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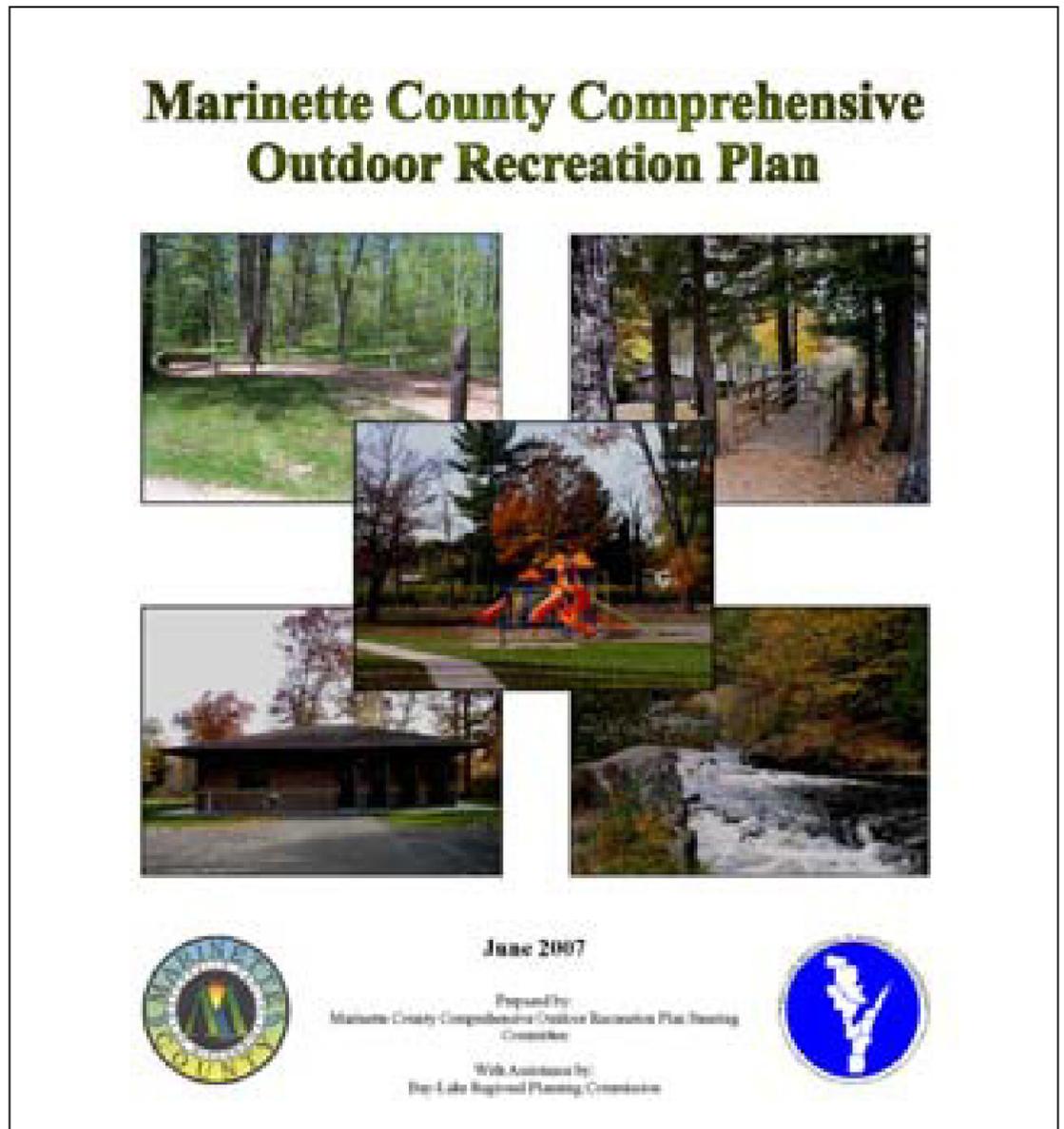
Enjoying and Protecting Marinette County's Outdoor Life

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New Marinette County Parks Plan Now in Place

By Erik Aleson, Assistant Parks Administrator



Join us to explore one of Marinette County's ancient river trails...

Peshtigo River Trail Paddle Trip

*Saturday, September 15th
10:00 a.m. – 2:30 p.m.*

- Free guided paddle trip on the Lower Peshtigo River
- From City of Peshtigo landing to County Rd. BB landing
- Bring your own canoe/kayak or use one of ours (limited supply)
- Wildlife viewing
- Historical sites

*To register, call
715-732-7780*

Youth under 18 must be accompanied by an adult.



Hosted by:
**Marinette County
Land & Water
Conservation Division**

The Marinette County Parks Department just finished updating the management plan for all of the county-owned parks. The new Comprehensive Outdoor Recreation Plan (CORP) establishes goals and objectives for our properties and identifies how the properties will be managed and developed. The plan was compiled to clearly communicate to the public how the park properties will look and what benefits they will provide. The plan has not been revised since 1977.

Highlights of the new plan include the water resources and forestlands in Marinette County; its population characteristics and seasonal population; Outdoor Recreation Supply Inventory of county, state, local community properties; and Outdoor Recreation Needs Assessment and recommendations for ADA accessibility in Marinette County Parks. County outdoor recreation goals and objectives, capital improvements projects, and annual operation and maintenance programs with respect to implementation of CORP are also discussed.

The Marinette County Parks & Outdoor Recreation Department is devoted to providing aesthetic and functional parks and recreational facilities to residents and visitors to Marinette County. Sound planning is required in order to meet the needs of park and recreational facility visitors. This plan also ensures eligibility for grants through the Federal Recreation and the State of Wisconsin Stewardship Local Assistance Programs.

During the updating of the county outdoor recreation plan, there were several opportunities for county residents to get involved in the planning process. A twelve-month time period was scheduled to complete the scope of work. The Marinette County

OUTDOOR RECREATION PLAN continued on page 3

HAUNTED HARMONY

FRIDAY, OCTOBER 26TH & SATURDAY,
OCTOBER 27TH 6:30 - 10:30 P.M.

