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June – September

Volume 3, Issue 4

Northwoods Journal

September 2005

Enjoying and Protecting Marinette County's Outdoor Life

In This Issue

Exploding volcanoes and soaring mountains!

Massive sheets of ice and vast glacial lakes!

They all left their mark on our area. Join your host, Howard Lorenz, on a bus tour to see these ancient landscape features and learn how they were formed.
(It's also a great time to enjoy the fall colors.)

Fall Geology Tour

of Marinette & Menominee Counties

Friday, October 7, 2005
8:00 a.m. – 5:30 p.m.
$20 / person
Bring a bag lunch, beverages provided

To register call 715-732-7780 or email adirienzo@marinettecounty.com

Sponsored By:
Marinette County
Land & Water Conservation
and Menominee Conservation District

Geological History of Marinette County Takes You Back in Time

Dolomite deposit formed from the sediment of ancient seas about 455 million years ago

By Howard Lorenz, soil scientist

Marinette County's rocks are a mix of volcanic and sedimentary rock and unconsolidated glacial deposits. If the county were divided diagonally along a northeast-southwest line from County Highway K where it meets the Menominee River to County Highway S where it crosses into Oconto County, the older volcanic deposits would be north of that line and the younger sedimentary deposits would be south.

The geological history of Marinette County begins in the Precambrian Era, about 3,500 million years ago when volcanic activity was rampant on earth. Lava flowing from these volcanoes formed a small continent called the *Superior Continent* by 2,500 million years ago. Shallow seas existed at the southern edge of this continent and deposited a variety of sediments.

About 1,900 million years ago, volcanic activity again started in the seas to the south of the Superior Continent. This volcanic activity pushed along the margin of this continent and formed the Penokean Mountains about 1,890 million years ago. Traces of the Penokean Mountains can be seen today in Marinette County. These mountains were once similar in height to the Rocky Mountains. For the last 700 to 800 million years of geologic time, most volcanic activity took place on the eastern and western edges of the continent, away from Wisconsin.

From the end of the Precambrian and earliest Cambrian time, Wisconsin was located very differently on the earth than it is today. Scientists believe that North America was located near the equator and was a very warm and wet place that was basically lifeless. Because of the continent's location, tropical weathering and erosion acted upon the rocks that existed at that time. This weathering eroded much of northern Wisconsin to a relatively flat landscape compared to what it was at one time.

From about 600 to 500 million years ago, at the end of the Precambrian Era and the beginning of the Paleozoic Era (during the Cambrian Period), Wisconsin was covered by ancient seas. The sand deposits from these seas were continually being redeposited by waves and sea currents and are today known collectively as *Cambrian sandstones*.

Geologic Time Scale

Era	Period	Epoch	Age*
Cenozoic	Quaternary	Holocene	0.011
		Pleistocene	1.8
	Tertiary	Pliocene	5
		Miocene	23
		Oligocene	38
		Eocene	54
		Paleocene	65
Mesozoic	Cretaceous		146
	Jurassic		208
	Triassic		245
Paleozoic	Permian		286
	Carboniferous		360
	Devonian		410
	Silurian		440
	Ordovician		505
	Cambrian		544

*Millions of years

During early Ordovician time, the seas again lowered and much of Wisconsin was a low, soggy, tropical land for a few million years. The sea level rose again about 490 million years ago. Much of the original sand deposits were cemented and changed to sandstone, so calcium-rich limestone was now being deposited in these seas. As time went by much of the limestone was chemically changed to form dolomite, which is rich in magnesium.

About 480 million years ago, the seas again started to fall and vast areas of North America were reduced to low lands that were eroded by rivers and wind. A large amount of the Cambrian sandstone was eroded away and formed a new deposit of quartz sand that covered much of Wisconsin. This layer of quartz sand, which looks like beach sand, is called *St. Peter sandstone*.

MC GEOLOGY CONTINUED ON PAGE 4

Wisconsin's Champion Trees

"If you stand in the tall woods and look up and around, you see the story of the land and its people. In fact, Wisconsin's history is written in her trees, by annual rings that act like pages in a diary, recording drought, fires and times of plenty. Fortunately for us, a few of these trees become champions."
Timothy Mulhern, WDNR Forestry Division Deputy Administrator

A statewide register for "big trees" was started in Wisconsin in 1941 by conservationist Walter E. Scott, who followed the lead of the American Forestry Association's national record. Today, the Wisconsin Department of Natural Resources Forestry Division maintains the register with information on over 270 tree species – native, non-native and cultivars – totaling over 2,200 records. This registry is published occationally, and is available on the DNR's web site (listed below). It contains a wealth of information about the dimensions, rank, and location of each listed tree. The registry promotes the appreciation of Wisconsin's trees and forests by providing us with the listing of Wisconsin's champion trees and encouraging us to nominate new champions.

Of course, Marinette County is home to a few of these champions. The second largest white pine (*Pinus strobus*) in the state was nominated and recorded in 2000 by DNR forester Dan Mertz. The tree, located near Five Star Lane in the village of Crivitz, had a 167-inch circumference, height of 118 feet, and average crown spread of 54 feet. The largest paper birch (*Betula papyrifera*) in Wisconsin has emerged in Peshtigo. It was recently nominated by Dave Banister and recorded by DNR forester Katherine Lenz. This tree, owned by Joe Jakups, measures in with a circumference of 130.5 inches, height of 95 feet, and a crown spread of 74.5 feet. These two are the only ones recorded, but there's got to be more out there, right?

Nominate a Champion Tree

Maybe your outdoor excursions have brought you across some pretty big trees that could be record holders. To find out, go to www.dnr.state.wi.us/org/land/forestry/uf/Champion/ to check out the competition. You will also learn how to take measurments, submit a nomination form, and have it verified by a "big tree inspector" or professional forester. If your tree makes the top ten for its species, it will be recorded in the registry.

The Wisconsin Big Tree Society

The Wisconsin Big Tree Society is an informal organization of people interested in the history and heritage of Wisconsin's trees and forests.
Interested members who qualify may be certified as "big tree inspectors." Inspectors are asked to verify new champion tree nominations and update old records in their area.
If you are interested in being on the mailing list for the Wisconsin Big Tree Society send your name and address to: Wisconsin Big Tree Society, Department of Natural Resources, PO Box 7921, Madison, WI 53707.

