FINGER LAKES INSTITUTE

December 2009

Education Outreach

Save the Date: A Conference for Teachers

March 25, 2010, 8:00am -3:00 pm, Vandervort Room on the Hobart and William Smith Colleges Campus

Climate Change and its Impacts on the Environment

Keynote Lecture: *Life on the Ice: Antarctica's Adélie Penguins*

Chris Linder will tell the story of life in a penguin colony, the tools researchers use to study them, what they are learning and how it relates to climate change. Scientists know more about how Antarctic penguins will adjust to rapid climate change than almost any other creature on Earth. Linder is a Research Associate in the Woods Hole Oceanographic Institution's Physical Oceanography Department and a professional science and natural history photographer.

Additional Speakers include:

- Tara Curtin, Hobart and William Smith Colleges Dept. of Geoscience
- Richard Kissel, Museum of the Earth, Ithaca NY
- Jennifer Schaus, Cornell University Lab of Ornithology
- Frank Moses, Montezuma Audubon
- Alliance for Climate Education: *An Assembly Presentation*
- Panel Discussion with area school district representatives and their students on how they have implemented institutional changes.

Registration Cost: $40.00 includes lunch. This event is co-sponsored by the Finger Lakes Institute and the Rochester Area Colleges Centers for Excellence in Math and Science. Speakers will address how science teachers can integrate the latest research on climate change into their curriculum. Contact Sheila Myers at the Finger Lakes Institute for more information: smyers@hws.edu or (315) 781-4380. The conference is being co-coordinated by FLI Environmental Ambassador Stacey Rice WS '11.

High School Students Explore Seneca Lake

Juniors and seniors and their science teacher Peter Wilder, from Fabuis-Pompey High School near Syracuse, NY, recently spent a (frigid) day onboard HWS's *William Scandling* research vessel exploring and analyzing different aspects of Seneca Lake. The students are enrolled in a Global Environment class, part of a college credit course offered by SUNY College of Environmental Science and Forestry. They were at HWS to participate in the Science on Seneca program.

The students from Fabius Pompey worked alongside the Finger Lake Institute's Environmental Ambassador, Stacey Rice (WS '11) to study the chemistry of the lake, different organisms that exist in the water and the geological history of the region by analyzing

sediment retrieved from the lake's floor. "Despite the weather, all of the students seemed to really enjoy their time on the boat. It's great to see them get so excited about looking at plankton under a microscope and analyzing the sediment samples," said Rice. After studying the lake environment, the Rice provided a tour on campus.

The award-winning, Science on Seneca program hosts approximately 400 high school students on campus each year. This was just one of many tours that were given on campus this past fall to Junior and Senior science classes from all over the region. The Finger Lakes Institute is currently working with the Admissions office to integrate the Science on Seneca program with opportunities for students to learn more about the academics and lifestyle of college students here at HWS.

From Lake to Lake

Margaret Yovanoff WS '10, FLI Environmental Ambassador, has been working on an independent study project under the tutelage of Sheila Myers, Education Outreach Coordinator and Dr. Meghan Brown, HWS Biology Department. Maggie will be speaking to a number of classes about her study abroad in Lake Baikal, Siberia with Dr. Brown in the summer of 2009. Maggie spoke at an Introduction to Ecology class at the Finger Lakes Community College as well as to junior and senior high school students in AP Environmental Science at Pittsford Mendon. Her talk focuses on the unique natural and cultural history of Lake Baikal and how global warming is impacting the lake's delicate ecological balance. Maggie will be presenting at 7 pm on December 9th at the FLI Seneca Room about her work for this independent study project.

Community Outreach

An Anniversary to Remember

The Finger Lakes Institute recently celebrated its 5th Anniversary with a public reception in its green facility in Geneva.

Faculty, staff, students, and supportive members of the public gathered in the FLI's classroom as HWS President Mark Gearan, Prof. John Halfman, FLI Director Marion Balyszak, Katherine Hoering WS'10, and Joan Grela, representing Senator Michael F. Nozzolio, acknowledged the accomplishments of the FLI since its opening in 2004. Many thanks and appreciation were directed to multiple partners in research, service, and education.

It was a momentus occasion for not only reaching its 5th year but also for receiving the 2009 ENERGY STAR Small Business Award, granted to the FLI by the Environmental Protection Agency, for its commitment to energy efficiency. The Finger Lakes Institute is the only non-profit organization out of seven national small business recipients to receive the award. Certificates of recognition were presented to collaborators President Mark Gearan, Senator Michael F. Nozzolio and Former Congressman James Walsh for their support of the Finger Lakes Institute's accomplishment of energy efficiency.

