



Great Lakes - Northern Forest Cooperative Ecosystem Studies Unit

Network Connections

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

Fall 2005

Welcome to our new partners



The Great Lakes-Northern Forest CESU would like to welcome our three new University partners: Northern Michigan University, Stephen F. Austin University, and University of Wisconsin LaCrosse. They were inducted on September 30, 2005.

Project Spotlights

Each newsletter will feature projects from throughout the GLNF-CESU. This quarter we are featuring projects from the State University of New York, West Virginia University Michigan State University, and the University of Toledo. Contact the investigators for more information about their project and our office if you would like your project featured in an upcoming newsletter.

Developing Indicators of Ecological Integrity: A Monitoring Plan for the National Park Service NE Temperate Network

James Gibbs
State University of New York, College of Environmental Science and Forestry,
Department of Environmental and Forest Biology
Greg Shriver
National Park Service, Northeast Temperate Inventory & Monitoring Network

The National Park Service (NPS) initiated a new "Vital Signs" program in 1998 to develop comprehensive, long-term monitoring of ecological resources within U.S. national parks. Vital signs are indicators, and are defined as are a subset of physical, chemical, and biological elements and processes of park ecosystems that are selected to represent the overall health or condition of park resources, known or hypothesized effects of stressors, or elements that have important human values.

The State University of New York's College of Environmental Science and Forestry (SUNY-ESF) is assisting the NPS in developing the Northeastern Temperate Network (NETN). In Phase 1, baseline inventories and analysis of threats provided information to

For more information on our new partners, please visit the website at:

www.cnr.umn.edu/cesu/partners

For questions regarding the induction process please contact RaeLynn Jones Loss at:

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build conceptual ecological models for four ecosystem groups – terrestrial, wetland, aquatic, and intertidal systems.

In Phase 2, the core science team developed a list of more than 100 potential vital signs. This preliminary list was peer-reviewed to develop a final list of 23 high priority vital signs, with 104 associated potential measures. In Phase 3 (currently underway), protocols are being developed for groups of vital signs. Once the three project phases are complete, NPS will be in a position to fully implement NETN.

Development and Implementation of an American Woodcock Habitat Management Plan for Fort Necessity National Battlefield

James T. Anderson, Jennifer A. Edalgo, and Jason P. Love
West Virginia University, Division of Forestry
Connie Ranson
National Park Service, Fort Necessity National Battlefield

WVU is developing a plan to remove invasive Morrow's honeysuckle (*Lonicera morrowii*) from Fort Necessity National Battlefield, restore the native and historic vegetation, and at the same time maintain the woodcock and other wildlife species that occur on site. As part of this effort investigators are gathering baseline information on wildlife and plant species that occur on site, and they are evaluating control methods for Morrow's honeysuckle.

Researchers have identified and quantified 32 bird species, 10 small mammal species, 173 plant species, 4 exotic earthworm species, 4 amphibian species, and 2 reptile species. They mechanically removed honeysuckle in five 5 x 5 m plots, applied a foliar application of 2% glyphosate (Roundup Pro) to 5 plots, cut shrubs with a chainsaw in 5 plots, cut and applied 20% glyphosate to stumps in 5 plots, and left 5 plots as controls during May 2004. The same treatments were repeated on a different set of plots in September 2004. Investigators monitored these sites in 2005 to determine the effectiveness of the treatments. Surveys, development of the management plan and evaluating control techniques for honeysuckle continued throughout 2005 and will be completed in 2006.



This 5 x 5 m plot was cleared of Morrow's honeysuckle by use of a chainsaw. Note the density of the remaining honeysuckle around the plot.

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

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Developing an Information Infrastructure for North American Fisheries

Andrew Loftus and William Taylor
 Michigan State University, Department of Fisheries and Wildlife
 T. Douglas Beard, Jr.,
 USGS, National Biological Information Infrastructure National Program Office

In 2004, the Michigan State University Department of Fisheries and Wildlife began working with the U.S. Geological Survey's National Biological Information Infrastructure (NBII) to develop an information framework for North American fisheries and aquatic resources. This project will lead to an infrastructure for integrating information systems. Such an infrastructure can be used as a tool to aid in managing inland aquatic resources.

The project will use North American sturgeon populations as a case study to design a system that is adaptable enough to incorporate data from multiple existing data management programs as well as be able to incorporate new data as it develops. The result will be a dynamic system, not an entirely new database that would be rigid in structure and limited in capability.

Initial tasks include identifying the information currently available and developing the standards necessary to incorporate each system into a shared structure. In the final year of the project, an assessment will be conducted to determine the utility of using the information framework to overlay fisheries information with watershed databases. This will aid managers and researchers in assessing landscape effects on aquatic populations. Work has just begun on the formation of an expert advisory team to help guide this project. For more information, contact project leader Andrew Loftus (Aloftus501@aol.com) or principal investigator Professor William Taylor (taylorw@msu.edu).

