

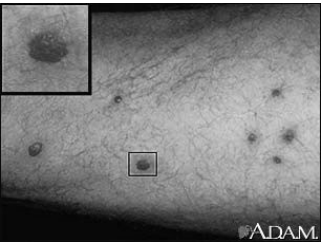
Questions (cont.)

For these reasons, swimming is discouraged right after big storms and in areas with high concentrations of waterfowl. It is also discouraged wherever a green, paint-like scum of bluegreen algae (*cyanobacteria*) creates a thick sheen on the water surface. The death and decomposition of bluegreen algae cells can sometimes cause the release of an algal toxin that can lead to health concerns. Dogs are particularly vulnerable since they can ingest the toxins by drinking the water or licking algae-coated fur.

For bacteria, visit www.wibeaches.us to get the latest sampling results for the Lake Ripley Park beach. Concerned swimmers and beach users can also call the Cambridge Community Activities Program (CCAP) at (608) 423-8108 to find out if any bacteria warnings have been posted. In the event of a high E. coli count, the county health department notifies CCAP (the beach manager) so that signs can be put up and consideration given to closing the beach.

Although less of a human-health risk, sharp zebra mussel shells and the common parasite that causes Swimmer's Itch can also be sources of occasional

consternation. Swimmer's Itch (*Schistosoma dermatitis*) is a temporary skin irritation caused by the lifecycle of the trematode worm—a parasite that relies on both snails and waterfowl to complete its life stages. When the microscopic parasite mistakes a human for a host waterbird, its attempt to penetrate the skin leaves behind a red, bumpy, itchy infection.



Red, itchy bumps that are characteristic of Swimmer's Itch. Photo credit: nlm.nih.gov

To play it safe while enjoying the water, consider taking the following simple precautions:

- 1) Avoid wading barefoot on rocks or wherever sharp zebra mussels are present;
- 2) avoid coming into contact with bluegreen algae when it creates a green film on the water surface;
- 3) stay away from areas with high waterfowl concentrations;
- 4) avoid the water right after big rain storms; and
- 5) vigorously towel off upon getting out of the water and before your skin dries.

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FROM THE HELM

The spring newsletter is always exciting for me, because it ushers in another season at Lake Ripley. The winter of 2010/2011 has been challenging, as have the past few winters. Early and frequent snow followed by frigid cold makes for short days and long nights. A February thaw brings hopes for the coming of spring.



Activity at the Lake District slows a bit in the winter and gives us time to catch up and plan for the summer. Last year, we began a large shoreland-enhancement project at the Hoard & Curtis Scout Camp which we hope will be completed this summer. We have several other projects ready to start as soon as we get a break in the weather. As always, our number one priority is to protect and preserve our beautiful lake.

The winter has also given us a chance to do some needed maintenance on our weed harvesting equipment, so we will be ready to harvest invasive weeds when summer returns. We have completed the last two years of cropping on the addition to the Lake District Preserve, and have started several restoration efforts, including seeding the land on the east side of County Road A to native prairie. Once the new prairie is established, we will be redirecting the path to the highlands to make the Preserve more assessable during wet periods. We will also start a management program in the woods by removing windfalls and invasive species. This will be a long-term project and we are looking for volunteers to help with some of the work.

Our newsletter has always been a very popular method to communicate with all of you, but print media has its limitations. So, in order to keep you better informed of our activities, we have joined the social-networking scene and set up a Facebook page that we hope you will find informative. In addition to being able to share photos and links to interesting information, our Facebook page gives you up-to-the-minute bulletins regarding Lake Ripley and our activities. If you are already on Facebook, please "like" us to stay connected, and, if you are not, think about accessing this free service in the future.

John Molinaro, Chair

Keep Those Questions Coming!

Every year, we receive many excellent questions from local property owners and lake users relating to Lake Ripley and its management. Some questions are not easily answered, and some inspire us to contemplate new or better ways of solving complex challenges. Still others have led to meaningful partnerships, or brought focus to unmet needs and concerns. Almost all of the questions we get share one thing in common: an affection for our lake and a genuine interest in improving its condition and future wellbeing. Here are some recent examples:

"Does Lake Ripley have a carp problem?"

