



michigan nature association

Preserving Michigan's Natural Heritage Since 1952

July - September 2009

Volume 58 Issue 3



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Grinnell Memorial at Bare Bluff
photo by Charlie Eshbach

326 East Grand River Avenue

Williamston, MI 48895

PH (517) 655-5655

FAX (517) 655-5506

www.michigannature.org

From the Director



The Michigan Department of Natural Resources updated its list of threatened and endangered species this spring. The list denotes plant and animal species which are either “endangered” – at risk of becoming extinct, or “threatened” – vulnerable to extinction in the near future. The classification of “endangered” is the higher of the two.

There was some good news in the new list, the first of its kind in a decade. Several species recovered enough to be removed from the list. The bald eagle, osprey and gray wolf were removed from the list because populations have recovered to levels considered sustainable. The dusted skipper (a butterfly) and the Great Plains spittlebug also recovered, as had the green spleenwort (a fern), and Weigand’s sedge (a grass-like plant that grows in bogs and swamps of the U.P.)

Interestingly, only one of these recovered species, the bald eagle, is found in southeast Michigan, and most are found in the U.P. or the northern Lower Peninsula, making MNA’s statewide efforts even more important.

Overall, the listing added 69 species as either threatened or endangered, showing that though a few species have recovered, many more are in peril. Some notable additions include the Blanchard’s cricket frog, now found in fewer than 60 sites across the state and only 3 sites in southeast Michigan. Also included in the new listing is the cerulean warbler, a brightly-colored bird that requires large tracts of unbroken deciduous forest to breed, and the yellow-fringed orchid, a native orchid of boggy areas.



Photo by Christopher Johnstone

The cerulean warbler is one of the newest members of the threatened species list.



photo by Brandon Holden

The yellow-fringed orchid was added to the Michigan endangered species list recently.

MNA sanctuaries protect all three of these species and many more that have been added to the state threatened and endangered listing.

Nineteen snail species were added to the list for the first time as either threatened or endangered, and nine mussels, freshwater bivalves that look like clams, also joined the list. Other aquatic organisms added include three fish: two ciscos and a shiner. The fact that so many freshwater animals have been listed highlights the role that water quality and invasive species play. Many snails and mussels are very sensitive to contaminants in water, and invasive species such as zebra mussels directly kill our native clams and mussels by covering them until they suffocate.

Floodplains and riparian buffers, fens and swamps, marshes and muskegs all help to filter surface waters before they enter our rivers and lakes. MNA has protected thousands of acres of such habitat and we are continuing to protect more of these critical natural areas. With your help, MNA is increasing the likelihood that the Blanchard’s cricket frog, the yellow-fringed orchid and the cerulean warbler will recover by protecting the highest quality natural areas in Michigan

Lastly I would like to thank our outgoing President, Karen Weingarden, for her efforts to help MNA succeed in its mission and welcome incoming President, Steve Kelley. Karen has been President for all seven years of my tenure and through her work, MNA has become a better organization.

Sincerely,

A handwritten signature in dark ink, reading "Jeremy P. Emmi".

Jeremy Emmi
Executive Director

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Michigan Nature Association's Mission

The purpose of the Michigan Nature Association is to acquire, protect and maintain natural areas that contain examples of Michigan endangered and threatened flora, fauna and other components of the natural environment, including habitat for fish, wildlife and plants of the state of Michigan and to carry on a program of natural history study and conservation education as permitted under the Michigan Nonprofit Corporation Act.

inside this issue

Every Sanctuary Has a Story

Fred Dye Nature Sanctuary



photo by Keith Saylor

The Fred Dye Nature Sanctuary prairie has features comparable to alvar and limestone bedrock glade plant communities.

By Keith Saylor, Eastern UP Field Representative

Formerly called the Purple Coneflower Plant Preserve, this site was renamed in 2004 when an anonymous donor purchased an addition to the sanctuary and asked that the site be renamed in honor of Fred Dye. Fred Dye is a current trustee and has served on the board for several years.

As you survey the sanctuary from M-123, the prairie opens up and seems out of place because it's surrounded by forest. No one is sure whether the open area is natural or the result of human activity. It is known that the town of Kenneth once existed in the area of the sanctuary. However, whether this area was once cleared by the residents of Kenneth is unknown. Some suggest the open area has features comparable to an alvar or limestone bedrock glade.

Alvar is a grass- and sedge-dominated community, with scattered shrubs and an occasional tree. The community occurs on broad, flat expanses of calcareous bedrock (limestone or dolostone) covered by a thin veneer of mineral soil, often less than 25 cm deep.

A limestone bedrock glade consists of an herb- and graminoid-dominated plant community with scattered clumps of stunted trees and shrubs growing on thin soil over limestone or dolomite. Tree cover is typically 10 to 25%, but occasionally as high as 60%. Shrub and herb cover is variable and there are typically areas of exposed bedrock. Mosses, lichens, and algae can be abundant on the exposed limestone bedrock or thin organic soils. This is also referred to as alvar glade.

MNA has managed the prairie to

“... the prairie opens up
and seems out of place
because it's surrounded
by forest.”

suppress the encroaching forest, preserving the open prairie area. Visitors will walk through prairie, northern forest and see interesting rock formations along with compelling plant and animal life. A prairie plant called the pale purple coneflower (*Echinacea pallida*) grows during summer, culminating in a spectacular display in July. This plant is presumed to be extirpated in Michigan. There is

a theory that the seed of the coneflower was brought to the area in hay imported by the residents of Kenneth from the west to feed their horses.

That's not to say the coneflower was never found in Michigan. According to the Michigan Natural Features Inventory (MNFI), the coneflower was found in prairie remnants in the Lower Peninsula. Today, the coneflower is widespread via plantings, but the last undisputed wild populations have not been observed since the 1800's.

The majority of the sanctuary is conifer forest; supporting a number of bird species during both the breeding and the migratory seasons. Watch for ruby-throated hummingbirds coming to the coneflowers, spruce grouse dusting in the sand and bohemian waxwings passing through in the fall.

A geological feature called karst is found throughout the sanctuary. The Michigan Karst Conservancy says the following about karsts:

Karst is a term that was first applied to a plateau region of the Dinaric Alps in Yugoslavia. It is now used to describe similar regions throughout the world that have features formed largely by underground drainage. Karst terrains are characterized by caves, steep valleys, sinkholes, and a general lack of surface streams because drainage is underground. A consequence of this is not only a very interesting landscape (caves have

fascinated people for millennia) with unusual habitats for plants and animals, but special problems in water supply, waste disposal, construction, and other land uses.

Often exposed, but also beneath a thin layer of soil, is dolomite rock. In some places the dolomite is cracked open. The cracks can be many feet long, up to two feet wide, and four feet deep. Water drains into these cracks which further erodes the rock over long periods of time. Aubrey Golden of the Michigan Karst Conservancy suggests the karst features on the sanctuary may one day turn into caves and sinkholes, or both, as water keeps working away

at the dolomite rock. Such action creates caverns and caves far beneath the surface causing the surface rock to collapse in places.

Many species of lichen grow on the exposed dolomite and on the trees and shrubs making the sanctuary a wonderful place to explore and learn about lichen.

One of the lichen I enjoy looking at while at the sanctuary is a type of foam lichen (*Stereocaulon*) that grows on a large rock in the meadow. When you see this lichen growing on the rock it becomes clear why it is called foam lichen- it resembles foam bubbling from the rock.

While at this sanctuary enjoying the prairie plants, please set aside time to explore the wonderful bird populations as well as the plant life, including the lichen, and be sure to make a point of exploring the karst features.

Directions to Fred Dye N.S.

From the Mackinac Bridge: Drive north on I-75 to M-123 and drive west through Moran. The Fred Dye sanctuary is about 8.5 miles further west of Moran on the south side of M-123; between the towns of Moran and Trout Lake. The drive is mostly forested on either side of the road. The sanctuary is noticeable in that a portion of the property is open prairie and is distinguishable by the abrupt change in tree density.

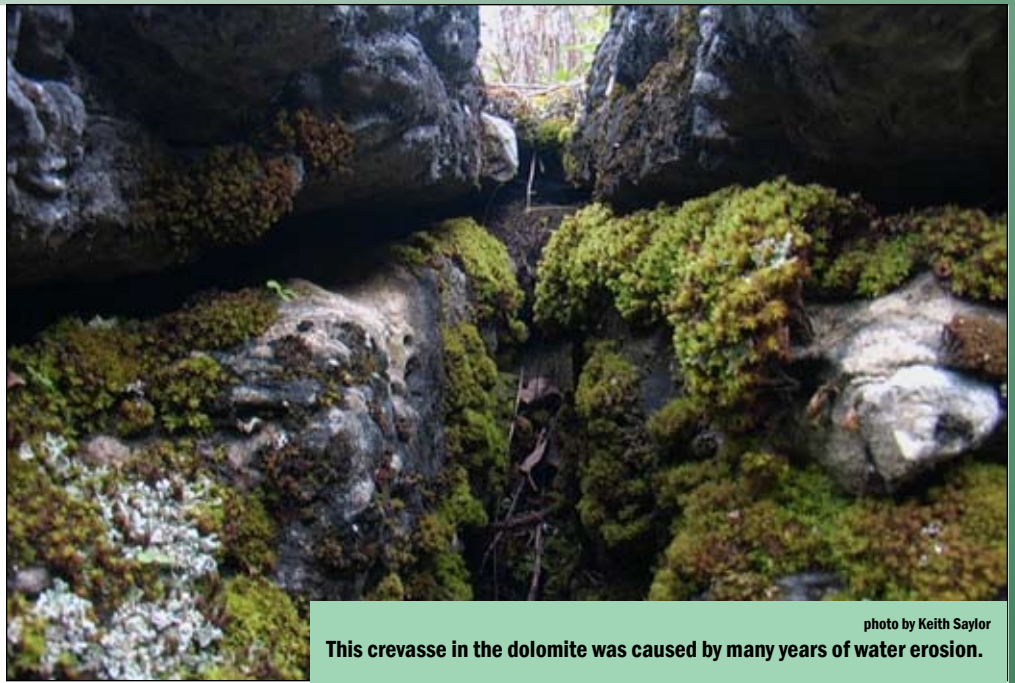


photo by Keith Saylor

This crevasse in the dolomite was caused by many years of water erosion.



photo by Keith Saylor

Foam lichen can be seen "bubbling" over many of the sanctuary rocks.

