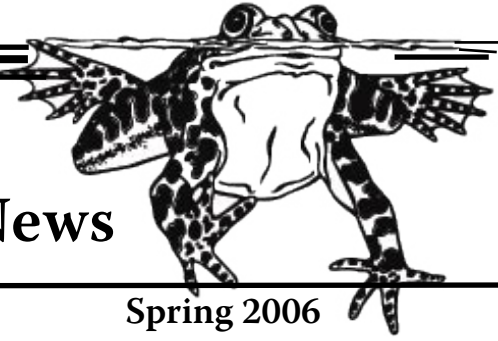


Water's Edge

Gratiot Lake Conservancy News



Volume 8

Spring 2006

CONSERVANCY CALENDAR

***Reading the Landscape of the Keweenaw
The Forested Landscape***

Art and Natural History Field Trips for Adults
Saturdays, July 1 through August 5
Including a July 15 field trip to Bammert Farm
Fee. Registration required. Call 906-289-4514 for information.

Gratiot Lake Conservancy Annual Members Meeting

Tuesday Evening, July 18, at Eagle Harbor Community Building
6:30 Members Business Meeting
(Members look for your invitation in the mail.)
7:30 Guest Speaker, Fisheries Supervisor George Madison
(Public Welcome)

Kayak Tour of Gratiot Lake

Sunday, July 23, from 9 AM to 3 PM
Meet at the public access and bring equipment and a bag lunch.
Keweenaw Adventure Company can provide equipment and
will provide orientation. Call 906-289-4303

***Reading the Landscape of the Keweenaw
Michigan Conservation***

A Slide Lecture with Dave Dempsey
Saturday, August 12, 5:30 PM to 7:30 PM
Eagle Harbor Community Building
Free program. Refreshments will be served.

***Astronomy Gathering On Brockway Mountain
with Robert Nemiroff***

and MTU Astronomy Students.
Wednesday, August 16, 9:30 PM to ?

***Aquatic Plant Workshop
with Janet Marr***

Saturday, August 19 and Sunday, August 20
9 AM to 3 PM
Enrollment necessary. Details on page 3.

Guided Nature Walk at GLC's Preserve at Gratiot Lake

Saturday, August 26, 9 AM to 1 PM
Meet at 9 AM at the Public Access to carpool to trailhead.
Bring a bag lunch. Contact GLC for info.

Coastal Cleanup at Gratiot Lake

Saturday, September 16, 9 AM to ?
Help clean up debris from the shoreline!
Call 337-5476 for info or meet at the Public Access at 9 AM.

***GLC Receives Grant from
MDEQ Office of the Great Lakes***

If you see people wading in Gratiot Lake shallows with magnifying lenses in hand or boaters "fishing" with metal rake heads on their lines, don't be alarmed. Chances are it's a sign that GLC's survey of the lake for plant and animal invaders is underway.

This summer's survey is partially funded by a small grant GLC received from the Michigan Department of Environmental Quality's Office of the Great Lakes. Botanist Janet Marr will be leading the survey with the assistance of student intern Laura Peterson, a Finlandia University's Arts Communication and Environment Program student, and other

Continued on page 3.



Janet Marr guides June 3 and 4 Spring Botany Workshop participants in the use of keys to identify native wildflowers.

The Gratiot Lake Conservancy is a Michigan Not-For-Profit Corporation formed in 1998 to preserve and protect Gratiot Lake and land within the Gratiot Lake watershed.

Through educational programs and materials, the Conservancy encourages good stewardship of the watershed and an understanding of its history and ecology.

We promote research to further understand the Lake and its watershed. The Noblet Field Station located in the SE corner of the Lake is the staging area for many of the Conservancy's educational and research activities.

Janet Morrow Avery, a friend and neighbor at Gratiot Lake and an advocate for the protection of the special ecology of the Keweenaw, succumbed to pneumonia on March 11, 2006. Her energetic civic spirit and lively intellect sparked and sparkled even in the past few years as her health declined.