Anyone who spends time on the lake in late spring to early summer has probably seen them. It's the time when spawning adults are easily seen congregating and splashing in the shallows near shore. The ensuing

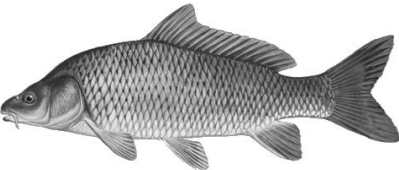


Photo credit: dnr.state.md.us

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commotion can be exciting... that is until you realize it's not a big bass but the much-maligned common carp—an Asian transplant that can uproot vegetation and muddy the water through its bottom-feeding activities. Although carp have long represented an undesirable component of Lake Ripley's fish community, the population has remained relatively small and stable over the years.

Doug Lubke, Wisconsin DNR Fisheries Technician, reports: "While there are some large adult carp in the lake, their numbers do not seem to be at levels I would consider detrimental. From our fall electrofishing surveys and last year's comprehensive sampling, our capture rate was very low." Lubke suggests their high visibility during spawning can add to the perception that there are many carp. "What tells the tale is that we see not only relatively few adults, but almost no juvenile fish....In short, Ripley does not appear to have a carp problem."



Doug Lubke, Wisconsin DNR Fisheries Technician

In the past, the Lake District hosted carp-a-thons during the spring spawning run to raise awareness and try to cull the population. Anglers and teams of archers competed for cash prizes and bragging rights, successfully removing at least a small fraction of the lake's troublesome fish. More recently, the cost-effectiveness of hiring a commercial harvester and installing carp barriers at the outlet were investigated.

"Seems to me that control efforts are not warranted," says Lubke. "Hiring a commercial crew would probably mean that the contractor would have to be paid for services since selling the small catch would not pay expenses. There would also be some incidental stress and mortality on game fish — not worth it in my mind. Even chemical spot treatments in the lake would kill more desirable fish than carp because of the low carp densities. A carp barrier means expenses for installation and ongoing maintenance that would pay very little in dividends. Even if you were successful in keeping out incoming carp, you still have a small resident population of very long-lived carp that would remain visible."

Several other fisheries experts were consulted and universally share the same opinion. As Senior Fisheries Biologist Don Bush recently summed it up: "Overall, Lake Ripley is a fine lake with a very good fishery."

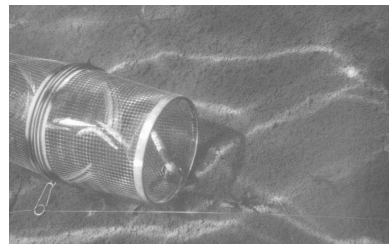
"I used to see crayfish along my shore as a child. Where have they gone, and can stocking help restore their numbers?"

Crayfish are fairly common, but seldom seen crustaceans. They are nocturnal, mobile, and will seek out ideal habitat conditions—often preferring the protection of submerged timber, rocky shorelines and well-vegetated shallows. If they seem to have disappeared along a certain stretch of shoreline, consider whether the area still provides the food and shelter that originally attracted them. Crayfish may be harder to find along shorelines that receive heavy use, are sparsely vegetated, or were recently altered.

Since we do not have a monitoring program in place to track Lake Ripley's crayfish population, their status and population trends have not been quantified. Current lake-monitoring efforts focus on direct water quality testing and the tracking of more commonly accepted "biotic indicators" of overall lake health, including fish and aquatic plant communities. Results of these long-term monitoring programs are generally positive, and do not reflect conditions that would cause the demise of the crayfish. Monitoring data and related analysis can be found in our 2009 [Lake Ripley Improvement Plan — A Condition Assessment and Strategy for Protection and Rehabilitation](#), which can be accessed from our website.

This summer, crayfish traps will be deployed in conjunction with a scheduled aquatic plant inventory, thanks to a partnership with the Jefferson County Land and Water Conservation Department.

Catch rates in the traps should provide some indication of crayfish prevalence in the lake, as well as whether the non-native and invasive "rusty" crayfish is present. Rusty crayfish are more common in the northern half of the state, but have been showing up in lakes within an easy driving distance of Lake Ripley. They often hitch a ride in bait buckets, and pose a threat to native crayfish populations due to direct competition for available food and shelter. Once introduced, rusty crayfish will feast on fish eggs and can strip the lake bottom of beneficial vegetation. They also multiply quickly and can escape predation from fish due to their larger claws and body size.