A Tale of Two Kingdoms

By Sherri Laier,
Stewardship Director

One thing you can say about lichen is that they like to grow on everything. Additionally you can find them in every sanctuary that the Michigan Nature Association manages. They are nature's indicators of good air quality and undisturbed habitats. You could also say that they are some of the coolest things in our natural world.

Lichen are a combination of two (and sometimes three) distinct species from different plant kingdoms that form a symbiotic relationship. The most common grouping of species are different types of algae and fungus. The third species is cyanobacteria, which can replace the algae or sometimes join the algae and fungus.

The algae and cyanobacteria do the work of photosynthesizing for the organism. These photobionts happily feed the fungus and the fungus is careful not to take too much of this precious resource. In exchange, the fungus protects the delicate photobionts from the elements. When algae is without water it becomes very vulnerable to solar radiation. The fungus is able to shield the algae with protective tissue called a cortex. These "loving arms" are opaque when the lichen is desiccated and become transparent when there is enough water for the algae to begin photosynthesis.

Most of the algae is green algae and the lichen color is anywhere from gray to green to orange. When cyanobacteria are present, it causes the color of the lichen to be dark gray, brown or black. The color of the lichen is very important in identifying it. Cyanobacteria are important organisms for many plants as they can convert atmospheric nitrogen into an organic form that plants can obtain from the soil.

Lichens occur on almost any surface where there is clean air, sun and water. However, some species can remain dormant for a year without moisture. They survive in the harshest terrestrial weather conditions known to man.

Some lichen can tolerate pollution. Since they have no root system they get their nutrients directly from the air, acting like sponges that store nutrients and pollutants in cell walls.



A healthy specimen of lungwort lichen at Estivant Pines.

Pollutants continue to accumulate in the lichen because they have no mechanism for getting rid of them. The problem with this is that lichen are terrific food for many animals and pollutants accumulate as you move up the food chain to the larger animals. In lichen circles, of which you can become acquainted, there is a familiar story of the reindeer near the Chernobyl nuclear disaster site. The fallout highly contaminated the lichen, and being the main food for the deer, passed directly into their tissue. In Sweden and Norway, huge numbers of these animals were slaughtered to keep people from eating the radioactive meat.

Many other species of lichen are incredibly sensitive to pollution and will only be found in pristine places. Examples include some of the *Ramalina spp.* and *Usnea spp.* which are more common in northern Michigan but can be found on our sanctuaries in the southern part of the state, even in urban areas like Oakland County and Calhoun County because the lands are isolated and protected. We've noticed that these lichen seem to be found in the low areas where they are even more protected. In the north, these same species also tend to grow in uplands.

In our Estivant Pines Nature Sanctuary, we have an abundance of the lichen Lungwort (*Lobaria pulmonaria*) growing. Lungwort grows on trees and rocks in dense, moist woods. It is most often found in rich, unpolluted and

often in very old forests. This distinctive leafy lichen is a preferred food for moose and one known to be especially sensitive to air polluted from sulphur dioxide. Sulphur dioxide is a colorless gas emitted from coal and petroleum sources such as steel and iron mills, smelting plants, petroleum refineries and pulp and paper mills. It is also the precursor to sulphates, which are one of the main components of respirable particles in the atmosphere. Recently, a landowner next to Estivant Pines logged right up to the sanctuary. As we walked the property line we noticed the dessicated remains of Lungwort lichen in full sun.

With over 14,000 spp. of lichen, there are many uses especially for wildlife. More than 50 species of birds in North America are known to use lichens in nest building. The State Special concern spruce grouse is known to eat lichen because it is high in carbohydrates.

So, the next time you're out, whether in an urban park, cemetery or MNA sanctuary, stick your eye up to a disc of lichen and watch the universe shift just a little from now on. Don't forget your camera and think about getting a hand lens. Enjoy.

Check out the "The Nest Cycle of the Ruby Throated Hummingbird" DVD we sell and watch the female build her nest with *Parmelia* lichen.

Available at
www.michigannature.org.

Alone in Dowagiac Woods (Well, Almost Alone)

By David Sharpe, MNA Trustee

After the MNA Annual Membership Meeting in April, my wife, Jeannette, and I went to the Dowagiac Woods Nature Sanctuary to take the tour.

When we arrived, it was raining and the MNA staff was packing up after hosting an all-day Community Open House. I got out and helped load the truck and decided that a walk in the forest was not possible. This was quite a disappointment as we had never visited this much-lauded property.

The next morning, I decided to visit the sanctuary because the rain had ended. I arrived at 7 a.m. and there were no other cars in the parking lot. Entering the woods, there appeared to be no clearly identified path, so I just followed my nose and plunged forward. I had brought waterproof boots which proved necessary. A path soon appeared, wet and soggy. I was surrounded by the sounds of birds coming from all directions, many familiar, others not. From time to time, other sounds echoed through the forest, sounds which were not recognized and made me feel uneasy.

The scene before me was incredible. Green of many hues on all sides and as far as the eye could see. Huge trees,



photo by Keith Saylor

Crescent Pond is one of two ponds found at Dowagiac Woods.

both evergreen and deciduous, with new growth soon to open, gave hint of the beauty in waiting. Many types of wildflowers, of different colors, were found in profusion.

Suddenly, three deer flagged their presence as they quickly moved past where I was standing.

The path led me through the verdant understory, boardwalk, wet deer trail, mossy foot path, deeper into this remarkable adventure. Suddenly, two large brown animals came lumbering to the left of me. What were these creatures?

As they neared, it was obvious they were two of the largest raccoons I had ever seen. Without acknowledging my presence, they climbed a snag and then sat looking down at me as I made them a part of history with my camera.

As I walked the trail around Square Pond, I thought of how Native Americans must have experienced Michigan in this way, walking through the forest among the plants and animals. Did they sense the wonder of it all or was it all too common to be appreciated?

The sun began to glow through breaking clouds, casting a morning glow through the trees. The terrain changed to sloping land with vernal ponds of rainwater. Downed giants on their way to becoming nurselogs lay along the pathway, many already covered with lush moss and fungi.

Crossing several small bridges over vernal streams kept me vigilant and careful to avoid missteps. An

Directions

From the town of Dowagiac: Travel west out of Dowagiac on M-62 and turn south onto Sink Road. After turning east onto Frost Road, look for the parking area and large sanctuary sign on the north side of Frost Road.

occasional frog leapt into the water at my approach.

As I finished my private hour in the woods of Dowagiac, I became acutely aware of what a treasure we have saved for posterity. Every MNA member should take the opportunity to visit this gem of nature.

How to Help

How many opportunities do you get to leave your mark on such a special place? MNA must raise \$375,000 in 2009 to cover the acquisition and endowment costs for the Dowagiac Woods addition. Your contribution will have a lasting impact, ensuring that the sanctuary remains a jewel in the crown of MNA's sanctuaries. Use the remittance envelope included with this newsletter or go to www.michigannature.org and contribute today!



photo by David Sharpe

This photo of two raccoons (one hiding behind the tree) was taken during David's visit.

Financial Summary

The Michigan Nature Association concluded our fiscal year (FYE2009 - March 1, 2008 to February 28, 2009) in a sound financial position.

We acted to aggressively control expenses and maximize the effectiveness of our programs. We have reduced our FYE2010 budget by \$20,000. We are also working to ensure that our income this year meets or exceeds our needs for operations and land acquisition.

In FYE2009, MNA expanded our staff early in the fiscal year, hiring a Land Protection Specialist and filling the vacated Development Director position. However, near the end of the fiscal year, we reduced our staff by one part-time position. We believe that our present staff is the minimum needed to carry out our mission.

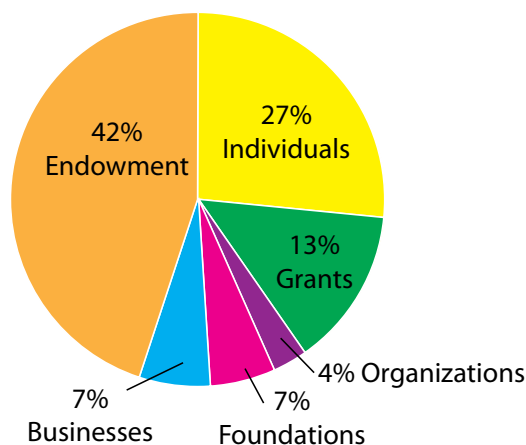
Although our endowments are in sound financial position, our endowment income will likely decrease next year, as we operate on a three-year average, taking close to 5% of the three-year average balance of our endowments annually. If the endowments do not appreciate in value considerably by year-end, then next year's endowment income will be down and we will have to raise additional operating income. MNA is preparing for this scenario and we feel strongly that we can weather any future deterioration in the overall economy. (As of May 31, our endowment funds have recovered over \$550,000 since the start of the fiscal year in March.)

MNA is dedicated to providing value to our members in the form of not only exceptional efforts to protect Michigan's highest-quality natural areas, but also to maintain low fundraising and administrative costs and little, if any, debt. MNA planned wisely in good times and owns its office, resulting in no rent or mortgage

**Remembering MNA
in your will or estate
plan helps us protect
special plants, animals
and habitats for future
generations.**

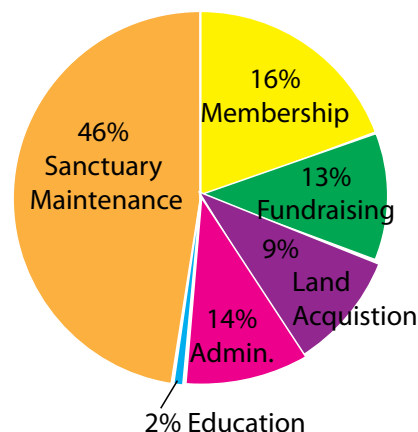
INCOME SOURCE

Total \$661,680*



EXPENSES

Total \$628,348**



*\$37,796 of the income was donor-restricted to endowment funds so it does not show up in the Operating Fund Statement of Activities on p. 9.

**Capital Expenses of \$357,661 were not included in the total expenses because they were capitalized. The expense was incurred when MNA borrowed from the Revolving Land Fund to acquire land. The Revolving Land Fund is a reserve fund that was created as part of the Statewide Land Protection Campaign and permits MNA to purchase properties on short notice, but requires that the funds be paid back as they are raised.

payment. We put the vast majority of operating income directly into efforts to protect nature, and even in a rough economy, we continue to do so, while building the organization from within so that we will be even stronger when the economy improves.