Northwoods Journal
Volume 3, Issue 4
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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:
- Land & Water Conservation Division, Marinette County Land Information Department
- University of Wisconsin-Extension

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Please send comments to:
Marinette County
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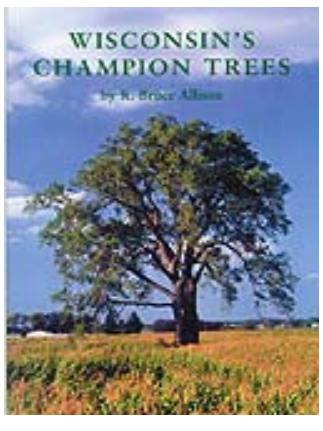
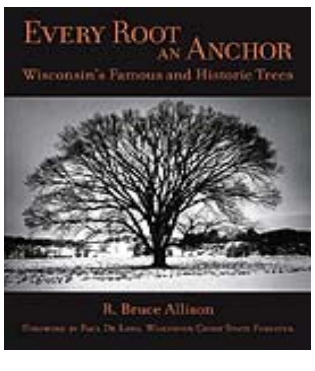
1926 Hall Ave
Marinette, WI 54143
(715) 732-7780
akostner@marinettecounty.com

Check us out on the web at:
www.marinettecounty.com/lw_home.htm

Order the Book

The 2005 edition of *Wisconsin's Champion Trees: A Tree Hunter's Guide,* by R. Bruce Allison is currently available. For you major tree enthusiasts, you might also enjoy another of Allison's books, *Every Root an Anchor: Wisconsin's Famous and Historic Trees.* Both can be purchased online at: www.wisc.edu/wisconsinpress/books/4288.htm or by phone, 1-800-621-2736.





Nature's Almanac

September 10

September air still holds the moisture of summer, and heavy dews are common in the chilly sunrises. In the calm of this early hour, dewdrops drape meadow plants, creating sparkling scenes. Large circular orb webs made by spiders last night now sag with moisture. Just as attractive as these aerial snares are the dew-coated funnel webs which now grace the lawns.

Not as large or delicate as the vertical webs, funnel webs are more abundant: twenty or more can easily be found in a single yard. In their droplet attire, they look like lace scattered on the lawn. The flat sheet of threads has an opening in the center, giving the webs their resemblance to funnels, and here the owner sits waiting for passing meals. A blundering insect crossing the web is quickly seized by this sedentary hunter. With poor vision, the spider relies greatly on feeling the struggling captive. The spider's fangs inject digestive venom into the prey, and with the insides of the insect thus liquefied, the spider sucks it dry. Spiders remain in these funnel webs until the cold sits in, at which time many lay eggs and die – unless they have chosen buildings such as garages and basements for their webs.

September 16

In keeping with the color changes of deciduous trees and shrubs in September, the hazels or hazelnuts of fence rows and woodland edges develop colors of yellow or red on their toothed leaves. This shrub is often confused with alder or is not even noticed among the larger trees.

It is not the leaf coloring that makes this shrub identifiable in fall; it's the nuts that clump on the small branches. The American hazelnut and the lesser-known beaked hazelnut both grow in the northland. Each forms its seeds in nutlike structure covered with ragged leaf bracts called husks. On the American hazelnut, the leafy husk grows out long and pointed.

Though they ripen in September, we may never see the mature fruits. Many animals – especially grouse, small mammals, and bears – devour them hastily, often when still green. Bears have been known to break down entire groves of these shrubs while feeding. Like other shrubs that are clones of a single plant, they will grow again from a sturdy rootstock.

September 27

Whether they are sunsets, rainbows, or northern lights, some of nature's displays are worth seeing again and again. During the last week in September, northland deciduous trees start to replay the autumn show that we have seen before. After a summer of green, look for the reds of dogwood, red maple, red oak, sumac, and Virginia creeper; the oranges of cherry and sugar maple; and the yellows of ash, aspen, basswood, birch, elm, hazel, poplar, sugar maple, and willow.

Green chlorophyll used for food-making all summer breaks down in cool weather, and with it gone, yellow xanthophylls and orange carotene, always present, become visible. During clear days and cool nights, excess leaf sugars form anthocyanin, a dazzling red pigment. Though a treat for us, this panorama seems to be incidental for the trees, doing them neither good nor harm. Within a month, this tree-mendous spectacle will be one of our summer memories and we will look forward to next year's show.

From, "Backyard Almanac," *by Larry Weber*
Illustrations by Judy Gibbs

Birding Bulletin

By Greg "The Egg" Cleereman, County Conservationist

Whip' poor will,...Whip' poor will... For many people nothing says "UP NORTH" like the call of the whip-poor-will. In years past it was often the first wild sound heard when the car doors opened on arrival at the cabin on a Friday evening. The whip-poor will's call is one of the most easily recognizable birdcalls heard in Marinette County. Because it depends on insects for food, whip-poor-wills are migrants. They summer in northeastern United States and southeastern Canada and winter along the gulf coast of the United States south to Central America. Their Marinette County arrival typically occurs in mid-May to coincide with hatching of large numbers of flying insects.

The whip-poor-will is a member of a bird group known as "goat suckers." Although there are 67 species worldwide, the only other species in this group commonly seen in Marinette County is the common nighthawk. In ancient times, this type of bird was seen flying around livestock to feed on the insects swarming over the animals. The herders thought the birds were there to suck milk from their goats udders, causing them to dry up. They really should be called moth catchers, after their main prey. Whip-poor-wills feed by catching flying insects in the air. The birds have relatively large mouths that open very widely and specialized feathers called rictal bristles surrounding their mouth and protecting their eyes. The birds fly with their mouths open. The bristles that surround the mouth make an even larger opening to catch flying prey.

Although many people have heard whip-poor-wills, few have seen them. This is not surprising considering the birds fly mainly at dusk and at night to feed. They rest on the ground during the day but their heavily mottled gray, black and brown plumage makes them look just like the forest leaf litter in which they lay. Whip-poor-wills are about the size of a robin. The male and female look similar except that the male has white tips to its outer tail feathers while the female's tail is all brown. If a light is shined on them at night, their eyes glow a bright ruby red.

