

Northwoods Journal - August 2012

A Free Publication about Enjoying and Protecting Marinette County's Outdoor Life

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Frogs & Toads of Marinette County

By Greg Cleereman, County Conservationist, & Aleta DiRienzo, Database Specialist/ Program Assistant



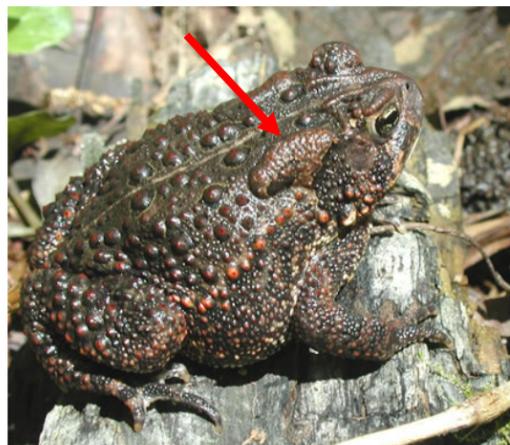
One toad species and ten species of frogs call Marinette County home. In this article we discuss each one.



The **Eastern American Toad** may be our best known amphibian. It is stocky (2" to 4.4"), with "warty," mottled tan, brown or gray skin. Toads have the ability to lighten and darken their skin to match their surroundings. Adults tolerate a large variety of habitats and thrive in suburban yards. Although seen much more often during daylight than frogs, toads are most active on moist or rainy nights.

During the day they dig into soft soil or leaf litter. Many a gardener has been startled by soil seeming to move on its own, only to find that he has roused a sleeping toad from its bed. Most gardeners know to leave a sleeping toad lie because of the good work they do, eating slugs and many insect pests and their larvae. Toads may gather under yard or streetlights to capture insects attracted there. Like frogs, toads shoot out sticky tongues to ensnare prey and use their front legs to gather larger food into their mouths.

Although it is a myth that toads cause warts, they do have chemical defenses against predators. Kidney shaped **parotid glands** are located on the skin behind the eyes (see photo). These glands secrete steroidal chemicals that affect heart function and blood pressure, and can kill small mammals. Also, grabbing a toad can result in a spray of urine.



Cryptic coloration and burrowing also protect toads from predators. Toads may hunch forward and puff themselves up to seem larger. Despite these defenses, toads are prey to snakes, birds of prey, and mammals like raccoons that have learned to eat only from the toad's belly, avoiding the poisonous glands.

Bull and Green Frogs are members of group known as the "true" frogs. They fit the more traditional idea of a frog in that they are green, have moist smooth skin and a "croaking" call. They live very different lives from toads and are much more frequently heard rather than seen. These two frogs don't get far from permanent lakes, sloughs, impoundments and wetlands in which they breed, except sometimes newly emerged Green Frogs disperse into new territories. Adults and tadpoles of both species spend the winter buried in the mud and debris on the bottoms of permanent water bodies.

Bullfrogs are our largest species, measuring up to 8 inches. They may be green, olive or brown on the back with dark bands on the hind legs. There is a ridge of skin beginning behind the eye and curving behind the tympanum (eardrum) to the shoulder. The belly is white or cream. Hind feet are fully webbed except for the tip of the longest toe. You can tell male from female because the male's tympanum is larger than its eye and their throats are yellow. Tadpoles are green or brownish above with dark spots on the upper tailfin and have white or cream bellies. The breeding call is a resonating "barroom."



Bullfrogs are inactive until water temperatures reach 60° F, generally from May to October. Upon emerging, adults will eat predominantly aquatic and terrestrial invertebrates like insects and crayfish, but also almost anything that will fit in their mouths including fish, other amphibians, reptiles, young or small birds, and small mammals (see picture below). They stalk other frogs by zeroing in on their calls and readily eat them. Tadpoles eat algae, aquatic plants and decaying animal matter. Although predators, Bullfrogs are prey to fish, reptiles, birds and mammals like raccoons and mink. When grabbed, Bullfrogs may emit a piercing scream that may scare a predator into letting go.



Bullfrog eating a bat – note the wings in his mouth

Prairie Walk & Astronomy Night Events at the Harmony Arboretum



Come to the Harmony Arboretum & Demonstration Gardens this month for several interesting free public programs! A prairie walk will be held on **Thursday, August 9 from 6:00-8:00 p.m.** to learn more about our native prairie ecosystems and the plants and animals that live there.

On **Thursday, August 16 from 8:45-10:00 p.m.**, come learn about what's in the summer night sky. After a brief introduction to astronomy spend an evening stargazing in a wonderful setting!

For more information about these programs and more, see the Harmony Arboretum Calendar on page 8, or call the Land & Water Conservation office at 715-732-7780, or visit www.marinettecounty.com. The Harmony Arboretum is located 7 miles west of Marinette, ½ mile south of State Highway 64 on County Road E. It's open to the public year-round.

Frogs continued

Green Frogs are smaller than Bullfrogs, ranging from 2.4 to 4.2". They may be green or brown above with dark spots on the back and sides. A ridge of skin extends from the eye about two-thirds of the way down the back. The belly is white. Adult males have a bright yellow throat and a tympanum that is much larger than its eye. Its call is a "gung" or "clung" often described as sounding like the plucking of a banjo string.



Tadpoles are very similar to Bullfrog tadpoles, except that dark spots are on both the upper and lower tail fin instead of just on the upper tail fin. The tadpole's belly is also more iridescent.



Green Frogs are active somewhat earlier and later in the year (April to November) than Bullfrogs. In ice-free waters they may be active all winter. They are ambush predators, waiting to pounce on insects and other invertebrates, other frogs, and small reptiles. Tadpoles eat mostly algae and decaying organic matter. Many predators feed on Green Frogs at their various life stages - turtles and leeches eat eggs, while aquatic insects, fish, and birds eat tadpoles. Adults are eaten by larger frogs, snakes, birds, and mammals. These wary and agile frogs leap into the water and dig into bottom mud and debris to avoid enemies.

These frogs are important to the "up north" character of Marinette County lakes. Although still present in many water bodies, anecdotal evidence indicates that Bullfrogs are in decline. The Green Frog population is in better shape, but like Bullfrogs they are dependent on quality habitat and clean water. Green Frogs are also considered an **indicator species** whose presence, absence, or relative well-being in a given habitat is indicative of the health of that habitat. In simplest terms, what is good for Green Frogs is good for the lake. If you have few or no Green Frogs on your lake there might be something going on that is unhealthy for the lake ecosystem as a whole.