RAIN DATE IS SUNDAY, OCTOBER 28, 2007

BE AFRAID . . . BE VERY AFRAID! Come and join us for a guided ½ mile hike through the darkness. People come not believing in ghostly tales, but be prepared – this hike will make a believer out of you! Find out about the Haunted Hardwoods and *the legend of Hatchet Hank*. Hatchet Hank roams these woods on cool autumn evenings when the moon is full, and helps the forest take back what once was its own. Never stray from the trail in these woods, for Hatchet Hank haunts the forest with other ghostly creatures that only come out at night, in search of unwary travelers. *You may think that it is just a cool breeze touching your cheek...but if you look, you may see glowing eyes staring back at you!*

Haunted Harmony takes place at Harmony Arboretum, located a ½ mile south on County Road E off of Hwy 64, 7 miles west of Marinette. There will be a kids' area located at the pavilion with games, pumpkin carving, a pirate ship to explore, music, and crafts. Concessions will also be available, as well as a warm fire to sit by. Your adventure begins with a wagon ride to the trailhead in the Haunted Hardwoods, where your hike guides will come along and share the legend of Hatchet Hank with you. The trail will be marked with lighted Jack-O-Lanterns to help you find your way...or not! Just make sure to stay on the trail, or else you may find yourself face-to-face with Hatchet Hank!



BEWARE OF HATCHET HANK!

In lieu of an admission fee, we will accept non-perishable food items and items for the Menominee Animal Shelter. Any monetary donations received will be used for Haunted Harmony 2008. The trail can be rough in areas, so please wear a good pair of walking shoes or hiking boots. Also dress for the weather, because unless it is a hard rain, Haunted Harmony will go on as scheduled. Sponsors include the Menominee Lions Club, the Menominee Sons of the American Legion, Waupaca Foundry of Marinette, Northern Lights Master Gardeners, and the Marinette County Land Information and UW-Extension Departments.

For more information please contact:

Aleta DiRienzo (715) 732-7780
Nancy Servais (715) 732-7514
Anne Warren (715) 732-7784

Enjoy Scaring People?

If so, come out to Haunted Harmony and sponsor a "Scare Station"! These are the spooky areas along the hiking trail that make this event so exciting! Individuals, families, and groups are welcome to participate, and the more scare stations we have, the better. All you need to bring each night are props, creativity, and your spooky self!

If you love scaring people, and want to participate in a fun Halloween activity, this event is for you. Haunted Harmony is an event for the whole community, and the food and item donations we receive will go to local food pantries and the Menominee Animal Shelter.

This is especially a great opportunity for students, scout groups, youth groups, and others looking for interesting ways to fulfill volunteer or community service hours.

To sign up for a scare station, or for more information, please call one of the numbers at left. Happy Halloween!



2007 Environmental Awareness Poster Contest

Each fall, the Marinette County Land & Water Conservation and the Wisconsin Land & Water Conservation Association sponsor the Environmental Poster Contest for school-aged children in Wisconsin. Subject matter should be focused on environmental awareness or conservation of natural resources, such as soil conservation, water quality, air, wildlife, and forestry as it relates to Marinette County or Wisconsin. Poster participants are encouraged to use the Soil Stewardship theme of "Conservation's Power". This theme covers the basic topics of the energy saved by no till farming, solar, wind, and alternative fuels, using conservation at home and in the community, and families working together to be the power behind conservation!



First place winners of the county contest will be entered in the Lake Michigan Area Land & Water Conservation (LMLWCA) Area Contest in October 2007. The first place winners in the area contest will be entered in the Wisconsin Land & Water Conservation Association (WLWCA) Contest that qualify in November 2007. The first place winners of the state contest will be entered in the National Association of Conservation Districts contest. Prizes will be awarded to the first three places in each division in the contest at the county, area and state level.

Contest Divisions are as follows:

- Primary - Students in Grades K-1 during the school year
- Elementary - Students in Grades 2-3 during the school year
- Middle - Students in Grades 4-6 during the school year
- Junior - Students in Grades 7-9 during the school year
- Senior - Students in Grades 10-12 during the school year
- Special Needs Junior - (K-6) Students enrolled in ED, LD, CD*
- Special Needs Senior - (7-12) Students enrolled in ED, LD, CD*

*Students enrolled in ED, LD, CD may enter in either their grade level or one of the Special Needs Divisions.

Posters must be returned to the Land Information Department by Friday, October 5, 2007 to 1926 Hall Avenue, Marinette WI 54143-1717. Please make sure that each poster is clearly identified with names of the student, parents, home address, home phone number, age, name of school and school phone number, grade in school, contest division and county. For a copy of the rules and an entry blank, please call Aleta DiRienzo in the Marinette County Land Information Office at (715) 732-7780.



Where Are the Northern Lights?

By Dr. Paul S. Erdman, UW-Marquette

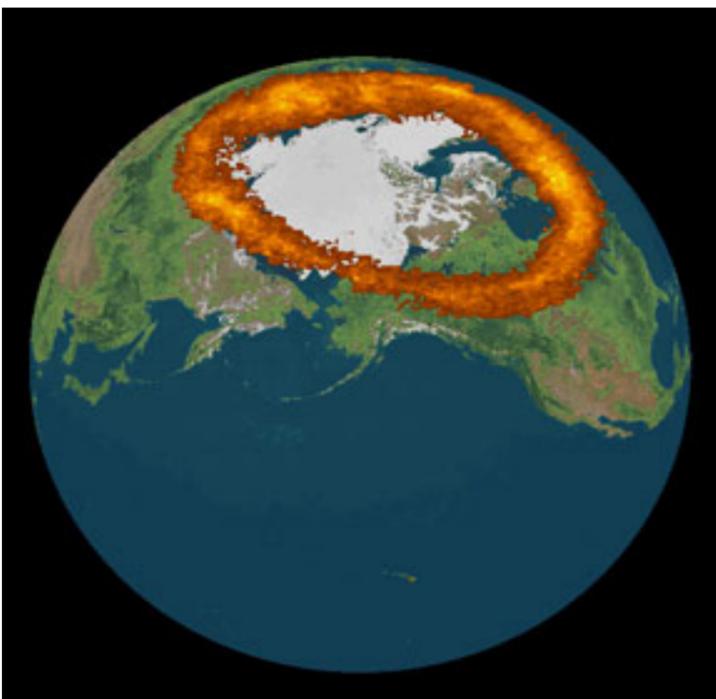


The Northern Lights over Alaska, courtesy of Joshua Strang

One expectation we have living here in northern Wisconsin is that we will see the Northern Lights more often than southern parts of the country. This is a realistic expectation, but it still requires cooperation from nature to produce them in the first place. You may have noticed that there have not been manifestations of the Northern Lights for quite a while, but it has nothing to do with what's going on here on Earth - it's really all about the Sun.

