



## From the Desk of the Program Coordinator

It is a spring ritual in the Ozarks to wander the woods and admire the wildflowers while searching for a special culinary treat: the morel. Experienced mushroom hunters know their elusiveness. Have you ever pondered as you walked through the woods, how many morels within a short distance you overlooked? WE DO, A LOT!

Even the best trained observers fail to detect the presence of every bird or deer as they collect monitoring data. To ensure that our monitoring produces the most accurate estimates of population size, we are incorporating an innovative “Distance” sampling technique into our protocols. By measuring the distance from the observer to the target (e.g. a bird) we can use mathematical models to estimate the number of animals we fail to see. We then use the model results to formulate a more accurate estimate of the real population size.

Paul Lukacs is a biometrician with the USGS, BRD and an expert of “Distance” sampling. Paul recently visited Springfield to assist in development of our deer population monitoring protocol, and help with analysis of our bird monitoring data using distance estimation techniques. Paul is employed through the Pautuxent Wildlife Research Center, and has a special mandate to collaborate with the NPS I&M program. We are fortunate to have the support from multiple agencies within the DOI to utilize the best science available to provide reliable information to NPS resource managers.

-- Mike

## Extra! Extra!

**Hope Dodd** has accepted the fisheries biologist position and will join the aquatic team on the SMSU campus July 10. Hope earned a MS degree in Fisheries and Wildlife from Michigan State University and has worked for the past six years as an assistant research scientist with the Illinois Natural History Survey. **Jessica Luraas** has accepted a term aquatic ecologist position for placement at OZAR starting May 29. Many of you already know Jessica through her previous work with the network and at BUFF. Jessica holds an MS degree in Environmental Science – Water Resources from Indiana University.

## Calendar of Events

**Change in annual meeting dates:  
August 1-4 at HOCU! Meeting is on Tuesday  
and Wednesday, August 2 & 3, with Monday  
and Thursday as travel days.**

May 16-22. Vegetation community monitoring at TAPR (field crew: Alicia Sasseen, Karola Mlekush, Craig Young and Pam Lucas)

May 16-25. Breeding bird community surveys and habitat work at TAPR (field crew: David Peitz, Tyler Cribbs, Brittany Hummel, and Holly Etheridge)

May 31-June 3. Vegetation community monitoring at GWCA (field crew: Karola Mlekush and Pam Lucas)

May 31-June 9. Breeding bird community surveys and habitat work at HOCU, HEHO, and AGFO (field crew: David Peitz, Jennifer Haack, Brittany Hummel, and Holly Etheridge)

May 31-June 3. Invasive plant sampling at PERI (field crew: Craig Young)

June 5-7. Site visit to CUVA (field crew: Mike DeBacker, David Bowles, Craig Young)

June 13-16. Aquatic invertebrate sampling at WICR and GWCA (field crew: Tyler Cribbs, others)

June 6-13. Vegetation community monitoring at HOME and PIPE (field crew: Alicia Sasseen, Karola Mlekush and Pam Lucas)

June 19-26. Vegetation community monitoring at EFMO grasslands and HEHO (field crew: Alicia Sasseen, Karola Mlekush, Jennifer Haack, Pam Lucas and others)

July 5-8. Invasive plant sampling at HEHO (field crew: Craig Young and Karola Mlekush)

July 9-12. Woodland vegetation monitoring at EFMO (field crew: Craig Young and Karola Mlekush)

July 13-15. Western prairie fringed orchid monitoring at PIPE (field crew: Craig Young and Karola Mlekush)

July 18-22. Black-tailed prairie dog surveys at SCBL (field crew: David Peitz, Tyler Cribbs and Brittany Hummel)

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## Feature

The HTLN Aquatic Monitoring Program made significant advancements in the past few months. Draft monitoring protocols and standard operating procedures are nearly complete for aquatic invertebrates at BUFF and OZAR, and large volume springs in OZAR; fish communities in BUFF and OZAR; and wetlands at CUVA. Review and revision will continue through the end of the year. Initial pilot monitoring efforts for invertebrates and fish will begin this fall at BUFF and OZAR.