Spring Peepers are tan or gray, 0.8 to 1.5" long with a dark "X" on its back. The X may be incomplete or have side bars. A dark line often runs from the nose and through the eye, ending at the tympanum (ear). 1.2" tadpoles are brown or green with gold flecks on the back. The tail fins are clear or orange tinted with dark blotches on the outer edges. The call is a sharp high-pitched rising "peep" made once per second.



For many, spring begins with calling of Spring Peepers. Other frogs, such as Wood and Leopard Frogs, are also early callers but not with the insistence or volume of Peepers. As water temperatures approach 50° F, the first frogs start calling to attract a mate and repel other males. On warm, damp nights hundreds of Peepers congregate at breeding ponds, marshes, and ditches. Females favor the loudest and therefore oldest and largest males.

Peepers are in the treefrog family. Most active at night, they move through undergrowth and leaf litter feeding on spiders, insects, and other arthropods. Tadpoles are eaten by larger aquatic insects, while adult Peepers are eaten by fish, larger frogs, snakes, and birds. Spring Peepers hibernate during the winter under logs, bark and leaf litter. They can survive subfreezing temperatures for several days due to glucose-based antifreeze in their blood. Unfortunately, the lack of insulating snow cover in recent winters has had an impact on many frogs that overwinter on the forest floor - soil temperatures get too cold for too long, killing the hibernating frogs.

Eastern Gray Treefrogs (below) vary in color from gray to brown to green, and can change color in an hour or so to more closely match the surroundings. They are 1.2 to 2.4" and have dark blotches, outlined in black on the back. The skin is somewhat like a toad's. Feet have large adhesive toe pads. Tadpoles are a gold flecked greenish yellow above and whitish below. High arched tail fins are blotched with red/orange and may have black spots on the edges. Newly transformed frogs are bright green without blotchy markings. The call is a loud musical trill lasting ½ to 3 seconds.



Cope's Gray Treefrogs (below) look almost identical to the Eastern Gray Treefrog. The call is faster, harsher, and more nasal than the Eastern Gray Treefrog.



Eastern Gray and Cope's Gray Treefrogs have essentially the same natural history and prefer the same habitat. When water temperatures reach 60° F both Gray Treefrog species seek out temporary ponds, swamps, flooded areas and the shallow margins of permanent lakes to breed. Although treefrogs leave dormancy very early in spring, they seldom start calling in Marinette County until late April or early May. They like to call from elevated perches of vegetation over water, and are even known to congregate at rural residential swimming pools where they will call from the pool ladder or deck furniture. Males often stay in breeding areas for weeks waiting for females that visit only long enough to lay eggs. Good calling perches are aggressively defended, and females choose males with the most frequent and longest calls.

Adults are found in deciduous and mixed forest adjacent to breeding ponds. There they forage up to 30 feet high in trees seeking insects, their larvae, and other invertebrates. Although readily

eaten by birds, snakes, and mammals, their nocturnal activity period, cryptic coloration, and arboreal habits keep them out of the reach of most predators. In fact, if not for their loud call and periodically showing up stuck to the sides of houses we may never know they exist. Their suction-cup toe pads allow them to climb smooth vertical surfaces such as windows, where they lie in wait for insects attracted by interior lights.

Western Chorus Frogs are also in the tree frog family. It is a slender frog, tan to brown even to red, gray and green with 3 darker stripes on the back. Their belly is tan to cream and unmarked. They have a distinctive white upper lip with a dark strip from the snout through the eyes. The Western Chorus Frog is one of the most widespread frogs and the earliest breeder with one of the longest calling season. The males call from wet ditches, fields and moist woodlands. The call sounds like a thumb running down the teeth of a stiff pocket comb. The warmer the water is, the faster the call is. After mating the male becomes secretive, hiding out near ponds and feeding during mornings and evenings. Temporary breeding ponds may often dry up before tadpoles transform, leading to reproductive failure. This frog is sometimes called the Striped Chorus Frog.



Treefrogs hibernate on land under logs, leaf litter, or even in hollow trees. They can tolerate subfreezing temperatures due to high levels of glycerol in their blood and tissues. This natural antifreeze has allowed these frogs to withstand temperatures as low as 21° F for several days, where more than 40% of their body fluids are frozen.

Wood Frogs are 1.4 to 3.3" long and brown with a dark "mask" extending from its eye to its front shoulder. It has a white line along its upper lip and a bronze or reddish brown back. 1.8" tadpoles are plump with a high tailfin. Its brown or olive body is speckled with black and gold. The belly is iridescent and the intestinal coil is usually visible. Calls are a series of croaks that sound like a quacking duck from a distance.



Wood Frogs prefer moist wooded habitats as adults and are seldom found in water except during the breeding season. They will cross open areas to reach suitable breeding habitat but prefer to stay under the shade of trees. They eat mostly terrestrial invertebrates. Adults escape predators with a short series of jumps after which they seem to disappear into the leaf litter. If grabbed they utter a piercing scream which can startle some predators into letting go. Wood Frogs are among our earliest breeders and may start calling when snow is still on the ground in spots. Adults seem to be more susceptible than most frogs to being hit by motor vehicles during spring migration to breeding sites.

Continued next page



Area Farmers' & Flea Markets



Marinette Main Street Farmers Market.

Tuesdays & Fridays throughout the growing season, starting at 7am. At Merchants Park at the corner of Main & Wells Streets in downtown Marinette. For more information call 715-732-5139.

Crivitz Farmers Market - Outdoors at the Evergreen Market in downtown Crivitz at 412 S. Hwy 141. Offering locally grown fruits and vegetables, honey, maple syrup, handmade soaps and personal care items, fresh-baked breads and baked goods, etc. For more information call 715-854-3837.

Crivitz Flea Market. Through September 1, Village Hall at 800 Henriette Avenue (County A). Every Thursday and July 4 across from the Village Hall at 800 Henriette Avenue (County A) in Crivitz. Vendors can show up on Thursday morning and set up in any unreserved spot. For more information contact Barbara at 715-854-2030.

Wausaukee Area Farmers Market & More First Saturday each month, from 9am-2pm, 1 block from east main street across from Payant Park. Crafts and farm products for sale, vendors wishing to set up booths call 715-856-5341.

Oconto Farmers' Market

The Farmers' Market is the first and third Thursday of each month from 7/2 until 10/8, from 11:30am-4:30 pm at the Oconto County Courthouse. For more information, call Hope Kersten at 902-834-7072.

Menominee Community Flea Market

Will be held at the M & M Plaza the second Saturday of every month, May through September, and also on Saturday, October 1st. Sales will run from 7am-2pm, all spaces are free, first come, vendors set up in area by T - straight across from ACE. Questions call Holly at 906-863-4808.