Whip-poor-wills breed in open, fairly dry woodlands. They simply lay two white gray mottled eggs on the forest floor. No materials are added to the nest site although sometimes a depression is formed in the leaf litter by the weight of their bodies. Both the male and female incubate the eggs for 19 to 20 days. Egg laying is synchronized with the lunar cycle so that the hatching occurs about 10 days before a full moon. This allows the parents to forage the entire night and bring the most food to their young. Unlike bats, whip-poor-wills feed by sight and need some light to find their prey.

Whip-poor-will chicks are considered to be semi-precocial. This means they hatch with open eyes and covered with down, but are still cared for by the parents in the nest, until close to adult size. The chicks move about during the nestling stage and often move a short distance apart possibly to deter predators. The parent encourages this movement by shoving aside one of the young with its foot as it leaves the nest. The nestling may be sent head over heels by the shove. Precocial is the term for baby birds that are well-developed at hatching and can run around, feed themselves and regulate their body temperature. Pheasants, ruffed grouse, and ducks are precocial. Altricial refers to birds that are naked, blind, and helpless at hatching. These birds are completely dependent on their parents to regulate their body temperature and provide them with food for rapid growth. Most songbirds such as robins, warblers, thrushes, and finches are altricial.

Although whip-poor-wills are still regularly heard in Marinette County, their numbers have dropped significantly in recent years. Researchers don't know why, but according to the North American Breeding Bird Survey, whip-poor-will numbers have declined an average of 4.9% a year since 1980.

This is the last Northwoods Journal of the Season!

Although we won't be back until next June, we will be working through the winter on article ideas for next summer. If you have article ideas on how to enjoy or protect our county's outdoor life and local history, email ***akostner@marinettecounty.com*** or drop us a line at:

LWCD – Northwoods Journal
1926 Hall Avenue
Marinette, WI 54143

Annual Meeting Coming to Marinette

The Phoenix Falls Chapter of the Wisconsin Woodlands Owners Association invites woodland owners and WWOA members from around the state to Marinette for the annual meeting September 8-11. Most of the conference will take place at UW-Marinette, while guests will stay at the Best Western Riverfront Inn and be shuttled to the UW campus and special field trip sites.

A preconference tour on Thursday will travel to the Menominee Tribal Lands to learn about their sustainable forestry management. Friday offers tours to three Mountain area tree farms, Marinette County waterfalls and forests, the Peshtigo River State Forest and Caldron Falls Flowage, Great Lakes Carbide Tool Manufacturing, and the Beyer Home Museum. The day is capped off with a pizza buffet evening social. Saturday's program will start with the annual business meeting, followed by keynote speaker. Diane Nichols will take you back in time to the Peshtigo fire through an historical reenactment. In the afternoon, a variety of sessions include exotic and invasive species, financial information, learning about family trees, and a hands-on computer workshop. The awards banquet at the Best Western Riverfront Inn will recognize WWOA award winners Jim and Marlene Zdanovec; the 2005 WI Tree Farmers, 2004 National Tree Farmers, and WWOA members. Sunday Bob and Phyllis Gottschalk will host WWOA members at their Medicine Brook Woodlands, located near Crivitz, for a hands-on field day.

For more information on how you may take part in these events, please call 715-346-4798 or email *nbozek@uwsp.edu*.

2nd Annual

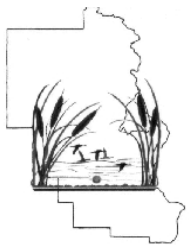
Peshtigo River Trail Trip

September 17th
10 a.m. – 2:30 p.m.

- Free guided paddle trip on the Lower Peshtigo River
- Limited supply of canoes for use
- Peshtigo East Side Landing to County Rd. BB landing
- Wildlife & historic sites

To register, call 715-732-7780
Or email adirienzo@marinettecounty.com

Youth under 18
must be accompanied by an adult.



Destination…. Marinette County

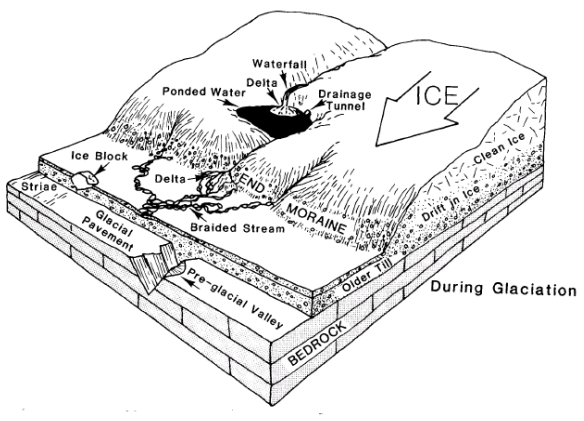
Geology Road Trip

By Howard Lorenz, soil scientist

When traveling Marinette County, remnants of geological history can be easily seen, if you know what to look for. To help you recognize these features, I will take you on a quick virtual road trip around the county to point them out.

Starting in the southeast corner of Marinette County, evidence of various water level stages of Lake Michigan can be seen throughout the Town of Peshtigo. Sandy ridges formed when the glacial ice receded to the north. They mark old beach lines from each of four major permanent elevations. One of these ridges can be observed just past Marinette High School on Pierce Avenue. Another ridge can be seen just past the Pine Tree Mall on County Highway T. This ridge marks the shoreline of Glacial Lake Nippising that had an elevation of 605 feet, about 20 feet higher than the present elevation of the bay.

Proceeding west on County B into the Towns of Grover and Pound, you cross over a gently sloping *ground moraine*. This ground moraine was deposited beneath glacial ice as it pushed southwest into the county. Some areas in this part of the county were probably covered with a layer of glacial ice as much as 1,000 feet thick. The soils in this area consist of loamy *glacial till,* a mix of soil materials ranging from sand to clay and may contain some cobbles and boulders. Much of the agriculture in the county is located here.



In this area you can also observe Ordovician-age dolomite deposits. Just east of Coleman, an exposure of dolomite can be seen in a road cut west of the intersection of County Highways B and MM. Another good site to view this dolomite is on County E just north of Highway 64 where dolomite is actively quarried for sand and gravel. The light yellow sand that is also being mined is from St. Peter sandstone. It is high in quartz and used for foundry molds and making glass. These bedrock types were deposited in ancient seas.

