Water's Edge

Gratiot Lake Conservancy News

Volume 9 Fall 2007

Fifth Year for Aquatic Ecology at Gratiot

Josh Mow, from Washington, Michigan, was this year's recipient of the Sandretto Scholarship to attend Michigan Tech University's *Summer Youth Program Exploration: Aquatic Ecology at Gratiot Lake.* Five high school students have received the scholarship since its inception. The endowed scholarship was established by Rita Sandretto in memory of her husband, Jack Sandretto, in 2002.

Josh (top row on the left) is pictured above at the Noblet Field Station with (clockwise from Josh) Eric Villanueva, Andrew Fitch, Sarah Quackenbush, Marcy Erickson (instructor), Shane Irmen, and Brian Rajdl (instructor).

See more on student education and research at Gratiot Lake on pages 4 and 5.

Your Membership is Due!
Click here to download form.

Ninth Annual Members Meeting

The Annual Members Meeting of GLC was held on July 24 at the Eagle Harbor Community Center. Board members were re-elected. GLC's over 100 member families and donors were acknowledged. Grants from UPPCO, Michigan Botanical Foundation, and the UP Sustainable Forestry Fund were announced. The grants support lake vegetation mapping and the production of a booklet and CD on local aquatic plants and potential aquatic invasives.

Bonnie Hay presented a slide show and reported on GLC activities including Janet Marr's *Botany* and *Aquatic Plants Workshops*, *Reading the Landscape:Shorelands*, and the *Kayak Tour of Gratiot.* Upcoming programs were announced including *SYP Exploration: Aquatic Ecology at Gratiot Lake*, *Astronomy on Brockway,* Marilynn Brandenburger's *Journaling Workshop,* and the *Coastal Clean-Up.* Volunteers were recognized and Virginia Jamison and Rachel McPherson were winners in a special drawing from names of those who had volunteered.

After a door prize drawing and refreshments, sixty GLC members and community residents enjoyed a presentation by Greg Wright on *Wolf Ecology: Fact & Fiction.* Greg detailed research on wolf/prey relationships at Isle Royale and Yellowstone National Parks. He also discussed the value of wolves in the ecology of an area and issues that arise when humans live in close proximity with wolves. (See more on Wolves on page 7.)

Hudson Bay Area Migrant Meets Tragic End at Gratiot Lake

That got your attention didn't it? Of course, this visitor was not a human but a Canada goose! GLC participated in the Alliance For the Great Lakes Michigan Coastal Clean-up on September 15. Seven volunteers combed the then broad Gratiot Lake shoreline for trash, dutifully noting how

Continued on page 6

Elmo Negro passed away on August 22 at the age of 82. He was a member of GLC since its beginning. Elmo owned land at the lake and had a small houseboat raft which was a place for family outings from time to time. One snowy winter a few years ago, GLC received a call from Elmo. He had been by the Noblet Field Station and was concerned about the snow load on the roof, and had to be dissuaded from going back over, climbing up there, and shoveling it

Landmark Volunteers, on loan from The Nature Conservancy (TNC), take a break during a day of service at the GLC Preserve. Emily Wessels from TNC is at left in the photo.

Volunteers worked nearly 400 hours maintaining trails, cleaning shoreline, taking photos, baking goodies, planning programs, writing grants, monitoring water, balancing the budget, tidying the cabin, opening their homes for programs, assisting at programs, maintaining the website, watching the lake, assembling notecards, editing newsletters, and generally pitching in.

Thank you to Everyone who helped. Your actions sustain GLC!

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
Bonnie Hay, Water's Edge Editor
Gratiot Lake Conservancy
P.O. Box 310
Mohawk, MI 49950

e-mail: belh@verizon.net phone: 906-337-5476

***Water's Edge* and more in full color on our web site:**
www.mlswa.org/gratiot-lake-1508/

Water's Edge is printed on 100% recycled paper.

GLC gratefully acknowledges this year's Donors to the Land Acquisition Fund, Education Fund, or to GLC's General Operating Budget...