A crayfish trap anchored to the lake bottom and baited with dead fish. Photo credit: limnology.wisc.edu

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Unfortunately, our native crayfish may also be threatened by zebra mussels which are already in the lake. Zebra mussel larvae can actually attach to the crayfish's shell where they then grow into adult mussels. As a result, the ability of the crayfish to move around and feed can become severely restricted.

At this time, we do not have evidence indicating that Lake Ripley's crayfish population is on the decline. Regardless, stocking or other management action would not be prudent until the cause of any such decline was first pinpointed. Is it due to a normal "boom-bust" population cycle? Increased fish predation? Zebra mussel impacts? Loss of habitat? A particular pollutant or water quality issue? If the root cause(s) could be isolated, then the next question is: What type of intervention (if any) would yield cost-effective results over the long run, and without risking entirely new food-web-related problems?

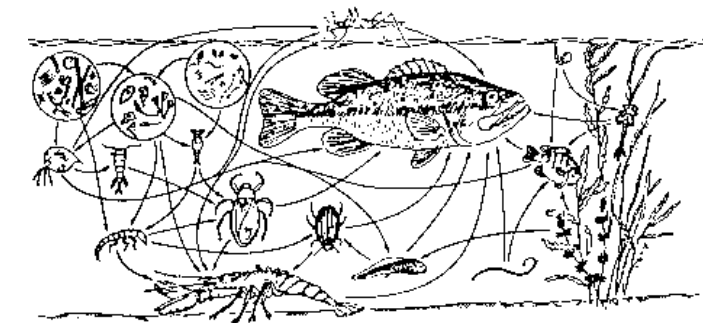


Illustration showing links in a generalized aquatic food web. Illustration credit: iowadnr.gov

Until such questions are answered, directing limited resources toward protecting water quality, improving general habitat conditions, and raising public awareness about aquatic invasive species is probably the best way forward. Doing so will not only benefit our native crayfish, but the overall health and quality of Lake Ripley and all of its diverse inhabitants.

"Why are downed trees and submerged timber good for fish?"

After the glaciers receded and until our shoreline-grooming rituals entered the picture (a span of 10,000 years), pristine lakes throughout Wisconsin were ringed with forested lakeshores and wetland edges. Trees that fell into the water remained there, slowly decaying over tens or even hundreds of years. Other trees continued to grow and succumb to the same fate. It was a perpetual recruitment process that maintained a vital and complex form of shallow-water habitat. Insects, fish, amphibians, birds and

other animals evolved to depend on these near-shore treefalls for their lifecycles. Today, compared to developed lakes with manicured shores, those with forested shorelines and an abundance of treefalls more often contain richer species diversity and higher concentrations of fish and other aquatic life.

According to the Bayfield County "Fish Sticks" Project: "The bottom of a single pine log laying on the shoreline could house a density of up to 75,000 invertebrates. While the invertebrates dine on the white pine, small fish gather to feast on them, and larger fish find the abundance of smaller fish to their liking. Research has proven that panfish in lakes with significant complex woody habitat have growth rates up to three times that of fish in more simple habitats due to the increased availability of invertebrates. Studies also showed that not only are there more fish along woody shorelines, but they feed in these areas at rates seven times higher than along shorelines void of wood."



While treefalls provide an important source of food and cover for fish, they also help protect the shoreline from wind and wave erosion. These multiple benefits are why lakefront property owners are encouraged to plant trees along their shorelines and leave them be once they fall into the water. It's a great way to catch more fish, see more lake critters, and protect against shoreline erosion all at the same time.

"Is Lake Ripley safe for swimming?"

In general, absolutely! While Lake Ripley will never look like a chlorinated swimming pool (nor should it!), it is relatively clean, undergoes regular testing, and—with few exceptions—is perfectly safe for swimming.

Water at the Lake Ripley Park beach is tested for E. coli bacteria (an indicator of possible pathogens that threaten human health) each week during the summer by the Jefferson County Health Department. Bacteria is generally not a problem, except (infrequently) if storm runoff flushes a large amount of accumulated geese droppings into the lake. Runoff contaminated with misapplied farm manure or uncollected pet waste can also cause spikes in bacteria readings and prompt beach closings.