Driving north on U.S. 141 from Coleman to the intersection of Highway 64, notice a gravel pit on the east side. Sand and gravel in this pit at one time formed an *esker*, a river tunnel cut into the ice by glacial meltwater. The tunnel eventually filled with sand and gravel, leaving behind the characteristic winding ridge when the ice melted. This esker runs about 30 miles in a northeast-southwest direction.

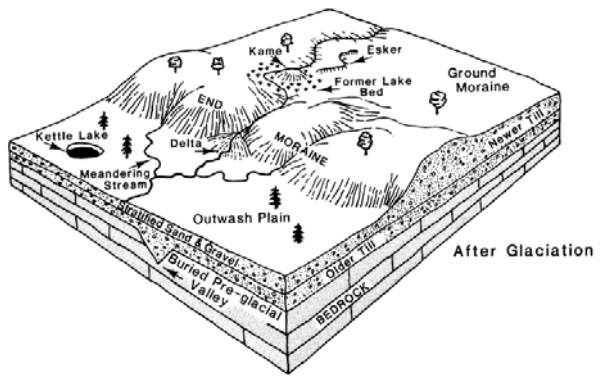
Following Highway 141 north to Crivitz, you will notice how flat the landscape is in the city. This area is part of an *outwash plain* deposited by glacial meltwater. The Peshtigo River is the remnant channel from this meltwater. Soils here are primarily sandy.

As you drive west from Crivitz on County W past Kirby Lake Lane, you will climb a hill. This is the edge of an *end moraine*, which marks the edge of the glacial ice.

Continue west on Highway W, and turn north onto Parkway Road. You will notice many igneous and metamorphic bedrock outcrops along the road. These are remnants of the Penokean Mountains that have been reduced by geological weathering. These outcrops are all that remain from a magnificent mountain range that once covered this part of Northern Wisconsin about 1,800 million years ago. Most of the scenic waterfalls in Marinette County are formed by rivers that flow through this area of bedrock outcrops.

Proceed north on Parkway Road, cross County C, then continue on Parkway for about three miles to Brandywine Lane. As you travel north, you are on the Mountain moraine for about the next seven miles. This moraine marks the western edge of the Green Bay Lobe of Glaciation that advanced into Marinette County from the northeast about 18,000 years ago. These soils feature a mix of sand, silt, clay, gravel, cobbles and even boulders as large as 20 feet in diameter. This is where the ice stopped for a relatively long time and slowly weathered away leaving a very irregular landscape.

West of this area, the landscape was formed by the Langlade Ice Lobe that entered the county from the north and west. The glacial features here consist mostly of *drumlins*, low, elongated oval ridges of compact glacial till, surrounded by outwash channels.



Continue north on Parkway Road, and then turn east on Benson Lake Road. About two miles from the intersection, you can view Benson Lake to the south. If you stop and walk the trail to the lake, you will see some clayey soil deposits along the way. This clayey material was deposited in Glacial Lake Dunbar, which was a temporary *glacial lake*.

As you travel about four miles to the east, and pass Tower Road, you will again notice more hilly landscape. This area is what glacial geologists call the inner Mountain moraine. This moraine and the Mountain moraine together formed the edges of Glacial Lake Dunbar. Glacial meltwater flowed between these two moraines until the pass was blocked by glacial deposits or ice. The lake formed and the clay settled to the bottom. This lake extended into Florence County to the north. Clay from this lake was used as a liner for several Marinette County landfills.

Follow Benson Lake Road until you reach Dow Dam Road then proceed east to Amberg. Take Highway 141 south until you reach the designated scenic overlook north of Wausaukee. This overlook is in the end moraine of the Green Bay Lobe of Glaciation. Again, the landscape is hilly and the soil a mixture of material deposited at the edge of the ice. The variable nature of the soils deposits can be observed in road cuts along the east side of Highway 141.

As you continue south on Highway 141, turn east on State Highway 180 and travel about 12 miles to McAllister. Just before the intersection of County JJ, lies a ridge north of the road. This ridge is a drumlin that formed beneath the glacial ice.

Kettle lakes can be observed throughout Marinette County. They formed when blocks of ice broke off the main ice sheet, stuck in the ground and eventually were covered with outwash sand or gravel. The ice blocks melted and left behind holes in the landscape that intercepted the ground water table, and filled with water. Sand Lake at Camp Bird and Left Foot Lake just south of Crivitz are examples of kettle lakes.

When traveling across the county, you are experiencing geological history, even some that dates back to the time when the earth formed. I encourage you to someday grab a county map and take this trip on your own, or join me on the bus tour coming up in October (see page 1 for details).

To dig even further into the geology of Northeast Wisconsin, I recommend Roadside Geology, by John Attig, or the Marinette County Soil Survey Report, available at the Land Information Office, Marinette County Courthouse.

MC GEOLOGY CONTINUED

The seas again began to rise and a layer of limestone known as the *Platteville formation* was deposited on top of the St. Peter sandstone. About 455 to 450 million years ago there was volcanic activity along the east coast and a layer of volcanic ash was blown westward by the prevailing winds. This layer of clayey ash is known as the *Maquoketa shale*, which can be observed at the Wequiock Falls wayside north of the City of Green Bay.

During the Silurian Period, from 430 to 415 million years ago, a layer of dolomite was deposited that today forms the backbone of Door County and is called the *Niagara Escarpment*. This layer is rich in ancient coral reef fossils.

For the next 400 million years (during the late Paleozoic, all of the Mesozoic, and most of the Cenozoic Eras), there is a gap in geological deposits in NE Wisconsin. This time interval included the period when dinosaurs roamed the earth. So, because of the gap, no dinosaur fossils are found in Wisconsin.

The Quaternary Ice Age that started about 2.5 million years ago and lasted until about 10,000 years ago is responsible for the surface deposits that cover much of Wisconsin. During the Quaternary Period, glaciers advanced and retreated several times. The last glacial period started about 26,000 years ago and lasted until about 10,000 years ago when the last ice retreated to the north. In Marinette County, ice entered the county from the north and the northeast covering the entire county.

Remnant beach ridge along Pierce Avenue, Marinette

Fall Lawn Care: Critical to Lawn Health

By Scott Reuss, UWEX Horticulture Agent

As fall quickly approaches, there are a number of activities that can be done to help your lawn next spring and summer. Proper weed control and fertility management now will increase your lawn's ability to survive the winter and decrease the work you need to do next spring to have a healthy, vibrant lawn.