LEADING CONTRIBUTORS

Joseph Nicholas, HFR Asset Management, Inc.
Rita Sandretto

MAJOR DONORS

Arthur Dion
Bonnie and Jim Hay

DONORS

Orin Ahlstrom
Judy and Steve Albee
Charles and Janice Anderson
Don and Dorothy Asher
Laura Cison and William Bingham
Ben and Gayle Brown
Katherine and Glen Brunner
Marie Celona
Ray Eister
Barbara Flanagin
Carrie and Michael Fraim
Bill and Karen Gibson
Bill and Eloise Haller
Sue Haralson
George Hite
Mary and Neil Hodges
Bruce and Ellen Horsh
Virginia and Dorothy Jamison
Joe and Kate Langdon
Evelyn and John Lindsey
Caron and John Lizzadro, Jr.
Christine and Louis Lizzadro
Sr. Barbara Lord
Bob and Janet Marr
Herbert and Joann Marutz
David and Debbie McPherson
Dennis and Pauline Moore
Gina Nicholas
Ellen and Rick Noblet
Ward Patton
Elaine Rysiewicz
George and Susan Robinson
William P. Ryan
Doug and Nancy Sherk
Jennifer Slack and Kenny Svensen
James F. Tercha
Paul Tomasi
Patricia and PeterVanPelt

Donations in Memory

Virginia and Dorothy Jamison In Memory of Betty LaMielle

Norma Neuswanger in Memory of Mary Lizzadro

Gina Nicholas in Memory of Elmo Negro

Ellen and Rick Noblet in Memory of Bert and Gladys Noblet

Donation in Honor

Calumet Figure Skating Club in Honor of Dorothy and Virginia Jamison

Grants Received

Michigan Botanical Foundation

Michigan Department of Environmental Quality, Office of the Great Lakes

Upper Peninsula Power Company Corporate Giving Division

St. Mary's College Students Research Wildlife at Gratiot Lake

In July and August, three St. Mary's College of California seniors under the guidance of their biology professor, Andrea Nicholas, undertook research projects at the GLC Preserve. The projects were part of St. Mary's Summer Research Program which engages science students in off-campus hands on scientific study. Brian Rajdl assisted in orienting the students to wildlife sampling techniques and the use of equipment. The group stayed for three weeks at the Noblet Field Station—quite an introduction to the North Woods!

Valerie Renosto (photo to right) studied plankton and took lake water samples at various depths using a plankton net. She identified her tiny "catch" under the microscope. Along with the native plankton, Valerie discovered that Gratiot Lake is now home to one potentially troublesome, tiny crustacean—spiny water flea. It is impossible to predict whether spiny water flea will cause problems for Gratiot Lake anglers or fish.

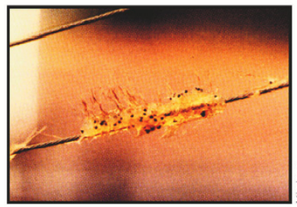
Crayfish were the focus of Mary Heady's research (photo above.) Using baited minnow traps to catch her subjects, Mary identified four crayfish species in the lake: northern crayfish (*Orconectes virilis*), northern clearwater crayfish (*Orconectes propinquus),* nail polish crayfish (*Orconectes immunis*), and devil crayfish (*Cambarus diogenes*). We were pleased to learn that the invasive, alien rusty crayfish was not found. Using a ratio she developed using measurements of crayfish body size and the size of their chelae (large front pincers), Mary developed a hypothesis about which of the native species would be most likely to defend themselves against any future invasion of the rusty crayfish, an aggressive species with large chelae. Mary won an award at St. Mary's for this research.

David Schwartz surveyed the diversity of mammals from top predators to herbavores on the Gratiot Lake Preserve. David used track plates (soot coated aluminum sheets) and raked sandy shoreline to serve as templates to collect animal tracks. He set out Havahart live traps to inventory small mammals present. Using pre-recorded animal distress calls, he attracted larger predators. A highlight of his project was hearing wolves howl back! In all, 22 mammal species were detected including black bear, gray wolf, fisher, coyote, beaver, raccoon, white-tailed deer, eastern and least chipmunks, thirteen lined ground squirrels, northern short-tailed shrews, red and gray squirrels, striped skunk, and a variety of voles and mice. David won a prize for his poster which detailed his research.

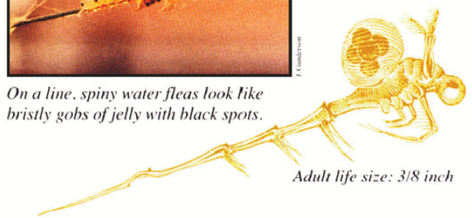
The St. Mary's students' work has enriched our understanding of Gratiot Lake, and is a welcome addition to our baseline data on the lake and its ecology.

Consider a Year End Donation!

Click here to download a form to mail in.



On a line, spiny water fleas look like bristly gobs of jelly with black spots.



Adult life size: 3/8 inch

Spiny Water Flea

The spiny water flea, or "B.C.", is not an insect at all, but a tiny (less than half an inch long) crustacean with a long, sharp, barbed tail spine. A native of Great Britain and northern Europe east to the Caspian Sea, the animal was first found in Lake Huron in 1984 — probably imported in the ballast water of a trans-oceanic freighter. Since then, populations have exploded and the animal can now be found throughout the Great Lakes and in some inland lakes.