Although Janet was born in Ohio and lived and taught journalism and English for much of her life in the Detroit area, she always dreamed of living near Lake Superior. That dream was fulfilled when she and her husband Eugene "Bud" Avery moved to Gratiot Lake as full time residents in 1980. Janet loved the pleasures and natural gifts of lake-side living and translated that love into caring action when she saw potential threats to the Keweenaw environment.

When a copper mine was proposed near Gratiot Lake over a decade ago, Janet founded A.W.A.K.E., a grassroots group which drew public scrutiny to the potential negative environmental impacts this mine could have—particularly on a nearby trout stream and the wetlands near the lake. It seemed like a David and Goliath battle, but Janet was an effective and articulate leader -- up for the fray. Janet was actively involved in the Keweenaw County land use planning process. She believed that civic involvement is a vital part of our democratic system and attended countless land use, county board, zoning, and township meetings both as a witness and to testify. It helped to have a husband who is a retired civics teacher at her side! When Bete Grise shoreline development proposals began to surface, she spoke out about the importance of that area's fragile ecology.

Janet was always supportive of GLC and attended many GLC programs. She knew that education is a key to good stewardship of the land. When A.W.A.K.E. dissolved last year the bulk of the residual funds were donated to GLC for education.

GLC and the Avery family would like to express their thanks for the generous contributions made in Janet's memory to GLC's Janet Avery Scholarship.



MTU Summer Youth Program Aquatic Ecology at Gratiot Lake

Thanks to a generous donation by Rebecca (Rita) Sandretto, the *Jack Sandretto Scholarship Endowment* will award a full scholarship to a deserving student. If you know of a 9th through 12th grade student who would like to apply for a scholarship to attend the *Aquatic Ecology Exploration at Gratiot Lake*, July 23rd -July 29th, please contact Melissa Roberts, Michigan Tech Summer Youth Program Coordinator at 906-487-1804. Visit the SYP website at <http://youthprograms.mtu.edu/syp/> for more information about the program.

About *Water's Edge*

Water's Edge is the newsletter of the Gratiot Lake Conservancy. Its purpose is to report Conservancy news, to share information about the ecology and history of Gratiot Lake and its environs, and to suggest ways to improve stewardship of the Lake and its watershed.

**Please send questions, comments, or articles to
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Gratiot Lake Conservancy
P.O. Box 310
Mohawk, MI 49950**

**e-mail: belh@verizon.net phone: 906-337-5476
Visit our web site: <http://www.mlswa.org/gratiot-lake-1508/>**

Guided Kayak Tour of Gratiot Lake Scheduled for July 23

GLC is sponsoring a six hour kayak trip on Gratiot Lake on Sunday, July 23 from 9AM to 3PM. Participants may bring their own kayaks, life jackets (pfd's), and equipment to the lake's public access or may rent a single or tandem kayak and all equipment from Keweenaw Adventure Company, who will be outfitting and guiding the tour. Novices to kayaking will be given an introduction to the technique beforehand.

Bonnie Hay, Program Director of GLC, will point out natural history highlights during the excursion. Participants will picnic at the Noblet Field Station on the Conservancy Preserve and have an option to walk the Conservancy's Bear Paw Path.

Registration is necessary if you intend to reserve equipment. Limited equipment is available, so sign up early. Children under the age of 18 must be accompanied by an adult. Small children may have difficulty with this tour. Please consult Sam at Keweenaw Adventure if you are considering bringing your small child or have questions about the kayaks (906-289-4303, website: www.keweenawadventure.com).

Participants should meet at the public boat access to Gratiot Lake at 9 AM. In addition to reserving or bringing a kayak, paddles, and pfd, bring a bag lunch and plenty of water, sunscreen, and insect repellent. If it's hot, you may want to wear a swimsuit. We may take a short hike after lunch so bring along a pair of walking shoes. In the event of inclement weather, the tour will be cancelled. Please call GLC if in doubt.

Are you... A cookie baker, a litter picker-upper, a wildlife watcher, a weed puller?



Have you always wanted to... write for a newsletter, see a photo you took in print, teach children, or help clear a trail?