A major consideration for 2005 is how much water our lawns are going to receive from rainfall in September. If we do start receiving adequate rainfall, our lawns should be in good shape as we head into winter. However, if our drought conditions continue, you will need to water your turf areas at the rate of one inch per week to make sure they start winter with healthy root systems.

Fall is the best time to control perennial weeds in your lawn. Ground ivy, commonly known as creeping Charlie, clovers, plantain, dandelions, and other perennial broadleaf weeds can be controlled in the fall. Some of these weeds are easily killed with an application of any herbicide containing 2,4-D. For adequate control of the ground ivy, clovers, and chickweed, and others, you will probably need to use one of the class of herbicides known as the three-way herbicides. These contain all three of the active ingredients 2,4-D, MCPP or mecoprop, and dicamba. An example of this family of products is Tri-Mec. If you are using a three-way type herbicide, you must leave an unsprayed safety zone around perennial flowers, shrubs, and trees, as the dicamba can potentially harm these plants.

The fall application of fertilizer is the most critical application of the year to maintaining a healthy lawn. Optimum timing to apply this final application is around October 1. With most of our soils, it is warranted to apply the fertilizers known as *winterizers*. They provide both nitrogen and potassium to the turf, maximizing the root and crown health of the plants. If you have tested the soil recently and know that you already have good levels of potassium, you can save money and just use a normal turf fertilizer. With either type, you want to apply a rate equivalent to applying one pound of actual nitrogen per 1,000 square feet. For winterizer types, that is about 4.5 lbs or about 3 lbs for normal turf fertilizers per 1,000 square feet. If you want to test your lawn, garden, or landscape area soil, contact Scott or Linda at the UW-Extension office. A soil test will provide the information needed to decide what fertilizer and at what rates will best meet the needs of your plants.

Early fall is also the best time to do any renovation or seeding projects. Research conducted at the O.J. Noer turf research facility indicates that double aerifying and overseeding turf is the best method of increasing turf density. If you are reseeding any portions of lawn, here are some things to consider when choosing your seed:

- Kentucky bluegrass prefers full sun and can tolerate high traffic.
- Fine fescues are more shade-tolerant than other species and need less fertilizer, but are not traffic-tolerant.
- Perennial ryegrass germinates quickly but does not survive winters or drought well, thus a mix should have less than 20% .
- Rough or Supina bluegrasses are good choices for shady, moist soil sites.

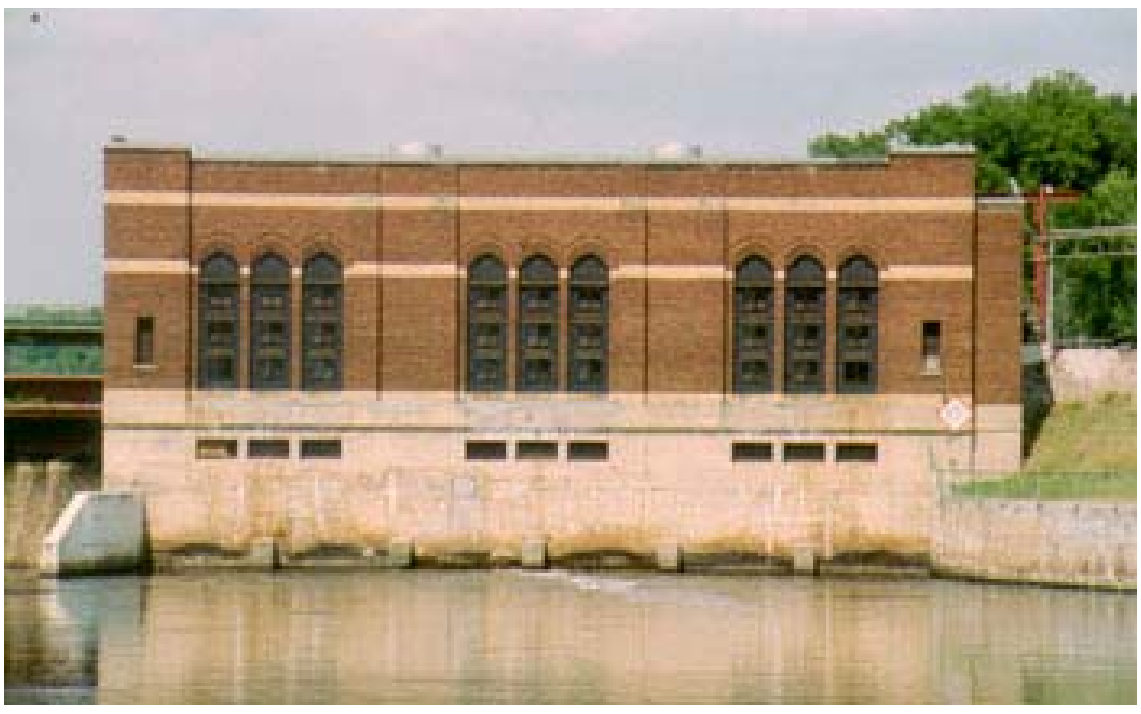
These are general statements, as there are many cultivars within each turf species, each with differing characteristics. A good resource is the UW-Extension bulletin on lawn renovation and establishment, found on the web at:
http://cecommerce.uwex.edu/pdfs/A3434.PDF.

If you have other lawn-related questions or want more in-depth information, please call Scott Reuss at the UW-Extension office, 715-732-7510, or stop by the office on the third floor of the Marinette County Courthouse.

Another opportunity to learn more about lawn care is to attend one of the series of lawn care seminars being held from September 16th through the 30th at the branches of the Marinette County Library System. Contact Scott or Linda at the above number for more information on those seminars, or look for details at your local library branch site.

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, and phone or go to ***www.marinettecounty.com/lw_home.htm*** to give us your answer.
Any interesting facts about the subject are also welcome.
Please respond by September 26, 2005
Correct answers will be entered into a drawing to win a **suet feeder**.

John Myszewski of Wausaukee won a cedar birdhouse for knowing that this very noticeable snag (dead tree) is located along Noquebay Road, north of County GG near Lake Noquebay. Although Myszewski admittedly called it "the ugly tree," snags serve an important role in nature. Many creatures need trees like this for survival. When insects move in, insect eaters such as woodpeckers, skunks, and even bears find food there. Cavity nesters and hibernators also rely on snags for protection from predators and harsh weather.