The effects spiny water fleas will have on the ecosystems of the Great Lakes region are unclear. The animals may compete directly with young perch and other small fish for food, such as *Daphnia* zooplankton. They also may provide a food source for larger fish.

Spiny water fleas also reproduce rapidly. During warm summer conditions each female can produce up to 10 offspring every two weeks. As temperatures drop in the fall, eggs are produced that can lie dormant all winter.

While the impacts of the spiny water flea seem to be minimal in some areas of the Great Lakes, it is not known if this exotic will have larger impacts on inland lake ecosystems.

Likely means of spread: Spiny water flea eggs and adults may wind up unseen in bilge water, bait buckets, and livewells. Also, fishing lines and downriggers will often be coated with both eggs and adults.

Courtesy of Minnesota Department of Natural Resources

Mammal Tracks Match Answers

1. Beaver I; 2. Bear F; 3. Opossum A; 4. River Otter H; 5. Coyote C; 6. Bobcat D; 7. Deer E; 8. Porcupine G; 9. Raccoon B.

"Little Gratiot River Tract" Capstone Wins Award

Michigan Tech University Forestry students, Brandon Bal, Rob Benson, Robin Conklin, Marcy Erickson, and Chad Fortin won a second place award for excellence for their research and report on the history, ecology, soils, forest values, and forest management plans for the Little Gratiot River tract. The group, mentored by MTU professor Chris Webster, competed with forestry students from Iowa State University and UW-Madison. The Capstone was sponsored by Keweenaw Community Forest Company on behalf of Gratiot Lake Conservancy. The 120 acres of land encompassed in the study included the land bordering the Little Gratiot River outlet of Gratiot Lake, the portion of GLC's Gratiot Lake Preserve where the Noblet Field Station is located, as well as land north of the Little Gratiot River owned by Lizzadro Farms Inc.

Five forest stands were delineated within the tract: two large mixed conifer stands, a tag alder stand, a black ash stand, and a mixed hardwood stand. The report assessed forest management scenarios for the various stands ranging from a "no active management" plan to plans that included some timber harvesting and replanting to encourage red oak growth. All plans provided ample buffer zones to the lake, river, and Noblet Field Station. A "no active management" approach was recommended for most of the tract.

Here are a few observations pulled from the report on aspects of the areas ecology:

> The State of Michigan originally surveyed Gratiot Lake in 1845 and indicated it was "primarily swamp." The survey noted cedar and black ash as the most abundant trees followed by red oak, yellow birch, sugar maple. alder, and balsam fir. The current forest composition is strikingly similar.

Four different soil types were identified—some sandy and glacially deposited but most mucky and formed by decaying plant material and indicative of a high water table. All types of soil were susceptible to a high degree of windthrow. Soil types are important factors in determining what types of trees and plants will thrive in an area.

The area was relatively free of infestations and pests although two fungal diseases were identified. Tips were given for identifying potential invasive tree pests including the Asian longhorn beetle, emerald ash borer, and the gypsy moth.

Two invasive plant species were identified—common speedwell and reed canary grass. Reed canary grass grows in sunlit areas along roads and shoreline and can easily overwhelm native vegetation. (Janet Marr has already identified this species as particularly abundant in a wetlands at the southwestern end of Gratiot Lake.)

Two wildlife assessment models indicated that the tract provides ample habitat for wildlife. Tag alder, yellow birch, white birch, cedar, and beaked hazelnut provide abundant food resources for diverse wildlife. Woody debris, snags, and brush provide nests, dens, burrow sites, cover for predators, hiding spots for prey, and travel corridors.

Were You Itching?

We got off easy in June and July because black flies and mosquitoes were scarce at Gratiot Lake as a result of a prolonged drought, but a new pest emerged in August that really had some folks itching. GLC received reports of mysterious skin irritations and welts which developed after people had been sitting or wading in shallow water. After a bit of detective work, we learned that the likely culprit was "swimmers itch."

Swimmers itch is caused by a tiny flatworm which parasitizes snails and waterfowl—its hosts. The worm may mistakenly imbed under a person's skin as well, even though humans are not the desired host. The worm dies, but may cause an allergic irritation. The swimmers itch parasite attaches to slow moving or stationary targets in warm shallow waters. Incidence is higher when winds are blowing towards shore.