The Conservancy is seeking volunteers to share their talents and interests. There are opportunities to help with everything from trail opening to cookie baking. Just e-mail or call Bonnie at GLC.

Thank you to Jim Hay and Janet Marr for assistance in editing this newsletter. Phyllis Carlson, Jim Hay, and Bonnie Hay contributed photos.

Aquatic Survey Grant Continued from page 1.

volunteers. Brian Rajdl, the Hancock H.S. science teacher who has worked with MTU's Summer Youth Program (SYP) students at Gratiot, will be engaging this year's SYP students in sampling for Aquatic Invasive Species (AIS) such as zebra mussels and spiny water fleas.

Unlike most searches, we hope that this one will come up "empty handed." If no AIS are detected, we will have the beginnings of a mapping of the aquatic vegetation abundance and diversity in the lake which will give us a better idea of the ecology of Gratiot and serve as a baseline for future monitoring. If AIS are found, it should be early enough for careful monitoring and speedy remediation.

Property owners around the lake are asked to cooperate in allowing Janet and her assistants to cross shoreline near their homes. Most of the work can be done from the water. Plant samples will be taken and recorded and their locations noted by using a GPS unit. The goal is to cover the entire lake perimeter. Work will be carried out in the first week of July and also in August. The last formal aquatic vegetation survey of the entire lake on record took place in 1938!

If you have a pontoon boat and would be interested in helping out for some of the survey time please give GLC a call.

A Great Blue Heron snacks on a tasty fish amid rushes at Gratiot Lake. This photo is an example of images from the lake in notecard sets given as a gift to donors of \$100 or more to GLC. To see full color version of this and other cards visit the GLC website.



In conjunction with the field work, Marr will teach a two day **Aquatic Plant Workshop** on August 19 and 20th from 9 AM to 3 PM. The participants will wade, boat, and swim to examine and record shoreline and submerged plants. (This workshop will not involve bringing participants on private shoreline!) Registration is necessary and enrollment is limited. Fee is \$70 (\$55 GLC members). A Janet Avery Scholarship is available. Classes fill quickly, contact GLC for registration or download a form from the [GLC website](http://www.glc.org).

***Dave Dempsey, Great Lakes
Advocate, to Speak in Eagle Harbor***

On August 12, 2006, *Reading the Landscape of the Keweenaw* will host a slide lecture and discussion with Dave Dempsey at the Eagle Harbor Community Center from 5:30-7:30 PM.

Dempsey is Great Lakes Policy Advisor for Clean Water Action and has served as environmental advisor to former Michigan Governor James J. Blanchard. He also served for seven years on the Great Lakes Fishery Commission. He is the author of three books, including *Ruin and Recovery: Michigan's Rise as a Conservation Leader* and *On the Brink: The Great Lakes in the 21st Century*.

Dave Dempsey will offer insights into the citizen action that helped make Michigan a national leader in conservation through the 1970's. He will show historical images and engage the audience in discussion and activities to envision the conservation needs and work of the coming decades.

All are welcome. Refreshments will be served.



"Gratiot Blue" by Marilynn Brandenburger
Gratiot Lake Artwork Benefits GLC

Marilynn Brandenburger, GLC's 2004 Artist-in-Residence, is offering for sale artwork inspired by her Gratiot Lake residency. To help support the GLC's work in preserving the lake and its environs, Marilynn will contribute to GLC 25% of the sales price of any work sold.

View Marilyn's website at <http://www.brandenburgerstudios.com/lakesuperior.html>. Brochures also are available from GLC or Marilynn. Original paintings and pastels are priced as indicated on the website. Digital prints are available in two sizes:

- 1) approx. 6" x 8" image on 8.5" x 11" paper
\$45 + \$5 for shipping
- 2) approx. 8" x 11" image on 11" x 14" paper
\$90 + \$5 shipping.

To order, contact Marilynn directly:
phone: 404-325-4302
email: marilynn@brandenburgerstudios.com



Walleye caught and released at recent Keweenaw fishing tournament.