Northwoods Journal Online

Would you like to read the *Northwoods Journal* on the Web? Each of the four summer issues are posted monthly on the Marinette County website at *www.marinettecounty.com/lw_journal_home.htm*

We can even send you an E-mail reminder when each new issue is posted, and a direct link to the site. To set it up, contact Amanda at *akostner@marinettecounty.com*

The Official 2006 Marinette County Plat Book

Available Next Summer
at the
Land Information Office
Marinette County Courthouse

For more information call
715-732-7535

Harvest Fest

Harmony Arboretum

Saturday, September 10
9 am – 1 pm

- Plant sale
- Classes: fall planting, caring for fruit trees, closing your garden for the winter
- Fruit and vegetable variety tasting
- Fall garden and prairie flowers

Harmony Arboretum is located on Cty E, ½ mile south of Hwy 64, west of Marinette.

Management Strategies

The best strategy is to prevent the introduction of the plant by stopping the spread of its seed. New invasions can be managed by monitoring for new plants and hand-pulling them prior to seed set. Gloves should be worn because of the possibility of skin irritation. The entire root should be removed to prevent resprouting.

Mowing at the start of flowering can help control seed production, but since the plant is not destroyed by mowing this will only control, and not eradicate, infestations.

Prescribed burning can be effective if the burn is hot enough and is followed by selective pulling and digging of weeds and establishment of native species.

Chemical controls are an effective means of eliminating spotted knapweed, but these chemicals can be expensive and may be harmful to surface and groundwater. The most commonly recommended chemical controls are clopyralid and picloram. Clopyralid can affect other plants (including legumes) so it can be used in grazing areas but should be avoided on cropland areas. Spotted knapweed that is still in the rosette stage can be controlled by applying 2,4-D low volatile ester, oil-soluble amine, or water-soluble amine formulations. Annual spraying may be required for several years to deplete the seed bank.

Several biological controls exist, including two root-mining moths, a flower moth, and a root-mining beetle. These have met with varying degrees of success and are still being evaluated. The USDA should be consulted to determine the current status of these controls.

MORE INFORMATION

A number of excellent web sites provide detailed information about spotted knapweed. A listing of web sites is available at:
www.invasivespecies.gov/profiles/spotknwd.shtml

For more information about chemical controls (application rates and times, safety measures, etc) contact your UW-Extension Agriculture Agent. In Marinette County, that is Scott Reuss, 715-732-7510.

Invasive Species Profile: Spotted Knapweed

By Kendra Axness, UWEX Basin Educator

Exotic species are plants and animals that spread into an ecosystem beyond their normal range. Exotic species can come from another watershed, state, country, or continent. Invasive species are plants and animals that, once established, take over an ecosystem because they are able to out-compete other species for habitat. Both native and exotic species can become invasive if the conditions are favorable for them.

What is spotted knapweed?

Spotted knapweed is a deeply taprooted, rosette-forming plant in the aster (Asteraceae) family. It is an aggressive plant that rapidly invades pastures, rangeland, dry meadows, floodplains, roadsides, and any other dry, gravelly or sandy sites. Its distinguishing characteristic is its flask-shaped pink to light purple flower, with stiff black-tipped *bracts* (modified leaves at the base of flower stalks) that give the flower head a spotted appearance.

Where is it from?

Spotted knapweed was introduced to North America from Eurasia as a contaminant in alfalfa and possibly clover seed, and through discarded soil used as ship ballast. It was first recorded in Victoria, British Columbia in 1883.

How far has it spread?

Spotted knapweed has become a serious problem in the rangelands of the northwest United States. In recent years, the species has invaded relatively undisturbed natural areas in Wisconsin as well as heavily disturbed areas. Until recently, spotted knapweed was presumed to inhabit only heavily disturbed areas such as road ditches, agricultural field margins, railroad beds, pipelines, and recently installed utility lines. It has now been found in dry prairie sites, oak and pine barrens, and on lake dunes and sandy ridges. It seems to be especially problematic in the central sands, northern Wisconsin, and near the Great Lakes. In Marinette County, spotted knapweed is found consistently in the heavily disturbed areas described above, but is also moving into grasslands, croplands, and lawns.

Why is it a concern?

Knapweed out-competes native plant species,

reduces native plant and animal biodiversity, and decreases forage production for livestock and wildlife. Early spring growth makes knapweeds very competitive for soil moisture and nutrients. Livestock will only eat knapweed when other vegetation is unavailable. Infestations can also increase run-off and sedimentation, since other plant species are excluded from these areas. Knapweed plants are allelopathic, exuding a substance from their roots that can inhibit the germination and root growth of native grasses and trees. The water-holding capacity of the soil decreases as knapweed taproots replace the interconnected network of native plant root systems.

How does it spread?

The plant reproduces solely by seed, and each plant can produce an average of 1,000 seeds. Seeds can survive in the soil for eight or more years. Seed germination occurs in the fall or early spring, depending upon moisture availability. Seedlings develop into rosettes. Plants that have overwintered as rosettes usually produce floral stems in the following summer. Stem elongation occurs in June followed by flowering in July and seed dispersal in August.

How can I help prevent the spread of spotted knapweed?

Seed spread can be minimized by avoiding infested areas; by cleaning footwear, clothing, backpacks, and other items after hiking through infested areas; by not grazing livestock when ripe seeds are present in the flower heads; and by using weed-free hay.

How to Identify Spotted Knapweed

Centaurea maculosa

Synonym: *Centaurea biebersteinii* DC.

- **Flowers:** Flower heads (up to 200 per plant) flask-shaped with pink to purple flowers; tips of bracts at base of the flower heads fringed with black spots, giving this weed its name.
- **Stems:** rough surfaced and highly branched; 2 to 3 feet tall
- **Leaves:** basal leaves up to 6 inches long, deeply lobed with 3 to 10 lobes, gray-green with a rough hairy surface; leaves near flower heads are smaller, narrow and less lobed or unlobed.
- **Root:** non-spreading taproot

A Pond to Call Your Own

By Chuck Druckrey, Water Resource Specialist

We humans have fascination with water. In our homes and offices, we install fish tanks and desktop water fountains. Visit the yard-and-garden section of any store and you'll find a wide variety of plastic pools, pumps and waterfalls so the do-it-yourselfer can install their own water garden in the back yard. And for the fortunate few we have the "holy grail" of water…lakefront property. If anyone doubts the value we place on water, look no further than the skyrocketing price of waterfront property. Of course, for those who can't afford the lakefront lot, there is the man-made pond. Indeed, it seems that everybody with an acre or two in Marinette County already has or wants a pond of their own.