The Northern Lights, or *Aurora Borealis*, are produced when high-energy charged particles from the sun hit the gases in our atmosphere. It works just like a fluorescent light bulb - when you turn on a fluorescent light, you send electrons through the gas, which makes the gas glow. When charged particles from the sun hit the gases in our atmosphere, the atmosphere glows. You may have noticed that some streetlights are different colors than others - that is because they have different gases in them. In the same way, auroras have different colors such as green, red, or blue because of the different gases in the atmosphere such as oxygen and nitrogen.

The sun puts out a constant flow of gases and charged particles that extend into the solar system and hit our planet - this is called the *solar wind*. So if our planet is constantly being hit by charged particles, why don't we always have auroras? The answer is that we do - you just can't see them because they are usually too far north. They actually form a glowing *auroral ring* around the North Pole. If there's a ring around the northern pole, shouldn't there also be one around the southern pole? In fact, there is - it's called *Aurora Australis*, or the southern lights.



Satellite view of an auroral ring at Earth's north pole (top), courtesy of Iowa University Physics and Astronomy Department

So what does it take for auroras to appear further south so that we can see them in Wisconsin? It takes charged particles with more energy, which will make the auroral ring expand so that it moves further south. From our point of view, it would look like the

auroras get higher and higher in the north as the ring moves south towards us. If it expands enough, the northern lights may appear to move overhead, or even cover the whole sky from north to south. In fact, for displays with very high energy, the northern lights may appear to be in the southern sky and may even disappear into the southern horizon. In that case, the auroral ring has moved so far south that Wisconsin is on the inside of the ring instead of the outside. In such rare cases, people as far south as Florida can see the northern lights.

The sun gives us these extra bursts of energy when it is very active and has a lot of sunspots. Sunspots are dark because the heat of the Sun is being suppressed, just like trying to keep a lid down on a pressure cooker. But that heat can't be suppressed forever and usually it manages to escape with a big burst, which sends huge jets of hot gas and charged particles into space. If those bursts are aimed at earth, we'll get a good display of auroras.

Currently, however, there are almost no sunspots on the sun. This is normal, as the sun goes through an 11-year cycle of sunspots and 2007 is the lowest point of the cycle. Over the next 5 years, however, the number of sunspots will start to increase until it reaches a peak expected to occur in 2012. So for the next few years, you'll have something to look forward to as the chances for auroras get increasingly better.

If you'd like to sign up for email alerts when it is possible that we might see northern lights, you can get such a service for free from one of our own local photographers, Duane Clausen. Visit his website at www.northernexposures.net to sign up for the service. For more information on auroras, visit these other useful links:

<http://www.nasa.gov> (NASA webpage)

http://www.exploratorium.edu/learning_studio/auroras

<http://www.exploratorium.edu/auroras>

<http://www.geo.mtu.edu/weather/aurora>

OUTDOOR RECREATION PLAN continued from page 1

Board of Supervisors approved the CORP as its official plan for growth and development of parks and recreation opportunities countywide for the next five years (2007-2011) on June 26th, 2007.

Marquette County worked closely with Bay-Lake Regional Planning Commission to update the plan. The Bay-Lake Regional Planning Commission is a public agency established to provide planning services on area-wide issues, to represent local interests on state and federal planning program activities, and to provide local planning assistance to communities in the Bay-Lake Region.

The Marquette County Comprehensive Outdoor Recreation Plan is now available for review upon request at the County Parks Office in Marquette County Courthouse, 1926 Hall Ave., Room C318, Marquette, WI 54143 and at the Crivitz Area Library, 606 S. Louisa St., Crivitz, WI 54114. You can also view this new plan on the Marquette County website at <http://www.marquettecounty.com>. If you have further questions, please call (715) 732-7530 or email Erik Aleson of the Parks and Outdoor Recreation Department at ealeson@marquettecounty.com.

Northwoods Journal Online

Would you like to read the Northwoods Journal online? Each issue is posted monthly on our website at <http://www.marquettecounty.com>. At the bottom of the website is a link to yearly back issues. We can even send you an e-mail reminder when each new issue is posted. To set it up, email Anne at awarren@marquettecounty.com or call 715-732-7784. Remember, this is the last issue for 2007, but we'll be back next year!



WHO YOU GONNA CALL?

Spotlighting natural resource and conservation professionals working in Marinette County so you know who to call with questions or concerns.



Greg Cleereman, County Conservationist
Land & Water Conservation Division
1926 Hall Ave., Marinette, WI 54143
Phone: 715-732-7783
gcleereman@marinettecounty.com

What does your job consist of?

I provide day-to-day supervision of staff, help organize the budget, write grants, assist with various LWCD projects, and help teach T.O.A.D. programs (Teaching Outdoor Awareness and Discovery).

What's your favorite part about being the County Conservationist?

I really enjoy presenting T.O.A.D. classes to groups. I especially like working with kids because they are the future of our natural resources and it's important to help them understand the basic concepts of conservation. Seeing the look on kids' faces when something catches their interest, like seeing a wild animal or catching a fish, is priceless and it may lead them to a lifetime of outdoor appreciation.

What are some current projects the LWCD is involved with?

We've been working on a big multifaceted shoreline protection grant, as well as an aquatic plant management plan for Lake Noquebay. We also continue to provide area farmers with cost-sharing and technical assistance for agricultural best management practices for water quality. And, of course we're gearing up for the fall education season for T.O.A.D. classes, as well as the budget for 2008.

