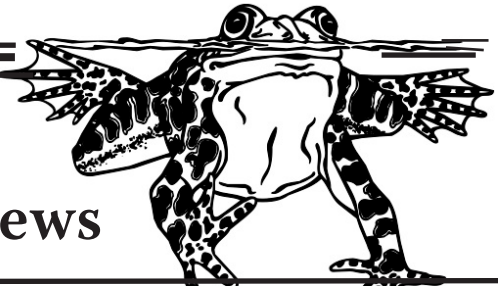


Water's Edge

Gratiot Lake Conservancy News



Volume 24

Fall 2022

2022 GLC Annual Meeting of Members

The Gratiot Lake Conservancy Annual Meeting of Members was held on Tuesday, July 26, 2022, at the Eagle Harbor Community Building. It was the first in-person members' meeting and first in-person GLC event since 2019 due to the COVID pandemic. Thirty-three persons were in attendance.

Bonnie Hay, President of GLC, gave a slide-show presentation about GLC's stewardship, research, outreach, and programs. Topics discussed include KCFC continuing land management at GLC Preserve and Bammert Farm as well as the GLC Book Club, which hosts quarterly virtual discussions of natural history and environmental books. Eight to sixteen people attended each session of book club discussion. Most recent books discussed were Susanne Simard's *Finding the Mother Tree* and Barry Lopez's *Of Wolves and Men*.

Since April of 2021, GLC has hosted virtual webinars featuring scientists and focusing on research relevant to Keweenaw County and Gratiot Lake. Attendance for these webinars varied from 10 to 28 persons.

Other discussion points include how GLC is a partner in *Keweenaw Invasive Species Management Area* (KISMA). As part of invasive species control in Keweenaw County, the KISMA weed crew continues to help GLC volunteers remove invasive thistle and knapweed from GLC Preserve. Additionally, GLC continues to sample Gratiot Lake phosphorus levels and take water transparency readings each summer to help gauge the health of the aquatic ecosystem with the help of volunteers and that GLC is assisting with *Michigan's Exotic Aquatic Plant Watch* by sampling and identifying aquatic plants in the lake. Data from this *Cooperative Lake Management Program* sampling are entered in the MiCorp's database on inland lakes in the state.

Bonnie thanked members, donors, grantors, and volunteers for helping GLC's work move forward. The business portion of the meeting adjourned and refreshments were served. After an intermission, the invited speaker Marsha Goodrich, President of the non-profit *Keweenaw WildOnes* chapter presented a slide program entitled "Why Native Plants." Marsha illustrated the vital ecosystem roles of native plants in home landscapes such as erosion control and providing food and shelter for wildlife including a host of insects such as bees and butterflies. She showed beautiful examples of home gardens that feature native plants.

View a video recordings of this meeting and GLC webinars can be found at <https://www.gratiotlakeconservancy.org/glc-news>
Information and resources for gardeners can be found at keweenaw.wildones.org

Fall 2022 Water's Edge



Lucy Granroth joined GLC in September as the administrative assistant. Lucy, a native of Hancock, has a Masters in literature from Eastern Washington University and has previously worked for the Keweenaw Bay Indian Community College and Finlandia University. She is excited to work for the conservancy and help protect land in the beautiful Keweenaw. She also hopes to create and reinvigorate more programming at GLC. She has two children with her husband, Alan, and the family lives in Chassell. Lucy will be handling all member and donor communications. Say "hi" to Lucy or ask any questions by emailing her at lucygglc@gmail.com



Is the insect nectaring on goldenrod a BEE...or not? Take the quiz on page 7, clues on page 6, and answers on page 8!

GLC gratefully acknowledges

Donors from Nov. 1 2021 - Oct. 31 2022



Major Donors

Charles E. Anderson
William Bingham and Laura Cison
Bonnie and Jim Hay
Herbert Marutz
Gina Nicholas
Carol and Joseph Lizzadro
Julia Gratiot Peterson
Carmen Sandretto
Mary and Tom Strohl
Jim Tercha
Peter VanPelt