While constructing a pond on your property can be a rewarding experience, it is not without difficulties. Many well-meaning folks have spent a lot of money constructing a "pond" only to wind up with a muddy hole in the ground or a weed choked tadpole nursery. Even worse, some have damaged valuable wetland habitat and in doing so have wound up on the wrong side of the law. To avoid the major pitfalls of pond construction, you need to engage in some pre-construction planning and make sure you get permits when required.

The first step in planning is to ask yourself what you expect of your pond. People dig ponds for many reasons – some for swimming, some for fishing, and some for wildlife habitat. While a pond can be designed and constructed to meet any one of these needs, rare is the pond that can meet all of these goals at the same time. When designing your pond there will always be trade offs, and site limitations may make constructing your perfect pond a difficult and expensive process. If you are realistic in your planning and expectations, you will be much happier with the end results.

Maybe you want a swimming pond. Ask anyone what the ideal swimming pond looks like and it will be deep, clear and have a firm sandy bottom with no aquatic plants or insects (Sounds a lot like a swimming pool doesn't it?) This is the most difficult pond to maintain. You may have heard the saying "nature abhors a vacuum;" well this definitely applies for ponds. Dig that pond and nature will immediately begin stocking it with plants, insects, frogs and fish quicker than you can blow up the pool raft. So be realistic. If you want a pool, get a pool.

Of course, ponds can be tailored for swimming. To reduce aquatic plants a pond needs to be deep enough to limit light striking the bottom. With clear water this typically means more than 15 feet. Steep sides will reduce the amount of shallow water as well. To control algae you need to control nutrients. This means eliminating surface runoff as a water source and limiting the amount of leaves and other organic matter that falls into the pond. Maintaining good grass cover on the pond edges will reduce erosion but skip the fertilizer unless you like green water. As for frogs, bugs and minnows, reducing aquatic plants and mucky sediment will reduce their numbers, but you will never eliminate them from a natural system.

The perfect fishing pond will also be fairly deep so fish have a cool water refuge during the heat of summer and plenty of oxygen to last the winter. Unlike the swimming pond, the man-made fishing hole needs plenty of structure and habitat. This can be achieved by varying the depth and slopes and by adding downed trees, rocks and gravel. To be self-sustaining, a fishpond needs to be productive, with aquatic plants and algae fueling the aquatic food web. The danger here is having too much productivity. Too many nutrients will lead to excessive plant growth and/or nuisance algae blooms. Here too you need to reduce nutrients that flow in with surface water to control productivity.

Like the perfect swimming pond, a wildlife pond also has water in it. But that's where the similarity ends. The perfect wildlife pond is shallow and mucky, which leads to warm and weedy, which leads to plenty of aquatic bugs, frogs and salamanders. Throw in good nesting cover around the pond and you have ideal habitat for ducks and geese. If the water is deep enough to prevent freeze out you can also expect muskrat, mink and other small mammals to call your pond home. So why not just add some more deep water and have fish too? Unfortunately, if you have too much deep water in the pond, fish predation will severely limit use by most frogs and salamanders and many aquatic bugs. If you have too little depth, temperatures will be too high and aquatic plants will use up oxygen as they decompose each winter. The typical wildlife pond will freeze nearly solid each winter and kill all but the toughest fish.

Of course no pond is a world unto itself. The pond ecosystem cannot be separated from the land. That narrow band of wetland plants on the pond shore is vital to fish and wildlife alike. Many mammals, birds and amphibians will use upland habitat for many hundreds of feet around your pond. So, consider the surrounding landscape when planning your pond.

Finally, no pond will be successful without a steady supply of water, a fact that some people fail to fully investigate before digging. There are two sources of water for a pond, surface runoff and groundwater. As mentioned, surface water is typically higher in nutrients than groundwater and typically not a suitable source for swimming ponds. Surface water may be acceptable for fishponds but only if nutrient levels are low. Since elevated nutrients are typically not a concern in wildlife ponds surface water is an acceptable source. Indeed, plugging ditches and impounding runoff in previously farmed areas is a popular way to create wildlife ponds. However, damming up a natural stream or flooding a high quality wetland is a bad idea and rarely allowed.

Groundwater is typically low in nutrients and makes the ideal supply for swimming and fishing ponds. But before you bring in the backhoe, some investigation is required to assure you have an adequate supply of groundwater. This typically involves digging test pits during the driest part of the year. Don't assume that because its wet in the spring it will hold water all year. In sandy or gravelly soil the water table may fluctuate by ten feet or more during the year. Dig a pond in these areas and it may be dry by August.

If there is an ugly side to the pond-building craze, it's the damage that has been done to wetlands throughout the county. Many well-meaning folks have sought to improve their wetlands by turning them into a pond. While excavating may be allowed in some wetlands

PONDS CONTINUED ON NEXT PAGE

MANAGING FISH PONDS

Even if you design and build the perfect fishpond, you will still have to manage the fish population to prevent overpopulation and stunting. If you search the web, you can find lots of info on constructing and managing ponds for fish. A great local source of information is a book called "Managing Wisconsin Fish Ponds." It can be ordered through your local UW-Extension office or you can find it online at ***http://cecommerce.uwex.edu.*** Follow the menus to Natural Resources and Wildlife to purchase or view the book.

WHAT ABOUT THE PERMITS?

According to the Wisconsin DNR, you will need a permit to dig a pond if it is located within 500 feet of a navigable waterway or if the pond will ultimately be connected to a waterway. Also, if the pond is in a floodplain or if it will affect a wetland you will need a permit. In Marinette County, you can find out if you need a permit by calling the DNR office in Peshtigo at 715-582-5000. The DNR will also inform you if you need a permit from the Corps of Engineers. If the pond is located within 300 feet of a lake or stream, you may also need a county permit.