What are some major accomplishments you've spearheaded for the LWCD?

I think the creation of the T.O.A.D. program has been the most memorable. I'd say it's probably one of the best county-run environmental education programs in the state, since we offer such a variety of programs and we have the materials to do it. It has grown to serve over 3,000 people per year in the last few years, and it's come a long way since 2000 when it started. Another big achievement is that we've brought in over 5.3 million dollars in cost-sharing revenue for the farming community in Marinette County – that's been a huge challenge.

Greg's Message

I want people to get outdoors and get more involved in community conservation efforts, like lake or stream monitoring, environmental and friends' groups, or even taking kids fishing, hunting or wildlife viewing. People need to realize that it isn't just the government's responsibility to take care of our natural resources – it's everyone's responsibility and we can all do our part. I'm also concerned that kids nowadays are getting more and more disconnected from nature, which is tragic. We need to make sure that kids get out and learn to appreciate and care for our natural resources, instead of ignoring or fearing them.

Greg Cleereman has been with Marinette County for 10 years, and has been the Conservationist for 9 years. He has a degree in Environmental Science with minors in Chemistry and Regional Planning.

Proper Watering for Your Landscape Plants

By Scott Reuss, UWEX Horticulture Agent

We have concentrated on selecting native trees and shrubs in this series, but now we need to break from that topic to discuss the urgent need for watering our landscape plants during late summer and fall. This is truly a drought year in Marinette County, and all of our landscape plants need water. This article will outline some of the steps you can take to help your various plants enter winter in a healthier state.

One advantage of having selected native species for your landscape plantings (herbaceous or woody) is that they are more likely to be able to tolerate different environmental conditions from year to year. However, this year goes beyond hard conditions and even our native plants need some assistance, either in the form of consistent fall rains or supplemental irrigation. It is particularly important to water younger trees, shrubs, and all conifers in the absence of adequate rain showers.

Most growing plants need approximately one inch of water per week during the growing season, which means that we are significantly short on natural rainfall throughout the entire area. An important thing to consider for the future is to increase the water-holding capacity of your soil. Over the long-term, probably the best way to do this is to increase the organic matter content of your soil. Do this by incorporating organic amendments such as leaves (don't use black walnut), straw, lawn clippings, compost, or hay whenever you till the soil. Another way to increase the organic matter and to directly slow the loss of water to evaporation is by using organic mulches. Any mulch can be used to decrease evaporation losses, but organic mulches will also serve to increase the nutrient and water-holding capacity of the soil itself. By increasing the water-holding capacity of your soil, you will increase plant health and decrease the amount of supplemental water you need to provide.

When irrigating, remember to water the soil thoroughly and deeply. Light misting or

WATERING continued on page 7

Where in Marinette County?

Tell us where this picture was taken and you could win a prize!

Send us a note including your name, address, & phone number, or email awarren@marinettecounty.com to give us your answer. Any interesting facts about the subject are also welcome. **Please respond by September 21, 2007.** Correct answers will be entered into a drawing to win a \$20 gift card from Wal-Mart.



Congratulations to Michelle Sladky of Grafton, WI for guessing August's photo and winning the drawing! This is a back view of the Middle Inlet Town Hall, located at the corner of County Road X and U.S. highway 141. Thanks to everyone who participated and contributed information. This issue has the last "Where in Marinette County?" for 2007, so keep your eyes open for the September photo location!



Submerged Aquatic Vegetation and Lake Ecosystems

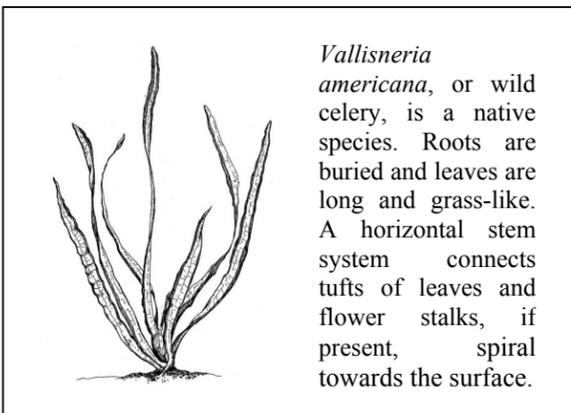
By Kendra Axness, UWEX Basin Educator

Illustrations by Amelia Hansen, from *The Book of Swamp & Bog*

When people hear the term “aquatic plants”, they probably think first of nuisance species, such as Eurasian water milfoil, that can interfere with their enjoyment of recreational activities such as boating and fishing. But native aquatic plants are an essential part of nearly every lake ecosystem, acting much like a forest does on land – providing shelter, food, and habitat for many organisms as well as producing oxygen and stabilizing soil. This article focuses on the submerged aquatic plants, also known as *submerged aquatic vegetation* (SAV). These plants are amazing in their variety, complexity, and ingenious adaptations.

Introduction to SAV

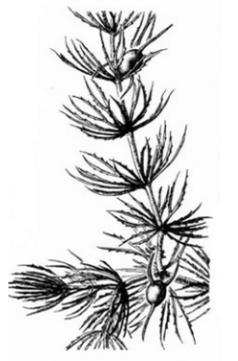
Aquatic plants, or *hydrophytes*, include those species of plants that require water to complete their life cycles. Aquatic plants can be *emergent*, *floating-leaved*, or *submerged*. **Emergent** plants have some parts in contact with the air above the water’s surface and leaves that look much like those of terrestrial plants (e.g. bur-reeds and Arrowhead). **Floating-leaved** plants have leathery yet flexible leaves that float on the surface of the water (e.g. water lilies and duckweed). Some plants with floating leaves also have submerged leaves, but they are still considered floating-leaved aquatics. **Submerged** aquatic plants grow entirely below the water surface (although a few species have flowers or tufts that may stick a few centimeters above the surface). They usually grow rooted in the bottom and have thin, flexible stems supported by the water (e.g. wild celery, some pondweeds, and bladderworts).