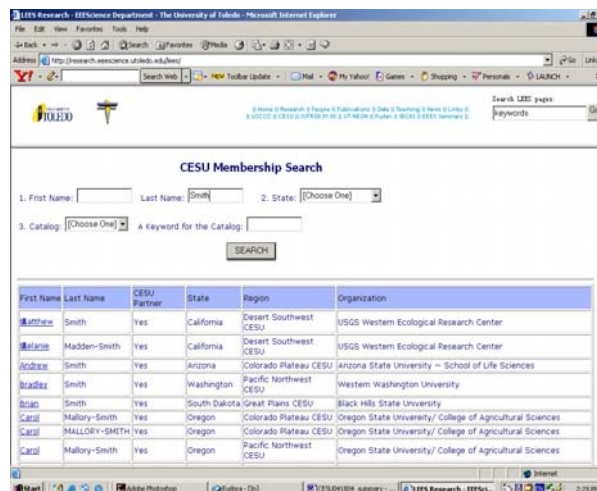
For more information on projects in the GLNF CESU visit our website at:

www.cnr.umn.edu/projects

CESU Catalog

Jiquan Chen, Mary Bresee, and Rui Zhou
 University of Toledo, Department of Earth, Ecological and Environmental Sciences
 Loyal Mehrhoff,
 National Park Service, Biological Resources Management Division

This study is designed to produce a catalog of biological programs of the institutions participating in the CESU network for the national park system and other CESU partners to identify potential collaborators for biological projects. We have created a multi-faceted approach combining the development of Internet website, a basic Excel database, hardcopy, and CDs for



The CESU Catalog is powered by a search engine of name, state, CESU region, and keywords. The above figure shows 48 entries founded by searching "Smith" as "Last Name". About 12000 entries are in the database by the end of 2004.

public distribution. We believe it is necessary to create a user friendly, readily accessible, and dynamic catalog to ensure the most update information and rapid technology transfer. All collected information will be placed in an Excel spreadsheet and transferred to a Microsoft Access database to create an interactive interface with pull down menus based on key words: location, institution name, department name, program name, and research key words. The Access interface is being hosted on the Landscape Ecology and Ecosystem Science (LEES) server

(<http://research.eeescience.utoledo.edu/lees/cesu/>) on Internet II connection for convenient and speedy access by any interested party. The Excel and Access databases are easy to update so if future changes or additions are needed the program can accommodate any alterations quickly. In addition to Internet access and Excel spreadsheets, we will generate CDs and/or bounded books, which will be ready for distribution when requested via email. Requests for both books and CDs will be handled through the Internet website. Acquiring information and creating the Excel database will be handled by a LEES Lab researcher (Mary Bresee), while development of the Access database and website creation will be performed by a LEES researcher and computer programmer (Rui Zhou). Dr. Jiquan Chen is overseeing the project, including product delivery. The database and internet website will be completed before the end of 2005. Books and CDs will also be ready for distribution at this time.



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<http://www.usace.army.mil/>

The U.S. Army Corps of Engineers (USACE) is very interested in joining the Great Lakes-Northern Forest CESU. We are in the middle of the induction process now. Their official request for induction will be sent out shortly. Once the request is sent out, members have 30 days to comment.

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



Upcoming Conferences and Events

- **2005 Midwest Fish and Wildlife Conference December 11-14, 2005.** Linking multiple perspectives: Bridges to Understanding, will be held in Grand Rapids, MI; <http://www.midwestfishandwildlife.com/index2.asp>. The 9th National Wild Turkey Symposium will be held in conjunction with the Midwest Conference. Please visit their website for more information: <http://www.michigandnr.com/wildturkey-symposium/>
- **Wisconsin's Wetlands: Biodiversity & Threats** conference. Wisconsin Wetlands Associations 11th Annual Wetland Science Forum: February 2-3, 2006, Monona Terrace Convention Center, Madison, WI. This two-day conference will convene members of the wetland community in Wisconsin and the Great Lakes region to discuss a variety of issues related to wetland biodiversity and threats. Following the Wetland Science Forum tradition, we anticipate that this conference will contribute to a growing collaboration for protecting and conserving our states wetland heritage. Please visit their website for more information: www.wiscwetlands.org/2006forum.htm
- The **5th Annual Western Great Lakes Research Conference** will be held March 22-23, 2005 in Ashland, WI. The Western Great Lakes Research Conference provides a forum for information and idea sharing between researchers and managers of national parks and other public lands throughout the Western Great Lakes area. This conference provides an opportunity for participants to share current research, monitoring, and management issues affecting parks and protected areas.

Abstracts are currently being accepted, please see the website for more information. <http://www.cnr.umn.edu/cesu/conferences/wglc/>
- The International Association for Great Lakes Research is pleased to announce its **49th Annual Conference on Great Lakes Research**, to be held May 22-26, 2006, at the University of Windsor in Windsor, Ontario. The conference theme is "Great Lakes in a Changing Environment." The general Call for Papers will be issued in October 2005. Please visit their website for more information: www.iaglr.org/conference/2006/

If you have an idea for upcoming newsletters, please email us at:

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