As the special occasion conluded, door prizes of regional wine, books, and artwork were given away to lucky winners!

FLI's Third Spring Break Service Trip Planned

In March 2010, FLI Community Outreach Coordinator Sarah Meyer will lead another group of Hobart and William Smith Colleges students to Louisville, Kentucky to clean up the Ohio River. Just as last year, college students will spend their Spring Break (March 13-21) volunteering for Living Lands and Waters, a not-for-profit organization working to clean up America's major rivers of pollution. The 2010 Alternative Spring Break (ASB) trip will be the third service trip that the FLI has coordinated as part of the HWS Compass Service Learning and Engagement Program. HWS students must submit their trip application to the HWS CCESL Office **by December 1**. For more information, students can visit the trip blog, website, or contact Sarah Meyer at smeyer@hws.edu.

Mystery of the Green Slimy Blob

Thank you to all of our readers that submitted their expertise on identifying the 'green blob' found by Sheila Myers on the bottom of Skaneateles Lake in late August. As we polled your opinions, Sheila shared photos and the blob with a few expert scientists and lake-goers in the region.

The mystery continues!

Barb Halfman, HWS Geoscience Technician

"**Nostic**, which is another type of algea that is typically found in streams."

Bob Werner, SUNY Colleges of Environmental Science and Forestry Professor Emeritus; Author of Freshwater Fishes of New York State

"I think there may be another candidate - the ciliate, **Ophrydium**. My limited experience with Cladophora was that it was a filamentous algae, attached to the substrate with the filaments arranged more like hair than in a ball. So, when I ran across a discussion of Ophrydium in Evermann's work on Lake Maxinkuckee where he says, "Ophrydium formed large blue-green gelatinous colonies about the size of a hazelnut, or larger. They are found abundantly wherever the carpet Chara grows, and are usually attached to it or to pebbles. Colonies were found on submerged pieces of tile, Augusts and September, 1907." I thought it might be a good possibility. You can see a picture of one at: http://www.bio.umass.edu/biology/conn.river/ophrydiu.html"

Bruce Gilman, Finger Lakes Community College Professor of Environmental Conservation/Outdoor Recreation

At first thought it was **Cladophora** but then concured with Bob Werner.

Eileen O'Connor

"Is it possible it is **ophrydium versatile**? We believe this has been seen in Owasco Lake."

Rick Naro

"I would guess a **marimo**. We did notice a bright green fall algae on our dock this year but it was attached rather than free standing and lacked the round morphorology of the marimo."

Finger Lakes Research Conference This Saturday

The Finger Lakes Institute will once again hold its annual Finger Lakes Research Conference on the campus of Hobart and William Smith Colleges in an effort to encourage the dissemination of our knowledge and understanding of the Finger Lakes environment. On Saturday, December 5, the 5th Annual Finger Lakes Research Conference will present ongoing, proposed, and past research projects conducted within the Finger Lakes region of New York. This special event invites independent scientists, faculty, and students to present their scientific research to their peers and the public as an oral presentation and/or poster. Currently, there are over 80 individuals registered to attend! Participants will have the opportunity to network with their colleges, discuss findings, discover opportunities for collaboration, and enhance their awareness of the scientific happenings of the region. Each year a $100 award goes to the best student (graduate or undergraduate) student.

Check out the presentation and poster titles for 2009!

- MODELING UNDERWATER LIGHT DYNAMICS AND THEIR ECOLOGICAL RELATIONSHIPS TO DEEP CHLOROPHYLL LAYERS IN THE FINGER LAKES
- MODELING SEDIMENT LOAD IN ONEIDA CREEK USING DWSM
- GIS MODEL TO PREDICT SUBMERGED AQUATIC VEGETATION GROWTH IN ONEIDA LAKE
- WETLAND MITIGATION BANKING SUITABILITY MODEL FOR MONROE COUNTY
- ENVIRONMENTAL ASSESSMENT OF THE OWASCO INLET
- WATERSHED RESTORATION
- PHOSPHORUS AND SEDIMENT IMPACT / CAYUGA LAKE
- COMPARATIVE LIMNOLOGY OF THE EASTERN FINGER LAKES: 2005 – 2009.
- HONEOYE LAKE WATER QUALITY MONITORING FOR 2003-2009
- THE ROLE OF FISH IN SHAPING POND COMMUNITIES AT THE HENRY W. HANLEY BIOLOGICAL FIELD PRESERVE
- LONG-TERM TRENDS IN TOTAL PHOSPHORUS FOR CANANDAIGUA LAKE
- LOCATING KARST FEATURES SENSITIVE TO FERTILIZER APPLICATION IN THE ONONDAGA FORMATION
- DECREASE OF EURASIAN WATER MILFOIL AT THE NORTH END OF CAYUGA LAKE: POSSIBLE ROLES OF NATIVE PLANTS
- MACROPHYTE COMMUNITY CHANGE VIA HERBICIDES "SONAR" AND "RENOVATE" IN WANETA LAKE, NY 2003-2009
- FISHES OF HONEOYE CREEK
- ANLYSIS OF TWO MANAGEMENT TECHNIQUES FOR HYDROCHARIS MORSUS-RANAE L (EUROPEAN FROGBIT) ON ONEIDA LAKE, NEW YORK
- DIET ANALYSIS OF TRANSLOCATED RIVER OTTERS IN HONEOYE LAKE
- HISORICAL RECORD OF LIMNOLOGIC CHANGE IN SENECA LAKE, NY (1970-2008 A.D.)
- THE SENECA LAKE INSTRUMENT NETWORK
- MONITORING PLAN FOR THE SOUTHERN BASIN OF CAYUGA LAKE