**GLC Annual Members Meeting
to be held on July 18th**

George Madison, DNR Western Lake Superior Management Unit Fisheries Supervisor, will be the featured speaker at GLC's Ninth Annual Members Meeting at the Eagle Harbor Community Building. All GLC members are invited to attend the Conservancy's 6:30 business meeting which will be followed by Madison's presentation.

Madison's talk at 7:30 will be open to the public. He will discuss fisheries issues common to Keweenaw lakes with a special focus on the DNR's assessment and management plan for Gratiot Lake. Light refreshments will be served.



**STOP AQUATIC
HITCHHIKERS!**

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

When you leave a body of water:

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

Visit the Gratiot Lake Conservancy web site to view current and archived issues of *Water's Edge News* (in full color), along with informative articles, photos, video clips, and links to more information.

<http://www.MLSWA.org/Gratiot-Lake-1508/>

Michigan Loses Land Conservation Leader

Bertha Daubendiek, Michigan Nature Association (MNA) co-founder, passed away in November. Her leadership of MNA for over 50 years led to the creation of 162 nature sanctuaries in Michigan (including 18 in the Keweenaw). Comprising 8,000 acres of land these sanctuaries preserve habitat for most of Michigan's rare and endangered species.

Under Daubendiek's direction MNA acquired two parcels that include bluffs on the North shore of Gratiot which are permanently conserved. It was also under Bertha Daubendiek's guidance that a survey was made of shoreline vegetation on the south side of Gratiot Lake in the 1980's—this piece was later donated to the Gratiot Lake Conservancy by Mary Lizzadro. We are grateful for Daubendiek's assistance in helping to generate a plan for conservation at Gratiot Lake. MNA has made a donation to GLC in memory of Bertha Daubendiek.



Bog laurel photographed during the Spring Botany Workshop by participant, Phyllis Carlson. See this photo in color in the online version of Water's Edge on the GLC website.

High Speed Connection...

GLC now has a high speed internet "hot spot" at the Noblet Field Station. Usually, GLC's solar installation provides more than enough power to keep the system running. The signal which emanates from Mt. Horace Greeley is then bounced back to homes on the other side of the lake. Pasty.net which installed the equipment is donating the use of the service to GLC. Pasty.net can also provide necessary interface device and high speed wireless internet service to homeowners at the lake for a fee. Pasty.net's fee structure has recently been modified to accommodate seasonal users as well as those who subscribe on a yearly basis. Visit <http://www.pasty.net> for further information or call 906-337-5979.

Wading at Central Mine



On August 8, Bonnie Hay, GLC's Director, will teach a session for the Keweenaw County Historical Society Children's Program. The children will explore what lives in the creek at Central. Linden Dahlstrom will be providing the art component to this session which is aimed at children ages 7-12. Call Anna Roche at 906-289-4666 for enrollment information.

Michigan Nature Association Invites You to July 13 Hike at Gratiot Lake

GLC is not the only conservation organization with a preserve at Gratiot Lake. MNA has a 100 acre sanctuary across the road from the lake's public access. Last year a trail was established through the second growth open hardwood forest to views of a waterfall on Eister Creek and an overlook of Gratiot Lake from a high bluff. MNA plans a guided hike on the sanctuary trail on Thursday, July 13 from 4-6 PM to introduce the trail to lake residents and neighbors. Meet at the public access at 4 PM for this moderately strenuous walk which includes a gradual 400 foot climb.

SUPPORT GLC!
See page 8 for membership details.
Donations are welcome!

Where are the Eagles?

It looks like the weight of the huge nest coupled with the deteriorating condition of a supporting limb have led to a partial collapse of the eagle nest at Gratiot Lake. Although mature and immature bald eagles have been seen this spring at the lake, there is no evidence of nesting in the old nest tree. We suspect the eagles may have selected a new nest site and have seen evidence of nest building in another white pine tree on the Conservancy preserve near the lake.

Scholarships to GLC's classes are available for Gratiot Lake residents and GLC members, and teachers. To apply, contact GLC (info on page 2).