Vallisneria americana, or wild celery, is a native species. Roots are buried and leaves are long and grass-like. A horizontal stem system connects tufts of leaves and flower stalks, if present, spiral towards the surface.

SAV is found in marine and freshwater environments around the world. They are generally found in shallow, near-shore environments, where sunlight is available for photosynthesis and where water is present all year within suitable salinity and temperature ranges. Wave action is another important factor in the ability of SAV to survive: too much wave action, and plants will not be able to stay rooted; too little and plants may become choked with algae. Sediment is also

Ceratophyllum demersum, or coontail, is a submerged plant without roots. Leaves are whorled around the stem and leaflets are forked, not feather-like (as in milfoils). Plants may be long and sparse but often bushy, hence the name “coontail”.



important, since an overabundance in the water can prevent sunlight from reaching the plants.

How does SAV differ from terrestrial plants?

Submerged aquatic vegetation is uniquely adapted to survive in the water. Their structures differ from those of their terrestrial relatives in a number of ways:

Stems: The stems are limp and delicate with little strengthening tissue because they use the water for support.

Leaves: Leaves tend to be small and fine to minimize water resistance and to maximize carbon dioxide absorption efficiency. They lack *stomata*, pores in the leaves through which terrestrial plants exchange gases such as carbon dioxide and water vapor. Instead, these plants possess intracellular spaces called *aerenchyma* that supply oxygen to the rest of the plant. Since they are surrounded by water, submerged aquatic plants lack the well-developed waxy cuticle layer that helps keep terrestrial plants from drying out.

Nutrient transport: Because submerged plants are capable of absorbing water, nutrients, and dissolved gases directly through their leaves, *xylem* (the part of the plant responsible for carrying water and nutrients from the roots to the leaves) is reduced or absent.

Roots: Roots, which play an important role in the absorption of water and nutrients in terrestrial plants, are often reduced (or lacking) in submerged aquatic vegetation and their only function is to anchor the plant to the ground.

Why is SAV important?

In lake ecosystems, SAV provides food for invertebrates, waterfowl and shorebirds, as well as providing shelter and breeding/nesting sites for invertebrates and small fish in the leaves and stems. Photosynthesis adds dissolved oxygen to the water, and their leaves and roots help stabilize the shoreline against erosion and enhance water clarity. They also absorb nutrients, which can be major water pollutants, through their leaves and roots.

Healthy native aquatic plant communities help prevent the establishment of invasive non-native plants like Eurasian water milfoil.

Healthy populations of aquatic plants also help lower algae levels: observations in many shallow lakes have shown that when vegetation reaches its peak in the summer, algae or phytoplankton abundance declines. As long as nutrients and sunlight are available, either algae or aquatic plants - or both - are going to use them. If you remove aquatic plants from a lake, algal growth will increase.

Threats to SAV

Threats to submerged aquatic vegetation are numerous. One of the primary threats is runoff from agricultural and urban lands. If present in sufficient quantities, runoff nutrients can cause algae blooms that severely diminish sunlight penetration. The nutrients may also trigger a thick growth of *epiphytes* - plants that grow on the surface of submerged plant leaves, which block sunlight from reaching leaf surfaces.

Invasive species are another threat to submerged aquatic plants. The invasive mute swan feeds on submerged aquatic vegetation, sometimes to the point of overgrazing, and can uproot plants. Swans, as well as common carp, can also stir up sediments; this increases water temperature, lowers dissolved oxygen levels, and reduces light penetration. These abrupt changes in the aquatic ecosystem reduce new plant growth, and harm suitable habitat for other fish and aquatic organisms. Invasive plants such as Eurasian water milfoil are also a threat, since they can out-compete the native plants.

Recreation and construction activities around and on water bodies can also harm aquatic vegetation. Boat-generated waves and propeller scarring can uproot plants and prevent new plants from growing. In addition, structures such as docks, rafts, and floating trampolines can prevent sunlight from reaching aquatic plants.

These threats can be addressed by reducing land-based nutrient inputs to water bodies; by following safe boating practices and no-wake regulations on water bodies; and by learning about the ecological importance of these plants and preserving them on your waterfront property where possible.

Aquatic Plant Management

Aquatic plants can be managed by chemical, mechanical, physical or biological means. Most aquatic plant management (APM) activities require a permit, so it’s a good idea to contact your WDNR APM specialist if you are thinking about addressing aquatic plant issues for your property or lake. Ideally, aquatic plant management activities should be guided by a long-term aquatic plant management plan. Grants are available to help lake groups develop plans and implement selected activities. For more information about aquatic plants and management options, contact Greg Sevener, DNR Watershed Specialist, at 715-582-5013 or e-mail Gregory.sevener@wisconsin.gov.

WEB RESOURCES

UWEX Lake Program Aquatic Plant Management in Wisconsin

<http://www.uwsp.edu/cnr/uwexlakes/ecology/APMguide.asp>

WDNR Aquatic Plant Management

<http://dnr.wi.gov/org/water/fbp/lakes/aquaplan.htm>

Canada’s Aquatic Environments: Plants

<http://www.aquatic.uoguelph.ca/plants/introduction/plantframe.htm>



The Frogs & Toads of Marinette County, Part Two

By Greg Cleereman, County Conservationist
Photos by A.B. Sheldon and Dan Nedrelo

So far in this series we have covered general amphibian anatomy/ecology and introductions to the salamanders and half the frogs of Marinette County. This month we wrap up our series with a discussion of our remaining "true" (or typical) frogs and tree frogs. You can read previous articles at www.marinettecounty.com; just scroll to the bottom of the main page and click on the *Northwoods Journal* header.

Frogs live very different lives as adults, but share several characteristics as tadpoles and in their breeding habits. They all return to aquatic spots of various kinds to breed, and all use amplexus, a special breeding embrace in which the male grasps the female tightly behind the front legs with its front legs. In this position, the male fertilizes eggs as they are released. After a period of 3 to 14 days, depending on species and especially water temperature, eggs hatch into gilled tadpoles. The period between hatching and metamorphosis (changing from tadpole to adult) takes much longer and also depends heavily on water temperature and the availability of food. This period lasts from 45 to 90 days. Tadpoles are primarily vegetarians that feed on algae and decaying plant matter; adults are strictly carnivorous.