Menominee Farmers Market. The Farmers' Market is located on the corner of 1st Street and 8th Avenue across from the Bandshell. Menominee, MI. June through beginning of October. Saturday market from 9am-1pm, and Thursday market from 3-7pm. For more information, contact Lucy Pier at dpier@new.rr.com or visit online at <http://www.culinate.com/market/MenomineeHistoryFM>.



Their tadpoles differ from the norm in that they can be quite carnivorous, feeding on eggs and larvae of other amphibians. Tadpoles nearing metamorphosis develop poison glands that deter some aquatic insects. The greatest threat to tadpoles is that breeding ponds dry up before metamorphosis can occur, and eggs are sensitive to road salt and acid rain.



Northern Leopard Frogs (above) are green, 2 to 4.4" long, with dark, rounded spots on its back and sides. The spots may have yellowish borders. The 3.3" tadpole is green or brown above. The back and tail may be speckled with yellow and/or black. Its belly is iridescent white and the intestinal coil is usually visible. Calls are a slow, rumbling snore. Leopard Frogs were our most common frog until the 1960's. Since then numbers nationwide have declined drastically. No single cause has been identified, but research has shown this species is particularly affected by certain pesticides, increasing acidification of breeding waters, and a bacterial disease called "red leg." Leopard Frogs don't live as long as they used to and seem to lay far fewer eggs than in the past.

Pickerel Frogs are smaller (1.7 to 3.4") but similar in color to the Leopard Frog - it has spots which are much more rectangular. Dorsal spots are arranged in two rows and outlined only in black. It also has bright yellow or orange in the groin area. 2 to 3" tadpoles are green or grayish brown above with black and yellow specks. Bellies are iridescent cream, and the tails are much darker than Leopard Frogs with dark blotches. The call is similar to the Leopard Frog but faster and quieter. Pickerel Frogs begin breeding when water temperatures reach 50° F. Males move at night to quiet, shallow stream backwaters, bogs, marshes and weedy ponds. Cool clear water is preferred. They will not use polluted or stagnant waters.



Adults prefer grassy stream banks and places where streams or cold springs flow into wetlands. They are active during the day in spring but become more nocturnal with increasing summer heat. In winter, they hibernate in soft mud or under rocks and logs on stream bottoms or in deeper parts of ponds. If the water body they inhabit does not freeze over, they may remain active all winter. Pickerel Frogs eat almost any aquatic or terrestrial invertebrate, and toxic skin secretions keep adults safe from most predators, except for Bull and Green Frogs.

The similar-looking Leopard Frog has a very different life history and habitat needs. They are typically found in open habitats including most wetland types, and grassland areas. They can show up on suburban lawns more than a half-mile from breeding and hibernating areas. Leopard Frogs feed on a wide variety of invertebrates and also small vertebrates such as

Spring Peepers. A host of predators eat adults, tadpoles and eggs. Adults escape by burrowing into bottom mud or (on land) making several erratic jumps before hiding under vegetation. Their coloration is great camouflage and the pattern can mimic Pickerel Frogs, which many predators know to avoid.



Giant Water Bug (1-3") eating a frog; they eat tadpoles too

Mink Frogs are green to brown with dark blotches or mottling over most of the body, which can be 2-3". The belly is white to pale yellow, sometimes being mottled with gray. The upper lip is a bright green. The webbing on the hind feet extends to the end of the fifth toe. This is the most aquatic frog in Wisconsin. When handling the Mink Frog, it will emit a musky onion odor, similar to mink, said to repel predators. While floating on the water's surface the call is a low-pitched "tok-tok-tok" that sounds like two sticks being hit together. The male is smaller than the female. Tadpoles need clear, cold water for proper development. They have a declining population due to changing climate (warming) but can be locally common in suitable habitat.



Amphibians play a vital role in the food web, are in many cases our first real exposure to wild animals, and are key part of the sound and color of the north woods. Providing and protecting habitat for them is a key factor to healthy ecosystems. Here are some useful websites:

- ✎ <http://dnr.wi.gov/org/land/er/herps> - the Wisconsin DNR amphibians page
- ✎ <http://www.discoverlife.org/> - comprehensive online compilation of species
- ✎ <http://www.allaboutfrogs.org/>
- ✎ <http://www.wiatri.net/inventory/Frogtoadsurvey/WIfrogs/natHistory.cfm> - WI Frog & Toad survey; species accounts, info, etc.

This article was largely based on information from *Amphibians and Reptiles of the Great Lakes Region*, by James H. Harding (1997, University of Michigan Press).



Landscaping for Wildlife: Part 3 – Reptiles & Amphibians

By Scott Reuss, Agriculture/Horticulture Agent, UW-Extension

This is the third of a four-part series in this year's *Northwoods Journal* regarding landscaping for wildlife. The September edition will feature Mammals/impact of invasive species. Birds were the focus of the June article and Insects were featured in July.



Common Garter Snake, found throughout Marinette County

Although not thought of by most people as being preferred visitors to your landscape, reptiles and amphibians, also known as **herptiles**, certainly make up a significant portion of the natural biomass. There are 38 reptile and 21 amphibian species found in Wisconsin. The easiest way to remember the difference between the two is that *amphibians need water to complete their life cycle*. Marinette County does have natural populations of many of these species, in part because we have a number of different forest habitats, soil types, and water bodies. I will delve into some of the reptilian diversity in this article, but please read the "Frogs & Toads" article (page 1) to learn more about the frogs, salamanders, and the toad species found in Marinette County.

When asked, most people would actually say that they do not really want to attract these species. **However, there are actually many good reasons to make sure to have these species in your landscape.** Amphibians are indicators of good ecosystem health, as their skin readily absorbs pollutants, creating health issues for them when subjected to pollution. Herptiles generally feed on other, more undesirable critters, like garden pests (insects, rodents, etc.). In addition, these species serve as a key base of the food pyramid. Salamanders, frogs, and small snakes form a large component of the diet of many larger forest, wetland, and even prairie animals.



Green Heron eating a frog

Realistically, we do not attract these animals with specific plant types as we can with many insect species, but by helping create safe living, breeding, and overwintering environments. Water and moist, cooler summer living spots are vital to amphibians. The presence of overwintering sites is usually the key to maintaining reptile species diversity and populations.

Amphibians

Attracting amphibian species generally requires the addition of water and/or naturally moist habitats. Only one species is seen commonly in our landscapes, the Eastern American Toad, as it is most able to handle drier conditions. They are very important insect, slug, and snail predators, literally eating a few thousand of them in a growing season. However, toads still need cooler, moist conditions to survive during hot, sunny days.

