



Great Lakes - Northern Forest Cooperative Ecosystem Studies Unit

Network Connections

An update of activities from the Great Lakes – Northern Forest CESU

Fall 2006

For more information about the renewal process please visit:

www.cesu.org



Great Lakes-Northern Forest CESU Renewal

Renewal? Yes, that's right; it is already time to start thinking about renewing the cooperative agreement. The Great Lakes-Northern Forest CESU's Cooperative Agreement will expire in August 2007. To stay on top of the process and to ensure involvement from all of our partners, we have already started collecting data and asking partners about their intent to continue participating in the GLNF CESU.

For the process to run smoothly and efficiently we need everyone to respond to emails and phone calls in a timely manner. Feel free to ask any questions about the renewal process at any time. You may also visit the National CESU network website for more information about CESU renewal and what is required www.cesu.org.



**US Army Corps
of Engineers®**

Welcome U.S. Army Corps of Engineers to the GLNF-CESU

The U.S. Army Corps of Engineers is now a member of the Great Lakes-Northern Forest CESU! The amendment became official on September 5, 2006. All partners will receive a copy of the amendment as soon as it becomes available.

Please contact our office with any questions regarding the USACE or the induction process. www.cnr.umn.edu/cesu 612-624-0734 or raelynn@umn.edu

Project Spotlights

Each newsletter features projects throughout the GLNF-CESU. This quarter we are featuring projects from Northern Michigan University, and the University of Minnesota and Michigan Technological University. Contact the investigators for more information about their project and our office if you would like to see your project featured in an upcoming newsletter.

Develop Geoarcheological Inventory of Specific Lakeshore Landforms

John Anderton, Ph.D.
Northern Michigan University

Pictured Rocks National Lakeshore has formally identified 35 archeological sites within its boundaries, but suspects there may be many more. Most of these sites are from the late 19th and 20th century reflecting the areas' logging industry and other historic uses. Not much is known about the prehistoric Native American use of the park. However, based on previous research in the region, many prehistoric archaeological sites are often found associated with ancient shorelines landforms that were formed during higher lake levels than currently exists. The team at Northern Michigan University are currently identifying, mapping and when possible, dating these paleo-landforms in the park. They are also mapping and inventorying any newly discovered archeological sites. Four major paleo-embayments have been identified and traced that date to the Nipissing Phase, a period of high lake levels in the Upper Great Lakes region that reached its maximum peak roughly 5000 years ago. Several unique, previously undocumented, wave-cut features, including caves, stacks, and notches have been found inland along the Nipissing shoreline (see photo below). While no new archaeological sites have been found as of yet, several previously discovered sites were relocated and examined. Woodland age ceramics, dating between 1000 and 400 years in age), were found associated with a site in the Chapel area that had previously been undated.



NMU students examining Nipissing-Age Wave-Cut Notch, West Side of Chapel Area, Pictured Rocks National Lakeshore, NPS

In 2007, Northern Michigan University will produce a professional technical synthesis of the results of the project, including baseline maps of the natural landforms and any discovered archeological sites. This information will allow future archeological research to concentrate on areas that have better potential to contain prehistoric data. The information will also help park staff make more informed decisions regarding visitor use, prescribed burns, road improvements, etc. The findings will be presented to the public at a campfire talk in Pictured Rocks.

For further information, contact John Anderton, Northern Michigan University, Associate Professor of Geography, 3319 New Science Facility, Marquette, MI 49855 906-227-1140; janderto@nmu.edu

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raelynn@umn.edu

Community-Agency Trust Relationships: Voyageurs National Park

Dorothy H. Anderson, Ph.D., Jerrilyn L. Thompson, and Joseph M. Schertz
University of Minnesota

In 2005 University of Minnesota researchers worked with the City of International Falls, St. Louis and Koochiching County Commissioners, Friends of Voyageurs National Park, Voyageurs National Park Association and Voyageurs National Park (VNP), to develop and administer a survey to help VNP better understand and work with nearby communities. Surveys were sent to 1,000 people randomly selected from the population of community residents living in communities adjacent or in close proximity to VNP. University of Minnesota researchers conducted public workshops during summer 2006 to disseminate findings and assist the communities and VNP to use results to begin mutual dialogue in planning their futures. Results include:



Do you have a project you would like featured in the next newsletter?