One of our most valuable assets - you - does not show up in our financial statements. MNA members have supported our efforts by donating money, equipment and land; by volunteering in the office and on our sanctuaries; and by promoting MNA to those you meet. One metric that has actually increased nationwide among nonprofits during this economic decline is volunteerism. The human capital of volunteerism is helping MNA to fulfill its mission in these times, along with the other resources you give. We will continue to efficiently use the resources you provide.

Note: Shortly after the close of the fiscal year, MNA's finances are audited by an independent auditor. This review typically begins in early May

and is finished mid-June. The audit will not be completed until shortly before this newsletter arrives on your doorstep; therefore, the numbers used to create this report may vary slightly from the final figures. If you would like a copy of the audit please contact Paul Steiner at (517) 655-5655 or psteiner@michigannature.org and we will get it to you as soon as it is complete.

E-Newsletter Now Available

In an effort to save paper and make it easier to share your newsletter with friends, the MNA newsletter is now available via e-mail. If you would like to view your newsletter as an Adobe PDF, please e-mail us at michigannature@michigannature.org.

Statement of Activities

Operating Fund Statement of Activities Michigan Nature Association	Year End 2/28/2009 Before Audit	Year End 2/28/2008 Final
Support and Revenue		
Member Dues	43,355	28,098
Member Contributions Above Basic Dues and Other Contributions	132,467	126,406
Investment Dividends and Interest	128,542	120,253
Investment Draw in Excess of Income	149,771	100,000
Miscellaneous	85,050	65,035
Restricted Grants for Stewardship Utilized	84,699	108,940
Total Support and Revenue	623,884	548,732
Expenses		
Program Services		
Membership	100,505	73,958
Education	15,210	7,522
Land Acquisition Expenses	58,510	9,569
Stewardship of Properties	287,134	319,267
Total Program Services	461,359	410,316
Supporting Services		
Management and General	87,311	37,082
Fundraising	79,885	64,499
Total Support Services	167,196	101,581
Total Expenses	628,555	511,899
Excess of Support and Revenue Over Expenses	-4,671	36,835

Michigan Nature Association Year End February 28, 2009	Balance 2/29/2008	Operating Fund Gain	Support and Revenue	Transfers	Before Audit Balance 2/28/2009
Unrestricted Funds					
Operating Fund	276,910	-4,671			272,239
Board Designated For:					
Endowment	1,591,238		340	-149,771 ^C	
			-1,522,227 ^A	134,497 ^B	54,077
Revolving Fund	1,600,000		415		
			-544,690 ^A	-357,661 ^D	698,064
Legal Defense	20,000			30,000 ^B	50,000
Temporarily Restricted Funds					
Stewardship Grants	47,205		44,644	-84,699 ^E	7,150
Capital Campaign	164,167		330	-164,497 ^B	0
Other Specific Uses	200,380		3,393		203,773
Permanent Restricted Funds					
Endowment	1,603,682		33,318		1,637,000
Investments in Sanctuaries	8,039,010			357,661 ^D	8,396,671
Total Net Assets	13,542,592	-4,671	-1,984,477	-234,470	11,318,974

Note A - Market Value Decline

Note B - Close Out of Capital Campaign

Note C - Transfer to Operating Fund of Draw in Excess of Investment Income (included in Operating Fund Revenues)

Note D - Purchase of Sanctuary Property

Note E - Grant Funds Expended in Operations (included in Operating Fund Revenues)

From the President



**By Steve Kelley
MNA President**

As MNA's new President, I expect to periodically report to our members and friends through our newsletter.

In this first column, I am pleased to report that:

- MNA has reaffirmed its longstanding Mission to protect areas that contain examples of Michigan endangered and threatened flora, fauna and other components of the natural environment including habitat;

- MNA remains financially sound with an endowment expected to generate nearly half of our annual operating budget, notwithstanding some endowment stock market losses;

- We are fortunate to have many very loyal volunteers, without whom we could not function. Volunteers help with monitoring, marking, and maintaining our sanctuaries, in the MNA office, fundraising, providing governance through our dedicated trustees and in countless other ways;

- We have a talented, dedicated staff which frequently goes above-and-beyond their job requirements;

- Our members, friends, and donors continue to support our Mission through their generous gifts of time, talent, and treasure.

We are thankful for all of these efforts.

Several of the following updates could be an entire column on their own, but I do want to fill you in on some of the things we are doing to better prepare MNA for the next several decades.

- We have developed a more sophisticated and more careful sanctuary acquisition process.

We now recognize that MNA's business model from the 1970s and 80s was incomplete. We then thought that ownership alone would protect our sanctuaries in perpetuity (a very long time). Now we understand that passive ownership after initial acquisition alone is not enough to properly care for many of our sanctuaries, which instead require active monitoring

and maintenance to protect against ORVs, dumping, invasive species, and encroachment from adjacent landowners. Active stewardship of our sanctuaries – in addition to thousands of hours of annual volunteer help – costs MNA over \$300,000 a year.

Given our goal to protect our sanctuaries in perpetuity, we need to be realistic about the volume of property that we – without more resources – can sustainably own and maintain. Thus, our new sanctuary acquisition process seeks to better understand risks and related management costs for our new sanctuaries and to prioritize our acquisitions.

- In conjunction with every new acquisition, we seek donated funds to endow the expected costs of maintaining that new sanctuary in perpetuity. Sometimes the donor can provide, or commit to providing, that endowment, but this frequently is not the case.

- While we support conservation efforts designed to protect farm land, to promote outdoor recreation, and to protect scenic areas and open spaces, we intend to focus on protecting Michigan habitat for rare and endangered species. When properties are offered to us which are outside our core Mission, we ordinarily will decline those properties and refer the donor or seller to other land trusts or groups which may be interested in, and able to accept, such a donation or fund such a purchase. We also look forward to working collaboratively with other conservancies to jointly protect properties under appropriate circumstances, such as our recent Mystery Valley project in Presque Isle County with the Michigan Karst Conservancy.

- We are examining our internal operations to focus on priority items and maximize efficiencies, including involving more member volunteers in day-to-day MNA activities. The MNA trustees have roughly tripled their involvement over the last three years, including participating in joint trustee-staff-volunteer committees which typically meet once a month by conference call and a Board

which meets at least six times a year with remarkable attendance and participation.

- We are moving forward with work necessary to apply for accreditation by the Land Trust Accreditation Commission ("LTAC") by 2011. LTAC accreditation is premised on general compliance with the published standards and practices of the Land Trust Alliance, of which MNA is a member. LTAC accreditation is expected to be required to remain competitive for major grants and attractive to major donors. To apply, MNA needs to formally adopt certain additional policies (typically documenting what we already do without a formal policy), reorganize our historical land files to meet LTAC criteria (a particularly onerous task given MNA's 57-year history, 165 sanctuaries, and volunteer history), and implement further sanctuary monitoring, marking, and maintenance protocols.

You will hear more about our accreditation efforts in subsequent newsletters and on our Fall Adventure to the Eastern UP in October. In the meantime, if you know dedicated folks who might be able to help us one to two days a week in our Williamston office reorganizing and reconciling our historical records, please forward those names and contact information the MNA office or to me at my contact information below.

We value your input. We may not be able to immediately implement every suggestion right away, due to resource limitations or competing concerns, but we do want to hear from you. Please let us know how we can better execute our Mission and serve our members.

Thank you again for your continuing support of MNA.

Stephen M. Kelley
President
skelley@kcmlaw.com
(586) 563-3500

Volunteer Opportunities

By Steve Kelley, MNA President

We frequently get asked “does MNA have any volunteer opportunities?” The answer is a resounding “yes”. We have a wide variety of field and office opportunities. For 57 years, MNA has depended on the goodwill and volunteer efforts of our members and supporters.

Here are some of our current needs:

General Office Volunteers: We need more general office help with day-to-day correspondence and mailings, answering the telephone, answering basic questions about the organization, and filing. More volunteers in the office should help us be more responsive to members and donors and save critical dollars for actual habitat protection. General office and some word processing experience will be helpful but are not essential to volunteer.

Historical Land File Volunteers: As part of our work to apply for LTAC accreditation (see “From the President”), we need volunteers to join an existing core volunteer group analyze, input, and image historical MNA land files in the MNA office. Training will be provided. This role requires at least a six month commitment of at least one day most weeks to keep things on track. Organizational and decisionmaking skills are required.

Legal Issue Volunteers: Legal issues regularly arise in connection with sanctuaries and preserves. We can use volunteer attorneys to help us manage and promptly resolve these legal issues. A background in real estate transactional legal work will be at least helpful if not essential. We will assign a specific legal issue and provide appropriate background documents and current first-hand knowledge.

Volunteer Coordinator: We would benefit from having a volunteer coordinator to schedule, email, and followup with our other volunteers for sanctuary volunteer days, boundary marking events, field trips, field GPS and office GIS work, editing and laying-out our newsletter, and other work.

Boundary Markers: Over the years, some of our historical sanctuary boundary markings have been removed or otherwise disappeared. As a part of our stewardship program, we want to be sure that boundaries for our respective sanctuaries are reasonably marked,



Photo by Jeanette Sharpe

Trustee David Sharpe represents the MNA at the Rouge River Water Festival.

and could use some help to get this up to date. All necessary training will be provided for this field position.

Sanctuary Monitors and Stewards: We continue to seek at least one volunteer “steward” for each of our 165 sanctuaries and preserves. The steward is expected to, at a minimum, annually visit their assigned sanctuary and prepare a written report documenting their observations about the sanctuary and its condition. Many stewards live relatively near the assigned sanctuary and enjoy visiting more often throughout the year. Importantly, we likely will need three years of sanctuary monitoring reports for each sanctuary to apply for LTA accreditation. To the extent we can accomplish these reports through volunteer stewards, MNA staff will be able to focus on other issues enabling us to better protect more Michigan land. A general ecology, biology, conservation or comparable background is desirable, including those who are self-taught.

Speakers and Representatives: We are increasing our public outreach efforts throughout the state and seek people to speak to local groups and organizations about MNA, and to represent MNA at the many events we attend. MNA will provide speakers with a PowerPoint presentation and talking points. For event representatives, MNA will provide talking points and appropriate materials.

We also appreciate receiving your photographs of the sanctuaries, which

ordinarily will be added to our files for that sanctuary (please indicate sanctuary name and date of your visit). If submitted in a digital format, we will consider using your photograph in our future newsletters. Photographs of young people enjoying time in our sanctuaries are particularly requested.