An effective protection is to towel dry thoroughly, immediately on leaving the water. The worms imbed as the skin air drys, so toweling dry deters them! Another recommendation is not to attract waterfowl in to shore by feeding them. The adult parasite lives in the blood of infected animals such as ducks, geese, gulls, swans, and certain aquatic mammals such as muskrats and beavers. The parasites produce eggs that are passed in the feces of infected birds or mammals. When the eggs hatch the young parasitize snails.

Perhaps the drought that led to low lake levels and warmer than usual water may have encouraged the proliferation of this pest.

Some soothing remedies for swimmers itch are applying cool compresses to the affected areas; soaking in colloidal oatmeal baths or Epsom salts; or applying calamine lotion, baking soda paste, or corticosteroid cream to the rash. The itchiness usually subsides in a few days but occasionally requires treatment with oral antihistamines.

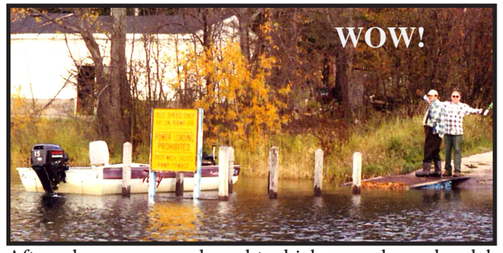
More info can be found at

http://www.swimmersitch.org/

http://www.cdc.gov/ncidod/dpd/parasites/cercarialdermatitis/default.htm

Visit the GLC Website!
View current and archived issues of Water's Edge News in full color.
Find articles, photos, video clips, and links to more information.

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



After a long summer drought which caused very low lake level, Gratiot Lake rebounded with a deluge of 20+ inches of rain in September and October. As evidence we submit Dorothy Jamison's photo above of Dave Mitchell and Ron Sibbald at the mostly submerged public boat dock.

Lake Superior rose 8" in September, which is twice the amount of rise from average spring snowmelt! Even so, Superior lake level is well below the long term mean level. According to experts, the lower than average Superior level is due to water temperatures that are increasing at twice the rate of air temperatures. Superior average water temperatures have risen about 3 degrees in the past century and much of the increase has been in the last 25 years. Evaporation is accelerating due to higher water temps, increasing wind speeds, and less ice cover. Ice helps prevent evaporation and also reflects away about half of the sun's heat. More information on lake levels can be found on the web at

http://www.glerl.noaa.gov/data/now/wlevels/sup_lvl.gif

Hudson Bay Migrant continued from Page 1

many cigarette butts, fishing lures, and plastic bags were picked up. Pam Schmitz spied a numbered metal band in the sand and much to her dismay found that it was attached to a small segment of a bird's leg.

On the band were a serial number and a phone number (1-800-327-BAND) which we dutifully called. In October, the United States Geological Survey (USGS) which coordinates the North American Bird Banding Program sent GLC word that the bird had been a male Canada goose. The goose was too young to fly when banded on July 19, 2007 near Winisk, Canada., due north of the Keweenaw Peninsula on Hudson Bay. The rest of his story is speculation, but most likely after a brief migration, this bird was a satisfying dinner for some local predator.

According to the USGS, "Bird banding is important for studying the movement, survival, and behavior of birds. About 58 million birds representing hundreds of species have been banded in North America since 1904…Data from banded birds are used in monitoring populations, setting hunting regulations, restoring endangered species, studying effects of environmental contaminants, and addressing such issues as Lyme disease, bird hazards at airports, and crop depredations." Results from banding studies support conservation programs as well.

Some Gray Wolf Facts

olves no longer protected by the d Species Act (ESA)?

en gray wolves were listed as an d Species only 500 to 1000 wolves he upper midwest with only 6 in the U.P. Under ion of the ESA, wolf has rebounded. There are about 4000 wolves in midwest, with about 530 in the U.P. (including Isle ith a sustainable population in the area, the wolf was delisted in March. Now, Michigan is drafting its own management plan for the wolf as a protected non-game species. The plan will be finalized soon and a draft can be viewed on the Michigan Department of Natural Resources (MDNR) website at http://www.michigandnr.com/publications/pdfs/huntingwildlifehabitat/DraftWolfPlan.pdf

What do gray wolves eat?

On Isle Royale, moose is a primary wolf food, but in the U.P. more than half of a wolf's diet is deer followed by beaver, snowshoe hare, grouse, and small mammals. Studies show that wolves usually cull weak, sick, very young, and very old of their prey. The end result is a more resilient prey population. According to various estimates, the 500+ wolves in Michigan consume between 1 and 7% of the herd annually, a bit less than cars kill. Hunters take about 8.5% of the herd.

Can gray wolves harm people, pets, or livestock?