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Native Wisconsin wildflowers and grasses are making a comeback around Lake Ripley, and for good reason. Prized by gardeners for their beauty and hardiness, they add curb appeal to a home and can break up the monotony of a lawn. Like sponges, native plants soak up rainwater better than lawn grass, reducing the amount of storm runoff that floods properties and carries pollutants to our lakes and streams. Deep, fibrous roots keep weeds in check while channeling water down into the soil, protecting the plants during summer droughts. Frequent mowing, fertilizing and watering become a distant memory, as do those obsessive battles over crabgrass and dandelions. Natives also support beneficial insect and songbird populations that evolved to rely on them for food and other needs.



Native purple coneflowers in full bloom. Photo credit: UW-Extension

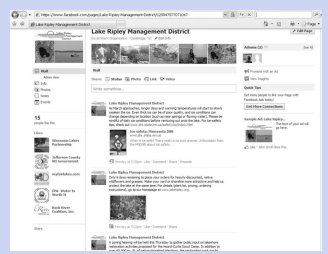
Because of these benefits, the Lake District has long encouraged their use, particularly for creating rain gardens and restoring shorelines around Lake Ripley. It is proving to be a win-win situation. While homeowners score a more attractive and nature-friendly yard, the rest of us gain from less flooding and an incrementally cleaner lake due to reduced stormwater volumes.

In response to their growing popularity, we recently piloted a new plant-ordering program in cooperation with Agrecol. Orders were accepted on nearly 200 varieties of discounted native plants. Minimum orders were by the flat, with each flat consisting of 32 single-species plants in 2.5-inch containers. By combining all orders, the Lake District received a volume discount, with most plants eventually costing as little as \$1.25 each (shipping included).

Those who saw our press releases and placed orders are reminded to pick up their plants at the Oakland Town Hall from 8:00-12:00 on Friday, May 20th, or from 11:00-12:00 on Saturday, May 21st. Did you miss your chance to order? A very limited supply of extra plants were ordered (including the stunning butterfly weed and big-leaved aster) that will be made available on the scheduled pick-up days. Individual plants will be sold on a first-come, first-served basis while supplies last. ♦

Did You Hear?

- We are now on **Facebook!** “Like” our page to receive instant updates on what’s going on around Lake Ripley.
- **Lake District Board meetings** are normally held the third Saturday of the month at the Oakland Town Hall. They usually start at 9:00 a.m. and are open to the public. See our website for a schedule of these locally-televised meetings.
- The deadline for **registering non-conforming piers** with Wisconsin DNR is **April 1st, 2011**. Non-conforming piers are those that exceed state standards for size and number of boat spots that went into effect in 2004. This free, one-time registration offers a chance to grandfather certain eligible piers that were in use prior to the rule date. Visit www.dnr.wi.gov/waterways/recreation/piers.html for more information.
- Limited **cost-sharing grants** are available on a first-come, first-served basis to eligible landowners for projects that benefit Lake Ripley. Most cost-share grants require a 50% landowner match and a 10-year maintenance agreement. Previously-funded projects include shoreline/wetland restorations, rain gardens, various farmland-conservation practices, the repair or closure of eroding farm drainage ditches, and aquatic-habitat-enhancement efforts.
- **Lake District Preserve** improvements remain in full swing to help protect Lake Ripley’s inlet stream. Twenty-six acres of former cropland were just planted to prairie. In addition, a long-term battle is being waged against invasive weeds and woody vegetation that threaten some of the Preserve’s most desirable water-quality and wildlife-habitat functions.
- All necessary permits and grant funding were obtained to begin phase-2 restoration work at the **Hoard & Curtis Scout Camp**. Work will resume with some selective tree thinning, a prescribed burn, aquatic plantings in front of the new lakeshore rocks, and the re-establishment of oak savanna groundcover plants covering over 61,000 sq. ft. of the lakeshore!



Is your boat protected against zebra mussels? Zebra mussels attach to a variety of materials, including fiberglass, aluminum, wood and steel, and may damage a boat’s finish. Microscopic larvae, called veligers, can be drawn into engine passages. Once in the engine cooling system, they can grow into adults and block intake screens, internal passages, hoses, seacocks and strainers. Good ways for boat owners to avoid these types of damages are:



Photo credit: sportslift.com

Use a boatlift to completely remove the watercraft from the water when not in use. Boatlifts allow the boat to be inspected, washed, or completely dried between uses.