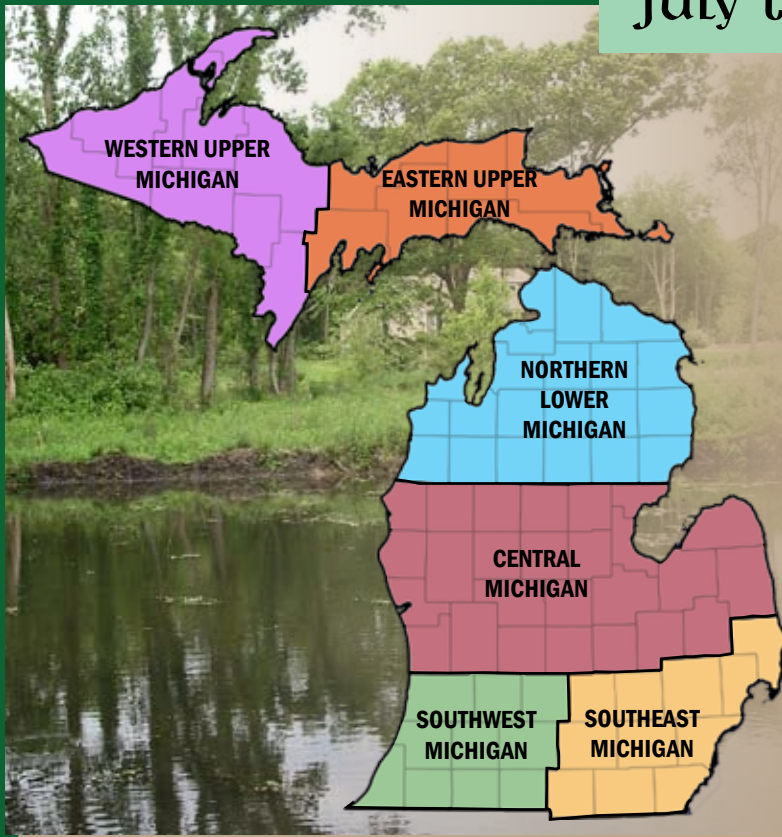
Again, thank you to our many past and present volunteers. If you are interested in becoming a volunteer for one of the above positions, please contact us at (517) 655-5655 or volunteer@michigannature.org. We cannot do this without you!



MNA is always looking for volunteers. Many of these opportunities occur on our sanctuaries. Each point on the map represents a sanctuary.

mna schedule of activities

july through november 2009



The Schedule of Activities has been redesigned to be more user-friendly and help our members and volunteers find their favorite activities with ease. Please let us know how you like it.

The map to the left will assist you in finding what region of Michigan you are located in. Use the following pages to see activities scheduled in your region from July to November.

As always, please call the MNA office to R.S.V.P. for these events at (517)655-5655 or you can email us at volunteer@michigannature.org. Please let us know if you are planning to attend so we can share that with our program leaders, most of whom are volunteers. It helps greatly with planning. When you R.S.V.P. you will also get directions to the sites.

SOUTHEAST MICHIGAN

Tuesday, July 21

10 a.m. to 2 p.m.

Red Cedar River

Ingham County

Please join us as we repair portions of this sanctuary's extensive boardwalk in the floodplain of the Red Cedar River.

Saturday, August 8

10 a.m. to 2 p.m.

Red Cedar River

Ingham County

Please join us as we repair portions of this sanctuary's extensive boardwalk in the floodplain of the Red Cedar River.

Saturday, November 7

10 a.m. to 2 p.m.

Lakeville Swamp

Oakland County

Please help us remove invasive shrubs threatening the natural communities at this site.



Please help your program leaders plan for these events by registering with the office at (517)655-5655 or emailing volunteer@michigannature.org.

CENTRAL MICHIGAN

Sat. and Sun., July 18 and 19

9 a.m. Knapweed Pull at Karner Blue

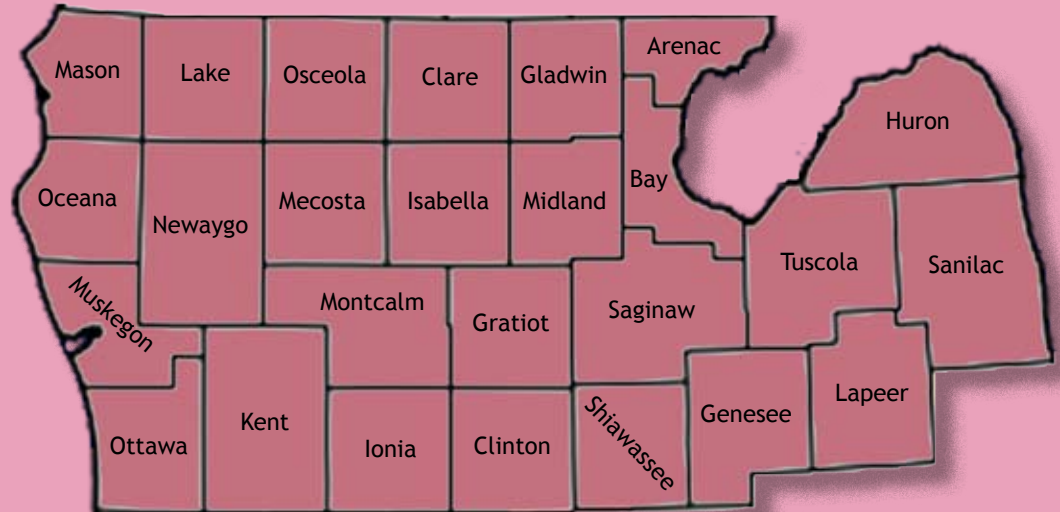
1 p.m. Field Trip at Karner Blue

8 p.m. Field Trip at Nawaygo Prairie

Sunday July 19, 11 a.m. Loda Lake

Nawaygo County

Join MNA member Jeff Ganley for a day in the dry sand prairie! We'll start off by pulling invasive spotted knapweed from Karner Blue Nature Sanctuary's dry sand prairie, which supports the Karner blue butterfly and its larval host plant, wild lupine. We'll then learn more about this unique community during field trips at this sanctuary and nearby Nawaygo Prairie Nature Sanctuary. Sunday you can visit Loda Lake in the Manistee National Forest.



Saturday, August 1

9 a.m. to 1 p.m.

Nawaygo Prairie

Nawaygo County

Please help us remove invasive spotted knapweed threatening the beautiful dry sand prairie of this sanctuary.

Tuesday, October 13

10 a.m. to 2 p.m.

Parsons Memorial

Clare County

Interested in seeing fall colors, Ferguson Lake and signs of beaver activity? Here's your chance to do so and also help remove autumn olive invading the upland forest of this sanctuary.

Thursday, October 15

10 a.m. to 2 p.m.

Krum Memorial

Montcalm County

Please help us remove invasive autumn olive from this beautiful sanctuary on Millmine Lake.

Tuesday, October 20 and 27

10 a.m. to 2 p.m.

Parsons Memorial

Clare County

Interested in seeing fall colors, Ferguson Lake and signs of beaver activity? Here's your chance to do so and also help remove autumn olive invading the upland forest of this sanctuary.

Thursday, October 29

10 a.m. to 2 p.m.

Krum Memorial

Montcalm County

Please help us remove invasive autumn olive from this beautiful sanctuary on Millmine Lake.

Tuesday, November 3

10 a.m. to 2 p.m.

Parsons Memorial

Clare County

Interested in seeing fall colors, Ferguson Lake and signs of beaver activity? Here's your chance to do so and also help remove autumn olive invading the upland forest of this sanctuary.

SOUTHWEST MICHIGAN

Saturday, August 22

Meet at 1 p.m.

Campbell Memorial at Helmer Brook

Calhoun County

Join us as we rededicate Helmer Brook Plant Preserve in memory of Betty and Ralph Campbell, longtime MNA members from southwest Michigan.

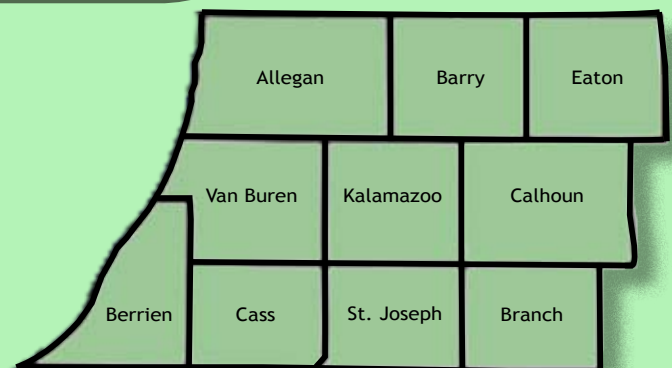
Tuesday, November 10

10 a.m. to 2 p.m.

Beck Memorial

Berrien County

Please help us remove multiflora rose, autumn olive and other invasive plants that are spreading into the sanctuary.



EASTERN UPPER PENINSULA

Wednesday, July 15

From Dawn to Dusk

Martin Bay

Delta County

Join us for the Summer 2009 Natural History Assessment of Martin Bay! The goal is to record which species are present on the sanctuary this time of year, along with detailed notes on their microhabitat and/or behavior. To accomplish this, there will be five assessment groups: one group each for birds, insects, reptiles/amphibians, mammals and plants.

Saturday and Sunday, July 25 and 26

From Dawn to Dusk Both Days

Swamp Lakes Moose Refuge

Luce County

Join us for the Summer 2009 Natural History Assessment of Swamp Lakes! The goal is to record which species are present on the sanctuary this time of year, along with detailed notes on their microhabitat and/or behavior. To accomplish this, there will be five assessment groups: one group each for birds, insects, reptiles/amphibians, mammals and plants.

Saturday, August 1

From Dawn to Dusk

Two Hearted River

Luce County

Join us for the Summer 2009 Natural History Assessment of Two Hearted River Nature Sanctuary! The goal is to record which species are present on the sanctuary this time of year, along with detailed notes on their microhabitat and/or behavior. To accomplish this, there will be five assessment groups: one group each for birds, insects, reptiles/amphibians, mammals and plants.

Sunday, August 2

From Dawn to Dusk

Pat Grogan Orchid Bog

Chippewa County

Join us for the Summer 2009 Natural History Assessment of the Pat Grogan Orchid Bog Nature Sanctuary! The goal is to record which species are present on the sanctuary this time of year, along with detailed notes on their microhabitat and/or behavior. To accomplish this, there will be five assessment groups: one group each for birds, insects, reptiles/amphibians, mammals and plants.