Grants

Steven C. Leuthold Family Foundation
Joseph F. Lizzadro Family Foundation

Donors to General Operations

Judy Albee
Betsy Aller
Angela Anderson
Dorothy and Don Asher
Joanne Bollinger
Marilyn Brandenburger
Becky Brown
Ella and Garri Budynsky
Anita and Paul Campbell
Cornelia Carlton
Marie and Salvatore Celona
Joan S. Chadde
Marilyn Cooper
Michael and Sylvia Cooper
Lt.Col. Stephen Danis
Christine Edenfield
Beth Flynn
Sandra Folzer
Renate Giannini
Marie Gilman and Family
Diane and David Gothard
Frann Grossman
Larry Grover
Sue Haralson
Eloise Haller
Penny and Don Hon
Ann Johnson
Sue Ellen Kingsley and Terry Kinzel

Joyce Koskenmaki
Laura Lee Lienk
Marsha Low
Patti and Ralph Lund
Miriam Lytle and Family
Robert and Maria Macfarlane
Donald and Ellen Marpe
John Marta
Mary Merrill
Ruth Mohr
Pauline and Dennis Moore
Gina Nicholas
John Nicholas
David Owens
Linda Rehorst
Beverly and Robert Rice
Dana Richter
George and Susan Robinson
Bill and Nanno Rose
Jan Rosemurgy
Elaine Rysiewicz
Horst Schmidt
Darrell and Terese Schummer
Pamela Shaughnessy
Keran Tischler
Dan Teare
Elizabeth Ward
Ron Woywood

Memorial Gifts

in Memory of Steve Albee
Judy Albee

in Memory of Sue Church
Elaine Rysiewics

in Memory of John F. Flynn
Beth Flynn (to all funds)

in Memory of Florence Adele Gratiot
Julia Gratiot Peterson

in Memory of Donald Hartwig Gratiot
Julia Gratiot Peterson

in Memory of Don & Marilyn Hon
Don and Penny Hon

in Memory of Virginia Jamison
Betsy Aller (to Education Fund)
Cornelia Carlton
Mary Merrill
Julia Gratiot Peterson

in Memory of Kahl
Robert Kahl

in Memory of Elmo Negro
Susan Negro (to Education Fund)

in Memory of Louis Sandretto
Carmen Sandretto (to Education Fund)

in Memory of S. Daniel Rosemurgy
Jan Rosemurgy

in Memory of Mary T. Woywood
Ron Woywood



Donors to Land Acquisition Fund

Diane and David Gothard
Sue Ellen Kingsley and Terry Kinzel
Miriam Lytle & Family
Linda Rehorst
Pamela Shaughnessy

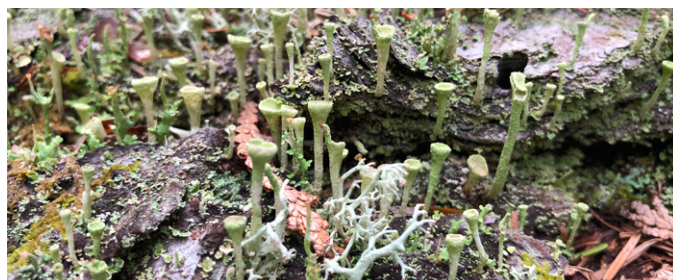
Gifts in Honor

in Honor of Carol Anderson
Meg, Kirsten, and Faith Anderson
Jenny Biechele-Speziale
Bonnie Hay
Miriam Lytle & Family
Joe and Carol Lizzadro

in Honor of Bonnie Hay
Joanne Bollinger

in Honor of Jim and Bonnie Hay
Laura Lee Lienk (to Education Fund)

In Honor of John Gratiot Hedberg
Junia Gratiot Hedberg



Donors to Education Fund

Betsy Aller
Joan S. Chadde
Beth Flynn
Diane and David Gothard
Renate Giannini
Sue Ellen Kingsley and Terry Kinzel
Laura Lee Lienk
Herbert Marutz
Susan Negro
Pauline and Dennis Moore
Linda Rehorst
George and Susan Robinson
Elaine Rysiewicz
Carmen Sandretto
Pamela Shaughnessy

**Donors to GLC Fund at
Keweenaw Community Foundation**

Mary and Michael Bingham
James Hertel

Gifts in Kind

Nancy and Martin Auer
Jim Hay
Jim Tercha

Algal Blooms: The Good, the Bad, and the Ugly

Gratiot Lake's surface temperature has been slowly rising in recent years, following a trend that has been noted in the Upper Great Lakes region. This year, warmer Gratiot Lake surface temperatures, lots of sunshine, and a prolonged summer drought followed by torrential downpours in mid-September created ideal conditions for the emergence of a large harmful algal bloom (HAB) which ringed the lake in the shallows. Algal blooms come and go at Gratiot Lake as part of the normal ecology, but this bloom looked more like a thick bright green paint slick ringing the lake than an algal bloom. The unusual floating slick caught people's attention right away.