Run your boat regularly whenever it is moored in infested waters. Run the engine at least twice a week at slow speeds (about 4½ mph) for 10-15 minutes. Monitor engine temperatures – if you notice an increase, it may mean that zebra mussels are clogging your cooling system. Immediately inspect the system and remove any zebra mussels. In-line strainers can also be installed in the engine’s cooling system.

Lift the motor out of the water between uses. This action will reduce the chances of zebra mussels colonizing the intake grate. Fully discharge any water that may still remain in the lower portion of the cooling system as this water may contain veligers.

Tip down the motor and discharge the water when leaving a waterbody. This will reduce the likelihood of transporting veligers (in water) to a non-infested waterway. If you own a fishing boat, don’t forget to also drain the livewell.

Clean your boat. Scrape adult mussels from your boat, trailer and other equipment. Because young zebra mussels and veligers are often too small to see, wash your boat with high-pressure hot water (>104 degrees). Use high-pressure cold water if hot water is not available. Avoid pressure washing classic wooden boats or others not made of metal. For these boats, manually remove plant and animal material, drain all wa-



Photo credit: basspro.com

ter, and dry in the sun for 5 days. Don’t forget that it is illegal to transport a boat or boating equipment with attached weeds or other aquatic hitchhikers.

Apply anti-fouling paints or coatings to the hull and the engine’s cooling system. This will help prevent zebra mussels, algae and other marine organisms from attaching. It is best to purchase these from an area boat dealer or your local marina. Anti-fouling paints that are copper based can be used in Wisconsin, and typically need to be reapplied every 1-2 years.



Photo credit: moore-group.worldpress.com

Use motor “muffs” (also known as motor flushers) to remove zebra mussels and other materials from your boat engine. Clamp the motor flusher onto the lower unit over the cooling inlets on either side of the motor, and screw the nozzle of your garden hose into it. This allows you to run the motor on land without worrying about heat buildup. Run the boat engine for approximately 10 minutes or as suggested by the manufacturer. Motor flushers may be purchased for less than \$10 at area marinas, boat retail outlets, hardware stores and local sporting goods stores.

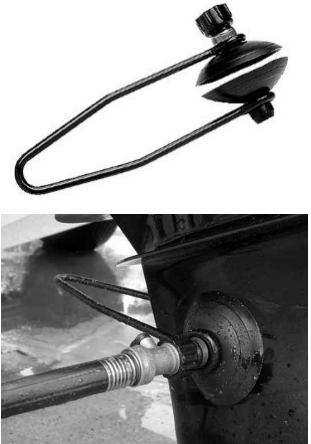


Photo credit: features.boats.com



STOP AQUATIC HITCHHIKERS!™

We thank the Wisconsin Department of Natural Resources for providing the information used in this article

Prevent the transport of nuisance species. Clean all recreational equipment. www.ProtectYourWaters.net

- When you leave a body of water:**
- Remove any visible mud, plants, fish or animals before transporting equipment.
 - Eliminate water from equipment before transporting.
 - Clean and dry anything that comes into contact with water (boats, trailers, equipment, clothing, dogs, etc.).
 - Never release plants, fish or animals into a body of water unless they came out of that body of water.

Anglers protect wild-life by using lead-free fishing tackle.

Lead is a toxic metal that can adversely affect the nervous and reproductive systems of mammals and birds. Found in most fishing jigs and sinkers, lead is poisoning wildlife such as loons and eagles. In fact, ingestion of lead tackle is the leading cause of loon deaths in many U.S. states.



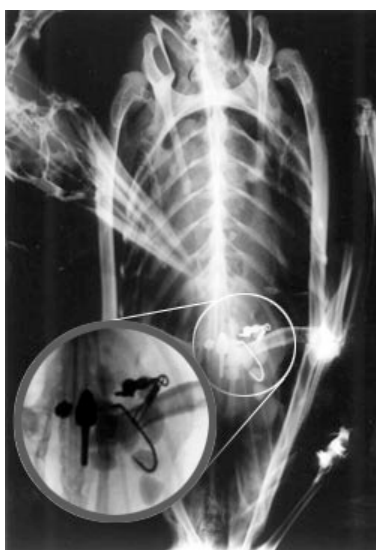
A female loon tending to its eggs. Photo credit: seagrant.wisc.edu

When lead fishing sinkers are lost through broken line or other means, birds can inadvertently eat them. Water birds like loons and swans often swallow lead when they scoop up pebbles from the bottom of a lake or river to help grind their food. Eagles and osprey ingest lead by eating fish which have themselves swallowed sinkers or jigheads.



