RESTORATION NEWS MIDWEST

Newsletter of the Midwest-Great Lakes Chapter of the Society for Ecological Restoration – December 2011, Volume 4, Issue 2

RECENT BOARD OF DIRECTOR ACTIVITIES AND 2012 ANNUAL MEETING UPDATE

In September the Chapter Board of Directors voted to appoint Troy Anderson to an eight month term as the new Chapter Secretary. Troy is a Construction Manager/Restoration Ecologist with Applied Ecological Services in Brodhead, Wisconsin. He has over 15 years of experience in the ecological restoration field. Troy has provided on-site management for a multitude of large-scale projects across the United States – overseeing restoration projects for private landowners, county forest preserve districts, park districts as well as federal and municipal government agencies.

Our parent society (SER) has been working on developing an ecological restoration certification program. The Chapter Board of Directors has provided SER with our suggestions related to the development of an ecological restoration certification program. This was an opportunity to share with SER the feedback that we received from you on this issue in our 2010 membership survey. Our recommendations centered mostly on long term considerations for SER to consider that would enable the development of a unique and robust certification program that would encompass certification of individuals (both practitioners and researchers), certification of projects, and accreditation of educational institutions. Some of our recommendations are ambitious, but our goal was to provide SER with ideas that they may not have considered previously. Our suggestions were provided to SER via a formal letter. This letter has also been posted on the our website (*http://www.ser.org/mwgl/events.asp*).

Recent communications from our parent society SER indicate that changes to its membership structure may be coming in the future. At this time we are not exactly sure of the details, but it is possible these changes may require us to change our Chapter membership rates. The Chapter Board of Directors discussed this issue in our December conference call. The Board does not want to raise chapter membership rates unless it is absolutely necessary. However, if necessary the Board has indicated that it would consider slight increases in membership rates for regular Chapter members, but not for student Chapter members. I want to emphasize the Chapter Board of Directors has not made any decisions regarding this issue. No decisions will be made until we learn exactly how SER modifies its membership structure. However, this issue is important enough that we wanted to share it with you in advance.

The Annual Meeting Committee has been busy preparing for this year's Chapter meeting that will be held in Ann Arbor, Michigan on May 4 to May 6, 2012. The theme of the chapter meeting is "*Connecting People with Ecosystems with Restoration*". Discussions are still ongoing, but it is likely that we will have a plenary session that focuses on restoration in urban and suburban areas. The Annual Meeting Committee is soliciting proposals for workshops at the meeting. So if you are interested in organizing a workshop please contact Young Choi (Ydchoi@purduecal.edu) for details on submitting a workshop proposal. The call for abstracts for contributed oral and poster presentations will be released in January 2012. So we encourage everyone to start thinking about what you want to present at the meeting.

Rocky Smiley, President

SER 2011: A MIDWESTERN U.S. STUDENT'S PERSPECTIVE

** Editor's note: Ms. Hannah Kalk was a student at Southern Illinois University Carbondale who attended SER 2011 in Merida, Yucatan, Mexico. The Midwest-Great Lakes SER Chapter donated $200 to SER's Travel Grant Program to support Ms. Kalk's participation in SER 2011.*

As a student living and pursuing graduate studies in the Midwestern United States and conducting research in the Northern Gulf of Mexico, the opportunity to attend the SER 2011 in Merida, Mexico was more than just an academic excursion. My graduate research focused on the conservation and restoration of coastal ecosystems that have begun to experience the effects of climate change. The opportunity to visit the other side of the Gulf of Mexico and to interact with restoration professionals facing similar challenges globally has reinforced my understanding of and respect for the resilience of life.

The research that I presented at SER 2011 focused on a novel tool, community translocation, for instilling ecological resilience and assessing appropriate restoration targets for ecosystems that may no longer support historic communities. Accelerated sea-level rise and increased intensity of tropical storm events have challenged the conventional approaches to the conservation and restoration of coastal ecosystems in the Northern Gulf of Mexico. Intense storm surge events have resulted in the federal buyout of hundreds of coastal properties for which appropriate restoration targets are unclear. My research evaluated the response of the emerging vegetation at five of these degraded properties following the application of donor propagule sods removed from five community types (i.e., salt marsh, brackish marsh, freshwater marsh, maritime pine island and wet pine flatwood) present in coastal areas in Mississippi. Propagule sods contained seeds and vegetative propagules from communities spanning the salinity and inundation gradient present across coastal habitat in Mississippi. Propagule sods were used with the hope that the species and communities which responded would indicate to us how much the sites have changed from their historic conditions and what types of communities the site would support now and into the future.