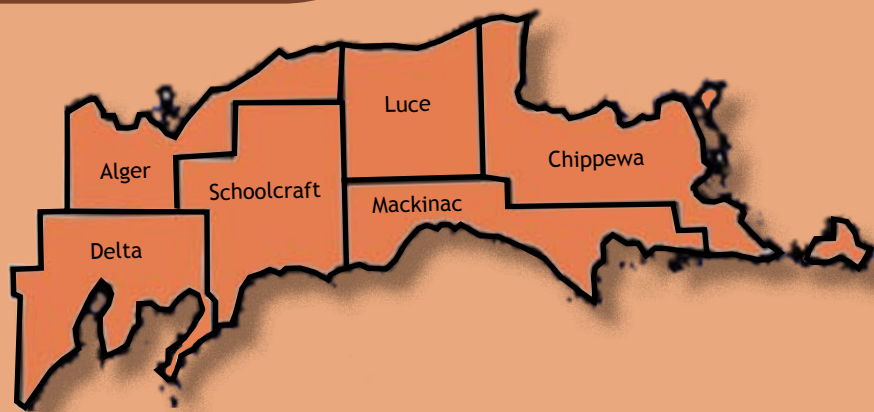
Wednesday, September 23

From Dawn to Dusk

Pat Grogan Orchid Bog

Chippewa County

Join us for the Fall 2009 Natural History Assessment of the Pat Grogan Orchid Bog Nature Sanctuary! The goal is to record which species are present on the sanctuary this time of year, along with detailed notes on their microhabitat and/or behavior. To accomplish this, there will be five assessment groups: one group each for birds, insects, reptiles/amphibians, mammals and plants.



Thursday, September 24

From Dawn to Dusk

Two Hearted River

Luce County

Join us for the Fall 2009 Natural History Assessment of Two Hearted River Nature Sanctuary! The goal is to record which species are present on the sanctuary this time of year, along with detailed notes on their microhabitat and/or behavior. To accomplish this, there will be five assessment groups: one group each for birds, insects, reptiles/amphibians, mammals and plants.

Saturday, September 26

From Dawn to Dusk

Martin Bay

Delta County

Join us for the Fall 2009 Natural History Assessment of Martin Bay! The goal is to record which species are present on the sanctuary this time of year, along with detailed notes on their microhabitat and/or behavior. To accomplish this, there will be five assessment groups: one group each for birds, insects, reptiles/amphibians, mammals and plants.

Friday-Sunday, October 2- 4

MNA Fall Adventure

See the back cover for more information on this trip to five sanctuaries in Chippewa and Mackinac Counties (and one in Clare County).

Saturday and Sunday, October 24 and 25

From Dawn to Dusk Both Days

Swamp Lakes Moose Refuge

Luce County

Join us for the Fall 2009 Natural History Assessment of Swamp Lakes! The goal is to record which species are present on the sanctuary this time of year, along with detailed notes on their microhabitat and/or behavior. To accomplish this, there will be five assessment groups: one group each for birds, insects, reptiles/amphibians, mammals and plants.

Please help your program leaders plan for these events by registering with the office at (517)655-5655 or emailing volunteer@michigannature.org. Directions to the sanctuary will be provided when you register.

WESTERN UPPER PENINSULA

Saturday, July 18

9 a.m. to 5 p.m.

Estivant Pines

Keweenaw County

Please help us replace the aging sanctuary boardwalk that was installed over thirty years ago. You are welcome to come for a few hours or stay the entire day. Be sure to bring a lunch and a cordless drill with screwdriver bit if possible. RSVP with MNA Western U.P. Representative Charlie Eshbach at (906) 281-3500 or ceshbach@keweenawtraveler.com.

Saturday, July 25

Meet at 11 a.m.

Black Creek

Keweenaw County

Join MNA stewards Jim and Joy Ziemnick for a picnic and hike in this diverse sanctuary that protects portions of Hills Creek, Black Creek and Lake Superior shoreline. Please bring a lunch for the picnic and allow about three or four hours for this trip. RSVP with Jim Ziemnick at (906) 337-1332 or jbziem@pasty.net.

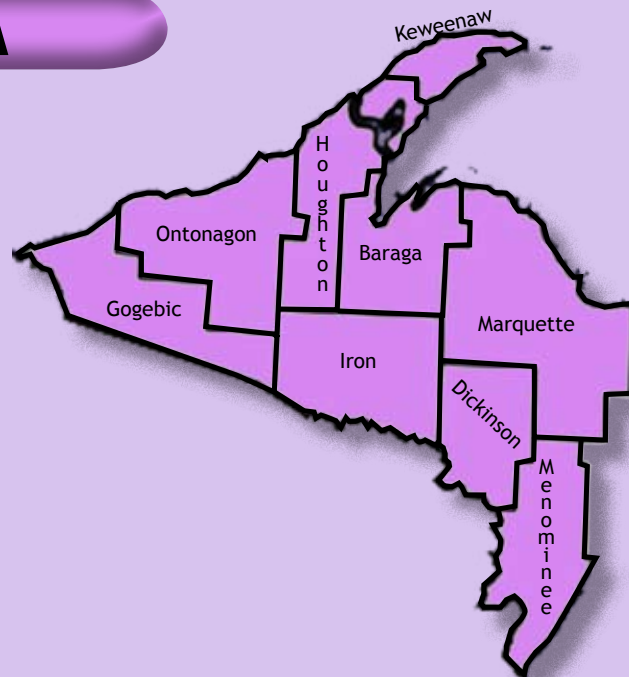
Saturday, September 12

Meet at 1 p.m.

Baraga Old Growth

Baraga County

Join MNA member Jeff Ganley for a journey into this sanctuary's very wild and remote old-growth hemlock stand with Lake Superior dune swale complex interspersed with bog habitat. Be sure to bring waterproof boots.



Saturday and Sunday, September 26 and 27

Keweenaw Color Tour

Keweenaw County

Come out and experience thirteen of MNA's sanctuaries in the Keweenaw! The self-guided tour materials will be available in advance of the event. Please contact the MNA Office to obtain the materials or for more information.

NORTHERN LOWER MICHIGAN

Saturday August 15

Meet at 1 p.m.

McAlvay Memorial

Alcona County

Jeremy Emmi will lead a late summer trip through this small yet diverse MNA plant preserve. This rare dune and swale habitat is home to some curious plants and is a geologic window into ancient lakeshores.

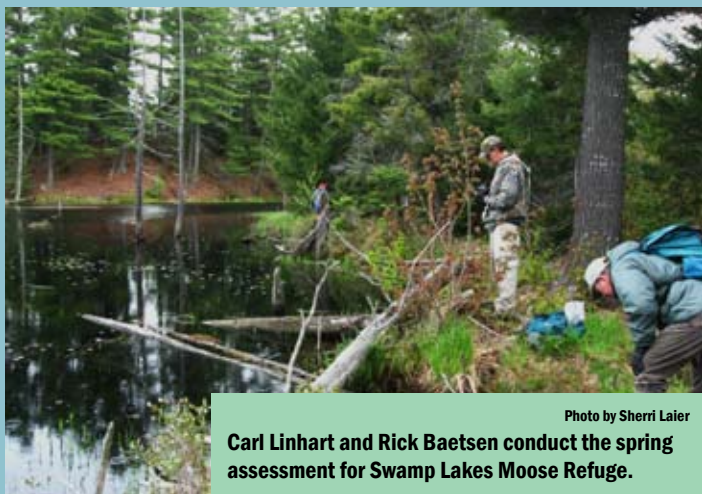


Photo by Sherri Laier

Carl Linhart and Rick Baetsen conduct the spring assessment for Swamp Lakes Moose Refuge.

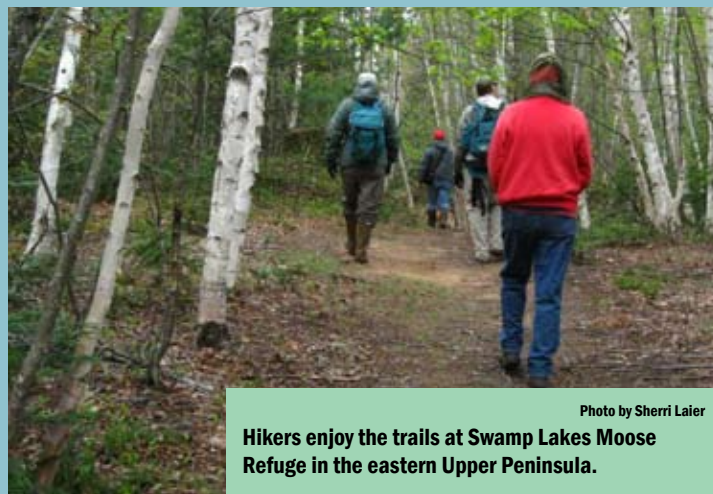


Photo by Sherri Laier

Hikers enjoy the trails at Swamp Lakes Moose Refuge in the eastern Upper Peninsula.

Nature Notes: Bogs

**By Sherri Laier,
Stewardship Director**

What type of plant community creates such an inhospitable environment that:

- Oxygen is sucked out of the system?
- The pH is so low that even decomposing bacteria can't survive?
- Nitrogen is unavailable and plants must turn to torture and carnivorous behavior to survive?
- The plants have had to adapt to arid conditions even while they are immersed in water?

This community is a bog, dominated by sphagnum mosses, shrubs in the Ericaceae family (leatherleaf, bog rosemary, blueberry, cranberry) and sedges. These plants have developed a diversity of adaptations to cope with low nutrient levels including carnivory, evergreen leaves and sclerophylly (thick epidermal tissue).

The Role Of Sphagnum Moss

Sphagnum moss grows continuously, adding new leaves on top while old leaves are dying away below. The long, reclining stems with their thin, almost translucent leaves may be yellow, red or green. Several species thrive in bogs — some specialize in forming hummocks, others occupy hollows.

The leaves and stems of sphagnum moss contain large, porous, hollow cells that absorb and hold water like a huge sponge. Depending on the species, sphagnum moss can hold 10 to 20 times its weight in water. It can even raise the water table by growing upward and pulling the water along with it.

Sphagnum moss lowers the availability of minerals to other plants by absorbing minerals and releasing hydrogen ions. The higher concentration of hydrogen ions in the water increases its acidity which hinders the absorption of any remaining minerals by other plants.

Sphagnum moss also reduces oxygen, so bog waters are often totally lacking in this element just 8 inches below the surface (Daniel et. al 1981). These low levels of oxygen and high levels of acidity also inhibit the microorganisms which decompose plant material.

