



FINGER LAKES INSTITUTE

November 2008

Funding Announcements

Meghan Brown, assistant professor of biology, with assistant professors of geoscience **Tara Curtin** and **Neil Laird** and assistant professor of Computer Science **Stina Bridgeman**, received a \$418,430 grant under NSF's Major Research Instrumentation program to acquire a suite of equipment to promote their research on the Finger Lakes. Deployed at seven sites in northern Seneca Lake, these instruments will create a network to investigate the ecology of the diapausing egg of exotic zooplankter *Cercopagis pengoi*, in concert with the meteorological conditions, internal lake circulations and sedimentation processes that drive its production and distribution.

Bin Zhu, research scientist at the Finger Lakes Institute, received multiple research grants during the past year. The NYS Department of Environmental Conservation awarded Zhu and colleagues from Syracuse University a grant to evaluate the presence of Eurasian water milfoil in Skaneateles Lake. Zhu also received an award from the Bristol Myers Squibb Foundation that enabled a summer research student to work with him to evaluate invasive species and water quality of the Finger Lakes and Great Lakes.

Additionally, Zhu received funding from the Ontario County Water Resources Council to study the distribution of aquatic macrophytes in Seneca Lake as an indicator of water quality. Most recently, through the Great Lakes Protection Fund, the NYS Department of Environmental Conservation has provided \$95,512 of funding to **Bin Zhu**, assistant professor of Biology **Meghan Brown**, associate professor in the Department of Natural Resources at Cornell **Lars Rudstam**, team leader of Natural Resources at Cornell Cooperative of Onondaga County **Amy Samuels**, and director of the Finger Lakes Institute **Marion Balyszak** to study the effectiveness of various control methods for European frogbit, an invasive plant that forms dense floating mats that may become a threat to the Finger Lakes.

Economic Development and Regional Planning



Land Use Symposium A Success

Water quality in the Finger Lakes is related to land use. On October 30, the Finger Lakes Institute hosted *Land Use in the Finger Lakes: Making the Right Decisions to Sustain Economic Viability and Water Quality*, a symposium intended to assist communities in understanding land use law, decision support technologies, and local approaches to land use. Partial funding for this event was provided by New York State Legislature through the advocacy of Senator Michael F. Nozzolio and the Stardust Foundation of Central New York.

The program's agenda featured a training workshop on land use decision-making by the [Pace University Land Use Law Center](#), a presentation by the [Institute for the Application of Geospatial Technology \(IAGT\)](#) in Auburn on their Owasco Lake Viewer and newly developing Owasco Watershed Network, and a panel discussion on regional approaches to land use. Panelists included Kevin Olvany, Canandaigua Lake Watershed Manager, speaking on a local laws project; Richard Ayers and Neil Simmons from the Town of Jerusalem speaking on managing development on steep slopes; and Ricky Slagle and Bob Martin from the Town of Niles speaking on lake rights law. The keynote speaker, Congressman James T. Walsh (25th Congressional

District of NY), spoke to how local decision making by Finger Lakes communities is critical to the future protection of the lakes and continued economic viability of the region.

The symposium was well attended by local elected officials, public agencies, environmental and civic organizations, planners, landowners and academia. Of the 120 attendees 23 towns, 3 villages, 9 academic institutions, 8 Finger Lakes region counties, 5 Finger Lake associations, and 3 regional planning agencies were represented. Each participant received a packet of conference related materials which will be posted to the FLI website shortly at

http://fli.hws.edu/land_use_in_finger_lakes.asp .

Community Outreach and Public Service

The Seneca Room: A New Venue for FLI Events

[Posted in the HWS Daily Update October 31, 2008](#)

In front of the sprawling floor-to-ceiling windows of the Seneca Room overlooking the largest of the Finger Lakes, members of the Hobart and William Smith community and Geneva neighbors gathered for the dedication of one of the newest spaces on campus. To inaugurate the Seneca Room - the latest addition to the Finger Lakes Institute (FLI) - several members of the Colleges spoke at the dedication and honored long-time HWS and FLI supporter State Sen. Michael F. Nozzolio L.H.D. '07.

The two-story, 2,300 sq. ft. brick structure adjacent to 603 South Main St. will primarily host FLI conferences and research gatherings as well as events open to area researchers, residents and other institutions.



