
Water's Edge

Gratiot Lake Conservancy News



Volume 18

Fall 2016

Little Gratiot River Wilderness

Along with Keweenaw Community Forest Company (KCFC), Gratiot Lake Conservancy (GLC) has participated in creating a wilderness area known as the Little Gratiot River Wilderness (LGRW). Gratiot Lake is part of the Bete Grise Bay watershed that also includes Deer Lake and Lac La Belle that are linked together by the Little Gratiot River. The Little Gratiot River runs from GLC protected lands on the west to the Bete Grise Preserve on the east. The approximately 3600 acre LGRW buffers the land in-between these preserves and protects most of the river corridor. This land will remain in its natural state in perpetuity.

KCFC owns the property and GLC holds the conservation easement on the Little Gratiot River Wilderness. Several former roads and culverts were removed during the summer to return parts of the LGRW to its natural state, and motorized traffic is only allowed on designated roads.



Photo by Gina Nicholas

The area is open to hiking, fishing, berry picking, bird watching, and nature study. GLC will plan some future programs at the LGRW. For further information about LGRW please contact Keweenaw Community Forest Company at 906-370-7248.

GLC Members Gather

Over forty GLC members attended the business portion of GLC's Annual Members Meeting on July 28th at the Eagle Harbor Community Building. President Joe Lizzadro greeted the group and the slate of directors for the next year was approved. Gina Nicholas, Joe Lizzadro, Bonnie Hay, Daniel McPherson, and John Lizzadro, Sr. will serve for the year ahead.

After Treasurer Louis Lizzadro provided a brief review of the 2015 year-end financials, Secretary Gina Nicholas reported on land stewardship, trail work, and efforts to remediate moisture problems at the Noblet Field Station. Keweenaw Community Forest Company (KCFC) oversees and implements this aspect of GLC work.

Gina announced that GLC now holds the conservation easement on the Little Gratiot River Wilderness Area, established in the last year. She also reported on the sustainable timber harvest activity at GLC's Bammert Farm in 2016.

Program director and vice-president Bonnie Hay presented a slide show on educational programs and research. She discussed the spring botany walk with Janet Marr, Karena Schmidt's *Ethnobotany Workshop*, Michigan Tech's *Summer Youth Program Exploration: Aquatic Ecology at Gratiot Lake*, a tour of Gratiot Lake by Land and Water with Will Lytle, a walk at Bammert Farm, a visit to John Yunger's small mammal demography research site at the GLC Preserve, and the September shoreline clean-up. (Continued on back page.)



*Look inside for puffballs, bird brains,
and to find out whose foot this is ...*

Make a year-end gift!

Click here to learn how.

GLC gratefully acknowledges Donors from Nov. 2015 - Nov. 2016

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William Bingham and Laura Cison
Bonnie and Jim Hay
HFRX Foundation
Keweenaw Community Forest Company
Carol and Joseph Lizzadro
Carmen Sandretto

Grants

Steven C. Leuthold Family Foundation

New Life Members

John Marta
John Yunger



Little Gratiot River headwaters at Gratiot Lake. Photo by Dorothy Jamison.

Gifts in Kind

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Jim Hay
Jean and William P. Ryan
Janet Marr
Eric Olson
James Tercha

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Memorial Gifts

*in Memory of all the great founders
of our paradise lake who have passed*

William Bingham and Laura Cison

in Memory of Bud and Janet Avery

Betsy Aller

in Memory of Allan Hochstein

Virginia Jamison

Terry and Hari Litz

in Memory of Marilyn and Don Hon

Diane and David Gothard

in Memory of Howard Hosking

John and Bunny Hosking

in Memory of Diana Nicholas

Dante and Joyce Iacovoni

in Memory of Bert Noblet

from his five great grandchildren

Anika, Ella, Olivia, Brodie, and Lucas Noblet

in Memory of Al Petermann

Anne Petermann and Orin Langelle

in Memory of Pamela Schmitz

Arthur Schmitz

*We miss a GLC member and friend
who recently passed away*

*A supporter of initiatives to save the beauty of
the Keweenaw for future generations, Doug Sherk
moved conservation forward in his official roles
in Eagle Harbor Township. He also lent support
and guidance as a boardmember and donor to
conservation groups. Doug and his wife Nancy
have been members of GLC for over a decade.*