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Participants see VNP as a place that:

- Means a lot to them and is special to them and their families,
- Protects the natural environment, water quality, and wildlife in the area,
- Should balance environmental and economic concerns, but could provide better economic benefits,
- That is one of the best places to engage in recreational activities that result in benefits related to being with family and enjoying the natural environment, and
- That adds to community character and adds economic benefits to communities.

Participants generally:

- Believe VNP staff is technically competent, honest, and give prompt responses,
- Are satisfied with and trust VNP management of recreational resources and uses,
- Are split on whether VNP staff care about them or are sensitive to economic impacts related to recreation and tourism that affect them,
- Do not believe VNP staff share their values, think like them or that the decision making processes the park uses are fair, and
- Are not likely to be involved in active civic engagement actions related to the park.

Most study participants would become more involved with VNP if:

- Local involvement mattered and park staff listened to their concerns,
- Communications (i.e., written) with the park improved,
- VNP was involved in an issue or concern of great importance to them,
- Management and management tactics on park decision-making changed, and
- Community politics toward the park changed.

The Voyageurs National Park Communities Partnership is continuing this dialogue to stimulate open communication and collectively work on a vision for the region. The partners see an ongoing collaboration that builds on success and works towards a prosperous and sustainable regional economy based on the assets of its people and places.

Determination of Genetic Diversity and Restoration Potential of the Pitcher Plant (*Sarracenia purpurea*) in the Lake Superior Watershed

Jennifer Karberg
Michigan Technological University

Sarracenia purpurea (Northern picture plant) is a prominent component of peatlands in the Great Lakes Region, a habitat type that is becoming increasingly scarce with development. Researchers at Michigan Technological University and the National Park Service are characterizing genetic diversity, and potential restoration of *Sarracenia purpurea* in wetlands, particularly in the Great Lakes Region.



Pitcher Plant Collection

One issue being examined is the pattern of gene flow that exists between established populations around the Great Lakes. Some of these populations are found on potential isolated island systems such as Isle Royale National Park and the Apostle Islands National Lakeshore. PhD student Jennifer Karberg is attempting to examine if these island populations are genetically different from mainland populations on the Keweenaw Peninsula, Apostle Islands National Lakeshore, and Pictured Rocks National Lakeshore. This information will give an idea of dispersal distances of the plant, gene flow across long distances and possible plant adaptation to individual microhabitats. Karberg is also examining the range of genetic diversity in this plant to aid restoration planning. This information would help locate viable seed sources for restoration if (a) the plant has not local adaptation or (b) seed sources must be selected locally for successful restoration. Results from this project will assist in the restoration of *Sarracenia purpurea* in Cowles Bog at Indiana Dunes National Lakeshore.

To date they have discovered moderate to low genetic diversity in *Sarracenia purpurea* populations on the Keweenaw Peninsula and Isle Royale National Park. Because of the low overall genetic diversity gene flow was unable to be determined, potentially because this species tends to reproduce clonally, conserving genetic diversity. The Great Lakes Region populations probably all colonized the area at a similar time following the retreat of the last glacier and hence they are closely related genetically. These results may allow reintroduction of northern pitcher plants from seeds and plants originating from any number of locations, while still preserving local genetic diversity. This allows cheaper, less time consuming and more successful restoration of these peatlands. Overall, this study will provide valuable information related to the restoration and conservation of peat wetlands in the northern United States. This information has been presented at several locations, including the 2005 Wetlands in Parks workshop sponsored by the Great Lakes Research and Education Center at Indiana Dunes National Lakeshore.



Participant in Wetlands in Parks Workshop learns genetic fingerprinting techniques.

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Planning Ahead: The National Park Service Project Funding Cycle

The "Service wide Comprehensive Call" (SCC) is the formal beginning of a new round of budget planning that begins each October (the start of the federal fiscal year) in the National Park Service. Budget formulation starts in the parks and moves through several levels of review and approval by the NPS, Department of Interior, Office of Management and Budget and Congress before finally being passed into law. Because the process can take up to 21 months to complete, at any given time the NPS is working on three separate budgets: the execution for the current year; the congressional review process for next year; and the budget formulation for the year after next! Because Congress, OMB and DOI have required the NPS to develop 5-year project plans, this fall (fiscal year 2007) parks begin identifying projects they hope to fund for the five year plan beginning in 2009. The SCC asks parks and NPS program offices to identify unfunded needs for base funding and for one-time project funding in the NPS "Project Management Information System" (PMIS). The PMIS supports the SCC by enabling the identification, justification, approval and prioritization of all unfunded park project needs.