The recipient sites required intense site preparation to remove above-ground and much of the below-ground vegetation. A 9 m x 13 m plot was constructed on each site to house the 24 propagule sods. My experiment contained four control replicates and five replicates of each propagule sod treatment. Twenty 0.50 m x 0.25 m sods were removed from each vegetation zone to a depth of 5 cm and then applied by hand to the designated subplots. The resulting communities were surveyed at each subplot three times during the following growing season, as well as in areas adjacent to each site to indicate what the communities would look like following the application of each treatment or without any site preparation and propagule sod application.

The results from this study suggest that community translocation may be an excellent tool for assessing restoration targets in sites that are substantially changed from their historic condition. Many of the propagule sods communities were consistent sources of target species, including many species which reproduce only vegetatively and are not commercially propagated. Species diversity and richness increased, and noxious species were greatly reduced on all restoration plots relative to untreated areas. The response of vegetation following application of freshwater marsh and maritime pine island sods indicated that they were probably the community best suited to the degraded environments. Propagule sods of wet pine flatwoods, which are of

particular conservation concern, also responded favorably on the restoration sites.

This study was the first step in assessing the potential for building ecological resilience into vulnerable coastal ecosystems. The growing number of abandoned coastal properties presents ecologists with an excellent opportunity to test hypotheses about the development and survival of novel ecosystems. Assisted migration may be a successful approach for accommodating the likely trajectories plant communities may follow as the environmental platform changes under them. This study indicated that community translocations may promote ecological resilience and may assist with the transition of these sites to futuristic communities that will be more adapted to future climatic conditions.

Study site in coastal Mississippi

Imagine my delight when I arrived at my first of several special sessions with dozens of speakers from numerous continents all remarking on the practice of futuristic restoration. I was as impressed by the diversity and depth of the topics covered in the conference as I was by the exceptionally comfortable and familial atmosphere. The lack of cultural barriers gave people the freedom to start conversations with ease and to ask many questions. The special sessions were so casual and open that people freely made comments, laughed, and interpreted out loud. Nothing about this conference felt like work. For the first time in my academic life I felt truly comfortable introducing myself to others and sharing my perspectives.

The most meaningful series of talks that I attended was a symposium and discussion focused on bridging the knowledge gap between restoration ecologists and practitioners. Robert Cabin, an associate professor of ecology at Brevard College, opened the session with the results of a survey performed at the previous conference in Perth aimed at assessing the perceived reasons for the disconnect between restoration science and practice. Interestingly, many academic researchers blamed themselves for the lapse. The speakers went on to discuss the creation of "knowledge brokers," who would act as mediators for disseminating pertinent research to resource-strapped practitioners and, in turn, assist in the creation of academic incentives for researchers to work on local issues. This is an issue of particular interest to me, as I have completed my graduate work and have been working extensively with dedicated land stewards in Southwestern Illinois who are desperate for researchers to take interest in the local challenges they are facing in restoring hill prairie and glade communities.

I was also able to visit several sites of interest throughout the Yucatan during my visit. I was stunned by the Mayan city of Chichén Itzá, the spectacular Karst features, and the extensive mangrove forests throughout the region.

After my visits to these different areas it was easy to understand why Merida was chosen to host the SER conference. The significance of the theme of this conference, *Re-establishing the link between Nature and Culture*, was constantly reinforced in the biosphere reserves, fishing villages, agave plantations and crumbling agricultural centers. This experience has instilled in me belief in the potential for ecological restoration to transform our societies. The social and economical implications of ecological restoration have never been so strikingly important and I am very grateful to have been a part of SER 2011.