Plant Adaptations

All of the ericaceous shrubs (except blueberries) are evergreen and show

adaptations typical of plants growing in very dry conditions. Their leaves are slender, cutting down the ratio of surface area to volume; they are thick and succulent and their surfaces are waxy and often hairy. It has been suggested that these traits are adaptations to a physiologically dry environment created by the ability of sphagnum to hold water so that it is unavailable to other plants' roots (Daniel et. al 1981).

prevents the prey from escaping, and eventually exhausted, the hapless victim ultimately drowns in a pool of digestive enzymes at the bottom. Once freed from the body of the insect, the various nutrients are absorbed by specialized cells in the leaf. The most important nutrient is nitrogen. Experiments with radioactively tagged nitrogen show that as much as 40 percent of this element in the roots of carnivorous plants is



photo by Natalie Kent

Swamp Lakes Moose Refuge Nature Sanctuary contains this beautiful bog.

Bogs are very cold, nutrient-poor environments. Their location in low, glacially-formed basins make them susceptible to midsummer frosts; growing seasons are short, so it is an advantage for these shrubs not to put energy into a new set of leaves every spring. The hairs and the tough skin are further adaptations of the leaves that aid survival by creating a buffer against the desiccating winds of winter.

Carnivorous Plants

Carnivorous plants have evolved in the stingy environment of bogs, gaining from their insect food the nutrients, particularly nitrogen, which are not otherwise available. The most conspicuous and well-known meat-eater is the pitcher plant. Pitcher plants are passive trappers. Their leaves do not move to close around an insect. Instead, color and the scent of a sugary solution that fills the bottom of the cup-shaped leaf attract the unwitting bug. A fringe of downward pointing hairs inside the leaf

derived from captured insects (Daniel et. al 1981).

The other carnivorous plants of the bog mat – bladderwort and sundew – are active trappers. Sundews have a basal rosette of tiny leaves covered with short, sticky glands. The glands hold the prey while the leaves close around it. The bladders of bladderworts are elastic pouches growing under water. When the trap is set, the bladders are flat, and the entrance to the pouch is closed by a flap of cells. If something touches the sensitive hairs around the entrance, the walls spring apart and water rushes in through the entrances, carrying the prey with it. Since the bladders are submerged, the plants often catch mosquito larvae and tiny, aquatic invertebrates (Daniel et. al 1981).

Bogs have the lowest diversity of plant species of any other community in Michigan. On average, there are 30 species of plants to learn in a bog (Cohen, 2005).

Natural Disturbance Regimes

Bogs thrive under disturbance and they have evolved with fire, flooding, windthrow and insects. Surface fires can contribute to the maintenance of bogs by killing encroaching trees without completely removing the sphagnum (Curtis 1959).

Flooding can contribute to the expansion and maintenance of bogs. Dam building activities of beaver can facilitate sphagnum peat development (Heinselman 1970). Roots of peatland trees are quickly killed when the water table rises following flooding (Glaser and Janssens 1986).

The natural disturbance regime in bogs is also influenced by wind. The Great Lakes region is one of the most active weather zones in the northern hemisphere, with polar jet streams positioned overhead much of the year. More tornados pass over this area than any other area in the continental U.S. (Frelich and Lorimer 1991). Trees growing in bogs are particularly susceptible to windthrow because sphagnum peat provides a poor substrate for anchoring (Burns 1906).

Tree survival is also limited by insects and parasites. Insect outbreaks of the larch sawfly cause heavy mortality of tamarack trees, which are common in southern bogs. Black spruce, a common tree in northern bogs, are killed by dwarf mistletoe (Coburn et al. 1933).

The Michigan Nature Association owns and manages about 10 bogs in the state. The Michigan Natural Features Inventory has 87 records in their database. These plant communities, which have widespread distribution in the north and local distribution in the south, are essentially unchanged since circa 1800 European settlement.

The MNA stewardship staff puts our efforts into keeping these unique systems safe from trampling, as well as combating invasive plants, particularly shrubs. We do not burn in these systems although we have discussed

Is this a bog, fen, marsh, sedge meadow or swamp?

All these plant communities are wetlands, but the source of the water (rainfall or underground springs), whether it has a high quantity of oxygen and what its pH range is will help answer that question. The types of plants you see will also help determine the community (Cohen, J.G. 2005). Keep in mind that these communities often merge together and become indistinguishable from one another. Here is a list of the basic differences between them.

Marshes, sedge meadows and swamps. Marshes, sedge meadows and swamps occupy aerated soils, which are subject to changing water levels, including spring flooding.

- Marshes are open, grassy or sedgy wetlands developed on mineral soil and standing under shallow water for at least part of the year.
- Sedge meadows are dryer than marshes during the heat of summer and are succeeded by a wet shrub community of willows, dogwoods, and alders.
- Swamps are wooded wetlands, rich in minerals and near neutral to somewhat basic in pH. They are highly productive. The oxygen saturation is high, owing to subsurface water movement. Peat development is limited by decomposer activities.

Bogs and fens. Bogs and fens are peatlands, but not all wetlands are peat storing. It is only when plant growth exceeds decomposition that organic matter accumulates as peat.

- Fens develop under the influence of mineral-rich ground or surface water. Most fens occur in the southern part of the state.
- Bogs are mineral-poor, acid peatlands raised above the groundwater by an accumulation of peat. Bogs can develop on alkaline or acid lakes. Most bogs occur in the northern part of the state.

Bogs serve important ecological functions. They process nutrients and absorb precipitation, which helps to prevent runoff and flooding. Bogs have also been recognized for their role in regulating the global climate because they store large amounts of carbon in peat deposits. This could change with global warming melting frozen bogs in Hudson Bay, Siberia and Scandinavia.

Little is known about managing these systems; however, the current literature states that the best protection we can give them is to keep people out, maintain the hydrology and allow the natural disturbances to continue.

small, experimental research burns in the southern bogs. Please treat them with the utmost care as you come upon them in your travels.

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Become a Steward

The Michigan Nature Association relies heavily on volunteer stewards to help care for our sanctuaries. The basic requirements for a steward is to visit the sanctuary twice a year and report on its condition. Many stewards go above and beyond by leading field trips and volunteer days but it is not mandatory. By becoming a steward, you will not only help MNA protect its sanctuaries, but also witness the amazing events that happen throughout the seasons. If you are interested in becoming a steward, please contact Natalie Kent-Norkowski at (517) 655-5655 or nkent@michigannature.org.

MNA is in particular need of stewards in these counties:

Chippewa

Mackinac

Presque Isle

Hillsdale

Softshell

By Michael Murphy

In March of 2007, MNA lost a friend in Patrick Murphy, a perfect neighbor, lover of nature, and lifelong educator. He retired as the Chief of Education for Historic Sites, Lower Peninsula for the State of Michigan Museum. His younger brother, Michael, remembers Pat in this story.

I first met my brother, Patrick, when I was thirteen. That sounds as though one of us was an orphan, doesn't it? But aside from what he may have told me, and assurances from Howard and Maxine that this was certainly not the case, we were brothers by blood. When I finally reached that age, my older brother by six years, bought me a birthday present. It closed the door on my previous childhood and ushered in a new world beyond Tinker Toys and rubber soldiers.

Crisp, new, two-hand sized, here in my grasp was my first real book: *Minn of the Mississippi* by Holling C. Holling. Following Patrick's lead, that book jump-started me on a lifetime of old bookstore pilgrimages. Mutually, our volumes grew as we tended to specialize and concentrate on texts which peaked our interests. Patrick read and revered the Michigan writers and those who wrote about the state. His shelves included, but were not limited to: Judge John D. Voelker (Robert Traver); Jim Harrison; nearby Owosso native James Oliver Curwood; Papa Hemmingway's Nick Adams stories of the North Woods; and as I mentioned, former Jackson County resident, Holling Clancy Holling. To my thinking, Patrick had it right. It is this last author who should be rediscovered and read by young and old.

If you're not familiar with that name, shame on you and maybe your parents or at least Miss Crabapple. Holland C. Holling and his wife, Lucille Webster Holling, were responsible for a half dozen books of great interest to a youthful audience, though written to impart knowledge to all ages. Published in 1951, *Minn* is the story of a hatchling snapping turtle making her way from the headwaters of the Great River to the Gulf of Mexico. Recipient of the Newbery Honor Award, it is a tale years ahead of *An Inconvenient Truth* and as important as Rachel Carson's

Silent Spring. For although it is about the education of a neophyte turtle, it is also the narrative of a vast watercourse which endures the pressures of population and environmental misuse on its banks. Here is a text of lavish color



Photo by Andrew Hoffman

The eastern spiny softshell turtle

plate and pen-and-ink illustrations, most contributed by Hollings' accomplished wife. The historical and scientific background writings and border notations wrap well around the wayward progress of a stouthearted turtle. It is great, informed reading and especially readable with small children. Because I had gone back to read *Minn* again, the Hollings' got me thinking of another turtle in our recent past.

Like most kids, my brother and I could count on two hands the number of turtles we had as pets, either in the backyard or in our rooms. In spite of the fact that our mother was an RN, the term "salmonella" never reared its ugly head and we thank her for that. Living along the Mighty Mississippi or in Michigan, both of which we did, it would have been against the current not to have had turtles. Responsibly, all of our charges eventually found Liberte. One incident similar to Hollings' *Minn*, I recall quite well. In this case, however, it involved a rather large and adventuresome soft-shell.

In the event you've not studied turtle mug shots, the particulars of the eastern spiny soft shell turtles are that the top, or carapace, is sturdy but somewhat pliable, hence the name. Like snappers, softshells can grow to great size, up to nineteen inches, though they generally don't share the heftier weight characteristics of their river mates. Where snappers tend to be deep-chested and thick, soft-shells are discus-profiled. In Michigan, it would

not be unreasonable to discover one of these floppy disks the size of a dinner plate or larger. Accomplished swimmers and fast mud diggers, softshell turtles prefer aquatic insects, tender plants and the occasional succulent crawdad. But they would relish a wriggling earthworm, too. And this is where most fishermen and women can run afoul.

Having hauled in to see what the great tug is all about, many forewarned individuals simply apprise the situation and cut their lines, going home with a story to tell. They recognize, or have at least heard the stories, that the term "soft" has nothing to do with the turtle's personality. They will battle. Here are razor jaws fashioned to a tubular neck stalk capable of twisting in uncanny planes, snagging a meaty thumb as though it were a passing chub. And hang on. So, that said, I invite you along to the Red Cedar Park bridge on the road between Williamston and Okemos, where flows the sluggish Red Cedar River.