Having areas of your landscape that feature large-leaved plants such as prairie dock, Canadian ginger, mayapple, hostas, hellebores, or other similarly structured plants help them survive hot, dry weeks such as those we've experienced this summer. Toads form shallow burrows to go into during the day as the soil helps them conserve moisture and remain at more constant temperatures. Having bare soil under some of these plant types, rather than fully mulched, may help them have the right day-time conditions. Toadstools are only effective if they produce significant shade and are under other plants.



Ostrich ferns, mayapples & hostas provide shelter for toads

Creating or maintaining the right habitat is generally the correct approach to maintaining healthy amphibian populations. Natural forest floors with layers of leaf litter, moss, etc. that stay moist year long harbor very large salamander populations, in excess of 1000 per acre. However, their secretive nature, need to stay moist by staying under cover and hunting only at night mean that very few people ever know that they are there.



Red-backed & Spotted Salamanders, both found in our area

The tree frog species will also flourish in healthy forests or even managed landscapes, as long as they have areas of denser plant growth and areas that stay moister during the day. Aquatic frog species generally live in or very near actual water bodies, with water gardens or garden ponds to serving as summer living quarters. Growing season habitat is obviously extremely critical for healthy amphibian populations, but sufficient wetland or water body area or deep leaf litter is necessary for successfully surviving our winters.

Overwintering habitat is key for these species, especially the longer-living species such as the larger frogs, salamanders, and the American Toad, which can live up to 20 years. Things you can do to improve overwintering success center around maintain natural habitats, specifically wetlands and water bodies. However, also consider wetland restoration or construction projects on your property, but make sure to contact Land & Water Conservation staff or the Natural Resource Conservation Service prior to doing so.

If you have landscape water features, plan ahead to make sure you are not accidentally harming amphibians. If the feature gets drained for winter, make sure to do so early in fall, so that anything in there can move to other habitat prior to winter's onset. If it doesn't get drained, construct it large enough that survival can occur there.

Other things you can do include:

- ✘ Educating yourself & others about the importance of amphibians & habitat.
- ✘ Maintaining healthy habitat and buffers around water bodies.
- ✘ Leaving dead or dying trees in forests and occasional brush piles.
- ✘ Minimize or eliminate pesticide use in your landscape.

Reptiles

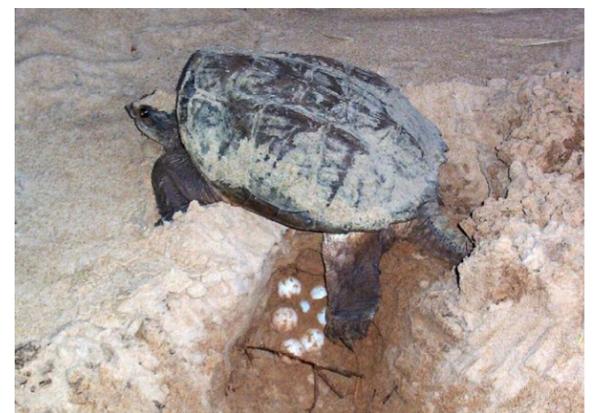
There are several key differences between reptiles and amphibians other than the amphibians' need for water. Reptiles have dry skin and scales vs. smooth, moist skin of amphibians. Reptile toes have claws, whereas amphibians' do not. In Marinette County, we have native populations of 1 lizard, 9 (possibly 10) species of snakes, and 5 species of turtles still found here. Turtles and snakes are long-living species; some of our turtle species can live to over 50 years old!

The one that surprises the most people is that we have 1 **lizard** species, the five-lined skink. There are four lizard species found in Wisconsin, generally all on drier, sandier soils such as the Central Sands area. Marinette County has its own central sands vicinity, centered on Crivitz and Town of Stephenson, and this is also where you are most likely to see a skink (below).



Juvenile skink; adults lack the blue tail, which can 'detach' if a predator grabs it. The tail then grows back!

Turtles can be very long-lived, with the snapping turtle being by far the largest. Turtle species found here include the snapping, two species of painted, wood, and Blanding's. Thankfully, Marinette County is blessed with many water bodies, creating good living habitat for turtles. However, egg-laying areas are being reduced by human activities, and their travel corridors between these egg-laying areas and their water body homes are increasingly being interrupted by roadways. Crossing a road wouldn't be an impediment to a turtle, but getting hit by a vehicle is now considered to be the number one reason for adult turtle fatalities.



Snapping turtle laying eggs

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Northwoods Journal Online

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Landscaping, continued

Turtles do not absolutely need water to survive, but the species found in Marinette County live in water and are generally only adapted to water environments. The one exception is the wood turtle, which is considered semi-terrestrial, as it will spend large amounts of time in lowland, mesic forests along rivers and larger streams. Thus, you'll usually only see turtles when enjoying Marinette County's natural water features or while they are traveling to their egg laying areas. In general, turtles don't visit constructed smaller ponds very often, but larger wetlands and ponds can serve as good habitat for them.



Painted turtle basking on a rock



Wood turtle, named for the shell's wood-carved look



Blanding's turtle; the chin is bright yellow and the shell has the shape & appearance of a helmet

Snakes

Although there are 9, maybe 10, species of snakes found in Marinette County, probably close to 95% of the snake sightings involve only two species – the Common Garter and the Western Fox, also known locally as a "pine" snake. The other species found here are the Northern Ringneck, the Eastern Hognose, the Smooth Green, Eastern Milk, the Brown or DeKay's, Northern Redbelly, Northern Water, and possibly the Northern Ribbon Snake.

No venomous snakes are found in our area anymore. The last verified sighting of a Timber Rattlesnake was back in the early 1950's. Many people *think* they see rattlesnakes when they see young Western Fox snakes (below), as they rapidly shake their tail tip in the grass or leaves and create a fake rattle to try to scare away predators (especially humans!).



Others see the copper-colored heads of Western Fox snakes and think they are seeing the venomous copperhead, which cannot even remotely survive the temperature extremes found in Wisconsin. All snakes can swim, so people tend to mistake the Northern Water Snake (below) for a water moccasin, another southern species that could not survive in Wisconsin.



All snakes found here are beneficial species, as the smaller species (Smooth Green, Brown, Redbelly, Ringneck, and Ribbon) feed exclusively on insects and the larger species feed primarily on either insects or rodents. Of course, there are exceptions. Fox snakes will feed on ground-nesting birds and eat eggs, as well, as will the occasional large garter or milk snakes.



Smooth green snake – they can be up to 24 inches long



Brown, or DeKay's, snake, has distinct 'pencil-point' marks along its back; they get to up to 12 inches long

Many snakes feed on amphibians mentioned above, particularly salamanders and frogs, but the Eastern Hognose is a toad specialist, having adaptations that make it very good at finding, digging out, and eating toads. Finally, the Ribbon and Water snakes feed on small fish, along with aquatic insects and amphibians.