Hannah Kalk,
Southern Illinois University Carbondale

RESEARCH AND EDUCATION INVOLVING ECOLOGICAL RESTORATION AND MANAGEMENT WITHIN AGRICULTURAL WATERSHEDS

The University of Minnesota's Department of Biosystems and Bioproducts Engineering (BBE) (http://www.bbe.umn.edu/) has over a century of experience working in agricultural watersheds on agricultural production, assessment and design of agricultural practices, and related drainage and irrigation systems. In the past decade the BBE Department has increasingly addressed environmental issues of evolving importance associated with hydrology, water quality, and erosion within agricultural watersheds. BBE's *Environment and Ecology* group consists of 10 faculty members who are devoted to research, teaching, and outreach related to the restoration of agricultural watersheds. The BBE Department also offers several restoration-related courses and a minor in Environmental and Ecological Engineering that focuses on watershed restoration and management and related agricultural sustainability issues.

The BBE Environment and Ecology group's ecological restoration work is geared towards maximizing ecological services and functions rather than the traditional focus on restoring native plant communities. Current areas of research include:

- Watershed hydrology, water quality, and Total Maximum Daily Load (TMDL) studies.
- Drainage design to reduce environmental impact, including conservation drainage, two-stage ditches, and controlled subsurface drainage outlets.
- Prioritization, assessment, and implementation of stream and wetland restoration for sediment and nutrient reductions.
- Development of sustainable biofuel systems, such as perennial native mixtures, algae, and wood products from agroforestry

University of Minnesota graduate students installing willow plantings as part of a stream restoration project in Elm Creek. Minnesota.

Much of the BBE Environment and Ecology group's research is conducted within watersheds located throughout Minnesota with some work in neighboring states. John Nieber is currently leading an assessment of the impacts of removing the historic logging dams on the Cross River, which is a a Lake Superior

Tributary located in the Superior National Forest. Joe Magner has led the design and implementation of several reach-scale projects focusing on restoring stream geomorphology. Additionally, numerous BBE staff members have worked on a variety of TMDL assessment and implementation projects within Minnesota streams.

Two stream restoration prioritization studies led by Chris Lenhart are intended to develop approaches for prioritizing stream restoration and actions to reduce near-channel sediment sources for TMDLs and other water quality goals. One project funded by the Minnesota Department of Agriculture is focused on developing tools for identifying sediment reduction hotspots and the hydrologic drivers behind the increased erosion rates at these hotspots. In related work funded by the McKnight Foundation, restoration strategies involving watershed and instream restoration practices are being developed for the 44,030 km^2 Minnesota River basin to reduce channel-derived sediment loading.

The BBE Department is researching different riparian management practices that address geomorphic and water quality issues and landowner economic concerns.

The BBE Department is very active in the development of more ecologically beneficial drainage practices to reduce nutrient loading and to improve instream habitat. Bruce Wilson and Joe Magner are conducting a study in southern Minnesota to evaluate the sediment and nitrogen removal effectiveness of the two-stage ditch design, which is an alternative design for agricultural drainage ditches that is predicted to provide greater ecological benefits than the traditional trapezoidal channel designs. Gary Sands and Dario Canelon are evaluating alternative subsurface drainage designs by assessing if different spacing and depth options are capable of reducing nutrient loading resulting from subsurface drainage of agricultural fields. Gary and Dario are also evaluating if controlled drainage reduces subsurface water volume and nitrate loadings from subsurface pipes.

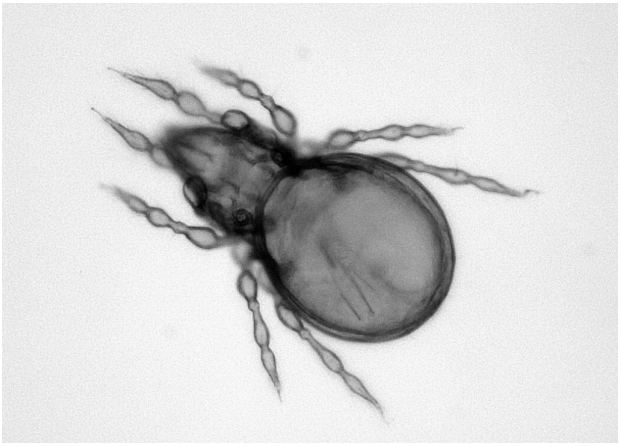
The growth of biofuels has "fueled" research into crops with greater environmental benefits including the use of native prairie mixtures and woody species. Much of BBE's work in this area is being led by Jason Hill and focuses on total Life Cycle Assessment of biofuels that involves a holistic assessment of the whole-cost accounting of energy inputs, costs, and benefits of biofuels.