Gifts in Honor

in Honor of Marilyn Cooper

Jill Burkland and Randy Feisinger

Memorial Gifts Land Acquisition Fund

in Memory of Marilyn and Don Hon

Diane and David Gothard

Donors to GLC Fund at

Keweenaw Community Foundation

Michael and Mary Bingham

Chevron Foundation

Douglas and Norma Lee Stuart

Donors to Education Fund

William Bingham and Laura Cison

Bob Dekema and Holly Schipper

Bill and Karen Gibson

Mary and Neil Hodges

Dennis and Pauline Moore

George and Susan Robinson

Doug and Norma Lee Stuart



Michigan Tech Summer Youth Program Aquatic Ecology group at the Noblet Field Station. William Becker received a Rita and Jack Sandretto Scholarship to attend this program held at Gratiot Lake in July.

Memorial Gifts Education Fund

in Memory of Marilyn and Don Hon

Diane and David Gothard

in Memory of Louis Sandretto

Carmen Sandretto

Gifts in Honor Education Fund

in Honor of Teagan Stansell

Laura Lee Lienk



Karena Schmidt's Ethnobotany Workshop group on the trail at the GLC Preserve in July.

Donors to Land Acquisition Fund

Charles and Janice Anderson

William Bingham and Laura Cison

Benjamin and Gayle Brown

Jo Foley

Mary and Neil Hodges

Don and Pat Keith

Linda Rehorst

Mark Salo

Doug and Norma Lee Stuart

Jim Tercha

Some Birds of Gratiot Lake



As part of his GLC Members Meeting presentation *Birds of Gratiot Lake*, David Flaspohler highlighted three grebe species which Jim Hay has photographed at the lake. David noted grebes belong to the Order Podicipediformes, meaning “rear-foot-ed.” This anatomical adaptation makes grebes strong divers and very awkward walkers. They evidently fall over a lot (think penguins). Grebes have lobed toes attached to blade-like ankles. When swimming, they rapidly paddle. At the top of the forward thrust the toe lobes begin to fan open, and as the foot is pulled back the grebe moves forward.

David’s talk inspired me to find out more about grebes. Here are some grebe facts:

- By varying the amount of air trapped in their feathers, grebes adjust the depth at which they float above the waterline.
- They perform elaborate courtship “dances”... including skittering, breast held high, along the surface of the water and synchronized diving.
- According to the Cornell Lab of Ornithology’s *allaboutbirds.org* website, grebes “ingest large quantities of their own feathers... to form a sieve-like plug that prevents hard, potentially harmful prey parts from passing into the intestine.” Like many other birds, grebes regurgitate indigestible pellets containing such things as fish bones and crayfish carapaces.



Pied-billed Grebe

Common mergansers were also featured in David’s talk. These fish eating ducks have serrated bills that help them grasp their prey. A wood duck nest box installed on the lakefront by Ron Sibbald housed a clutch of 13 merganser eggs. Ron observed all 13 ducklings exit the box early one morning in June. David noted that mergansers are precocial... basically feathered and ready to swim as soon as they hatch. Their eggs have a greater proportion of yolk to



Red-necked Grebe with a crayfish catch



white than chicken eggs do, which helps to facilitate prodigious development within the eggs before they hatch. On the GLC website, check out David’s description of his close encounter with a mislaid merganser egg (photo above taken by David). There you can also view video clips of David speaking about grebes and other Keweenaw birds and download his powerpoint slide show. Go to <http://www.gratiotlakeconservancy.org/MembersMeeting16.htm>

About *Water’s Edge*

Water’s Edge, the newsletter of the Gratiot Lake Conservancy, reports Conservancy news, informs about the ecology and history of Gratiot Lake and its environs, and shares ways to improve environmental stewardship.

**Please send questions, comments, or articles to
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Archive of *Water’s Edge* Newsletters, articles, program information, photos, video clips, and more at
www.GratiotLakeConservancy.org

Redefining what it means to be “bird brained”

The Genius of Birds by Jennifer Ackerman (Penguin Press 2016)

In her new book, Jennifer Ackerman asserts “The misguided use of ‘bird brain’ as a slur has finally come home to roost.” Recent research has revealed that many bird craniums pack more neurons per square centimeter than primate brains do, and a lot of those neurons are in parts of the brain reserved for perception, memory, and learning. Turns out that much of bird behavior isn’t just instinctual after all. Referencing current research at sites throughout the world and unearthing intriguing historical tidbits, Ackerman describes the brilliance of birds in a lively and engaging manner.