"There's no better person to officially open this space than Senator Nozzolio," said President Mark D. Gearan during the dedication. "Senator Nozzolio's commitment to the Finger Lakes Institute is unsurpassed. He could have easily contributed to the Institute in its opening and allowed that to be the end of his work with us. Instead, he has supported the Institute's cause throughout all four years of its presence in the Finger Lakes."

"A few decades ago, a professor at Cornell planted a seed in me while I was a resource economics major there as an undergraduate," Nozzolio explained. "He posed the question, how do we provide a platform for government, science and the vast region of the watershed to come together in making the important decisions related to the environment? Through the establishment and success of the Finger Lakes Institute, I believe that together we have germinated that seed and planted it firmly here at Hobart and William Smith."

"We're grateful to the Senator for his advocacy on behalf of the Colleges and the Finger Lakes Institute," said Gearan. "In a short period, the Finger Lakes Institute has accomplished a great deal, both in Geneva and in the surrounding region. Bringing in \$7 million in outside funding, the Institute has quickly become an important opportunity for our students to take advantage of the vital research and significant educational research that is part of our mission."

FLI Director Marian Balyszak and Professor of Geoscience John Halfman thanked Nozzolio during the dedication.

"Education and outreach is an important arm of the Finger Lakes Institute," Balyszak said. "You have certainly recognized this critical component as well in your support of the Institute and on behalf of these lakes."

"Senator Nozzolio has truly done so much for us and the protection of the Finger Lakes," said Halfman.

Rayza Santiago '09, the FLI's Bonner Leader for Environmental Education and Outreach, addressed the crowd and Senator Nozzolio. "The Seneca Room will now provide an exceptional space to welcome school children, educators, undergraduate students and the general public who participate in these programs," she said. "The beautiful view of Seneca Lake exemplifies the importance of preserving the Finger Lakes and that students of the Colleges can have an important role in this through active participation in the efforts of the Finger Lakes Institute."

Rayza Reports

Rayza Santiago is a student ambassador representing HWS, the FLI, and the HWS Center for Community Engagement and Service-Learning in their mission to promote and foster education, outreach and community engagement programs that connect the Finger Lakes environment with numerous stakeholders, educators, and students in the region. Her recent projects include...

[Hungry? Eat Local!](#)

There are many small local businesses that can be found right here in the city of Geneva that offer unique foods and products. Even though the Farmer's Market has closed up shop for the winter, many local businesses still carry products made from area ingredients and produced right here in the Finger Lakes region. These include, but are certainly not limited to, Normal Bread, Red Jacket Orchards, and Stony Brook Cookie Company. You can also look for some seasonal products from area farms in Wegmans. For a brief list of these local businesses and produce that is in season, [see attached PDF form](#). This pamphlet was distributed campus wide to encourage HWS students to support local businesses and take advantage of what the Finger Lakes region has to offer! Rayza has also coordinated a special guest to speak publicly on the farmer's perspective of buying and eating local.

December 4, 6:00 pm; The Seneca Room (adjacent to 603 S. Main St., Geneva)

Local Food - Growing in the Finger Lakes

Andy Fellenz, Fellenz Family Farm

The Fellenz Family Farm is a NOFA-NY certified organic fruit and vegetable farm in Phelps, NY. In this presentation Andy Fellenz, owner of Fellenz Family Farm, will discuss the importance of buying local food in order to support local farmers and to help the Finger Lakes environment. Fellenz is a supporter and major contributor to the Geneva, Canandaigua, and Pittsford CSAs. A CSA (Community Supported Agriculture) program is often characterized as a risk sharing partnership between the farmer and the members. Members purchase a share of the farm's production and over the growing season they receive a share of what was harvested that week. Fellenz will speak about his experience as a local farmer and how he works to provide organic and locally-grown produce to residents of the Finger Lakes Region. He will speak specifically to the growth of local foods in the Finger Lakes, seen primarily through the lens of one farm, while providing some historical and regional context. This event is free and open to the public.

Calling All Cell Phones!

A lot of energy is used in making (extraction of raw materials) and disposing (incinerate, landfill) of cell phones. According to the EPA, if all of the 100 million cell phones ready for end of life management in the U.S. are recycled, we could save enough energy to power more than 194,000 U.S. households with electricity for one year. Recycling and properly disposing of electronic waste, such as cell phones, reduces the amount of persistent toxic chemicals that may compose landfill leachate, which has the potential of contaminating soil and drinking water via the leachate treatment process.