- LOCAL EFFORTS TO ERADICATE WATER CHESTNUT (TRAPA NATANS).
- 'GROUNDWATER-PROPELLED' VAPOR INTRUSION: A NEW HEALTH HAZARD ?
- HABITAT PREFERENCES OF NATIVE AND NON-NATIVE TROUT SPECIES IN A RESTORED COLD-WATER STREAM
- TERTIARY TREATMENT UPGRADES BEFORE/AFTER IMPACT STUDY: EFFLUENT AND LAKE PHOSPHORUS RESULTS

FLI December Events

December 5, Hobart and William Smith Colleges Comstock Hall Dining Room and Lounge (campus map)

5th Annual Finger Lakes Research Conference

While providing an opportunity to meet others interested in environmental science and scholarship, this conference highlights Finger Lakes scientific research particularly as it pertains to issues related to the Finger Lakes of western and central New York State. Conference agenda and plans are at fli.hws.edu/conference.asp
Funding for conference is provided by NYS through the advocacy of Senator Michael F. Nozzolio. All those attending the Conference will receive FREE registration, which includes a copy of the extended abstract volume, refreshments, snacks and lunch. **Registration Required** Register Online! Parking options include Medbery, Odell's South, or the Barn Parking Lots (Campus Parking Map). Also, please pick up your free visitor parking pass at the HWS Security Office in the Medbery lot when you arrive.

December 9, 7:00 pm, Finger Lakes Institute Seneca Room

HWS Fall 2009 Student Presentations

Lake Baikal/Seneca Lake Outreach Programs, Maggie Yovanoff '10
Education Outreach Summer Programs, Christie Eldredge '10
Town of Victor Greenhouse Gas Emissions Analysis, Alex Henry '09

Each semester the Finger Lakes Institute staff have an advisory role as they host college student projects, whether it be an independent study, internship, or summer science research. In this evening program, four Hobart and William Smith College students will present an update and overview of their Summer/Fall semester work. This semester the FLI staff worked with Christie Eldredge '10, Alex Henry'09, and Maggie Yovanoff '10 to complete projects focusing on environmental education and greenhouse gas emission inventory. Learn more about what research projects the FLI is supporting and what students are currently studying to learn and teach about the Finger Lakes. This program is free and open to the public.

December 10, 7:00 pm, Finger Lakes Institute Classroom

Tornado Chasing from a Scientific (and a not-so-scientific) Perspective

Jeffrey Frame, Visiting Assistant Professor of Geoscience Hobart and William Smith Colleges Article

Tornado chasing in the name of science has received much publicity recently, including Hollywood movies, cable television shows, and even news reports focusing on the recent Verification of the Origins of Rotations in Tornadoes Experiment-2 (VORTEX2), the first phase of which occurred during May and June of 2009. These media reports often describe tornado chasing as nonstop tornadoes, with scientists traveling from one tornado to another, while capturing thrilling images and video. In fact, scientific tornado chasing has adrenaline moments like this while one is collecting great scientific data set. What the media does not show is what tornado chasing is like away from tornadoes, including the 10,000-plus miles driven in a single season, that allows one to experience roadside America at its best - and worst. Professor Jeff Frame has spent four tornado seasons in tornado alley and will share some of his pictures and stories of storm chases - and the time in between storms. The talk will also explain why scientists intercept tornadoes (it is not for the pictures and video), and how they hope to use the data they collect to further the understanding of these dangerous storms, and hopefully to improve warnings and save lives. This program is free and open to the public.

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HOBART AND WILLIAM SMITH COLLEGES

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