Their problem solving ability, communication sophistication, and memory prowess has made media stars of crows, ravens, jays, and parrots. This book broadens our sights beyond these stars and encompasses diverse species including chickadees, pigeons (a.k.a. rock doves), mockingbirds, and sparrows. Bird behaviors including nest building, bird song, food gathering and catching, and the intricacies of bird navigation are examined to highlight aspects of bird intelligence.

For example, the black-capped chickadees flitting back and forth to the sunflower seed feeder hundreds of times a day are storing many seeds in multiple caches for future use. Each bird requires well-developed memory and mapping skills to retrieve its seeds from multiple locations weeks after the seeds are stored. The hippocampus is the region of the brain that stores spatial memory and maps. Chickadees in colder, snowier climates must cache more food for longer periods and have larger hippocampi than their relatives in milder climates (a graph detailing this can be seen in David Flaspholer’s *Gratiot Lake Birds* powerpoint on the GLC website).



photo by Jim Hay

Ackerman brings in fascinating historical highlights. She focuses for instance on the oft-maligned pigeon to uncover some details of avian navigational prowess. The domestication of homing pigeons to serve as message carriers goes back at least 8,000 years. More recently G.I. Joe, Caesar, and Jungle Joe served in the U.S. Pigeon Service as life-saving winged emissaries during WWII.

Leaving no stone unturned, Ackerman even explores such questions as avian aesthetics, a topic of some recent research. Does the Australian bowerbird who carefully constructs a stage of sticks, colorful stones, glass, and found items for his courtship displays have an artistic sensibility? Maybe not all of our questions about birds can be fully answered by science!

Ackerman has nearly three decades of nature and science writing under her belt including many books and articles in the *New York Times*, *National Geographic*, and *Scientific American*. Her ability to make science accessible is very evident in this book. I came away from my reading with a greater appreciation for these dinosaur descendants and their mastery of the world we share.

Research at Gratiot Lake



Governors State University graduate student Snehal Chavda weighs a northern flying squirrel before releasing it. She assisted in the mid-September work at John Yunger’s small mammal demographic study site on the GLC preserve. Snehal also collected data for her own research on parasite abundance (cryptosporidium) in mice along an urban to rural gradient.

So far, deer mice, red-backed voles, northern short-tailed shrews, and northern flying squirrels have been caught (and released) at the Gratiot Lake study site. The chipmunks just perch quietly nearby and watch the proceedings!

Keweenaw Warbler Migration Study

Zach Gayk, who now holds a Masters Degree in genomics from Northern Michigan University, began his study of birds fifteen years ago under the tutelage of Mike Schiewe of Headwaters. As an adolescent, Zach participated in this mentoring program for budding naturalists that was then headquartered at the Gratiot Lake Conservancy preserve.

Zach is currently researching warbler migration along the Keweenaw Peninsula. This August and September with funding from Copper Country Audubon Club and the Keweenaw Community Forest Company, Zach surveyed warbler migration at Bete Grise North. This area appears to be an important site in concentrating migratory flocks (sometimes numbering in the 1,000’s) of warblers moving west along the south shore.

He hopes to expand this research of warbler migration along the south shore of the Keweenaw Peninsula and is also seeking funding (through crowd funding website *experiment.com*) to purchase recording equipment to capture the calls of migrating birds. To find out more about Zach’s Keweenaw warbler research or make a donation towards the recording equipment, search for “Zach Gayk” at *experiment.com*

And a special “thank you” goes to...

ALL who donate their time and expertise to GLC.

GLC board officers Louis Lizzadro, Joseph Lizzadro, and Gina Nicholas for helping to keep GLC on track.

Vicky Doyle for taking care of GLC’s Facebook page. If you “do” Facebook take a look and “like” GLC.

GLC webmaster Jim Hay. Visit the GLC website to see the latest: www.GratiotLakeConservancy.org

Dorothy Jamison for recording lake water transparency data for a decade. Click here to see the data chart on the GLC website.

Jim Tercha for pro bono assistance.