Do you have an old, used, or broken cell phone lying around your dorm or house? If so, it can be recycled! Donate your cell phone to the Finger Lakes Institute and it will be recycled by Eco-Cell, a program that encourages organizations to collect used cell phones, accessories, and batteries in a fundraising effort. Acceptable drop off items include: cellular phones, batteries, accessories, PDAs, blackberries, pagers, and chargers. Do your part, recycle your cell phone!

To encourage education and participation in electronic recycling, Rayza Santiago has worked with a few Geneva elementary schools to distribute cell phone recycling drop-boxes accompanied with lesson plans and presentations. At this time, drop-boxes have been placed in North Street School and West Street School in Geneva. In addition, drop-boxes can be found throughout the campus of Hobart and William Smith Colleges; in the Finger Lakes Institute, Stern Hall, Napier Hall, and the Campus Security Office. If your school or organization would like to participate in the Finger Lakes Institute's cell phone recycling program, please contact Rayza Santiago at fli@hws.edu.

2008 Best Student Presentation Award Winner Announced

The Finger Lakes Institute at Hobart and William Smith Colleges hosted its 4th Annual Finger Lakes Region Research Conference for regional students, faculty, independent scientists and members of the public on Saturday, October 18, 2008 at the Hobart & William Smith Colleges Vandervort Room in Geneva, New York.

This year's conference, funded by New York State through the advocacy of Senator Michael F. Nozzolio, highlighted all aspects of Finger Lakes regional scientific research, providing an opportunity to share scientific information for those interested in environmental science and scholarship, particularly as they apply to problems related to the Finger Lakes of western and central New York State. The day-long conference featured both oral presentations and poster display.

The annual event honors the best student (graduate or undergraduate) oral presentation with a \$100 award and certificate. Isabel Olson, a senior at Hobart and William Smith Colleges, was recently awarded the 2008 Best Student Presentation in recognition of her commendable verbal communication of her research objectives, processes, and conclusions.



Olson, majoring in chemistry and minoring in mathematics and education at Hobart and William Smith Colleges, presented “Dendrochemistry: Does the Chemistry of Tree Rings Offer an Archive of the Chemical Environment?”. This presentation delivered findings from Olson’s research in comparing the cation binding capacities of Douglas Fir tree rings taken from Mount St. Helens area in Washington State to that of Norway Spruce from Geneva, NY. Isabel was able to explain the processes of determining cation concentrations and calcium binding capacity (the woods ability to hold calcium)(CBC) of tree rings and concluded that the changes in cation concentration from 1930-1970 in the Douglas Fir are most likely not due to changes in CBC. Overall, Olson explained how the CBC of tree rings may make dendrochemistry more useful in dating major environmental events and allow for a better understanding of its influence on tree ring chemistry.

Olson’s research was conducted under the supervision of HWS Professor of Chemistry Walter Bowyer. “I’ve been fortunate to work with extremely talented students, and Isabel is one of the key members of our research team. She is already a mature research scientist in the way she designs experiments and thinks about her data. It’s always a joy to work with her.” Bowyer said.

Olson, honored for her academic achievements, has also been the recipient of the Chemical Rubber Company First Year Chemistry Achievement Award in 2006 and the HWS Analytical Chemistry Prize in 2008. Isabel has high hopes of becoming a chemistry and mathematics secondary school teacher in the future. After graduating, she will pursue her Masters in the Art of Teaching at Hobart and William Smith Colleges. In her free time, Isabel loves swimming, making jokes, and laughing.

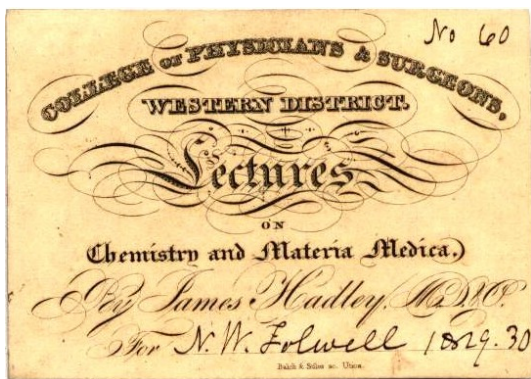
Isabel Olson’s presentation on dendrochemistry, along with other conference participant’s presentations and posters, can be viewed at <http://fli.hws.edu/conference/2008agenda.asp>.