There are few reports of wolves attacking humans in North America. One possible incident of a human fatality from a wolf attack in Canada has been reported. There have been incidents of wolf threats to livestock, hunting dogs, and pets in Michigan. Education about strategies to minimize the likelihood of this type of wolf predation--such as using herding dogs, special fencing in agricultural areas, and avoiding bringing hunting dogs into known areas of wolf activity- and a protocol for managing wolf numbers in areas where there are valid concerns, are part of the focus of the new MDNR Michigan Wolf Management Plan.

How can you tell the difference between a gray wolf, a coyote, and a large dog?

Adult	Gray Wolf	Coyote	Dog
Length(tail tip to nose)/Height (at shoulder)	6 feet/ 30-34 in.	4.5 feet/20 in.	Varies
Weight	58-112 lbs.	20-50 lbs.	Varies
Physical Characteristics	Rounded ears Blocky muzzle Straight tail tipped in black	Pointed ears Pointed nose Straight tail sometimes tipped in black	Varies Tail may be curled.
Behavioral Characteristics	Gait: often place hind foot in track left by front foot Long, low howls	Gait: like wolf Short, higher pitched yips	Gait: tracks not usually overlapping

Click here for more Links to wolf information including isleroyalwolf.org.

Match Mammal and Track

Check your answers on page 5.

1. A beaver's tracks are usually wiped out by its tail! Chewed trees and branches are a clue.

2. Besides a black bear's footprints, look for trees marked with scratches and bite marks.

3. A rear foot with an opposable thumb makes the opossum an expert climber. A tail drag mark is often seen between its footprints.

4. A river otter track reveals the webbing between its toes. River otter slides are visible near streams and ponds.

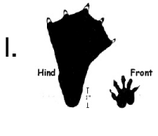
5. Coyotes often deposit droppings in the middle of the trail as a territorial marker.

6. Like all cats, the bobcat has retractable claws. No claws are visible in its tracks.

7. Besides their heart shaped tracks, saplings with bark rubbed off are a good sign that deer are present. Deer rub the velvet off antlers in the early fall and damage young trees in the process.

8. Porcupine feet are well suited to climbing. On the ground, a porcupine's top waddling speed is about two m.p.h.

9. At Gratiot Lake raccoon tracks may be seen near piles of empty clam shells, a favorite on this omnivore's menu.



Become a Gratiot Lake Conservancy Member!

In addition to the biannual newsletter, members receive invitations to special events and an invitation to the Annual Members Meeting. GLC programs that have fees are discounted for members. The enrollment is $15.

Click here to download form and mail to
Gratiot Lake Conservancy, P.O. Box 310, Mohawk, MI 49950

Membership runs for one year from Dec. 31st.

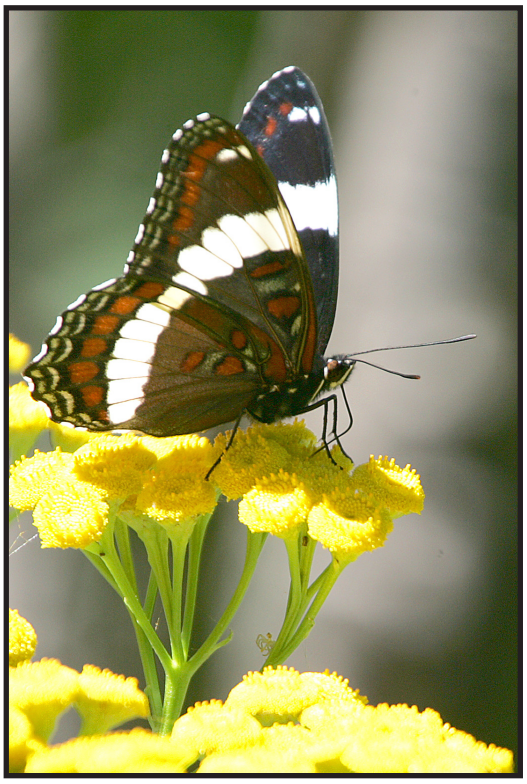


Photo by Jim Hay

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

Click here to view this white admiral butterfly and other Gratiot Lake notecard photos in full color!

David Schwartz from St. Mary's College shares information on track collection on Gratiot Lake shoreline (see page 4) with *Reading the Landscape: Shorelands* (RTL) participants. The group pictured at the Conservancy's Gratiot Lake Preserve from left to right: David Schwartz; Kayo Miwa (RTL program artist); Joe Haara (Kayo's spouse), and RTL participants; Maria and Robert MacFarland and Elaine Wildman.