Snake eating a salamander

There will be occasional snake species that wander through and/or live during the growing season in pretty much any environment. However, to attract and hold larger numbers of these beneficial species, you likely need to create wintering areas, or *hibernacula*, and/or areas for them to safely sun themselves (called

basking) like rock piles, log piles, etc. during the spring, summer, and fall. Places that tend to serve as hibernacula include large rock piles, especially if they are buried or partially buried; old building foundations; old dug wells that haven't been filled in; and natural caves, waterways, and other geological features. An example of building a hibernacula in Vernon County can be found online at <http://www.co.vernon.wi.gov/lwcd/snakehib.htm>.



Above: volunteers constructed this hibernacula



Garter snakes emerge from a hibernacula in spring

All that said, let's be blunt: *the best way to preserve snakes is to educate others about the benefits they bring to our environment and landscape.* Although small snakes are eaten by larger snakes, birds of prey, and raccoons, opossums, and a few other mammals, the number one killer of snakes is humans. Countless snakes get run over each year on area roadways, often by people who purposely maneuver to run them over. Each year, hundreds, if not thousands, of local snakes get needlessly killed by people whenever they find them in their lawn, garden, or outbuildings. Yes, snakes cause innate, natural reactions of surprise or fright. But, we all need to try to move past those emotions and do what we can to save these valuable species.

Other Resources

There are many places to get good information about the reptiles and amphibians of Wisconsin. One of the best is the book *Natural History of Amphibians and Reptiles of Wisconsin* by Richard C. Vogt, ISBN 0-89326-060-6. Other good publications are produced by the WI DNR and include "Amphibians of Wisconsin" – PUB-ER-105 2001 and "Snakes of Wisconsin" – PUB-ER-100 00. Another good publication is the *Reptiles & Amphibians of Wisconsin Field Guide* by Stan Tekiela (Adventure Publications, 2004).

Websites you may find useful include:

- <http://dnr.wi.gov/org/caer/ce/eek/critter/index.htm> - The WDNR Critter Corner web page
- <http://www.discoverlife.org>
- <http://www.wiatri.net/inventory/Frogtoadsurvey/WIfrogs/natHistory.cfm> - Wisconsin Frog & Toad Survey
- <http://learningstore.uwex.edu/assets/pdfs/G3139.pdf> - Snakes of Wisconsin
- <http://www.michherp.org/herpatlas.html> - MI Society of Herpetologists
- <http://www.rtpi.org/electronic-naturalist/> - Roger Tory Peterson Institute

For more information, contact Scott or Linda at the Marinette County UW-Extension office, 715-732-7510 or Anne in Land & Water Conservation, 715-732-7780.



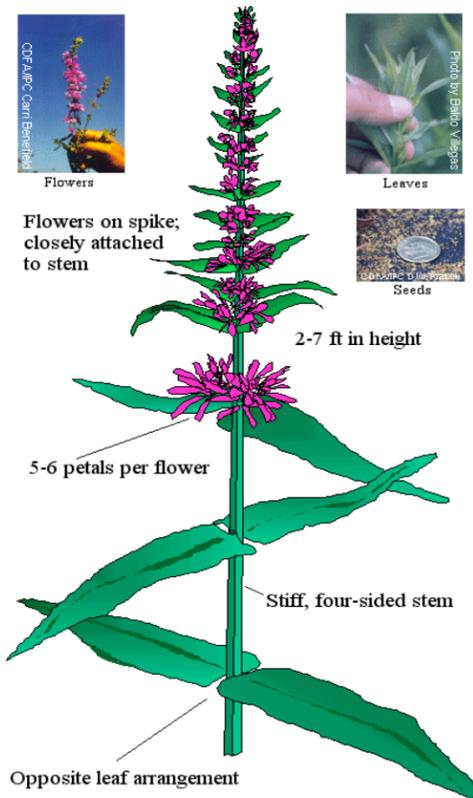
Wetland Invaders: Purple Loosestrife and Phragmites

By Robert Ruleau, Aquatic Invasive Species Coordinator

Colorful flowers and feathery seed heads are a deceiving cover for two of the most invasive plants currently threatening Great Lakes wetland and shoreline habitats. Purple loosestrife (*Lythrum salicaria*) and common reed (*Phragmites australis*) are causing fits among land managers and property owners alike and a lot of time and money is being spent to control these two wetland invaders. Wetlands and shorelines provide tremendous ecological, economic and recreational values, so it is important, as with all invasive species, to prevent their spread and reduce the impacts on valuable wetlands.

Purple Loosestrife

Found in all of Wisconsin's 72 counties, this invasive plant species was introduced from Europe in the 1800s as a garden perennial because of its attractive bright purple flowers. Also, in the early days of introduction, ballast soil in ships transported loosestrife seeds to North America from its native range in Europe. Purple loosestrife prefers to grow and spread rapidly in wet areas including; meadows and pastures, marshes, stream and river banks, lake shores, and roadside ditches.



It grows relatively tall, 3-9 feet and dense. Its distinct purple flowers bloom from July to September. This non-native plant has a few invasive characteristics that have contributed to it being harmful to the habitats it invades. Due to its aggressiveness, purple loosestrife has been known to swiftly take over a wetland habitat and crowd out native plants and displace native wetland animals. Spread mostly by seed, a healthy mature plant can

produce up to 3 million seeds per year, giving it a good chance of introduction to new areas.



Established purple loosestrife populations are difficult to control and eradicate, but some techniques have reduced their abundance and allowed for wetland habitats to regain a healthy and diverse mix of native plants and animals. A small patch of loosestrife in loose soil can be dug up by hand with the roots intact. Be sure to put dug up plants in a garbage bag and dispose of them properly. Herbicide application provides a quick control method to kill Purple Loosestrife. However, be aware the chemicals used are non-selective, meaning a treatment will kill most plants in the spray area, including native- beneficial species. If possible, target only the invasive plants you plan on treating.

Also, an extremely successful method to reduce Loosestrife has been biological control. *Galerucella* beetles have been released to attack and control purple loosestrife in Wisconsin since 1994. These beetles are from the same region in Eurasia and feed on the plants. Once released, beetles are very efficient at feeding on developing stems and leaves of purple loosestrife which often prevents flowering. The only downside with *Galerucella* beetles is the time required rearing them and high number of beetles needed to be released on the invasive loosestrife plants in Wisconsin. Learning to properly identify purple loosestrife is important considering there are many native, beneficial plants that look very similar.