Future work will focus on restoration and management for enhancement of ecological services, including removal of nitrogen and sediment from agricultural runoff and drainage water. One area of specific interest is the development of treatment wetlands designed specifically to treat subsurface drainage runoff. Another focal area for future research is the development of riparian corridor management systems that provide both ecological benefits and economic gains. Along with the development of native perennial biofuel systems more research is needed on the processing and market development for these native plant crops. In conclusion, the BBE's Environment and Ecology group is poised to address current and future challenges related to the restoration of agricultural watersheds.

Chris Lenhart, University of Minnesota

WHY SHOULD WE CARE ABOUT RESTORING DECAY-LOVING DECOMPOSERS?

Soil organisms are phylogenetically diverse, trophically heterogeneous, functionally assorted, highly variable in size, dissimilar in longevity, variegated in morphology, behaviorally divergent, adapted to different soil horizons, disparately pigmented, but are united in their reliance on death. Specifically, soil organisms are all similar in that they feed on detritus (i.e., dead organic matter). It is a remarkable thing that feeding on dead organic matter can functionally link such a diverse group of organisms. Collectively the action of these organisms within detrital-based food webs results in the breakdown of dead organic matter and the mineralization of organic compounds that makes key nutrient available to the living. Thus, the important functional role of these organisms means that we all live in the shadow of the kingdom of decay.



Oppiella nova, a ubiquitous soil mite, perhaps one of the most abundant animals on earth

Restorationists need to pay attention to soil organisms because they are a very large component of the biological diversity at many sites and because the regulation of nutrient availability exerts a large influence on biological diversity. Concern for the conservation and restoration of decomposers and soil communities is made all the more urgent because soils are vastly affected by global change. A warmer earth implies generally more rapid decomposition rates (when other factors such as moisture content of the soil remain constant). Invasive species can also have dramatic implications for soils, either directly when soil animals (earthworms and isopods, for instance) are introduced into a site or indirectly when plants invade. Modification of plant communities will result in altered biological assemblages within the soil, and these in turn will have implications for ecosystem processes that are capable of determining the successional trajectories of plant communities. In the last couple of years my lab has initiated investigations on the diversity of soil organisms and their functional significance in the context of restoration efforts. We are addressing these questions in ongoing restoration projects designed to conserve biodiversity in and around Chicago. These sites, in woodland, savanna and prairie habitats are heir to the typical problems associated with open space in a major metropolitan setting – highly disturbed, heavily invaded, eutrophied, and fragmented terrestrial ecosystems. We are especially interested in learning how our current best restoration practices influence the composition of these below ground communities and, assuming such practices are altering these biotic communities, the influence these soil critters have on ecosystem processes.

There is widespread agreement that much of the diversity of soil organisms is functionally redundant. That is, the rates of decomposition and nutrient cycling may be buffered from the loss of some biodiversity within soil communities. As long as key ecosystem processes remain intact does it matter if restoration practices that benefit other target taxa (i.e., plant or birds) are negatively affecting soil community diversity? It is not my intent to exaggerate the differences between

restoration conducted for the sake of nature itself or restoring for the continued provisioning of ecosystem services for people. Often management action stemming these opposing motivations will have convergent outcomes. However, as we learn more about the diversity of below ground soil communities we will most likely face difficult trade-offs. Can we modify restoration practices in order to enhance the diversity of organism above and below ground? If we cannot, what diversity matters most? Are butterflies more important than mites?

Undergraduate researcher Darin Kopp takes a well deserved break from arthropod sampling.

Posing the dilemma of choice about which organisms to target in restoration projects admittedly seems to be somewhat of an academic matter. A good debating topic for a conservation biology class perhaps. After all, we know very little about soil organismal diversity in the Midwestern United States. Taxonomic experts admit, for instance, that only a fraction of soil arthropods have been described. For mites it may be as few as 5% of all species globally. We know even less about the fate of soil organisms in ongoing restoration project although some researchers have examined the suitability of soil organisms as an indicator of restoration progress.