It is important for parks to submit strong project statements because many of the fund sources are competed for nationally within the NPS. Projects are selected based on need and strength of the project statement, including the significance of the issue to the park, the severity and strength of threat if action is not taken, how well the problem is defined, the technical soundness of the proposed action, the ability of the actions to resolve a problem, the transferability of the results, cost effectiveness, and project support.

We strongly encourage partners to begin this process with parks early in the cycle. CESU partners are invited into the process NOW to help parks prepare PMIS project statements! The timing of getting projects into PMIS and getting them park prioritized and reviewed varies by park, but now is the time to talk to park staff and get projects into the system for funding consideration.

For a list of Midwest Region national park natural resource contacts, needs, and funding sources, visit the website: <http://www.cesu.umn.edu/projects>. To read more about the NPS budget process, please visit the website: <http://home.nps.gov/applications/budget2>.

Changes in UMN College Structure

The University of Minnesota is currently undergoing a strategic repositioning process to become one of the top three research universities in the world. This visioning process has led to several realignments of colleges and departments University wide. The host for the GLNF-CESU was part of that process. The College of Natural Resources and College of Agriculture, Food and Environmental Sciences have merged to become the new College of Food, Agriculture and Natural Resource Sciences (CFANS). This will not affect how the CESU is run or managed, but it will allow for better collaboration among researchers and administration.

If you have a question about PMIS or the NPS budget process, contact Jerrilyn Thompson: thompson@umn.edu

For more information about the UMN Strategic Planning Process please visit www.umn.edu



Upcoming Conferences and Events

- **The North American Association for Environmental Education Annual Conference** will be held October 9 - 14, 2006 in St. Paul, MN. This largest regular gathering of environmental educators in North America - approximately 1,000 people are expected - includes these main themes: (1) Joining Forces: Environmental Justice, Health and Education (2) Sustainability (3) Conservation and Community Education (4) EE Leadership Skills (5) Schools, Education, Achievement and Literacy. <http://www.naaee.org/conference>
- **Heritage Canada Annual Conference**; Heritage Headlines and Hotlinks: Historic Places in an Electronic Age; Ottawa; October 12-14. <http://www.heritagecanada.org/eng/conference.html>
- **2006 St. Croix River Research Rendezvous**, October 17, 2006 at the Lee and Rose Warner Nature Center in Marine on St. Croix, MN. This forum brings together scientists, resource managers, agency staff and the interested public to hear presentations about research plans, projects and findings in the St. Croix watershed. www.smm.org/scwrs/rendezvous.php
- **Preserve America Summit** to mark the 40th anniversary of the passage of the National Historic Preservation Act; Advisory Council on Historic Preservation and Mrs. Laura Bush; New Orleans, Louisiana; October 19-20, 2006. <http://www.preserveamerica.gov/06PAsummit.html>
- **NADP 2006: Effects of Deposition in Coastal and Urban Environments**; National Atmospheric Deposition Program 29th Annual Technical Meeting, October 24-26, 2006 Norfolk, VA. The meeting is intended for scientists, land managers, policy-makers and students interested in air quality, atmospheric deposition, the effects of airborne constituents on natural and cultural resources, and the protection of these resources. <http://nadp.sws.uiuc.edu/announce/norfolk/>
- **State of the Lakes Ecosystem Conference**, Milwaukee, WI, November 1-3, 2006. The major regional forum for developing and reporting on indicators for the Great Lakes ecosystem, this year's event will focus on Chemical Integrity. http://www.epa.gov/glnpo/solec/solec_2006/
- **Global Environment and Sustainability: Sound Science in a World of Diversity**. The Society of Environmental Toxicology and Chemistry (SETAC) invites you to join us at the SETAC North America 27th Annual Meeting to be held 5-9 November 2006 at the Palais de Congrès in Montréal, Québec, Canada. <http://montreal.setac.org/home.asp>

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Upcoming Conferences and Events Continued