Phragmites

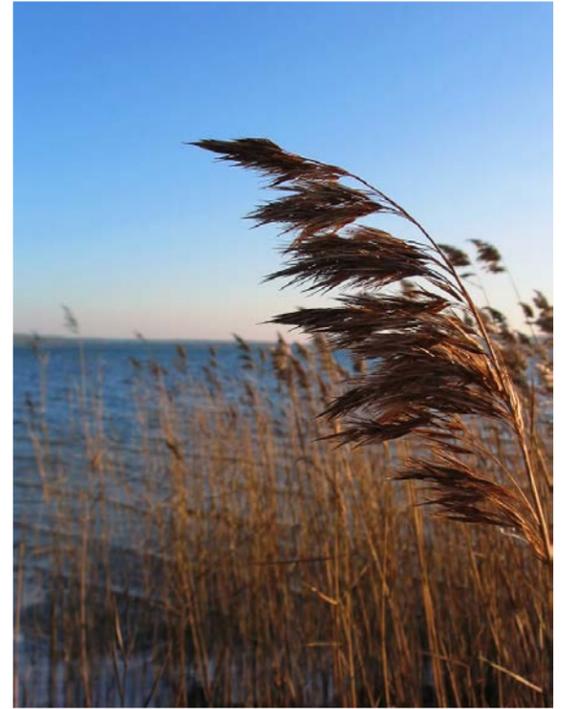
Phragmites (*frag-my-teez*) comes from the Greek word "phragma" meaning "fence". Creating dense, fence-like barriers is exactly what this highly invasive plant is up to in wetland habitats. A relatively new invader in the Great Lakes region, this non-native grass can reach heights of 15+ feet and have up to 20 stems per square foot.



Phragmites has been rapidly spreading in wetlands and especially newly exposed lakebed caused by low water levels on the Great Lakes. It spreads mainly by vegetative reproduction through rhizomes and runners that create a root system that can be 6 ft. deep and stolons that can run 50 ft horizontally. This mechanism of spread allows a few individual plants to quickly form the thick and monotypic stands all too common in an increasing number of wetlands areas. Like purple loosestrife, Phragmites is an extremely aggressive plant that forms nearly impenetrable stands, outcompeting native plants and creating poor habitat for wildlife. It has been observed to even take over purple loosestrife in some habitats.

Along shorelines, property owners often express concern with blocked access and views of the water because of the thick, tall growth. In the winter months, dry stands present a fire hazard to properties near them. This plant is an all around

nuisance for people, native plants, and wildlife.



Control measures to combat Phragmites depend on the location and density of the plants. Ideally, it should be controlled when the population is small. This can be done by hand using a weed whacker, machete or anything that will chop down the stems. If left unchecked, Phragmites populations usually expand exponentially in wetland or disturbed habitats. Once this happens, control methods on large stands become very costly in terms of time and resources, often involving mechanical equipment for mowing and a large scale herbicide treatment. Frequent mowing using a motorized vehicle may help keep populations in check.

There has been success with the use of aquatic approved herbicides to control Phragmites in wetlands areas. A DNR permit is required to use this technique. Combinations of cutting and herbicide application have been the most effective methods to reduce large Phragmites populations. Whatever method is used for control, a multiple-year follow up is usually necessary because this plant is quite resilient and will surely grow back if given the chance. A professional contractor should be hired to do proper herbicide application.

To learn more about these and other aquatic invasive species impacting Marinette County and how to control them, please refer to the Marinette County website, www.marinettecounty.com (Marinette County home page ' Departments ' Land Information ' Aquatic Invasive Species) or contact Robert Ruleau at 715-732-7642.

Northwoods Journal

Volume 10, Issue 3

The *Northwoods Journal* focuses on various outdoor recreation opportunities and local environmental topics to inform readers about natural resource use, management, and recreation in Marinette County.

Published in cooperation by:

- Marinette Co. Land & Water Conservation
- Marinette Co. Parks & Outdoor Recreation
- Marinette Co. UW-Extension

UW-Extension provides equal opportunities in employment and programming, including Title IX and ADA. To ensure equal access, please make requests for reasonable accommodations as soon as possible prior to the scheduled program. If you need this material in another format, please contact the UW-Extension office at 715-732-7510.

Please send comments to:
Marinette County LWCD
1926 Hall Ave, Marinette, WI 54143
abartels@marinettecounty.com

Peshtigo River Trail Paddle

Saturday, September 15th
10:00 a.m. – 3:00 p.m.



Enjoy a leisurely paddle down the Lower Peshtigo River from the City of Peshtigo boat landing to the County Rd. BB boat landing. LWCD staff will guide the group along the river and answer questions about the area. Bring your own canoe/kayak or use one of our canoes (limited supply of 6 canoes – call to reserve a canoe starting August 29 at 9am).

Youth under 18 must be accompanied by an adult, and you must provide your own snacks, water, etc. To register, reserve a canoe, or for more information about the event, please call the Land & Water Conservation office at 715-732-7780. This is a free program sponsored by the Land & Water Conservation Division.



Northeast Wisconsin Land Trust Protects Local Habitat
 By Kari Hopfensperger, Administrative and Communications Coordinator, NEWLT
 Photos and images courtesy of <http://www.newlt.org>.



**NORTHEAST WISCONSIN
 LAND TRUST**
Preserving Our Natural Heritage

"Standing at the creek's edge, I saw fish flickering in the water as I listened to the roaring of the rapids. It felt good to know that this place would always remain this way," recalled Julie Hawkins Tyriver, Land Stewardship Coordinator at Northeast Wisconsin Land Trust. Julie is describing how she felt while visiting the Land Trust's largest conservancy, 600 acres of private land located in Marinette County. A property of this magnitude is a rare gem that consists of undeveloped shorelines, private forested lands and unique habitat.



This is just one of many stories the people at Northeast Wisconsin Land Trust are fortunate enough to share about preserving the natural heritage of northeast Wisconsin. They have many stories about opening land to the public and increasing public access so people can enjoy some of these special places. They also have stories about helping people protect their family's land in perpetuity.



Northeast Wisconsin Land Trust is a private, non-profit, member-supported land conservation organization working in 12 Wisconsin counties. Since their founding in 1996, they have preserved over 4,600 acres of natural land on 39 conservancies and 5 publicly accessible nature preserves. But they feel they are just getting started. This year alone, more than 400 acres await preservation for the Land Trust in northeast Wisconsin. There is so much more to be done to preserve our waters, landscapes, and natural habitats. It is their hope future generations will be able to enjoy the rich and healthy scenery that is characteristic to only Wisconsin.