Eric Olson for lending his expertise to assessment of moisture issues at the Noblet Field Station.

Nick Wilson for assisting with Field Station maintenance and trail work.

Winona Asher for assisting in invasives removal and trail work.

Pat and Jean Ryan for expert repairs on two GLC canoes, including crafting a new wood gunnel for one.

Eagle Harbor Township for use of the township Community Building for GLC programs

Everyone who provided refreshments and helped with GLC’s Members Meeting.

Newsletter proofreaders Jim Hay and Ben Hay.

Janet Marr for leading the June Botany walk.

David Flaspholer for volunteering his time to prepare and present the “Birds of Gratiot Lake”. Click here to see links to see video clips from his presentation and to view the power-point slideshow.

Will Lytle for taking on the leadership of the GLC canoe trip.

Sustain GLC’s future by contributing to the

Gratiot Lake Conservancy Fund
at the Keweenaw Community Foundation.

Click here to make an online donation to KCF’s
“Gratiot Lake Conservancy Fund”.

Fund donation may also be sent to:
Keweenaw Community Foundation
236 Quincy Street
Hancock, MI 49930

906-482-9673 mail@k-c-f.org www.k-c-f.org

Gratiot Lake Shoreline Trash Haul

Over the past six years GLC has participated in the *Alliance for the Great Lakes Coastal Clean-up* in mid-September.



This year Mary, Mike, and Pete Bingham; Bonnie and Jim Hay; Dorothy Jamison; Chris Marks; Neil Noack; and Elaine Rysiewicz covered approximately 3.5 miles of shoreline and removed about 180 pounds of trash. A lot of this weight was water weight of saturated materials from an old ice-fishing shack. Of the 257 items recorded, 63 were smoking related, 29 were fishing related (lures, line, bobbers, pole pieces, etc.), and 77 were food related. Fifty tiny pieces of plastic, glass, or Styrofoam were collected. Tiny trash can be consumed by fish and cause problems for them.

Thanks to those who helped out on the damp September weekend, and also to everyone who keeps Keweenaw shoreline clean of trash.

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and save paper and postage!***

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to receive only a full color digital copy of
Water’s Edge and no paper copy.**

Learn to Monitor the Health of Inland Lakes

The *Cooperative Lake Monitoring Program* (CLMP) is offering its first Western Upper Peninsula training of volunteers on May 3, 2017. Although volunteers at many lakes in the Lower Peninsula participate in CLMP, few U.P. lakes are enrolled, and most of those enrolled are in counties that border Wisconsin. Gratiot Lake is the only lake participating in the Keweenaw Peninsula.

The training will be an opportunity for volunteers already enrolled in CLMP to brush up on skills and will introduce new people to the program. Volunteer monitors are trained in techniques to assess such parameters as transparency of water, phosphorus content, and chlorophyll amount (indicator of the density of algae). They may learn to conduct surveys for invasive aquatic species. Lakeshore landowners, boaters, anglers, and others interested in attending the training should contact Jim Novitski at jjnovitski@gmail.com.

If you are interested in assisting Dorothy Jamison with ongoing water monitoring at Gratiot Lake, and you would like to attend this training, please contact GLC. GLC will provide a scholarship to attend this training or the one offered in the Lower Peninsula in April.

Learn more about the CLMP at <http://www.micorps.net>. Click here to see Gratiot Lake CLMP results on the GLC website. Go to the “Nature Topics” dropdown menu and click on “Water Monitoring.”

It's raining...mushrooms!

The results are in. July 1st through September 30 the Keweenaw Peninsula received (depending on the exact location within the peninsula) 130 to 150 percent of normal rainfall (NOAA Integrated Drought Information System). In fact, a three-day spate of rain in September dropped about 4 inches of rain at Gratiot Lake. In addition to relatively high lake levels and enormous wild blueberries, these conditions made for one of the best mushrooming summers in my memory.

Where did all the mushrooms come from, and what were they doing? The fungal mycelia are the tangled, matted networks of the fungi that exist year-round. These interwoven fungal bodies permeate soil, wood, dung, or other substrate from which the fungi draw nourishment. Mycelia are evidently just about everywhere underfoot. They patiently await the appropriate conditions to reproduce. Then comes the bonanza!