Returning from dinner in East Lansing with a carload of family, at the curve before the bridge, we see an overturned pie-baking dish navigating the road. I say "navigating" because this turtle was exactly straddling the double yellow center lines of the bridge - literally and figuratively sticking its neck out to make good its transit. Although I'd already begun to brake, from the back seat brother Patrick was yelling, "Stop the car! Stop the car". It was obvious what he had in mind, though I'm guessing it must have been less so to the turtle. With tires spewing onto gravel, Pat was already exiting, gauging the timing of his dash into the often times busy highway. Had a Detroit to Lansing produce truck been clipping along at that moment, I don't need to tell you, gentle reader, the obvious implications for the turtle. My son, Matthew, also as if by one motion, vaulted from the back door and was moving around the rear of the car to follow his intrepid uncle. With a rejoinder to "Watch traffic!" I saw all from the vantage of the rear view. Of course "Chariots of Fire" theme music must have been playing, as all appeared as though it were in slow motion.

I can't tell you why an aquatic

creature would choose to cross a highway when there is a perfectly good river running under. But there was no question about her (I'm guessing it was a "her", females being the larger of their kind) turning back. Not this turtle. And as she was as much forward as she was back, as the saying goes, she was determined to make it to the other side. My brother, who knew turtle thoughts, obviously shared this thinking and was equally determined to assist. Picture, if you will, a 50-something adult male, somewhere in the romp range of a Detroit lineman or, ok, Captain Kangaroo, bounding across the left lane of a highway in three, surprisingly elegant strides accompanied by a totally enamored 12-year old co-rescuer. "This is SO cool", I heard Matt chirp as he tore off, glancing both ways and then following the "Captain's" lead. On exactly the third plant, Baryshnikov, with a Big Mac double hand hold, scooped the plodding, and I should think, astonished, terrapin from the threatening roadway. And she was olive green, in the way it is said that only things in nature are green. I stared in amazement, as, with another three glides while holding the object of

concern at straight arms length, the far cement bridge abutment was made. There was a smooth yet spirited fling as the dazed, dull-eyed, but no doubt grateful, softshell described a shot-putted high arc into the firmament. Eternities passed. Civilizations rose and fell, it seemed. Finally she landed with a confident SPLAT! in the deep center of the sluggish Red Cedar. Could Al Oerter have been so proud? I think not.

Maybe the best of times are in the remembering and the endless retelling. Now, back in the car, such was the back seat's reaction. With both heroes now motoring down the road once again, the exchange was rapid fire with much gesturing. "Woo hoo! Do my hands ever STINK!", Pat declared. He held up eight fingers and two equally opposed thumbs slimed with river yuck. No digits missing, I verified. "Godfrey Daniel, do you smell that?! Whew!". We assured him we did. There was not much mistaking that, no. Matt piped that there was, "a big 01' leech attached to the inside of its hind leg...you SEE that thing?! That turtle was a pancake! Man!" Ah, the keen observational powers of youth.

Pat conspired that he too, had seen the at once gross but delectably fine leech. More cackles. So, in a shared moment of striking a blow for conservation, the occupants settled into a warm, smug feeling of yet another job well done. I could have been chauffeuring the Lone Ranger and Tonto. With one more glance in the mirror, it was a toss up as to whose smile was broader, as they each gazed out their own windows, mentally replaying the highlight film of the day. Worthy of the written page, I believe the Hollings' would have approved both the deed and the cherished memory.

By about April, when the struggling sun begins to warm the ooze of the Red Cedar, a long nose will snorkel out of a long winter mud soak. An older, and no doubt, wiser softshell will periscope to breathe in yet another season on the river. I'd also like to think there's a small, improbable smile on her face, because for a brief moment in turtle-time she thought she was flying. Perhaps some balmy afternoon, when she has the inclination, she'll tell her kids about that too.

There are no answers, seek them lovingly.

The success of MNA relies on the support of people like you...

In fact, we can't do it without you. Your support is critical and will ensure that MNA has the resources to remain a vibrant organization, capable of responding to new challenges and opportunities and protecting and maintaining our sanctuaries and preserves in the manner that is a hallmark of MNA.

Please consider contributing to MNA this year so that we will have the necessary resources to achieve our shared goals.

If you contribute at least \$250 between July 1 and December 31 (either a one-time contribution or the sum of your contributions) you will be entered into a drawing to win an excursion to one of MNA's premier sanctuaries or preserves throughout the state:

Lost Lake
Carlton Lake
Jasper Woods
Lakeville Swamp
Powell Memorial

Big Valley
Grinnell Memorial
Lake Superior and Pat Grogan Orchid Bog
Saginaw Wetlands
Goose Creek
Black River

Bird Island
Gunn Memorial
Butternut Creek
Walker Memorial
Handford Memorial

An MNA staff person and/or volunteer steward will lead you and up to three guests on a private tour of the sanctuary or preserve of your choosing. The excursion will include a picnic lunch. Imagine the beautiful view from Bare Bluff at Grinnell Memorial, or enjoying your lunch beneath the hemlock groves of Jasper Woods. Each MNA sanctuary offers a different atmosphere from adventurous and trailblazing, to calming and scenic.

Date to be arranged in consultation with MNA. 6 winners will be selected. For more information on our sanctuaries, go to www.michigannature.org

Trustee Profile

Kurt Jung

By Mary Ann Czechowski, MNA Trustee

Trustee Kurt Jung was elected to the MNA Board of Trustees just this past March. Kurt's educational background is in science, with professional expertise in computer software. He brings a deep appreciation and respect for the natural environment of Michigan and for the work of MNA to the Board.



What kindled your initial interest in MNA?

My wife Maura and I learned about MNA when we were introduced to the Big Valley Sanctuary in Oakland County by our friends Freda and Lawrence Bannerman, neighbors of the property, several years ago.

My appreciation of MNA was definitely fostered by learning about the extent, quality and diversity of its sanctuaries throughout Michigan. Later, that appreciation grew as I got to see firsthand the knowledge and dedication that members, staff and the board brought to fulfilling the purpose and mission of the MNA. I'm continually impressed with the people that make up this organization.

What activities are you participating in with MNA?

Currently, the Michigan Nature Association is working to become accredited by the Land Trust Accreditation Commission, a national organization that has established uniform standards for all aspects of operating a land conservancy. I am a member of the committee that coordinates and streamlines MNA's efforts in this process. Additionally, I serve on the Sanctuary Committee and its Stewardship Subcommittee — groups that are concerned with the ongoing and long-term protection of our holdings.

Where do you live? Are you from Michigan?

I grew up in Michigan and, except for several months working in Wyoming and Germany, have lived in Oakland County my whole life. I love this state.

What is your occupation and education?

I work as a software developer, although my degrees are in anthropology, engineering and physics. I studied at Michigan State University and Oakland University.

When did you first become interested in nature?

Some of my earliest memories are of family camping trips, and it was on these outings that I learned my father's maxim that we leave a place better than when we found it.

The first Earth Day also had a deep and lasting effect on me. As a formative fourteen year old, it taught me a valuable life lesson in the power of public awareness to address issues of global concern. It made me feel connected to a community that had its priorities intact. It was around this time that my brother, an avid conservationist a little older than me, encouraged me to read his copies of books by Rachel Carson and other environmental trailblazers.

What, to you, is special about Michigan, and about the natural environment of Michigan?

Michigan has an amazing array of diverse ecosystems. In the Keweenaw Peninsula, where MNA has a cluster of sanctuaries, we've got the oldest and most extensive lava flow on the planet. In the south, again with a lot of sanctuaries, the land is just rebounding from the retreat of glaciers a few geologic moments ago, with a profound effect on flora and fauna. Michigan's Great Lakes shorelines are a world unto themselves. A recent walk through Dowagiac Woods was a revelation to me in how vibrantly alive Michigan's hardwood forests can be. This state is a magical place.

Do you have a favorite MNA sanctuary?

Maura and I will always be particularly attached to Big Valley. Like other fens, its alkaline groundwater foundation supports an incredibly rich and delicate ecosystem. Its interesting glacial geology provides long unobstructed views, a rare treat in Oakland County. But I must confess, there are a lot of MNA sanctuaries I have not yet visited. I hope to become familiar with each of them in my lifetime.

What, to you, is special about MNA, and what the MNA has accomplished and is continuing to accomplish?

Michigan's natural resources face a sobering set of ongoing threats from many quarters. Because of its scale and reputation, the Michigan Nature Association fills an extremely important niche in countering these threats. It has attracted leading experts and generous friends that as a team can evaluate, acquire, monitor and steward vulnerable habitat throughout the entire state. I find it particularly encouraging that MNA has the momentum to push through during times in which conservation can be disappointingly far from the top of public policy priorities.

Do you have any particular goals for helping the Michigan Nature Association as a Trustee?

The particular area that I believe I can offer some expertise is in selecting and configuring appropriate technology for team collaboration. Whether we're in the office or out in the field, secure and fast access to documents such as sanctuary management plans, biologist's reports and legal descriptions is crucial for effective work. Of course, I've got a pair of work gloves that have helped me pull my share of undesirable invasives like garlic mustard, too.

New Memorial Trails

*By Jeremy Emmi,
Executive Director*

On May 9th, memorial trails were dedicated at two MNA sanctuaries in Macomb and Oakland counties. At the Wilcox-Warnes Nature Sanctuary, the Jane Kohring and Margie Watkins memorial trails were dedicated in memory of two long-time members and supporters of MNA. At the Timberland Swamp Nature Sanctuary, Alicia's Trail was dedicated in memory of Alicia Orihel, a young woman whose family chose Timberland as a fitting place to remember her life.



Visitors on Alicia's Trail cross the headwaters of the Huron River at Timberland Swamp Nature Sanctuary.

all photos by Jeremy Emmi



This huge ancient tree stump held a surprise for members Walt Kummer and Vince Orihel: a nesting turkey vulture.

The day started and ended with rain, but the dedication and field trips were interrupted with perfect periods of sunshine. We toured the newly-renovated trails in hiking boots and tennis shoes, over boardwalks, moist high ground and mushy lowlands. We encountered a great horned owl's nest at Wilcox-Warnes and a turkey vulture's nest at Timberland. The spring wildflowers were just opening up on that cool day.



Jane Hoey, daughter of Jane Kohring, and John Watkins, brother of Margie Watkins, smile at the dedication of the new trails.

Featured Interns

By Zach Jay, MNA Intern

Jeff and I are two of six interns that were seen converging on MNA's Williamston office last spring. As might be expected, the six of us shared a passion for Michigan's incredible natural beauty and the plant and animal species that abide here.

