations in the U.S. and Canada have seen a staggering decline of nearly 3 billion birds since 1970, according to the Cornell Lab of Ornithology.

You can help birds during this key time by taking a few small steps at home:

- **Shut off exterior lights at night** during May, which is historically peak migration. Bright lights disrupt birds' natural navigational patterns, often leading them off course.
- **Reduce window collisions** with external screens, markers or cords. Many birds fall victim to window strikes, which can be



A red-winged blackbird hangs out on a cattail in the Preserve. Photo by Andrew Sabai, our Nature Preserve Technician.

prevented! Get DIY solutions from 'SOS – Save Our Songbirds'.

- **Order native plants** from the District's annual native plant sale! Why not enhance your garden with native plants? These species not only add beauty to your landscape, but help our native bird species! Fruit-bearing native trees like serviceberry, dogwood and cherry, also provide both food and cover for birds.
- **Avoid pesticides** to help insect-eating birds, which include many backyard species as well as swallows, swifts, nightjars and flycatchers. Reducing or eliminating pesticide use is a powerful way to help our avian friends.

By making these small changes, Wisconsin residents can lend a helping hand to our migrating birds during this critical season.

2025 – THE SUMMER OF LAKE SURVEYS!

Last year the District set out to complete three different surveys that help us monitor the ecological health of Lake Ripley. These surveys included a 1) Point-Intercept (PI) Survey, 2) Nearshore, Nongame Fish Survey, and 3) Shoreland and Shallows Survey.

Point-Intercept Survey - Plants

Peering under the waves reveals an enchanting world where fish, invertebrates, amphibians, and reptiles are busy living out their lives. You can't help but notice these animals are surrounded by the backdrop of towering pondweeds in their many different forms, the vibrant green, ribbon-like leaves of water celery forming underwater meadows, and meandering coontails that float gracefully in the water column above. These plants are imperative to a healthy lake ecosystem.

The composition of plants in Lake Ripley has been studied for over 50 years! A thriving and diverse native plant community is the foundation of a healthy and high-functioning lake ecosystem. Aquatic plants are vital for maintaining ideal water quality by absorbing nutrients and providing habitat and food for fish and wildlife. The relative abundance, distribution and types of rooted aquatic plants can be used as an indicator of lake quality. The littoral zone of a lake is the shallow, nearshore area where sufficient sunlight reaches the sediment to support the growth of plants via photosynthesis (16 feet deep or less for Lake Ripley!). This area acts as a nursery and a pantry for aquatic life. This zone supports high biodiversity and provides essential services such as erosion control.

Anybody who fishes knows that aquatic plant beds are a good place to target when casting because aquatic plants provide structural habitat for not only fish, but for what the fish eat too. The plants provide structure for those complex interactions to occur among the native animals of our lake.

The point-intercept (PI) survey allows us to understand the plant community, directing us towards appropriate management activities. It helps to identify trends, and allows us to refine our understanding of our aquatic plant population in

Lake Ripley. Our 2025 survey results saw a healthy, productive littoral zone that is abundant with native plants species.

The survey was conducted during the last week of July, providing a snapshot of plant conditions during the lake's summer season. The crew found a total of 30 different plant species – including three new native species that haven't been found before! A total of 374 points were sampled throughout the lake, with plants being found as deep as 16 feet!

The six most dominant plants in Lake Ripley are (from most to least): sago pondweed, water celery, common stonewort, coontail, Fries' pondweed and variable pondweed. Would you be able to identify any of these native species?

Lake Ripley has had two invasive species in the lake since 1990: Eurasian watermilfoil (EWM) and curly-leaf pondweed (CLP). Both invasive species saw declines in their frequency of occurrence. That is a big win for the lake's native plant community! Frequency of occurrence is the number of sites at which a species was observed, divided by the total number of vegetated sites. EWM's frequency of occurrence was only 3.3%! Meaning – out of all the vegetated sites that were sampled, EWM was only found at 3.3% of them. Most of the CLP that was found during the survey had colonized around pier clusters. Disturbed areas of the lake are hotspots for invasive species to colonize; that's why it's best to keep the natives growing – so they don't get replaced by invasives!

Two of the newly discovered species have likely always been in the lake, but we were unable to identify them to their species until this year. Braun's stonewort and globular stonewort are two species in the *Chara* genus. Belonging to an ancient family of plants, *Chara* is a macroalgae. These plants grow in calcium-rich water and have a strong, musky odor when pulled out of the lake. They have a gritty texture that is caused by calcium carbonate deposits. These plants provide sanctuary for a myriad of organisms, but also play a vital role in maintaining water clarity.