It’s a Small World: Mere degrees of separation

“Small world” relationships are highlighted repeatedly throughout the FLI’s newest exhibit, titled *Collection Fever and Scientific Adventurers*, as they are defined and intertwined through blood relatives and distant cousins; mentors, instructors and students; employers and employees; friends and classmates. The exhibit itself was composed to recognize the distinguished and somewhat forgotten pioneer scientists that established the initial curiosities and understandings of our natural systems, from fisheries scientists, nature educators, and scientific illustrators, to botanists, geologists and paleontologists. Meanwhile it also emphasizes the close relationships that have brought our understanding of the Finger Lakes environment to a global context in history.

The theory of six degrees of separation states that any two individuals can be connected by at most five acquaintances. As the content of the Finger Lakes Institute’s newest exhibit developed through a series of Google searches, phone calls, research journals, books and archives, it was realized that there are a mere six degrees of separation between Charles Darwin and Hobart and William Smith Colleges! It sounds astonishing to state; however through a chain of acquaintances the “small world” relationship was defined as John Torrey’s, Asa Gray’s and Charles Darwin’s social networks expanded to include the mention of Nathan Wright Folwell, a local man from Seneca County, NY.

The chain of acquaintance between Darwin and the Colleges is bound by a complicated, deep, and somewhat obscure investigation. It begins with Asa Gray, born in 1810 in Oneida County, NY, a renowned 19th century botanist with extensive influence on the taxonomic organization of plants and botanical discoveries. While attending Fairfield Medical School in the late 1820’s Gray attended his first science lectures on *Chemistry and Materia Medica* from Prof. James Hadley and quickly took an interest in collecting and identifying plants. Also a pupil of John Torrey, New York State’s first appointed botanist, Gray assisted in writing *Flora of New York* published in 1843 in addition to many textbooks and scientific articles. It was Gray’s interest in plant distribution that led him to correspondence with Charles Darwin between 1855 and 1875. Prior to presenting his theory of evolution in his 1859 *Origin of Species*, Darwin often [corresponded](#) with the notable American botanist regarding the geographic distribution of plants and the genera common to the United States.



This [ticket](#) was issued by Hadley to Gray’s close chum, botanizing companion and medical school classmate (one year Gray’s junior), Nathan Wright Folwell of Ovid, New York.



Photo: Nathan W. Folwell (Courtesy of HWS Archives)

Taking a step back, the life story of Nathan W. Folwell is interwoven with Asa Gray’s. Nathan Wright Folwell, son of William Watts Folwell, was raised on a farm in the Town of Romulus, Seneca County where he later enrolled in Geneva (now Hobart) College in 1816. After graduating in 1829, Nathan went on to pursue his doctorate degree from Fairfield Medical College where he met

enthusiastic botanist Asa Gray. Nathan also took an interest in natural history and has been credited in multiple scientific journals for collecting specimens from the Finger Lakes region in the mid 1830s. A casual correspondence demonstrates a clear chain of acquaintance between John Torrey, Asa Gray, and Nathan Wright Folwell. Asa Gray writes to John Torrey on April 6, 1832:

I have given a copy of this list [of plants] to my friend Dr. N. W. Folwell of Seneca County, an industrious collector, who is situated in a section rich in plants, and requested him to transmit specimens of these and other interesting plants to you. I think he will be able to furnish you with many interesting plants from that section of country, and I shall be grateful for any favors you may have in your power to confer upon him.

Dr. Nathan Folwell later married Caroline Reeder and had ten children, his first son named after his father, William Watts Folwell and his second son named after his close friend, Asa Gray. How is the chain of acquaintance to Hobart College defined? In addition to Nathan graduating from Hobart College in 1829, his son Asa graduated in 1862, and both nephews in 1857 (William Watts Folwell) and 1865 (Mahlon Bainbridge Folwell). Today, on the campus of Hobart and William Smith Colleges, 764 S. Main St. is named *Folwell House*, after Nathan Wright's father, a 1857 Hobart alumnus and professor of Greek and Latin Language and Literature.

The deep history in scientific research of the Finger Lakes natural environment offers explanations of the advancement of people, places, and things in our region. In the early 1800s many aspiring educators, self-taught scientists, and physicians, like Darwin, Torrey, Gray, and Folwell, "caught" collection fever while looking to document and preserve unique species and one-of-a-kind specimens. They ventured out into undiscovered landscapes to discover, identify and assist in understanding our natural history. The current FLI exhibit, *Collection Fever and Scientific Adventurers* illustrates notable individuals and leaders, men and women, in Finger Lakes research and identifies the chains of acquaintance among their accomplishments, family heritage and historic regional achievements.