Swimming ponds are the most difficult to maintain.

Area Events Calendar

Sept 3 **Amberg Fire Department Picnic**
Fireman's Park. Parade 11 am, picnic follows. Lawnmower races, horseshoe tournament, raffle, prizes, free roasted corn all day. 715-759-5594

Sept 5 **Pembine Community Picnic**
11 am – 9 pm. Horse pulling contest, live music, kids games, crafts, and raffles. $1 lunch donation.

Sept 10 **OctoberFest**
Newingham's Supper Club. Dorf Kapelle. 715-856-5966

Sept 10 **Harmony Arboretum Harvest Fest**
9 am – 1 pm. Taste various fruit and vegetable varieties grown at Harmony Arboretum, view fall flowers, attend classes on fall planting, caring for fruit trees, and closing your garden for the winter. 715-732-7510

Sept 17 **Annual Peshtigo River Canoe Trail Trip**
Lower Peshtigo River, starting in Peshtigo. 10 am – 2:30 pm. Guided paddle trip on the Peshtigo River Trail. See page 3 for more details.

Sept 24 **Workshop: Putting Your Garden to Bed**
Harmony Arboretum. 9:30 – 11am. Includes management and proper harvesting of late season vegetables. Scott Reuss, UWEX Horticulture Agent.

Sept 24 **Wausaukee Fall Color Fest**
9:30 am – 4:30 pm. Register to win door prizes at Northwoods Traditions, The Variety Store, and the Ice Cream Station. 715-856-5921

Sept 24 **Crivitz Harvestfest**
Crivitz High School. Art, crafts, food, and more. Downtown business promos.

Sept 24 **Peshtigo Historical Day**
Parade 10 am. Main events at Badger Park. Live music, craft booths, food. 715-582-1140

Sept 24 **Parker-Jose-Stockwell American Legion Post 66 Chili/Soup Fest**
Corner of Co Hwy I and Co Hwy C. Starts 11 am. Numerous types of chili and soups along with desert and bake sale. 715-757-2484

Oct 7 **Fall Geology Tour**
Marinette & Menominee Counties. 8 am – 5:30 pm. Bus tour to see ancient landscape features formed millions of years ago. See page 1 for more details.

Nov 19 **Hunters' Dinner**
St. Mary's Parish Center, Crivitz. 4:30– 7 pm. Serving baked chicken, dressing, polish sausage, sauerkraut, potatoes, vegetable and desert. 715-854-2774

Dec 3 **Amberg Historical Society's Cookies by the Pound**
County V, Amberg. 10 am – 4 pm. 715-757-5281

Dec 3 **2nd Annual Vintage/Antique Snowmobile Show & Swap Meet**
Gateway Bar & Grill, Hwy 141, Crivitz. 8 am - ?. Free! Display or view snowmobiles from 1980 or older. Awards will be given. Sponsored by N.E.W. Low Buck Vintage Riders Snowmobile Club. 715-759-5867
www.newlowbuckvintageriders.com

Spokes & Folks Bicycle Club

www.spokesandfolks.com

Guests are welcome, helmets are required, and lights are recommended on some rides.

Ride Schedule

U.P. Mountain Biking Weekend – October 1-2
We will ride mountain bike trails in Marquette area on Saturday, led by Adam Haeusler of Cycle Path. We will then travel on to Big Bay to stay the night at the Thunder Bay Inn. If time permits on Saturday, we will drive and then hike to Pinnacle Falls on the Yellow Dog River. On Sunday, we will ride a loop of approximately 18 miles around a stretch of the Yellow Dog River, taking time to hike along the river to view waterfalls and eat lunch. **Reservation deadline is September 16**. Call Vern Quever at 715-587-4341 for more info.

Sunday Morning Breakfast Rides
A club favorite! Bring your family, bring your appetite. Riders will ride to and from breakfast for a social ride great for all levels. Meet at 8:00 a.m. at Jim Shane's house: 2801 Parkridge, Marinette.

Wednesday Fast Rides
This is a super fast drop ride. Anyone can join, but if you aren't keeping up, you will be left behind, or dropped. Speeds will be 20 mph and higher. Meet at Cycle Path bike shop in Menominee at 6:00 p.m.

that have been degraded by years of farming, putting a pond in an undisturbed wetland upsets the natural balance and invites invasion by exotic species. Even worse, some people look at wetlands as a convenient place to put all the spoils generated when they dig their pond. Not only is this extremely damaging to the environment its highly illegal. Get caught and your pond is going to cost a lot more than you planned.

If it all sounds rather complicated, it is. However there are plenty of people out there who can help. In Marinette County, you can start by calling the Marinette County Land & Water Conservation Division at 715-732-7780. The department has county soils and wetland information that can be invaluable when choosing a site for your pond. Excavators who are familiar with digging ponds can also be a good source of information, just beware that you are the one responsible for permits, not the contractor. So do your homework, proceed with realistic expectations and enjoy your new pond.

What's In Season

Home Grown Produce in Marinette County

Potatoes (late August– Winter)

Joe Panis
715-251-3551
N21801 Panis Road, Niagara
Reds, whites, and russets
Sold at 50 lbs, but will custom-size

Joe Fiedorowicz Farms
715-854-3132
W7982 W. 22nd Road, Crivitz
Red Norlands, Yukon Golds, russets
10, 20, & 50 lb bags

Apples (September – November)

Pleasant View Orchard
www.pleasantvieworchard.com
715-856-5815
W 6050 Chapman Road, Niagara
Apples, maple syrup, bakery

Assorted Produce (Fall)

Country Gardens
715-789-2291
W4851 Cty D, Peshtigo
Self-serve stand
Squash, pumpkins, gourds, Indian corn, corn stalks, straw bales

Bergeson Vegetable Farm
715-789-2664
N3166 Jandt Road, Peshtigo
Open daily 7a.m – 7pm
Tomatoes, cantaloupe, apples, gourds, potatoes, squash, cornstalks, pumpkins

Wagner's Sugar Hill
715-582-3243
Sold at Hwy W & 64 and Hwy 41 Peshtigo
Call ahead
Potatoes, tomatoes, pumpkins, maple syrup

Dave & Sharon Antonissen
715-251-3866
W8703 County N, Niagara
Pumpkins, cornstalks