LAKE SURVEYS CONTINUED!

These *Chara* species help our nearshore nongame fish species...which is a good segue to our next survey...



Braun's stonewort with oogonia present. Oogonia are female reproductive structures of the plant. Waterfowl love this plant as the oogonia are energy rich!

Nearshore, Nongame Survey – Fish

Underneath the waves, schools of nearshore, nongame fish seek shelter in the dense beds of *Chara* and other native plant species as boats and kayaks pass above. Their small, slender faces poke out of their hiding spot every so often to check if the coast is clear. Other gamefish species like bluegill, especially this time of year, are steadfastly protecting their bed from any potential predators – day and night. A healthy fishery is a key component in a healthy lake ecosystem.

Fisheries play a central role in maintaining a healthy lake ecosystem through their interactions with other biological communities. They are biotic indicators of environmental quality. But fisheries management has historically focused conservation efforts on game or sport fish species, despite most fish being nongame species. The intrinsic value of these nongame species should be impetus enough for proactive conservation, but this hasn't always been the case.

There is no debating that Lake Ripley has a robust game fish population. During the 2023 comprehensive fish survey, the DNR sampled 13,056 fish from 21 different species. The most abundant species was bluegill, followed by

pumpkinseed and yellow bullhead. Walleye, northern pike, largemouth bass, black crappie, yellow perch, rock bass, golden shiner and brown bullhead were also common.

Most surveys and studies focus on game fish production, and management can tend to lean towards protecting those game fish – but what about our nearshore, nongame fish? They need studying and protection, too. They are a critically important part of a lake's food web, serving as an essential food source for game fish. Some nearshore, nongame fish species are very intolerant of environmental change and degradation and have been described as "canaries in the coal mine". These fish provide important ecological linkages that may even reveal ecosystem stresses before traditional parameters reveal water quality problems. Nearshore, nongame fish species live in the shallow, littoral areas of lakes. These areas are critical for their survival. They provide nongame fish with critical nurseries, abundant food sources, and protective shelter from predators. These shallow areas can offer specialized spawning habitats necessary for many nongame fish. Degradation of these areas through shoreline hardening or vegetation removal reduces the suitability of the habitat for these fish, making them vulnerable to population declines.

The June survey results showed fewer nongame species and fewer number of individuals. Four nearshore, nongame species were found during the 2025 survey, including the bluntnose minnow, brook silverside, fantail darter and the mud minnow. The crew that was using seining nets during this survey felt as though all of the sites could have been shocked because of the amount of nongame fish that were able to avoid the nets – commonly referred to as 'net avoidance'. So, although we recorded the lowest number of nongame species so far, it could have been due to the survey methods or other environmental factors that were uncontrollable. And despite these results, the District still recognizes the value in developing a conservation aquaculture project for

LAKE SURVEYS CONTINUED

Lake Ripley – which we debuted in our last edition of the Ripples! This project's goals include the successful reintroduction of the western banded killifish, resulting in natural production over time.

Without a healthy littoral zone, these fish (and our game fish and all other lake organisms) would suffer.



Some of the crew in the water using a towed electro-shocker to collect the fish.

Shoreland and Shallows Survey – the Shoreline

The land adjacent to our lakes, and the shallow water next to the land, are important areas for many different reasons. These areas are where people use the waters for relaxing, fishing, bird watching, swimming, getting their boats out on the water, or simply sitting and enjoying the view. The shoreland area is also a vital place for many species that are dependent on native habitat during part of their life cycle. In fact, as much as 90% of the living things in lakes are found in the shallow waters and shoreland areas!

How we manage our shoreland areas impacts our lakes positively or negatively. A shoreland area containing a native plant garden can prevent pollutants carried by rainwater from reaching our lakes and also prevent shoreline erosion. When comparing native shoreland habitat to lawns, areas with lawns contribute 7-9 times more phosphorus and 18 times more sediment to the water! These phosphorus and sediment inputs to the water can reduce water clarity and increase algae blooms, which can cause

a decrease in property values. Development of our shorelands and shallow areas can negatively impact our lake's fish and other wildlife. Shorelines that contain seawalls and rock riprap impede the movement of turtles and other animals that need to access both the lake and the shoreland area. Increased development (lawns, impervious surfaces, bare ground, piers) has been linked to degraded aquatic plant habitat, decreases in green frog populations, decreases in uncommon bird populations, and a decline in fish species.

Many of the values lake front property owners appreciate and enjoy about their properties—natural scenic beauty, tranquility, privacy, relaxation—are enhanced and preserved with good shoreland management. Studies have shown that healthy lakes with good water quality translate into healthy lake front property values.