The **Eastern Gray Treefrog** (below) can be gray, brown, or green, and can change color to more closely match its surroundings. They are 1.2 - 2.4" and have dark blotches outlined in black on the back. The skin is somewhat like a toad's, and 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 1/2 to 3 seconds. The **Cope's Gray Treefrog** is almost identical in appearance to the Eastern Gray Treefrog, but its call is faster, harsher, and more nasal.



Both species of Gray Treefrogs have essentially the same natural history and prefer the same habitat. When water temperatures reach 60° F both species seek out temporary ponds, swamps, flooded areas and shallow margins of permanent lakes to breed. Although they 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 over water, and are 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 up to 2,000 eggs in small clusters on plants and other objects in the water. Gray Treefrogs reach sexual maturity after their second winter and have lived to be seven years old in captivity.

Adult Gray Treefrogs are found in deciduous and mixed forest adjacent to breeding ponds. There they forage up to 30 feet high in trees for 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. Treefrogs' suction cup toe pads allow them to climb smooth vertical surfaces such as windows, where they wait for insects attracted by interior lights. They hibernate under logs, leaf litter, or even in hollow trees. Like Peepers, they can tolerate subfreezing temperatures due to high levels of glycerol in their blood and tissues. This natural

antifreeze allows these frogs to withstand temperatures as low as 21°F for several days, where more than 40% of their body fluids are frozen.

The **Spring Peeper** is 0.8-1.5" and tan or gray with a dark "X" on its back; the X may be incomplete or have sidebars. 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, and 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 people, spring begins with the calling of Spring Peepers; 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 they congregate at breeding ponds, marshes, and ditches by the hundreds. Females favor the loudest males, who defend and call from a small territory. During amplexus, 750 to 1,300 eggs are released singly or in clusters on aquatic plants.



Peepers are most active at night, moving through undergrowth and leaf litter feeding on spiders, insects, and other arthropods. Larger aquatic insects eat tadpoles while fish, larger frogs, snakes, and birds eat adult Peepers. They hibernate during the winter under logs, bark and leaf litter. They can survive subfreezing temperatures for several days due to a glucose based anti freeze 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, since soil temperatures get too cold for too long and kill the hibernating frogs.

Wood Frogs are 1.4-3.3" 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, a brown or olive body speckled with black and gold and an iridescent belly. Calls are a series of croaks that sound like a quacking duck from a distance. They are among the earliest breeders and



may start calling when snow is still on the ground. Males generally outnumber females at a given time during their short breeding season and readily grab any passing frog. Because of this, males have developed a special chirp, while females remain quiet. Once in amplexus the two frogs move to a communal egg-laying site where 500 to 3,000 eggs are laid in several masses attached to vegetation.

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. Like most Marinette County frogs, they eat mostly terrestrial invertebrates. Their tadpoles differ from the norm in that they can be quite carnivorous, feeding on the eggs and larvae of other amphibians; in addition, tadpoles nearing metamorphosis develop poison glands that help deter aquatic insects. Another threat is that their breeding ponds may dry up before metamorphosis can occur.



The **Northern Leopard Frog** is 2 -4.4" and green 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, and its belly is iridescent white. Calls are a slow, rumbling snore. In late April as water temperatures reach 60° F, breeding begins. Males call mostly at night while sprawled at or just below the waters' surface. A mating pair moves to a communal egg laying area where the female lays up to 6,000 eggs, usually attached to submerged stems. Sexual maturity can take up to three years and individuals have reached nine years of age.

Leopard Frogs 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. They 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.

Pickerel Frogs are smaller (1.7-3.4") but similar in color to Leopard Frogs. They have more rectangular spots in general, and on their back the spots are arranged in two rows and outlined only in black. They have bright yellow or orange in the groin area. 2-3" tadpoles are green or grayish brown above with black and yellow specks with iridescent cream-colored bellies. The tails are much darker than those of Leopard Frog tadpoles and have 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, and they will not use polluted or stagnant waters. During a period of amplexus that can last several days, up to

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Northwoods Journal

Volume 5, Issue 4

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 County Land Information Department, Land & Water Conservation Division
- ▶ Marinette County Parks & Outdoor Recreation Department
- ▶ University of Wisconsin-Extension

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Please send comments to:

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Why not visit the county website? Go to <http://www.marinettecounty.com> today!





Hydrilla – The Newest Invader to Marinette County!

By Chuck Druckrey, Water Resource Specialist
Photos courtesy of Wisconsin DNR

By now you may have already heard that a new aquatic exotic invasive weed called *hydrilla* has recently been discovered in Marinette County. The discovery was made in early August when a private lake and pond management company identified the plant in a manmade pond near Athelstane. You may think this is not all that important – after all, it's just another plant in the water, right? Unfortunately, this is no ordinary aquatic weed. In fact, hydrilla has been called the "perfect aquatic weed" due to its rapid growth and ability to spread!

A native of Asia and Africa, hydrilla was found growing in two Florida lakes in 1960. By 1995 it covered almost 100,000 acres in 43% of Florida's lakes. In most southern states, hydrilla is now aquatic enemy number one. *Florida alone spends millions of dollars each year just trying to manage hydrilla in public lakes.*



So what makes hydrilla so bad? First, it can survive and reproduce in low light conditions that limit most native plants. In clear lakes it can often be found growing from shore to a depth of more than 15 feet. Like the exotic Eurasian water milfoil, hydrilla grows quickly to the surface. How quickly? In mid-summer, it can grow an inch a day. When it reaches the surface, it branches profusely and spreads out to form a canopy that cuts off light to all other plants below it. To add to the problem, it has developed resistance to Fluridone, one of the chemicals used for whole lake treatments.