Jeff Proulx was one of three GIS Interns. They worked with the MNA's Geographic Information Systems, which he described as, "using the computer to help us generate maps and... analyze geo-spatial data." Such maps, 10 to 13 per sanctuary, allow MNA to summarize a management strategy for each sanctuary. After graduating Jeff became MNA's newest staff member.

Like Jeff, Taaja Tucker and Alia Koczara were at the MNA doing GIS work. Taaja and Alia are both recent graduates of MSU, with degrees in GIS. Alia enjoyed interning with the organization because most of the GIS tasks tackled by our office are centered on computer map-making. Normally,



photo by Jeremy Emmi

Left to right: Jeff, Zach, Veronica, Alia, Taaja and Amanda.

data-collection is a second and equally-important aspect of GIS work, but for many MNA sanctuaries this has already been done.

Broadcast Journalism junior Veronica Jackson has a love for animals—in fact, for "all of them," she said. Specializing in public relations, Veronica had the same media responsibilities for the MNA that I did—she covered the bottom half of the Lower Peninsula, while I covered the Upper Peninsula and northern Lower Peninsula. We focused on writing and organizing press releases and

newsletter articles, and updating the MNA's Sanctuary Guidebook.

"I wrote press releases for volunteer days and activity days in the southern portion of Michigan," said Veronica, who grew up in Centerville in southwest Michigan. "I wrote an article for the April newsletter, and I also wrote articles or passages for the new sanctuary guidebook that MNA is working on."

Handling some of MNA's graphic design duties this spring was MSU Telecommunications Junior Amanda Grix. "I worked on brochures and the layout of the April newsletters," she explained.

You may notice that some of the articles that appear in the MNA newsletter are written by our members. If you would like to write an article for the newsletter, please contact Paul Steiner at: (517) 655-5655 or psteiner@michigannature.org.

Memorials and Honorariums

Beginning with this newsletter, we will no longer be recognizing donors each newsletter. Instead we will recognize the total contributions donors make each fiscal year in the April newsletter (the MNA fiscal year runs from March 1st to the last day of February the following year). We will continue to immediately recognize "In Memory" or "In Honor" donations each newsletter, as well as business sponsors.

Thank you to all donors who make MNA's work possible.

In Honor of

Ellen Canterbury
Anonymous
Fred Dye and Debby Igleheart
Cranbrook House and Garden Aux.
Marriage of Natalie Kent
and Travis Norkowski
David and Beverly Bandt
Art Schneck's 60th Birthday
Anonymous
Matthias Schultz and Anne Royers Wedding
Andrew and Melanie Proschchenko
Birth of Katherine Emily Steiner
David and Beverly Bandt

In Memory of

William Compton
Viola Decker
Mary Dimaria
Berry Rubin
Bonnie Sherr
Dr. Lewis Rosenbaum
Suzanne Bailey
James Gusfa
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Giarmarco, Mullins, and Horton

We apologize for any errors or omissions.

BECOME AN MNA PROTECTOR

Join our monthly giving program!

The MNA Protector Program is MNA's monthly giving program where members like you can work together with our staff every month to preserve and protect Michigan's natural heritage. As an MNA Protector, your contribution will go towards our general support fund, providing MNA with the critical support necessary to preserve, protect and maintain our sanctuaries and preserves.

With your monthly gift as an MNA Protector, you will provide sustainable, predictable support for our ongoing efforts. It is also a great way to help MNA keep costs down because we save money by not having to send out membership renewal notices each year.

IT'S SIMPLE

Determine what amount you wish to give each month – the minimum monthly contribution is \$10 – and provide MNA with your checking account or credit card information (Visa or MasterCard only). Your contribution will either be automatically transferred from your checking account or charged to your credit card.

And, if you would like to increase your monthly contribution, decrease it, or stop it altogether, just contact us. MNA will handle any changes you wish to make.

IT'S CONVENIENT

Each month, the transaction will appear on your bank or credit card statement showing the date and amount of your contribution. In addition, MNA will send you a year-end statement reflecting your total contribution because, as is the case with your other gifts to MNA, your contributions as an MNA Protector are tax-deductible.

AND YOU CAN BE ASSURED, IT'S SAFE

Your checking account or credit card information is stored in a secure location in MNA's office and the monthly transactions are conducted by a trustworthy MNA staff member. And, MNA will only transfer the specified amount from your checking account or charge your credit card.

THREE WAYS TO BECOME AN MNA PROTECTOR

- 1) Complete the enclosed remittance envelope and return it to MNA
- 2) Sign-up online at www.michigannature.org (for credit cards only)
- 3) Call the MNA office at 517-655-5655

We encourage you to become an MNA Protector today!

You Can Make A Difference!

The Michigan Nature Association has worked for over 50 years to preserve and protect the finest natural areas in Michigan, which are home to some of the most extraordinary plants, animals, and habitats. We are dedicated to protecting these resources forever so that future generations can experience firsthand what you help us preserve today.

We invite you to support our efforts. The success of MNA relies on the support of people like you... in fact, we cannot do it without you.

JOIN

MNA is comprised of individuals who care deeply about the natural heritage of our state. If you're not a member of MNA, please join today. If you are a member, consider giving a gift of membership to a family member or friend who shares your love of nature.

CONTRIBUTE

- 1 Make a contribution in addition to paying your membership dues. There are several funds you can contribute to:
 - General Support
 - Bertha A. Daubendiek Sanctuary Preservation
 - General Endowment
 - Land Acquisition Endowment
 - Dowagiac Woods Endowment
 - Estivant Pines Endowment
 - Sarah Jane's Endowment
- 2 Become an MNA Protector. The MNA Protector Program is a monthly giving program. Each month, MNA will automatically charge your credit card or deduct from your checking account an amount you choose. By becoming an MNA Protector, you provide sustainable, predictable support and it's also a great way for MNA to keep costs down.
- 3 Make a memorial contribution or an honorarium. You can pay tribute to the memory of a friend or loved one, or honor them, by donating to MNA in their name. Contributions are directed to MNA's General Endowment.

You can double your contribution to MNA!

Many employers offer matching gift programs, so your contribution to MNA could be doubled. Contact your employer's human resources department to determine if they will match your contribution and to obtain the form which you must complete and include with your contribution.

The Michigan Nature Association is a non-profit organization. Contributions are deductible to the full extent of the law. Consult your tax advisor.

Contribution Levels

\$10,000+	Dwarf Lake Iris
\$5,000 - \$9,999	Karner Blue Butterfly
\$2,500 - \$4,999	Piping Plover
\$1,000 - \$2,499	White Pine
\$500 - \$999	Brook Trout
\$250 - \$499	Northern Maidenhair Fern
\$100 - \$249	Partner
\$50 - \$99	Friend
\$35 - \$49	Member
\$20 - \$34	Living Lightly

At the conclusion of each fiscal year, you will be recognized as a contributor at the level that reflects your total contributions to MNA throughout the year.

VOLUNTEER

The Michigan Nature Association relies heavily on volunteers to help us protect and maintain our sanctuaries.

- 4 Leave a lasting legacy with a planned gift. MNA offers members and supporters the opportunity to make a gift in a number of ways including a will, trust, annuity, insurance or other planned or deferred gift.
- 5 Contribute at your workplace.
- 6 Contribute to a MNA fund at your community foundation. MNA currently has endowment funds with three community foundations - the Community Foundation of Greater Flint, the Keweenaw Community Foundation, and the Community Foundation for Muskegon County - which provide support of MNA's properties and future land acquisitions in specific counties.
- 7 Change your internet search engine to GoodSearch, which donates 50% of its revenue to the charities designated by its users. Using GoodSearch earns the MNA about one penny per search.
- 8 When you shop online, use iGive.com. A percentage of each online purchase is contributed to MNA.



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Coming soon: Our new *Walking Paths and Protected Areas of the Keweenaw* guidebook will be published by fall of 2009. We will have more details for you soon on how to order this terrific publication in time for the holidays!

Fall Adventure to the Eastern Upper Peninsula!

By Paul Steiner, Office Manager

Every fall, Michigan Nature Association members from around the state meet for a weekend of visiting sanctuaries and enjoying each other's company. Last year, a record number of members and guests visited six sanctuaries in St. Clair and Huron counties. This year, we will visit six more but we will be concentrating on the eastern Upper Peninsula, including both MNA sanctuaries on Drummond Island!

On Saturday, we will start by visiting Beavertail Point, where steward Ruth Vail will show us this amazing sanctuary on the shore of Lake Huron. We will then board the ferry for Drummond Island and visit Zeerip Memorial. Although fairly small at only 6.2 acres, this plant preserve is home to an incredible diversity of plant life. After visiting Zeerip, we will head over to Harvey's Rocks. Here, we will enjoy a picnic lunch and see a beautiful cobblestone beach. The final stop before dinner, back on the mainland, is at the Lake Huron Sand Dunes Plant Preserve. As the name would imply, you'll get a spectacular view of Lake Huron from the top of the dunes. Finally, after dinner we will have an optional old fashion campfire.

Sunday will be equally exciting. We will start by visiting the Fred Dye Nature Sanctuary, which has one of only two

Sign up by September 11

This year's Fall Adventure will include visits to six MNA sanctuaries in Chippewa, Mackinac and Clare counties. It is a great chance to visit sanctuaries and meet other MNA members, trustees and staff.

When: October 2-4

Cost: \$250 including bus, hotel and meals

Please call Paul Steiner at the MNA office at (517) 655-5655 to register. Space is limited so be sure to sign up early.

purple coneflower populations in the state, as well as numerous animals including bald eagles, sandhill cranes, and black bears. (More on this sanctuary can be found on page 4.) On the way back home we will visit Parsons Memorial in Clare County. This sanctuary protects upland northern forest communities, a rich conifer swamp and part of Furgeson Lake.

The Michigan Nature Association will once again charter a bus with pickup locations in Oakland County and Lansing. We will depart early Friday afternoon and return Sunday evening. Traveling by bus with your fellow nature lovers means you get to spend more time having fun and less time fumbling with a map.

The total cost for this weekend \$250 per person. This includes the bus trip; a shared double occupancy room (single rooms are available for an extra fee); breakfast, lunch and dinner Saturday; and breakfast and lunch on Sunday. A terrific value! If you have any questions or need special arrangements call the office at (517) 655-5655. To register, call the office or visit www.michigannature.org by September 11. Space is limited and we did sell out last year, so don't delay.



photo by Peggy Keeney

Volunteers visit the Fred Dye Nature Sanctuary.