Below I present four conjectures about soil organisms in the context of restoration projects. Within these conjectures I concentrate on soil microarthropods (i.e., free-living soil mites and springtails) since I and my lab are most interested in these organisms. I also have Midwestern ecosystems and habitats in mind, but the concepts might be applicable to other regions and habitat types. These are for the most part empirically-based conjectures where there is not enough work done to be definitive, but there is supportive data emerging for each contention.

C1. Soil microarthropods are hyperdiverse at most restoration sites. This may be true even for those sites that are in poor ecological health. The number of described mite species globally is 45,000, a very small fraction of the likely total diversity. To put this in perspective - if mite diversity received proportionate attention there would be over 100 consecutive "Mite Weeks" on the Discovery Channel for every one “Shark Week”. In the coming years we will get some real numbers of the diversity of soil microarthropods at a variety of sites. Expect no fewer than 200 species per hectare.

C2. Factors that negatively affect plant diversity will also have adverse affects on soil organismal diversity. Invasive species, fragmentation, nitrogen deposition, altered hydrology, climate change and so forth have implications for the soil environment. In particular, factors that elevate decomposition rates may have devastating implications for soil animals. This is because the decomposing litter hosts the greatest diversity of soil arthropods. Increasing decomposition rates means less litter and detritus for soil animals. I conjecture that in habitats where the litter layer has been reduced there will be greatly diminished diversity of soil organisms. This may represent a vast unnoticed local extinction crisis that might easily exceed the biodiversity losses exhibited by recent amphibian declines.

C3. RESTORATION PRACTICES THAT ENHANCE THE DIVERSITY OF PLANT SPECIES MAY NOT BE AS EFFECTIVE IN STIMULATING BELOW GROUND DIVERSITY. Although there are strong reciprocal influences between above and below ground aspects of ecosystem structure and function, the diversity of soil microarthropods is determined by a suite of factors unlikely to be greatly influenced by restoration practices aimed at improving the health of plant assemblages. Researchers starting with the renowned Jonathan M. Anderson (University of Exeter) have referred to soil arthropod diversity as enigmatic since many of these species feed on the same substrates (fungi and bacteria) and most species might be expected to be competitively excluded. Soil arthropod diversity may be very reliant on the physical structure of soil and by the relatively limited mobility of the animals themselves. My prediction is that enhanced diversity of plants will benefit soil arthropod diversity, but plant diversity alone will not be a good predictor of soil arthropod diversity. Support for this conjecture in the Chicago Wilderness region comes from a preliminary study conducted by my graduate student Claire Gilmore where we found that diversity of soil microarthropod diversity in 11 sites along a gradient of management efforts was more strongly correlated with the variability in soil nutrient availability rather than any index of management intensity.

C4. ALTERED SOIL FAUNAL ASSEMBLAGES WILL PRESIDE OVER ALTERED DECOMPOSITION AND NUTRIENT CYCLING RATES IN RESTORATION SITES. That ecosystem processes are modified by altered soil faunal assemblages is true most obviously when non-native earthworms have been introduced. Plant communities that developed in the absence of earthworms (as is the case in many ecosystems north of the last glacial maximum) will be strikingly influenced by these animals. The impacts of non-native earthworms which may persist in soils after restorative management may frustrate restoration efforts because non-native earthworms will continue exert a strong influence on plant communities. Less well understood is how soil microarthropod assemblages may influence ecosystem processes at restoration sites. Differences in the structure of microarthropod assemblages can translate into distinct patterns of nutrient cycling and can influence litter decomposition rates. Emerging evidence for this conjecture in relation to restoration projects comes from research conducted by my undergraduate student Darin Kopp that focused on determining if differences in soil microarthropod assemblages altered ecosystem processes. We extracted soil microarthropods from a series of replicated restoration plots and introduced these slightly different assemblages into microcosms containing a single substrate in the lab. The replicated plots consisted of plots that received a range of restoration practices ranging from removal of invasive species followed by the introduction of native seeds to treatments that incorporated mulch into soil. We observed differences in the leaching of several key nutrients among different soil microarthropod communities. These results suggest that differences in soil microarthropod communities may influence the availability of nutrients at restoration sites and might subsequently alter the early successional trajectories of above ground plant communities. We plan on devoting more time in the coming years to investigating such patterns in greater detail.