A collection of fishing sinkers and jigheads that can put wildlife at risk when made of lead. Photo credit: pca.state.mn.us

A bird with lead poisoning will have physical and behavioral changes, including loss of balance, gasping, tremors, and impaired ability to fly. The weakened bird is more vulnerable to predators, or it may have trouble feeding, mating, nesting, and caring for its young. It becomes emaciated and often dies within two to three weeks after eating the lead.



In this x-ray of a dead loon found on a northern Minnesota lake, lead fishing tackle is clearly visible. Photo credit: pca.state.mn.us

Research on loons from six New England states has shown that on most lakes where dead adult breeding loons were found between 1987 and 2004, about 26% of these loons died from lead poisoning. Some lakes were identified as hot spots with lead causing over 50% of documented deaths.

In Michigan, another 17-year study examined 204 dead loons and revealed that lead poisoning — primarily from lead jigs — was the second leading cause of death at 22% of overall mortality. Limited research in Minnesota has also documented lead poisoning of loons. A study conducted by the Minnesota Pollution Control Agency concluded that lead poisoning accounted for 12 percent of adult loon deaths.



These pebbles and sinkers were found in the gizzard of a lead-poisoned loon from Minnesota. Photo credit: pca.state.mn.us

Between 1980 and 1996, the Raptor Center at the University of Minnesota reported lead poisoning in 138 of 650 eagles they treated. Most of the time, the source of the lead cannot be detected as the birds have cast the material out of their systems. Because lead shot was banned in waterfowl production areas in the early 1990s, bullet fragments in big game carcasses, lead shot lodged in upland game, and lead fishing tackle are considered possible sources of lead poisoning of eagles.

The problem is so widespread that lead tackle bans are becoming more common. States like New Hampshire, Vermont, Maine and New York all have partial bans in place, as do some national parks and wildlife refuges.

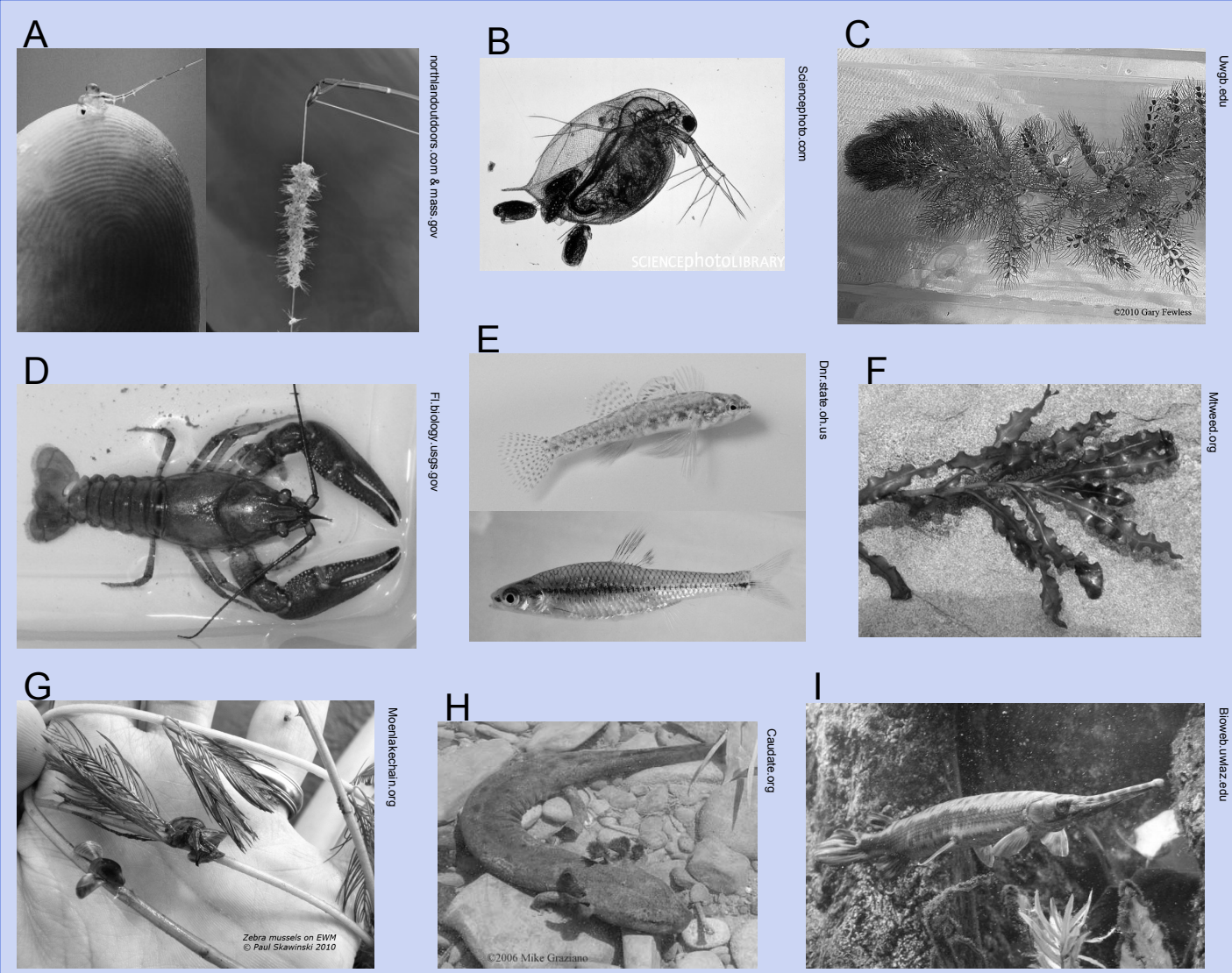
But there is hope! There are now non-toxic alternatives to traditional lead tackle. Anglers can purchase sinkers and jigs made from non-poisonous materials such as tin, bismuth, steel, ceramic, glass, and tungsten-nickel alloy — and they can find them at established sporting goods retailers and on the Internet. Non-lead tackle is generally only pennies more than lead equivalents. A list of suppliers that carry lead-free tackle can be found by visiting www.northland.edu/loonwatch.