Many species of algae live in Gratiot Lake, from time-to-time an algal species flourishes and forms masses of suspended floating filaments or mats of muck. Warmer waters foster more algal blooms of all kinds. Some are seen as specks or tiny translucent balls floating in the water column. Most blooms are a harmless and vital part of lake ecology. Species diversity is actually an indicator of a well functioning ecosystem, a balance that may help to keep HAB in check.

Nature educator Mike Scheiwe, who taught students at GLC's Noblet Field Station in the conservancy's early days, mentored student Robert Heyman for the Summer of 2000 and 2001 in a study of "The Algae of Gratiot Lake." With the verification from Dr. Ann St. Amand of Phycotech, they identified algal species in 25 genera, including one potentially HAB causing type of cyanobacteria. Scheiwe and Heyman noted that Gratiot Lake is lentic; it takes ten to thirteen years for complete flushing of the basin. Therefore nutrient inputs (nitrogen and phosphorus) that feed algal blooms stick around for a long time and can become more concentrated when lake level is low (as it was this summer).



Photos emailed (like the ones above) to Michigan Department of Environment, Great Lakes and Energy (EGLE) confirmed that the spilled green paint slick was likely a HAB. Follow up testing by the Western Upper Peninsula Health Department (WUPHD) identified it as a cyanobacteria HAB capable of producing Microcystin toxins. No toxins were present in the sample taken, but HAB's can cause allergic skin irritation even if no toxin is detected. Sara Heathman, WUPHD Environmental Health Operations Supervisor, said in her email:

"(HAB) Blooms can disappear and reappear, as well as turn their toxin production genes on and off. You cannot assume that the bloom is "toxin-free" all the time based on one test. The toxicity of the cyanobacteria changes over time and the cyanobacteria itself is capable of causing a reaction regardless of toxins. Skin contact with water containing cyanobacteria may cause irritation such as rashes, hives, or skin blisters. It may also cause runny eyes and noses or asthma-like symptoms.

Regardless of the test results, it is always recommended to avoid recreating in any discolored or scummy waters (for both people and pets). Clear water, away from any discoloration or scums, has consistently been shown by years of EGLE testing at many Michigan lakes, to have no detectable toxins or at very low levels not considered a health risk. Clear water can be safely used for recreational swimming and boating. People and pets should continue to avoid direct body contact and avoid swallowing water in areas where these algal blooms are present.

(HAB ... look like spilled paint, pea soup, floating scum, mats, green sheens, clumps, or streaks. Swimming, wading and water activities that create spray are not recommended in the areas where this is visible. Do not let dogs drink affected water. Monitor children and pets closely to ensure they do not eat or play with algae on the shoreline. If people and dogs enter the affected water, rinse them off and monitor for illness.

Suspicious-looking algae can be reported to EGLE by calling the Environmental Assistance Center at 1-800-662-9278 or sending an e-mail to AlgaeBloom@Michigan.gov. More information on harmful algal blooms can be found at www.michigan.gov/habs”

What causes Algal blooms and HAB in Gratiot Lake??

1. **Slow Flushing and Exchange:** Gratiot Lake drains slowly into the Little Gratiot River a slow moving, sinuous old river with many old and new beaver dams along its length.

This allows the lake to retain nutrients that feed algae.

2. **Low Lake Level:** A droughty summer further concentrated whatever nutrients were present.

3. **Rising Water Temperature:** Gratiot Lake surface water temperature has been rising in recent decades. Extra warmth promotes algal growth.

4. **Sudden Downpour:** After many weeks of drought, the area had an abundant rainy period. Nutrients accumulated on land were suddenly all washed into the lake at once. Some inputs were from animal feces and decaying vegetation.

5. **Human Input:** Other nutrient rich runoff might have come from human sources such as septic systems, fertilizer, or roads. What can lakeshore landowners do? Proper maintenance of septic systems and eliminating use of fertilizers on lawns decreases nutrients available to nourish algae.