Designation of river stretches and their physical attributes for BUFF and OZAR being developed by the Missouri Resource Assessment Program (MORAP) is nearly complete. A training session to use the MORAP product was held on May 4 at WICR. The river stretch map will be used to select our monitoring sites.

Chris Phillips, Illinois Natural History, started a multi-year project to develop a protocol for monitoring hellbenders at OZAR. We expect completion of a protocol for assessing physical habitat and geomorphology of streams in August 2005. The USGS continues work on protocol for assessing environmental lead deposition at OZAR using crayfish and Asian clam (*Corbicula*) as model indicators.

David Pietz will transfer invertebrate and fish monitoring responsibilities to the Aquatic Program this year. Additionally, aquatic invertebrate sampling begins at GWCA this sampling season. Some projects such as temperature monitoring at HOSP, and 303(d)-related fecal coliform studies on the Jacks Fork River (OZAR) near their final stages. Iowa Geological Survey will cooperate in water quality monitoring on Yellow River at EFMO and 303(d)-related work at HEHO. -- David

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## Inventories

We are coming down to the wire in closing out the inventory projects. We have completed most reports, but we continue to finalize inventories as our target date to finish the inventory component of the program approaches at the end of fiscal year 2005.

NPSpecies certification continues with 70% of the taxa groups verified in the parks. We have completed GWCA, LIBO, PIPE, and WICR. We have successfully posted more than half of the datasets and reports to the Biodiversity Datastore.

Geodatabase development is half finished. Midwest Region GIS office, working with the HTLN, should complete the remaining databases by the end of the fiscal year. -- Mike W

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## From the Parks

### *HTLN contributes to MWR initiative*

HTLN has partnered with state and federal agencies to monitor the Yellow River, a 303d listed river that bisects EFMO. Although HTLN only supports monitoring associated with EFMO, our contribution broadened a large scale sampling effort throughout the watershed. Several divisions of the Iowa Department of Natural Resources, the Natural Resources Conservation Service (USDA), the U.S. Geological Survey, and Iowa State University work cooperatively to characterize water quality and land use within the entire watershed. These efforts contribute to TMDL determination and to source tracking *E. coli* in the watershed.

This is not the only NPS work within the Yellow River watershed. The Midwest Natural Resource Group (MNRG), a collaborative group of Federal agencies, including NPS-MWR, engaged several partners and St. Mary's University to collect geo-referenced information on natural and cultural resources within the watershed. The MNRG authorized NPS to lead an interagency "rapid resource assessment" (later to become the "Yellow River Initiative") late in 2002. By the end of 2004, data sets or links were established through the Upper Mississippi Basin Stakeholders Network (UMBSN) ([www.umbsn.org](http://www.umbsn.org)). Information gathered with HTLN support may contribute to the UMBSN data set that guides resource management on a broad scale. Improvements within the entire watershed will result in better water quality for the Yellow River within EFMO.

For more information on the Yellow River Watershed Initiative, contact John Sowls, MWR. -- Sherry

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## What is it?

*Ever wonder about the terminology that we toss out so freely? Send Sherry Middlemis-Brown a note with your pet jargon to be defined.*

**BIODIVERSITY DATASTORE** -- This digital repository of documents, GIS maps, and data sets contributes to the knowledge of biodiversity in National Park units, including presence/absence, distribution, and abundance of species.

**MONITORING PROTOCOLS** -- Methods used to accomplish scientific monitoring; these methods ensure quality assurance and quality control for data recording, location selection, sample collection and handling, data manipulation, laboratory procedures, every aspect leading up to final results. They are clearly and completely written so that another researcher can replicate the monitoring. Protocols must consider how the data are used so that monitoring answers the correct questions using meaningful statistical analysis.