In the kingdom of decay microbes are royalty but toiling in those putrescent fields is a collective of soil animals that influence the functioning of the belowground realm more than ecologists had traditionally realized. Assemblages of soil arthropods are exceptionally diverse, functionally significant and vastly understudied. For those of us who see the challenge of restoration as saving all the

pieces, our challenge has become a little muddier than before. Our new motto: *Ad terram* – to the soil!

Liam Heneghan, DePaul University
Environmental Science Program and
Institute for Nature and Culture
http://10thingswrongwithenvironmentalthought.blogspot.com/

SELECTED CONTENTS OF THE DECEMBER 2011 ISSUE OF *ECOLOGICAL RESTORATION*

RESTORATION NOTES
V.C. Pandey, K. Singh, B. Singh, & R.P. Singh. New approaches to enhance eco-restoration efficiency of degraded sodic lands: critical research needs and future prospects.

C.R. Keyes. Thinning promotes the restoration of branch structure in second-growth redwoods at Redwood National Park.

B. Molano-Flores & H. Mlynarski. The effects of carbon amendments on growth and reproduction of a prairie plant (Illinois).

W.M. Bartodziej, S. Blood, & J. Lindeman. Assessing urban wetland soils for reed canary grass management (Minnesota).

RESEARCH ARTICLE
C.R. Adams, P.J. Kauth,& J.W. Sorenson. Assessing competition between reed canary grass (*Phalaris arundinacea*) and swamp white oak (*Quercus bicolor*).

R.D. Tompkins, W.C. Stringer, & W.C. Bridges, Jr. An outcrossing reciprocity study between remnant big bluestem (*Andropogon gerardii*) populations in the Carolinas.

K.K. Bohn, P.J. Minogue, & E.C. Pieterson. Control of invasive Japanese climbing fern (*Lygodium japonicum*) and response of native ground cover during restoration of a disturbed longleaf pine ecosystem.

C.W. Weekley, E.S. Menges, D.Berry-Greenlee, M.A. Rickey, G.L. Clarke, & S.A. Smith. Burning more effective than mowing in restoring Florida scrub.

L.P. Maurin & A.P. Stubblefield. Channel adjustment following culvert removal from forest roads in northern California, USA.

REVIEW ARTICLE
J.B. Salesman& M. Thomsen. Smooth brome (*Bromus inermis*) in tallgrass prairies: a review of control methods and future research directions.

For more information on current and past issues of Ecological Restoration see:
http://er.uwpress.org/

UPCOMING ECOLOGICAL RESTORATION RELATED CONFERENCES AND EVENTS – DECEMBER 2011 TO MARCH 2012

Volunteer Opportunity: Restore Oak Savanna and Pioneer Cemetery. December 18, 2011. Alden Sedge Meadow, Illinois. For more details call Jack or Judy Speer (815-690-6240 or 815-648-1372) and see webpage ***http://smallwaters-org.doodlekit.com/home/calendar***

Dane County Chapter Savanna Restoration Workday. Dane County Chapter Ice Age Trail Alliance. January 7, 2012. For more information contact Gary Werner (nattrails@aol.com) and see the website: ***http://www.iceagetrail.org/calendar***

2012 Wilds Winter Extravaganza. A joint Ohio Ornithological Society and the Wilds event. January 14, 2012. Cumberland, Ohio.
http://www.ohiobirds.org/calendar/society_events/current/Wilds/about.php

Annual Minnesota Wetlands Conference. Minnesota Wetland Professionals Association. January 18, 2012. Brooklyn Park, Minnesota.
http://www.mnwetlands.umn.edu/annualconference/index.htm

Why we are failing to manage water quality. Public lecture - Dr. G. Allen Burton, Jr., 7:00 pm - January 19, 2012. University of Toledo Lake Erie Center Public Lecture Series, Toledo, Ohio.
http://www.utoledo.edu/nsm/lec/events/events.html

The Science, Practice, and Art of Restoring Native Ecosystems 2012. Stewardship Network's Annual Conference. January 20 to January 21, 2012. East Lansing, Michigan.
http://www.stewardshipnetworkconference.org/site/c.5oJHLSPvFhJUG/b.6297511/k.BD1D/Home.htm

Minnesota Green Chemistry 2012: Strategies for Growth. January 26, 2012. Minneapolis, Minnesota.
http://www.iatp.org/event/minnesota-green-chemistry-conference-2012-strategies-for-growth?