GLC Donation Options

Use credit card or PayPal account at:

www.gratiotlakeconservancy.org/ways-to-contribute

Mail a check:

*note your membership/donation preferences

Gratiot Lake Conservancy

P.O. Box 310

Mohawk, MI 49950

GLC Book Club Virtual Discussions

Contact Director@GratiotLakeConservancy.org to join.



Illumination in the Flatwoods

A season living among the wild turkey

JOE HUTTO

Joe Hutto's *Illumination in the Flatwoods*

Saturday, January 28 from 12
p.m. to 1:15 p.m. (Eastern)

What better book to read after Thanksgiving than one about Ben Franklin's favorite bird (he thought the turkey was a more worthy choice for national bird than the eagle)? The success of wild turkeys in recently claiming the Keweenaw as their home

has not gone without notice, and I, for one, am interested in understanding our new neighbors. This book, a very personal account by naturalist and wildlife artist Joe Hutto offers his experience rescuing wild turkey eggs about to be plowed under on farmland, raising the hatchlings, and ultimately releasing them back to the wild. Hutto immerses the reader in the art of seeing nature deeply. His book was inspiration for the PBS *Nature* documentary, "My Life as a Turkey", which is about him and his imprinted chicks.

Robin Wall Kimmerer's *Braiding Sweetgrass*

Saturday, March 25 from 12 p.m.
to 1:15 p.m. (Eastern)

BRAIDING SWEETGRASS

INDIGENOUS WISDOM, SCIENTIFIC KNOWLEDGE,
AND THE TEACHINGS OF PLANTS



ROBIN WALL KIMMERER

Botanist and environmental educator, Robin Wall Kimmerer is a SUNY Distinguished Teaching Professor of Environmental Biology and founder and director of the Center for Native Peoples and the Environment. She twines her scientific perspective and her Potawatomi heritage as the threads that weave together this thought-provoking collection of essays about nature and how we interact with it. In Kimmerer's words, "I could offer you a braid of sweetgrass, as thick and shining as the plait that hung down my grandmother's back. But it is not mine to give, nor yours to take. *Wiigaashk* belongs to herself. So I offer, in its place, a braid of stories meant to heal our relationship to the world."

Get GLC news to your inbox

director@gratiotlakeconservancy.org

“Thank YOU” to

KISMA weed crew and volunteer Dorothy Asher for invasive plant removal at Gratiot Lake.

Dorothy Jamison for measuring Gratiot Lake water transparency weekly during the summer as part of the Cooperative Lake Monitoring Program (CLMP). This was the 22nd year the CLMP at Gratiot Lake.

Dorothy Jamison, Jim Hay, and Bonnie Hay for providing photos for GLC use.

Shoreline cleanup volunteers (see article).

Jim Tercha for pro bono services .

Gina Nicholas for her article (at right).

GLC Board and Officers for keeping GLC on track.

KCFC for faithfully managing GLC land.

all GLC members, donors, and volunteers!



Dorothy Jamison and first mate Scout at work at Gratiot Lake.

Clues to “Bee or not a Bee” quiz on p. 7

In general bees have two pairs of wings. Some other insects, like flies, have only one pair of wings. Also bees usually have bent antennae. These characteristics might not be discernable in some of the photos.

Here are some clues for specific insects:

1. Chew half-moon circles out of leaves and create a chamber from the cutting to hold their eggs. Unlike some of their relatives, they live alone and not in colonies.
2. These pollinators do not sting or bite.
3. This insect is a predator that immobilizes insect prey with a powerful sting.
4. A relative of this insect was an ancient Egyptian talisman and symbol for the sun deity Ra.
5. This insect preys on beetles.
6. Adults overwinter and emerge to find nectar in early spring. Larvae are called rat-tailed maggots.
7. This insect is a colonial nester.

Front Page: This insect and its close relatives are even better pollinators than the European honeybee.

GLC Contributes to a Major Conservation Effort

For several years Keweenaw Outdoor Recreation Coalition (KORC) and many partners including the Gratiot Lake Conservancy (GLC) have been working to encourage the State of Michigan Department of Natural Resources (DNR) to dramatically increase public conservation land in Keweenaw County. In the winters of 2021 and 2022, KORC and GLC members sent hundreds of letters to the DNR and the Michigan Natural Resources Trust Fund (MNRTF) to encourage Keweenaw land conservation.