See Stars on Brockway August 16, 9:00 PM-?

Bring your bug dope, blankets, beach chairs, binoculars, and telescopes to the Brockway star gathering around sunset. MTU's Robert Nemiroff and his astronomy students will be on hand to introduce us to the celestial highlights. We may cancel without notice if it's very cloudy or raining! Raindate is August 17.

Forest Worth answers
to questions on page 7:

1. B \$18.5 Billion, 2. A \$3.4 Billion, 3. C \$110 Billion,
4. C \$2 Billion, 5. B \$4.16, 6. B \$750,000

Bammert Farm Site of July 15 Reading the Landscape Field Trip

Gratiot Lake's own Nancy Stoneman will be leading the art/craft portion of the July 15th RTL session "Forest Recovery" at Bammert Farm. Basketmaker Stoneman will guide participants in using split black ash wood to make a woven wood ornament. Participants will hike recently logged forests with Forester Byron Sailor to learn about sustainable forest management practices.

GLC's Bammert Farm management plan includes selective logging to achieve a more diverse mix of trees and better wildlife habitat. A portion of its 466 acres was planted in red pine in the 1950's. It is also the site of a sustainable forestry education project in collaboration with MTU.

To enroll in this or other *Reading the Landscape of the Keweenaw: The Forested Landscape, Art and Natural History Field Trips for Adults*, please consult the enclosed brochure or call 906-289-4514.

Fallen Trees: Let'em Be

Trees falling in water become LWS, limnology-speak for "large woody structure." A tree's life in a lake is as important and may last longer than its land existence. Recent studies show that LWS hugely improves the food web of lakes and streams.

An old tree of complex structure is critical habitat for fish and macro-invertebrates as it decomposes and sinks to the bottom...the tree will offer food and cover for predator and prey species. Diurnal walleye seek shade beneath the branches; pike stage ambushes there; and the latticework of limbs offers protection for young. Turtles and ducks bask on partially submerged LWS near the shore. Dragonflies, kingfishers, and insect-eating songbirds perch on branches as mayflies munch algae on decomposing wood.

Removing trees from water; cutting trees in the riparian zone; or mowing over seedlings damages this vital forest-fish connection.

Unless treefalls become dangerous to swimmers (or boaters) lake science says nurture your lakeside trees and leave LWS in the water.

Excerpted from materials developed by the UW Extension, Wisconsin Department of Natural Resources. Reprinted with permission.



Wild May Storm Downs Many Trees

The high winds of a May storm damaged many trees around Gratiot Lake, including a venerable pine—hugged and climbed by many—at the outlet of the Lake, the Little Gratiot River (see photo on the next page.) We believe this white pine was over 150 years old. It snapped at about 25 feet up. Many trees also came down along the Bear Paw Path.

As destructive as such storms may be, the canopy gaps which they create in the forest allow in the sunshine which promotes the germination and growth of other trees—sometimes species unable to get a start in the dense shade of a mature forest. These young trees add to the age and species diversity of the woods. This is beneficial to the overall health of the forest and is good for wildlife as well. Laying on the forest floor in a slow process of decay, fallen limbs and trunks can become "nurse logs" fostering the growth of many saplings on their moss covered surfaces.



Downed trees can serve as habitat and shelter for many animals, including bear which may den up in winter under windthrown roots. Tall standing stumps slowly decay and provide food and habitat for a myriad of animals—and give those pileated woodpeckers something to peck on besides my house!

Can You guess what our Forests are Worth?

It is estimated that each person in the U.S. uses four pounds of wood per day. Forests are important resources which produce timber, solvents, esters, fibers, medicines, food and fuel. Since 1970, wood use per person in the U.S. has increased by 30% and this figure only includes wood based products consumed.

In addition, forests are vital

- as places to find recreation, sport, inspiration, and spiritual recharge;
- as ecosystems supporting diverse wildlife and plants;
- as filters for water;
- as mitigators of erosion and controllers of runoff;
- as producers of some of the oxygen we breathe; and
- as reservoirs to lock up some of the excess carbon dioxide which is accelerating global warming.