A healthy, vegetated shoreline! This shoreline helps the lake by having an herbaceous layer, shrub layer and canopy layer. Downed wood in the water serves as habitat for fish. 10/10 for lake protection!

The Shoreland and Shallows survey was conducted near the end of August. During this survey the crew is making a slow loop around the lake to assess the current conditions of Lake Ripley's shoreland and near-shore shallow areas. This survey serves as a baseline so that future changes (improvements or declines) in conditions of the lake's shoreland and shallow areas can be measured. The crew focuses only on the 35-foot riparian buffer zone; this zone is considered the foundational, minimum standard for protecting water quality and supporting wildlife.

LAKE SURVEYS CONTINUED

Only 23% of Lake Ripley's shoreline buffer zone had shrubs or herbaceous plants on their shoreline. If this number continues to trend down, Lake Ripley's water quality could suffer from runoff pollution – seeing increased algae blooms among other negative water quality impacts. The average canopy cover around the lake also decreased, meaning less trees along the shoreline.

More than 50% of Lake Ripley's shoreline has manicured lawn for 55-100% of their 35-foot buffer. Seventy parcels (or 38% of shoreline) had manicured lawn for 80-100% of their buffer – which is a lot! Manicured lawns are an ecological wasteland; they require high volumes of water, fertilizer and fossil fuels for maintenance. Now that you know manicured lawn has the potential to degrade Lake Ripley's water quality – would you consider converting some of your lawn to pollinator habitat?



Manicured lawn all the way to the shoreline provides no buffer whatsoever for the lake. It allows polluted surface water runoff to flow right into the lake without any type of infiltration. You can tell where property lines change ownership, as the neighbor keeps a shrub layer to help protect the lake.

Of our 4.1 miles of shoreline, 2.72 miles have been artificially altered with rock riprap or vertical seawall – that's over half of our lake's shoreline. Although erosion control methods can be beneficial to your shoreline, they also have negative impacts. For example, seawalls and rock riprap impede the

movement of turtles and amphibians from getting in and out of the lake which can prevent them from migrating and/or reproducing.

Being mindful about how you utilize your shoreline and 35-foot buffer goes a long way. This is one of the main ways we can help protect our lake for centuries to come.

What does it all mean?

All three of these surveys play a critical role in guiding the District in management decisions. They help us understand how our lake is changing around the shoreline and how those changes and others have impacted our fish and plant communities.

Continuing to educate our residents on what a healthy shoreline actually looks like is so important! Manicured lawn all the way down to the lake is harmful to our lake's water quality, habitat and inhabitants. Making your home bigger by adding a boathouse or a patio creates more impervious surfaces, effectively reducing the amount of natural areas for runoff to infiltrate and naturally reduce any pollution before entering our lake. Everything we do on land affects our waters. It is our responsibility to make sure the water quality of Lake Ripley stays the same (or better!) for our future generations.

To read the full survey reports for any of these surveys, please visit our website at www.lakeripley.org/plans-reports-surveys/

RAIN GARDENS KEEP POLLUTANTS OFF THE MENU!

Would you ever think of eating your dinner off the road? Of course not! Roads and other paved surfaces accumulate some unsavory materials, like oils, dirt, and other debris.

As a rainstorm begins, pollutants quickly wash off the pavement and flow into storm sewers — and eventually into our lakes. This initial pulse of stormwater, also called the “first flush,” can contain higher concentrations of pollutants than stormwater runoff generated later in the rainstorm. First-flush runoff is also unnaturally warm,

threatening aquatic organisms that are sensitive to sudden fluctuations in water temperature.

Enter the common rain garden. While rain gardens are not intended to contain all the runoff occurring during a big storm, these lushly vegetated depressions are particularly good at absorbing the first flush, keeping it from being sent untreated into nearby storm sewers. They also help to naturally clean and cool the water by allowing it to percolate into the ground.

(Rain Gardens, page 8)

RAIN GARDENS CONTINUED

Watershed stewardship begins at home with little more than a shovel and some of your favorite plants. Rain gardens are relatively easy to build and provide benefits beyond cleaner stormwater (pollinator habitat, anyone?). So, until our streets are as clean as dinner plates, we can thank every neighborhood rain garden for working to handle that first flush and protecting our lakes. They are unsung heroes, quietly working to mitigate the impact of stormwater and safeguard our lakes for generations to come. In every rainfall, there's

a reminder of the connection we have to nature and the shared responsibility we bear to protect it.



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