Another addition to protected land in Wisconsin is 34 acres of wetlands along Green Bay's west shore that protects Northern Pike

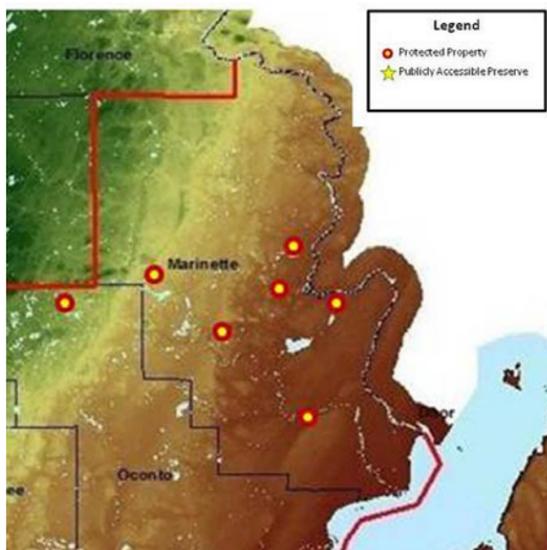
spawning habitat. UW-Extension states over 70% of wetlands along the west shore of the Bay have been damaged or destroyed and is a contributing factor in the scarcity of top predator species such as Northern Pike in the region.

"If we care about the waters of the Bay and the quality of our fisheries, land conservation on the west shore of Green Bay is crucial. The health of the Bay and also Lake Michigan is very much determined by what we do on the land here, in northeastern Wisconsin," said Deborah Nett, Executive Director of Northeast Wisconsin Land Trust.



The people at Northeast Wisconsin Land Trust consider themselves lucky to have the opportunity to preserve land supporting a rich diversity of plant and animal life, and representing some of Wisconsin's finest natural habitats. They know these places are cherished now and will be treasured long into the future by subsequent generations of people who live, work and play in northeastern Wisconsin.

The Land Trust feels that while change is inevitable, loss of our natural heritage is not. To join their efforts or find out more information about their protected properties and events, visit their website at www.newlt.org.



Map of protected properties in Marinette County

To contact NEWLT, call (920) 738-7265, or email them at newlt@newlt.org. Their mailing address is:

Northeast Wisconsin Land Trust,
 14 Tri-Park Way, Suite 1
 Appleton, WI 54914.



**HANDS-ON NATURE AT THE
 MARINETTE COUNTY FAIR!**



Visit our educational displays at the Marinette County Fair August 23-26th at the Wausaukee Fairgrounds! The Education Area is co-sponsored by the Marinette County UW-Extension, Land & Water Conservation, and the Parks Department. The Education Area is located inside the main Exhibit Building. Explore displays, pick up brochures or maps, and visit department staff with questions or concerns.



Returning this year is the "Herptile Habitat" display, featuring live reptiles and amphibians. Herptiles are crucial to the food web, and act as "biological indicators" to help determine the health of wetland habitats. Various amphibian and reptile species will be on display. Visitors get a close-up look at the critters that help regulate pest populations, provide food for other animals, and add to the beauty and mystique of our Northwoods home.



If you have any questions about what our departments do or services we provide for the public, feel free to stop by the Education Area and chat with our staff, or contact us: Land & Water Conservation Division at 715-732-7780; UW-Extension at 715-732-7510; and Parks at 715-732-7530. You can also visit us online at www.marinettecounty.com.