Sources:

[Hobart College: General Catalogue of Officers, Graduates and Students. 1825-1897](#)

By Hobart College Associate Alumni, Associate Alumni, Charles Wells Hayes, Hobart College, Charles Delamater Vail, Authur Patrick Rose
Published by Press of W.F. Humphrey, 1897, Original from the New York Public Library, Digitized Oct 3, 2006

[Letters of Asa Gray](#)

By Asa Gray, Jane Loring Gray
Published by Houghton, Mifflin and company, 1894

[The Darwin Correspondence Project](#)

University Library
West Road, Cambridge CB3 9DR

http://historicalbotanica.blogspot.com/2004_06_01_archive.html

<http://www.geocities.com/~ccfullerton/carteranc/carsixpg3.html>

November Events

November 11, 2008 6:30 pm; Finger Lakes Institute Classroom

Aquatic Plants in the Finger Lakes: Native, Invasive, or Nuisance?

Dr. Bin Zhu, Research Scientist



Aquatic plants can directly or indirectly alter the physical and chemical environment in lakes by shaping light, temperature, and nutrient dynamics. They also play a significant role in shaping the structure and dynamics of food webs in water column and at lake bottom, even at relatively low areal coverage. For example, aquatic plants are used as food or habitat by algae, zooplankton, invertebrates, and fishes; therefore, they affect predator-prey interactions among these groups. In addition, aquatic plants can affect property value, swimming and boating. Particularly nuisance and invasive species cause many problems in the lake ecosystems. This presentation will discuss native, invasive, and nuisance aquatic plant species in the Finger Lakes, with focus on Skaneateles Lake, Owasco Lake, Cayuga Lake, Seneca Lake, and Honeoye Lake. This event is free and open to the public.

November 13, 6:30 pm; Finger Lakes Institute Classroom

Why Build Green?: CEC's Green Building Guide and Statewide Outreach Initiative

Sabrina Wells, Environmental Program Associate and Green Building Coordinator for Citizen's Environmental Coalition

This presentation will present the reasons people build green, identify CEC's advocacy efforts on the state level to promote green building policies, and encourage an interactive discussion of the decision making process when deciding to green your home. A brief presentation on the health effects of toxic building materials will also be given as well as an overview of NY State financial incentive programs. Copies of CEC's Green Building Guide will be available. This event is free and open to the public. Preview CEC's [Green Building Guide](#). Presenter Sabrina Wells, Environmental Program Associate and Green Building Coordinator for CEC, has broad experience in environmental advocacy and non profit work. Her commitment to environmental and social justice has shaped her career and educational choices and she has long advocated for policy changes that address pollution, climate change, and water quality issues. She holds a Bachelor of Arts in environmental policy from Prescott College in Arizona and is pursuing a Master of Arts in Environmental Public Policy. Her research has included international environmental justice, climate change, and Latin American studies.

Love Canal activist Lois Gibbs's visits HWS

Sponsored by the Department of Anthropology and Sociology at Hobart and William Smith Colleges

Love Canal is a neighborhood in Niagara Falls, NY where 20,000 tons of toxic waste had been buried and later a two schools, residential homes, rental units, and churches were built upon. In 1978, after becoming concerned for her child's health and exposure to chemical substances, Lois Gibbs created the Love Canal Homeowners' to show that the buried chemicals were connected to residents health problems- birth defects, miscarriages, cancer, etc.. Today, Lois Marie Gibbs is executive director of the [Center for Health, Environment and Justice](#) and author of *Love Canal: My Story and Dying from Dioxin*. Her new book, *Love Canal: The Story Continues...*, was published in April 1998 by New Society Publishers. All events are free and open to the public.

[Hobart and William Smith Colleges Campus Map](#)

Wednesday November 19, 2008, 7:30- 9:30 p.m., Albright Auditorium

Film Screening: "In Our Own Backyard: The First Love Canal." [Learn More](#)

Thursday November 20, 2008, 7:30-9:00 p.m., Albright Auditorium

Lois Gibbs's talk titled "Environmental Activism and Citizen-Activism: Lessons Learned from the Last Thirty Years--Where Do We Go From Here?"

Friday November 21, 2008, 2:00-4:00 p.m., Stern Hall 217

One-on-one meetings with Lois Gibbs



Visit our Website at <http://fli.hws.edu/workshops.asp>

Email the FLI at fli@hws.edu

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