Hydrilla is also very good at spreading. In fact, there are four ways this plant can reproduce: fragments, turions, tubers, and seed. A *stem fragment* containing a single whorl of leaves will grow into a new plant 50% of the time, which means it can easily spread on boats, trailers, and



bait buckets. A *turion* is a special bud that overwinters and forms a new plant. *Tubers* form in the sediment and can withstand several days of drying. As long as the sediment remains moist, the tubers can lie dormant for several years. Finally, hydrilla also produces seeds that can be spread by waterfowl. Thankfully, the production of seed appears to be relatively rare in northern climates.

So how did it get here? Currently, the DNR and Wisconsin Department of Agriculture are trying to find the source, but it may have hitchhiked on plants purchased from an aquatic nursery on the east coast. If this does turn out to be the source, it would further the argument that we should not be importing aquatic plants into Wisconsin. While that may be unpopular with water gardeners, it is critical to protect our lakes from these exotic invaders.

As for the existing infestation, currently the DNR, US Department of Agriculture, Wisconsin Department of Agriculture, and Marinette County Land & Water Conservation Division are working with the owners of the pond to eradicate the plant. By the time this goes to print, the pond will have been treated with herbicide and drained to reduce the chance of spread to other waters. The winter drawdown should also destroy most of the tubers. A long-term plan to eradicate the plant will be developed this winter and implemented next spring. We remain confident that we can eradicate this isolated population.

The Marinette County LWCD will also be surveying the surrounding waters to detect any hydrilla that may have escaped from the pond. With any luck, it has not spread to any natural lakes or streams in the area and we can treat this invasion as a lesson in the dangers of importing and spreading invasive exotic species.

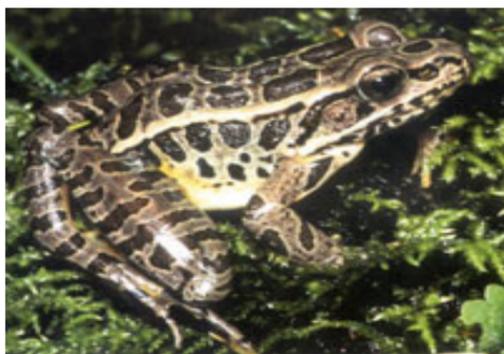
CITIZEN LAKE MONITORING NETWORK

Did you know that there are 442 lakes in Marinette County? Each one provides us with recreational opportunities and scenic beauty, while fostering a unique, intricate, and delicate ecological community. To ensure these benefits survive for our grandchildren's enjoyment, we must actively monitor and maintain the water quality and surrounding ecosystems. This duty typically falls to state and county governments, but Wisconsin has far too many lakes for local agencies to effectively monitor them all.

With this in mind, the Wisconsin Department of Natural Resources teamed up with interested and active citizens in 1986 and began the Citizen Lake Monitoring Network. Volunteers measured water clarity in 126 lakes in the first year. Since then, the program has been expanded to include chemical sampling and exotic species identification and mapping. Currently, over 1,100 volunteers are actively monitoring 850 lakes throughout Wisconsin. Of these lakes, though, only the following nine are in Marinette County: Bass, Big Newton, Glen, Hilbert, Little Newton, Noquebay, Oneonta, Thunder, and Town Corner.

That's why we need your help! For twenty years, environmentally conscious citizens like you have committed a few hours of their time a month to keeping Wisconsin lakes healthy. The ability and responsibility for stewardship of our lakes and water resources falls upon all of us. So please, if you feel the health of your local lakes is important, give us a call and find out how you can become a Citizen Lake Monitor. Call the Land & Water Conservation Division at 715-732-7780 for details.

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3,000 eggs will be laid in several globular clusters on submerged vegetation. Emerged frogs reach sexual maturity in their second spring after hatching. 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 the increasing heat of summer. In winter, Pickerel Frogs 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. They will eat almost any aquatic or terrestrial invertebrate. Toxic skin

secretions keep adult Pickerel Frogs safe from most predators, except for Bull and Green Frogs.

Marinette County is home to nine species of frog, one species of toad, and six species of salamander. Few amphibian species are well known and even fewer are properly appreciated. They play a vital role in the food web, were in many cases our first real exposure to wild animals, and are key part of the sound and color of the north woods. Information for this article was based on *Amphibians and Reptiles of the Great Lakes Region*, by James H. Harding. This book is a great place to start to learn more about these interesting creatures. You can also visit the DNR's environmental education website online at <http://dnr.wi.gov/org/caer/ce/ee/critter/amphibian/index.htm>.

WATERING continued from page 4

showers do not do your plants very much good, whereas one or two deep irrigations of one-half to one inch of water per week is much better for plant health. When watering large areas, such as flowerbeds and lawns, try to water in the early

morning to maximize the ability of the soil to absorb the water and minimize plant disease potential. If in doubt about how much water your sprinkling technique is applying, place coffee cans or other containers in various places under your irrigation system and check for both consistency and the amount that you are applying. In regards to lawns: if your grasses have been dormant all summer you need to start watering them, or they will likely not come back this fall and/or next spring and you will need to replace it.

Trees and shrubs should be soaked, rather than sprinkled, so the roots are fully hydrated prior to soil freeze. When watering large woody plants, remember that most of their root system is not by the trunk, but out near the drip-line of the tree. Also, mature trees take a lot more water; they need at least 15 gallons of water per inch of diameter, whereas small trees and shrubs need at least 5 gallons per inch of stem diameter.

If you have horticultural questions or concerns, contact Scott or Linda at the Marinette County UW-Extension office, 715-732-7510 or 1-877-884-4408, or e-mail Scott at: scott.reuss@ces.uwex.edu.



Spokes & Folks Bicycle Club

www.spokesandfolks.com



*Guests are welcome, helmets are required.
Lights are recommended on some rides.*

September 2007 Ride Schedule

(See website for more details)

Saturday Morning Rides

May 5-August 25 leave at 8am

Meet at the Marinette City Park near the restroom. From June through August, rides are longer, approximately 45 miles. Contact: Vern @ 715-587-4341.

Wednesday Night Fast Rides

Leaving from Cycle Path in Menominee at 6pm on Wed. nights. Anyone can join, but if you don't keep up, you will be left behind. Contact: Adam @ 906-863-9361.