In June 2021, TRG, the major hedge fund landowner in Keweenaw County, announced that about 32,600 acres of land in Grant and Eagle Harbor Townships, called Keweenaw Heartlands, was up for sale. This spring the DNR applied for \$5 million from MNRTF and will apply for another \$5 million in 2023 for Keweenaw Heartlands acreage adjacent to the existing DNR owned Keweenaw Tip. The Nature Conservancy (TNC), who served as an interim buyer for the Keweenaw Tip land purchased by the DNR in 2002-2003, also joined the Keweenaw Heartlands effort. In October, TNC announced that it was again serving as an interim buyer for about 31,000 acres. This Keweenaw Heartlands land will be sold to the DNR and other governmental and/or conservation organizations in the next few years.

One segment of Keweenaw Heartlands borders both the Bete Grise Preserve, owned by the Houghton Keweenaw Conservation District, and the Little Gratiot River Wilderness which is owned by Keweenaw Community Forest Company (KCFC) with a conservation easement in favor of GLC. GLC and many of its members contributed to this exciting conservation collaboration that will ensure a much greater segment of Keweenaw County is protected in its natural state for posterity.

Cleaner Beach Thanks to Volunteers

Gratiot Lake Conservancy hosted an annual September shoreline clean-up of Gratiot Lake in partnership with the *Alliance for the Great Lakes Adopt-a-Beach* program. Shoreline cleaners filled in data sheets indicating trash collected. This data is used by the Alliance for the Great lakes to communicate the human impact on shoreline areas. Gratiot Lake residents and friends Mary, Mike, Pete, and Will Bingham, Dorothy and Winona Asher, David and Diane Gothard, Bonnie and Jim Hay, Dorothy Jamison, Miriam Lytle, and Mark and Carol Parrish, pitched in to clean-up Gratiot Lake’s shoreline!

Volunteers picked up about 10 pounds of trash from the shoreline this year, including fireworks, a shotgun shell, two usable fishing lures, and one golf ball. Most numeruos were plastic pieces and food wrappers. Not surprisingly, cigarette related debris has lessened over our years of participation in this survey and clean-up. Due to lack of tools and time we left behind for next year one tire which is totally imbedded in GLC shoreline.

A Bee or Not a Bee?

These insects nectaring or stalking prey on flowers. A surprising number of bee imposters as well as many not-a-bee pollinators are in the Keweenaw. Can you find the true bees among the bee mimics and other nectaring insects or predators on this page. Clues are in column to left. The insects are identified on the back page. No cheating!





Photo courtesy of KISMA

KISMA weed crew display bags of invasive thistle heads removed after a busy day at GLC beaver dam wetland. Find out more about KISMA and invasive plant ID, mapping, and control at <https://www.mtu.edu/kisma/>

It's time to Renew for 2023.

We are grateful for your support !

"A Bee or Not A Bee" Answers:

1. Leaf-cutter bee, 2. Yellow-legged flower flies
 3. Bee wolf wasp, 4. Hairy flower scarab beetle
 5. Bee fly, 6. Black-shouldered drone fly
 7. Northern amber bumble bee
- Front Page: Tri-colored bumble bee



photo by Dorothy Jamison

The wintery scene above was photographed by Dorothy Jamison in March of 2022. A new snow season has begun in the Keweenaw, and Dorothy reports that as of November ice is beginning to form again on Gratiot Lake.



Loon Photo by Jim Hay

Water's Edge Editor: Bonnie Hay, Proofreading: Lucy Granroth and Ben Hay Articles by: Bonnie Hay, Gina Nicholas, and Lucy Granroth. Photos by KISMA crew, Jim Hay., Dorothy Jamison, and Bonnie Hay. We welcome comments, corrections, and questions. contact Bonnie@gratiotlakeconservancy.org

Donations in any amount are welcome.

Conservancy members receive newsletters, notice of special events, and an invitation to the Annual Members Meeting. Membership is \$15. GLC programs fees are discounted for members. Join at any time. Renewals are due at year end.

Send your membership/donation check to:
Gratiot Lake Conservancy
P.O.Box 310, Mohawk, MI 49950

or

or contribute online at:

<https://www.gratiotlakeconservancy.org/ways-to-contribute>

Donors of \$100 or more receive a gift of photo notecards.

If you would prefer NOT to receive the notecards please indicate that when you donate.