Area Events Calendar

- July-August** **Bands at Badger Park.** Badger Park in Peshtigo. Free musical entertainment, 6:30-8:30pm. Concerts held Wednesday evenings with concessions available at 5:30pm. Scheduled dates: July 11, July 25, **August 8 & August 22.** Call 715-582-1141 for more information.
- July-August** **Concerts in the Park.** Great Lakes Memorial Marina in Menominee, MI, 7-9pm - July 12, July 26, & **August 16.** The event is free of charge. For more information or a listing of the bands, please call the Marinette/Menominee Area Chamber of Commerce (MMCC) at (715) 735-6681.
- July-August** **Concerts in the Park.** Evergreen Park, Wausaukee. Refreshments available, bring your own seating. July 5, **August 9: 7pm.** July 15, **August 19: 2pm.** More information, call 715-856-5341.
- July-August** **Sunset Concert Series.** Stephenson Island in Marinette July 3 & 14, from 7-9pm; July 15 & **Aug. 7 from 6-9 p.m.** Free musical entertainment. For more information, please call the MMCC at (715) 735-6681.
- May 28-Sept.3** **Area Museums Open.** Marinette & Menominee County Historical Museums, Peshtigo Fire Museum, Amberg Historical Complex, Busville Doll Museum (Crivitz), Land of Oz Museum (Wausaukee) & West Shore Fishing Museum (M-35 north of Menominee, MI). Visit <http://therealnorth.com/museums.htm>.
- Thru October** **'Tour de Taco' Ride.** Weekly bike ride on Thursdays at 6pm, join us for a one hour ride with beverages and tacos after the ride at Cycle Path, 2329 13th Street, Menominee. Questions call 906-863-9361 or cyclepath360.com.
- August 2-5** **Annual Waterfront Festival** at Menominee Marina Park. Thursday: children's parade, food booths open at 4pm, children's activities, fire house safety tours, and music 4pm & 7pm. Friday: brats for breakfast, food booths open at 4pm, children's activities, water ball contest, sailboat race and music 4pm & 7pm. Saturday: 5k run & 5k walk, YMCA fitness demonstrations, M&M Amateur Radio Club, food booths open at 11am, children's activities, kayaking demonstrations, music 2:30pm & 5:15pm, and fireworks (9:15pm). Sunday: food booths open at 11am, parade at noon, Drum & Bugle Corp. performance 2-7pm. For more information call 906-863-2656 or visit www.menomineewaterfrontfestival.com.
- August 3** **Family Water Bash.** Civic Center Pool in Marinette, 6:15-8:15pm. Theme is "underwater object hunt". Call the Rec. Dept. at 715-732-5222 for more information.
- August 4** **Menominee River Float Trip.** Wausaukee boat landing to Bear Point Yacht Club. Leave at 11am from boat landing on River Road, arrive at Bear Point at 3pm. Adults must accompany children under 18. Bring your own flotation device (tube, rafts, canoes, etc.) & snacks, call 715-856-5092 for more information.
- August 4** **Budweiser Clydesdales in Peshtigo.** Vandervest Harley-Davidson, 12:30-4pm. The Gentle Giants will engage in a short parade at 1:30pm, route will take them up to Bus. Hwy 41 to S. Stephenson Avenue to Pine Street to the Old Peshtigo Road to Frontage Road and back. Vandervest HD will have food available for purchase served by The Peshtigo Booster Club and the Wild Fire Hog Chapter will handle all beverages for the event. Event is open to the public. More information, call 715-582-8843.
- August 4** **Pembinе 2nd Annual Community Run.** Run at Pembine American Legion Park, Minnie & Willis Street and will include walkers as well in the 5K event. All participants receive a t-shirt and medal (medals unique to the Pembine Run). For more information call 715-324-5182 or <http://pembinecommunityrun2011.webs.com>.
- August 4** **Gun & Knife Show.** 8am-2pm at Crivitz Village Hall, downtown Crivitz. Buy-Sell-Trade. Admission is \$3, children under 12/\$1. Show is sponsored by Netzel-Zenz Post 413 of Crivitz. For more information call 715-854-2676.
- August 6-10** **Gifted & Talented Academy.** College 4 Kids Program at UW-Marinette, class is for 1-8 grades and runs from 8am-2:30pm. Class includes "Nature Experts" with Anne Bartels, "Learn to Lead" with Brenda Blystone, "German and Art Experience" with Manu Junemann, "Buccaneer Glee Club" with Jay Jensen, "Smart Moves" with the Healthy Youth Coalition and "Make Em Laugh" with John Thornberry. Cost of the Academy is \$133 per student. (Breakfast, lunch, snack and T-shirt included).
- August 10** **Kiddie Carnival at Fred Carney Park.** Ogden Street, Marinette, 11am-1pm. Sponsored by Marinette Recreation Department. Games 10 cents, win tickets to redeem for prizes. Pizza & root beer floats for sale. Call the Rec. Dept. at 715-732-5222 for more information.
- August 10** **Movies in the Park.** Stephenson Island, Marinette at dark. "Winnie the Pooh" shows at the gazebo. No admission, bring your own blankets & chairs and enjoy the show. Concessions available.
- August 10** **Family Water Bash.** Civic Center Pool in Marinette, 6:15-8:15pm. Theme is "picnic games". Call the Rec. Dept. at 715-732-5222 for more information.
- August 9** **Movies in the Park.** Littleland Park Playground in Crivitz. 'The Fox & The Hound 2', showing, sponsored by Witt's Piggly Wiggly/Subway/True Value with free snacks. Kids of all ages are invited. Movies are free but bring your own blankets, chairs and popcorn. For more information contact Ginger at 920-246-0831.
- August 11** **41st Annual M&M Antique Auto Club Show.** 8am-4pm at Menominee's historic waterfront, with trophies awarded at 3pm. Sponsored by the Motor Company with music by Russes Golden Oldies. Registration from 8am-11am; more information call 906-863-3616 after 4pm.
- August 16** **Movies in the Park.** Littleland Park Playground in Crivitz. 'Wall-E', showing, sponsored by Witt's Piggly Wiggly/Subway/True Value with free snacks. Kids of all ages are invited. Movies are free but bring your own blankets, chairs and popcorn. For more information contact Ginger at 920-246-0831.
- August 17** **Bay Beach Trip.** Sponsored by the Marinette Recreation Department. \$12 per person, includes bus fare. Ride tickets available upon arrival at Bay Beach. Participants may bring a bag lunch or purchase at Bay Beach on their own. Bus departs 9am, returns at 4pm. Call the Rec. Dept. at 715-732-5222 for more information.
- August 18** **Middle Inlet Annual Fireman's Picnic.** Located at the Town Hall/Fire Department building.
- August 18** **Walk n' Wag Dog Walk.** Henes Park, Menominee. 10am-2pm. Coordinated by the Community Leadership Academy Class of 2012. Preregister at Angelis' Foods and all Stephenson National Bank locations. Register day of event between 7:45-8:45am. Cost is \$10/dog or \$15/2 dogs (limit 2 dogs per walker). Profits to support area pets with an emphasis on creating a dog park within Henes Park. Call 715-735-6681 for questions.
- August 24** **Movies in the Park.** Stephenson Island, Marinette at dark. "Pirates Band of Misfits" shows at the gazebo. No admission, bring your own blankets & chairs and enjoy the show. Concessions available.
- August 25** **Motorcycle Ride to benefit Piper's Rescue Ranch** in Wallace, MI. registration starts at 9am at Schooner's Pub & Grill, 2203 11th Ave., Menominee. Ride leaves at 10:30am, \$15 per person with \$20 passenger. Various stops, ends with at pig roast and events at Piper's. Call 715-587-4921 for more information.
- August 25** **Midwest Walleye Series.** Menominee Marina, Menominee, MI. Sponsored by Ranger Boats. Registration from 5-6pm rules meeting to follow at 5:30pm. Catch & Release tournament. For more information, call 920-731-3474 or email info@fishfm.com.
- August 26** **Art in the Park.** John Henes Park, Menominee MI. Sponsored by the Menominee Area Arts Council, showcasing & selling original artwork. Art activities available for all ages. Visit the MAAC website at www.cityofmenominee.org/maac.html for more information or call 906-863-8246.
- August 23-26** **Marinette County Fair** at the Wausaukee Fairgrounds. See page 2 for more information.

Harmony Arboretum Schedule of Events

Located seven miles west of the City of Marinette off Highway 64, then ½ mile south on County E. *All programs are free and at Harmony Arboretum unless otherwise stated.* For more information, call UW-Extension at 715-732-7510 or Land & Water Conservation at 715-732-7780.

August 9 - Prairie Walk, 6:00 - 8:00 pm
Stroll the 17-acre prairie at Harmony Arboretum with local native plant enthusiasts. Spend an evening learning what constitutes a prairie and why people are creating or restoring them. Prairie flowers should be nearing their peak. Free public program. For more information, call 715-732-7780.

August 16 - Astronomy at the Arboretum, 8:45 - 10:00 pm
Spend an evening under the stars! Introduction to stars, constellations, star lore, and other space-related topics - includes a stargazing tour. Dress for the weather, hot beverages will be provided; if inclement weather, event will be cancelled. Free public program. Call 715-732-7780 for more information.

August 28 - Apple Tasting Workshop, 5:00 - 7:00 pm
A series of 3 apple tasting workshops to sample early, mid-season and late apples. Instructor: Tony Dembski, owner of Maple Valley Orchard, Gillett, who grows many old fashioned apple varieties not available elsewhere.

September 1 - Frost Protection & Season Extension, 9:00 - 10:30 am
Tender vegetable plants can still have positive growth in September and October, but we need to properly protect them from the first frost events of the year. We'll also discuss how to really extend the growing season for cool-season vegetables, with growth as late as into December.



Update - Children's Learning Garden at Harmony Arboretum



Maze with new 'face pots', created by local students

The Children's Learning Garden (CLG) recently got new additions to the hedge maze (above) and the Chipmunk's tunnel is being worked on this summer too! The sensory garden will be installed this summer and Harmony is getting a new greenhouse as well. Come visit Harmony and the CLG this summer - there are many more exciting & fun events coming up into the fall and it's always open to the public. For questions call 715-732-7510 or 715-732-7780.