Minnesota Environmental Partnership's 16th Annual Legislative and Policy Reception and Forum. February 1, 2012, St. Paul, Minnesota.
http://www.mepartnership.org/mep_calendar.asp?cal_id=4185

Reclamation, Restoration, & Conservation: Recovering What Was Lost. 2012 Ohio Fish and Wildlife Management Conference. February 3, 2012. Columbus, Ohio.

2012 Annual Symposium – Getting the Job Done. Illinois Prescribed Fire Council. February 10, 2012. Mahomet, Illinois.
http://www.fsi.illinois.edu/content/outreach/fire%20council/

Urban Wetlands. 17th Annual Conference of the Wisconsin Wetland Association. February 22 to February 23, 2012. Lake Geneva, Wisconsin.
http://wisconsinwetlands.org/2012registration.htm

The Prairie Enthusiasts at 25: The Journey to Prairie Preservation. Annual Banquet and Conference. February 25, 2012. Menomonie, Wisconsin.
http://www.theprairieenthusiasts.org/conference12/conference12.htm

Wild Ones Annual Conference - Design with Nature. February 25, 2012. Plymouth, Minnesota.
http://www.designwithnatureconference.org/

32nd Annual Midwest Aquatic Plant Management Society Conference. February 26, to February 29, 2012. Milwaukee, Wisconsin.
http://www.mapms.org/2012/meeting.htm

25th Annual Conference of the Michigan Stormwater Floodplain Association. February 29 to March 2, 2012. Dearborn, Michigan.
http://mi.floods.org/conference.html

25th Annual Michigan Wildflower Conference – Preserve the Legacy – Pass It On. Wildflower Association of Michigan. March 4 to March 5, 2012. East Lansing, Michigan.
http://www.wildflowersmich.org/index.php?menu=5

2012 Upper Midwest Stream Restoration Symposium. Partnership for River Restoration and Science in the Upper Midwest. March 4 to March 7, 2012. Minneapolis, MN.
http://www.prrsum.org/content/umsrs-2012

23rd Annual Awards Ceremony of the Illinois Chapter of American Society of Landscape Architects. March 16, 2012. Chicago, Illinois.
http://il-asla.org/meetinginfo.php?id=45&ts=1321898798

2012 Indiana Lakes Management Annual Conference. Indiana Lakes Management Society. March 23 to March 24, 2012. Nashville, Indiana. ***http://www.indianalakes.org/ilmsAnnualConference.htm***

2012 Great Lakes Environmental Law Symposium. A Discussion on the Future of Energy Law in Illinois and Beyond. March 30, 2012. Chicago, Illinois. ***http://www.kentlaw.edu/student_orgs/els/symposium***

If you have a conference, volunteer workday, or restoration-related event that you would like listed in this section in future newsletters please email the information to Bill Santelik (wsantelik@eaest.com)

CALL FOR ABSTRACTS

The fourth international EcoSummitt 2012 will be held in Columbus, Ohio from September 30 to October 5, 2012. This conference will bring together the world's most respected minds in ecological science to discuss restoring the planet's ecosystems. Come hear Nobel Prize laureate Elinor Ostrom, Pulitzer Prize winners E.O. Wilson and Jared Diamond, Kyoto Prize winner Simon Levin, Stockholm Water Prize laureates Sven Jørgensen and William Mitsch, and many others in the first conference ever linking the Ecological Society of America (ESA), The International Association for Ecology (INTECOL) and ***the Society for Ecological Restoration (SER)***.

70 symposia and 11 workshops with almost 600 participants from over 55 countries have been accepted for the EcoSummit 2012 Program. The symposia and workshops cover a wide variety of ecological topics, including ecological restoration, ecosystem services, climate change issues, and lake, wetland, and river management and will be presented over the entire week of the conference in parallel sessions. Abstract submission for contributed oral or poster presentations is now open. The deadline for submitting abstracts is January 20, 2012. See website for more information. http://www.ecosummit2012.org/submit-abstract.html

Midwest-Great Lakes Chapter Society for Ecological Restoration

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http://www.ser.org/content/SERMWGL.asp

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