Photo credit: dnr.wi.us

Parents can help by teaching good stewardship to young anglers. Outfit kids' tackle boxes with non-lead weights. They are nontoxic and safer for youngsters to handle. Plus, inexperienced anglers tend to lose the most sinkers, so you'll be cutting down on the amount of lead getting left behind in our lakes.

We thank Northland College's LoonWatch campaign and the Minnesota Pollution Control Agency for providing the information contained in this article



- A Foe.** The **spiny water flea** is a prolific aquatic invasive species recently discovered in Lake Monona (Madison). It eats the zooplankton that graze on algae. A spiny barb prevents fish predation.
- B Friend.** **Daphnia** are tiny, native zooplankton that graze on algae. They can be found throughout Lake Ripley's upper water column. Hold a jar of lake water up to the light and see if you can spot them.
- C Friend.** **Common bladderwort** is a carnivorous, free-floating aquatic plant that is native to Lake Ripley. It prefers sheltered areas where it can use its tiny bladders to capture small insects and other prey.
- D Foe.** The **rusty crayfish** is a prolific aquatic invasive species found in many Wisconsin lakes (not Lake Ripley). It is distinguished from a native crayfish by its larger, black-tipped claws and a dark, rusty spot found on its sides. Large populations can decimate aquatic plants and outcompete native crayfish.
- E Friends.** The **least darter** (top) and **pugnose shiner** are two Wisconsin Threatened Species that were once found in Lake Ripley. These tiny fish are very sensitive to pollution and the loss of natural habitat.
- F Foe.** **Curly-leaf pondweed** is a submersed, rooted aquatic plant found in Lake Ripley. It is also an aggressive, non-native species that can shade out other plants and create a recreational nuisance.
- G Foes.** These **zebra mussels** are attached to a **Eurasian watermilfoil** weed. Both are prolific aquatic invasive species that create problems in Lake Ripley. Milfoil is the main target of harvesting efforts.
- H Friend.** The **mudpuppy** is a native, rarely-seen aquatic salamander found in Lake Ripley. It has gills, can absorb oxygen through its skin, and spends its entire life underwater crawling along the lake bottom.
- I Friend.** The **longnose gar** is native to Wisconsin and can be found in Lake Ripley. It is an efficient predator that can help control carp. It can breathe air at the surface through a modified swim bladder.