In recent years some studies have begun to quantify the dollar value of many of these “ecosystem services” of forests. See if you can guess the values of the various services forests play in the multiple choice quiz below.

Answers are on the bottom of page 5.



Old White Pine which snapped on GLC Preserve as a result of early May storm gets a hug from visitors.

1. Forests help regulate climate by trapping moisture and cooling the earth's surface. How many billions of dollars yearly is the estimated value of this climate regulation in the U. S.
A. \$1.8 billion, B. \$18.5 billion, or C. \$185 billion
2. Trees also capture carbon dioxide thereby reducing global warming. This carbon sequestration function of trees is estimated by the U.S. Forest service annually to be worth
A. \$3.4 billion, B. \$34 billion, or C. \$340 billion
3. The value of recreational services in national forests is estimated to contribute to the Gross Domestic Product annually
A. \$1.1 billion, B. \$11 billion, or C. \$110 billion
4. In 1992, it was estimated that 100 million mature trees in urban areas could reduce annual cooling costs by
A. \$20 million, B. \$200 million, or C. \$2 billion
5. A study concluded that the ability of each Tucson tree to improve air quality by removing particulates was worth how much annually?
A. \$41 B. \$4.16 or C. \$416
6. Forested watersheds protect drinking water resources. Portland, Maine spends \$729,000 annually on watershed protection, thereby preventing an expenditure of \$25 million for a water filtration facility and how much in annual costs to run the facility
A. \$75,000, B. \$750,000, or C \$7,500,000

Some resources on this subject:

"The Economic Value of Forest Ecosystem Services: A Review" by Douglas Krieger

<http://www.wilderness.org/Library/Documents/upload/Economic-Value-of-Forest-Ecosystem-Services-A-Review.pdf>

American Forest Foundation <http://www.affoundation.org/>

Colorado Trees Tree Benefits Page <http://www.coloradotrees.org/benefits.htm>

Upper Peninsula Tree I.D. from Michigan State University <http://uptreedid.com/>

Biodiversity Project fact Sheet *Eastern Forests a Statistical Profile* <http://www.biodiversityproject.org/EF Kit/EFstatisticalprofile.pdf>

U.S.D.A. Forest Service, "The Eastern Non-Industrial Private Forests" <http://www.na.fs.fed.us/spfo/pubs/misc/enpf/enpf.htm>

"Ecosystem Services: Benefits Supplied to Human Societies by Natural Ecosystems" by Gretchen Daily and S. Alexander Ehrlich, et.al

<http://www.esa.org/science/Issues/FileEnglish/issue2.pdf>

Please note membership changes >>

Donors of \$100 or more will receive a gift of notecards with photos taken at Gratiot Lake.

To bring fees more in line with current costs and with contemporary fees of similar organizations, we are raising basic membership to \$15 and moving to an annual renewal system in 2007.

This new membership fee will be phased in as follows:

Memberships renewed (and new memberships initiated) between 6/01/06 and 12/31/06 will be \$15 and come due again for renewal on 12/31/07.

Thereafter, all new memberships and renewals will run from January 1st of the year in which they are initiated until December 31st of that year .



Become a Member of the Gratiot Lake Conservancy!

One way to show your support for the Gratiot Lake Conservancy is to become a member. In addition to the biannual newsletter mailed to all Gratiot Lake residents, members receive invitations to special events and an invitation to the Annual Members Meeting.

Please note upcoming membership changes above.

Please complete this form and mail with your check to

\$15 Transition year Membership 6/1/06-12/31/07

Additional Donation ____

Donation to Land Acquisition Fund ____

Donation to Education Fund ____

The Gratiot Lake Conservancy
P.O. Box 310
Mohawk, MI 49950

PLEASE PRINT

Name: _____

Street or Box #: _____


City, State, Zip: _____

E-mail address: _____

Phone number: _____

Winter address if different from above:

----- The Gratiot Lake Conservancy is a 501(c)3 non-profit organization. Your contribution is tax deductible. -----

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