For most fungi, reproduction means pushing a spore making structure (a thallus) out of the mycelium. These structures are the mushrooms we notice. Tiny spores produced by mushrooms are dispersed by wind, water, and animals to “take root” elsewhere... rather like seeds (although fungi are not plants). In fact, fungi have their own separate taxonomic Kingdom. We now know that they are evolutionarily more closely related to animals than to plants!

Here are a few of the fruiting fungi that caught my eye in September:

A crater covered asteroid

This pockmarked, soccer-ball sized giant puffball, *Calvatia gigantea*, emerged next to our driveway. Spores (7 trillion in an average-size specimen) mature inside puffballs and are ejected in smoky puffs from a pore on top which opens when they are ripe, hence their name. My puffball was puny next to a 32 pound one found in Keweenaw County, a photo of which was posted on TV 6 Facebook page. Its cratered appearance was created by nibbling animals including slugs (which I found on it). Fungi are important foods for a variety of creatures. Although this slug-munched puffball would be an edible lunch for a person, it is not true that a mushroom a slug or squirrel nibbles is necessarily safe for human consumption. Because animals' digestive systems differ, what is nourishment for another species, in some cases will poison us.



A Hen-of-the-woods bouquet

I found this *Grifola frondosa* mushroom, a mass of spore producing “petals” on a moss covered oak stump which is a favorite hen-of-the-woods habitat. Also known as maitaki (dancing mushroom), kumotaki (cloud mushroom), and dancing butterfly mushroom, it is a sought-after mushroom in Asia where it has been used for centuries in traditional medicine. A tasty edible mushroom, it also apparently has antitumor, anti-diabetic, and antiviral properties that are the subject of numerous scientific studies and clinical trials. Only forage for this (or other wild mushrooms) if you have the knowledge and training. Thankfully, hen-of-the-woods can be cultivated and is commercially available in fresh and dried forms.

A frozen fungal waterfall

This mushroom reminds me of a waterfall. *Hericum erinaceus* produces its spores in a cascading multitude of tiny icicle-shaped spikes. It has inspired monikers including lion's mane, old man's beard, hedgehog, pom pom, and yamabushitake (mountain-priest mushroom). Lion's mane is an edible mushroom long-used in traditional Chinese medicine. It is commercially cultivated, but much more exciting to encounter in its natural habitat. I found this mushroom growing on long-dead wood... probably oak or maple.



With a contribution of
**\$500 you can become
a GLC Life Member!**

There is a quick and easy way to make last minute donations to the Gratiot Lake Conservancy.

Click on the *Just Give Donate* button on the GLC home page.

Just Give deducts 4.5% of your donation as a service fee.



photo by Gina Nicholas

Mark Salo and Nick Wilson take in the GLC dock, as Mark's dog Nikoli plays in Gratiot Lake on an unseasonably warm early November day.

**Great stocking stuffer:
Gift a Membership to GLC!**

GLC Members Gather (Continued from page 1)

The completion of Janet Marr's botanical survey of GLC land at Gratiot Lake was announced. This is the last of three surveys that Janet has completed for GLC in the last decade (some details and plant lists are available on the GLC website). These surveys serve as a botanical baseline to guide future land management decisions and can be referred to over time to note and assess changes in the landscape.

Bonnie gave a membership report. GLC currently has 131 family memberships and 14 Life memberships. John Marta and John Yunger were welcomed as new Life Members. The important contributions of volunteers were recognized. Door prizes were drawn and the business meeting was adjourned.

Winners of the silent auction of Jim Hay's photographs were announced. Following refreshments, Dr. David Flaspohler presented an entertaining program entitled "Birds of Gratiot Lake: Their Biology and Ecology" which incorporated photos taken by Jim Hay.

Some photos from the evening along with both the powerpoint of and video clips from David's presentation are available on the GLC website.

It's time to renew for 2017!
CLICK here to download and print a form to mail in.

With a contribution of \$500 or more you can become a GLC Life Member!

Become a GLC Member!

Conservancy members receive a biannual newsletter, notice of special events, and an invitation to the Annual Members Meeting. Some GLC programs that have fees are discounted for members. Memberships renew at year end.

Your support is always welcome!

Click here to download a GLC donation form.

Mail memberships or donations to:
Gratiot Lake Conservancy
P.O. Box 310
Mohawk, MI 49950

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