- **8th Cultural & Heritage Tourism Alliance Conference; *Culture is the Spark***, Atlanta, Georgia; November 8-11. Three days of innovative speakers addressing the current trends in cultural & heritage tourism.
<http://www.chtalliance.com>
- **67th Midwest Fish and Wildlife Conference; *The Economic and Social Values of our Natural Resources***, December 3-6, 2006 Omaha, Nebraska. Two centuries ago Lewis & Clark had just returned from their "Voyage of Discovery" and were embarking on their new task of sharing the experiences and knowledge gathered along this historic journey. Join us in Omaha on December 3-6th, 2006 to explore "The Economic and Social Values of our Natural Resources" and share with the nations leading natural resource professionals your experiences, while gathering invaluable insight from others in the field. www.midwest2006.org
- **Science + Society**, January 19-21, 2006, Westin Copley Palace Hotel, Boston, MA. We live in a time of hard choices and extraordinary opportunity. Science and technology play a role in every aspect of our lives, from politics and world affairs to business, fashion, and sports. The conference's three days of speakers and sessions are designed to stimulate dialogue and action, as participants explore practical, real-world strategies for effectively engaging the public.
<http://www.scienceandsocietyconference.com/>
- ***Riverine Wetlands: Connections, Corridors and Catchments***, 12th Annual Wetland Science Forum, February 1-2, 2007, La Crosse, WI. Wisconsin's water-rich landscapes are drained by more than 32,000 miles of perennial streams and rivers. Hundreds of thousands of acres of diverse wetland habitats are associated with these treasured waterways, which range from tiny headwaters to large rivers like the wonderful Wisconsin and mighty Mississippi. Protection of the many connections and interactions between rivers and their wetlands is vital to watershed health and will require collaboration among researchers, agency staff, private professionals and conservationists.

Wisconsin Wetlands Association invites you to submit an abstract for presentation at our [12th Annual Wetland Science Forum](http://www.wiscwetlands.org/2007forum.htm). We seek presentations on riverine wetlands research, restoration and management projects see a list of riverine wetlands sub-topics below that we are particularly interested in including in the conference program. The conference program will begin with an overview of riverine wetland ecology followed by a keynote address, several topical oral sessions, a poster session, working groups and field trips, all related to the conference theme. **Abstract Deadline: Wednesday, November 1, 2006** www.wiscwetlands.org/2007forum.htm

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raelynn@umn.edu



Federal Partner Contacts:

Bureau of Land Management

Geoffrey Walsh
 Eastern States Office
 7450 Boston Boulevard
 Springfield, VA 22153
 Phone: (703) 440-1668
 Fax: (703) 440-1551
Geoffrey_Walsh@es.blm.gov

National Aeronautics and Space Administration

Daniel D. White
 Glenn Research Center
 MS 6-4
 21000 Brookpark Road
 Cleveland, OH 44135
 Phone: (216) 433-3103
Daniel.D.White@nasa.gov

National Park Service

Jerrilyn L Thompson
 Research Coordinator
 National Park Service
 Great Lakes-Northern Forest CESU
 University of Minnesota, College of
 Natural Resources
 115 Green Hall,
 1530 Cleveland Ave N
 St. Paul, MN 55108
 612-624-3699
 fax: 612-625-5212
Jerrilyn_Thompson@nps.gov
thompson@umn.edu

National Resources Conservation Service

Sheryl H. Kunickis, Ph.D.
 National Agricultural Research Coordinator
 NRCS Room 4-2274
 5601 Sunnyside Avenue
 Beltsville, MD 20705-5140
 Phone: (301) 504-4787
 Fax: (301) 504-6231
Sheryl.Kunickis@wdc.usda.gov

U.S. Army Corps of Engineers

Alfred F. Cofrancesco
 Technical Director, Civil Works
 Environmental Engineering & Science
 Waterways Experiment Station
 3909 Halls Ferry Road
 Vicksburg MS 39180-6199
Al.F.Cofrancesco@erdc.usace.army.mil

USDA Forest Service North Central Research Station

Tom Schmidt
 Station Assistant Director
 North Central Research Station
 USDA Forest Service
 1992 Folwell Avenue
 St. Paul, MN 55108
 Phone: (651) 649-5295
 Fax: (651) 649-5256
tschmidt@fs.fed.us

U.S. Geological Survey

Kirk Lohman, Ph.D.
 Supervisory Research Biologist
 USGS - Upper Midwest Environmental
 Science Center
 2630 Fanta Reed Road
 LaCrosse, WI 54603
 Phone: (608) 781-6341
 Fax: (608) 783-8058
klohman@usgs.gov

For more information about our federal partners please visit our website at:
www.cnr.umn.edu/partners