West Shore Fishing Museum Ice Cream Social Ride – September 2

Meet at Cycle Path in Menominee at 10am. This ride will be 25 miles out and 25 miles back with a stop along the bay for refreshments. Contact: Mel @ 715-587-7300.

UP Mountain Bike Ride - September 8

A 25-mile mountain bike ride on gravel, single track and 2 track. At the end of the ride there is a wet river crossing with a lunch stop by a secluded waterfall. Contact: Vern @ 715-587-4341.

Whitefish Lodge Mountain Bike Weekend - September 21-23

Join Mel Levin for a weekend away from it all at secluded Whitefish Lodge. The weekend includes rides to Laughing Whitefish Falls and Bruno's Run. Contact: Mel @ 715-587-7300.

UP Mountain Bike Weekend – October 6& 7

Leave at 8am and drive to Gladstone. We'll stay at Thunder Bay Inn and need a \$40 deposit per person by Sept. 21. Contact: Vern @ 715-587-4341.

Sauna Ride – October 13. Details not yet complete. Contact: Joanne @ 906-863-8827.

Marinette County Harmony Arboretum



½ mile south of Hwy 64, on County E

Extension : 715-732-7510

Land Information Office: 715-732-7780
<http://www.marinettecounty.com>

September 2007

All programs are free unless otherwise stated.

September 15 – Fall Plant Sale, 9am-1pm

Fall is a great time to plant bulbs and transplant perennials. Here's your chance to pick up some color for your garden or yard.

September 29 – Fall Fruit Management Workshop, 9:30-11:30am

UW-Extension Horticulture Agent Scott Reuss will discuss how to manage fruit plantings to ready them for winter, and how to achieve optimum production for the following year.

Area Events Calendar

- Aug.24-Oct. 5 Environmental Awareness Poster Contest.** Sponsored by the Wisconsin Land & Water Conservation Association and the Land & Water Conservation. There are 6 different divisions from Kindergarten through 12th Grade. Posters need to be at the Land Information Office by October 5, 2007. Questions call (715) 732-7780.
- Sept 1st-30th UW-Marquette Art Gallery Exhibit**
By student artists from the DAR Boys and Girls Club in Menominee.
- Sept 1 Amberg Fire Department Picnic**
Parade 11am, picnic follows. Lawnmower races, horseshoe tournament, raffle, prizes, free roasted corn all day. Call (715) 759-5594.
- Sept 2 Silver Dollar Street Dance**
In Pembine. Music, brats, refreshments, corn roast. Call (715) 324-5237.
- Sept 8 “Embrace Life” Community Family Walk**
Registration YMCA - UW Max Peterson Field House at 7:30am, walk begins at 8:00am. Entrance fee \$25 individual or \$50 in sponsors. Sponsored by Suicide Prevention Network. Questions call (906) 864-2590.
- Sept 8 Bazaar & Flea Market at Memorial Marina Park, Menominee**
Sponsored by Marinette Menominee Area Chamber of Commerce. Event will be held rain/snow or shine. Questions call Donna at 735-6681.
- Sept 8 Creative Color in Crivitz Fine Art Show**
Veteran's Memorial Park, downtown Crivitz. Proceeds of this event will be used to create a scholarship for a high school student in the arts. Sponsored by Crivitz Business Association.
- Sept 8-9 Quilt Show 2007**
10:00am – 4:00pm Marinette Middle School. Sponsored by Northwoods Quilters. Admission \$3 and public welcome. For more information call 864-3078 or 735-9806
- Sept 9 Henes Park 100-Year Celebration & Community Potluck Picnic**
12:00 – 4:00pm, Pavilion #3 Henes Park, Menominee. Open to everyone. Bring dish to pass and beverage, table service, lawn chairs, portable table if you have one, play equipment: swimsuit, softball, etc.
- Sept 11 M&M Chamber of Commerce End of Summer Golf Outing**
11:30am, Little River Country Club, Marinette. Open to the public. Registration 11:30am, shot gun start 1pm. \$75 per person, includes lunch, greens fees, dinner, beverages, chance at door prizes & golf shirt. To register/questions, call 735-6681.
- Sept 15 Annual Peshtigo River Trail Paddle**
Lower Peshtigo River, starting in Peshtigo. 10am – 2:30pm. See page 1 for more details. Free, but must register to attend.
- Sept 15 Fall Plant Sale at Harmony Arboretum**
See Harmony schedule below for details.
- Sept 22 Peshtigo Historical Day**
Badger Park. Parade starts at 10am. Live music, craft booths, food, kids' activities. (715) 582-0327
- Sept 29 Fall Fruit Management Workshop at Harmony Arboretum**
See Harmony schedule below for details.
- Sept 29 Crivitz Harvest Fest**
Sponsored by Crivitz Business Association. Arts, crafts at high school, downtown merchant's specials. Contact (715) 856-3623.
- Sept 30 Apple Fest**
Pleasant View Orchard, W6050 Chapman Rd, Niagara. 11:30am – 4:30 pm. Horse-drawn hayrides, food, blue grass concert and jam session. (715) 856-5815
- Oct 6 Arts & Crafts Show**
9:00am – 3:00pm, at The Red Apple, corner of Hwy 141 and Cty. W Crivitz. Artists and crafters from WI, MI and IL. Contact 715-854-7191.
- Oct 20 Bazaar & Flea Market at Memorial Marina Park, Menominee** (see Sept. 8 info)
- Oct 26-27 Haunted Harmony**
Harmony Arboretum. 6:30 – 10:30 pm. Spooky trail hike and family fun for all ages. See page 2 for more details. Rain date October 28.
- Oct 27 Haunted Hayride**
Four Seasons Resort, Pembine. Call (877) 324-5244.

This is the last Northwoods Journal!

Don't panic, we'll be back next June. However, this winter we will be thinking about article ideas for next summer. If you have ideas about subject matter or would like to contribute articles on how to enjoy or protect our county's outdoor life and local history, email awarren@marinettecounty.com or drop us a line at: LWCD – Northwoods Journal, 1926 Hall Avenue, Marinette, WI 54143.

