

News in Brief

Aquatic Invertebrate Monitoring

The small stream invertebrate and contaminant metal protocols are complete. Contaminant metals field work began at OZAR. Draft reports for the large rivers, small streams and springs are in development. Sample processing and data entry continue for the FY08 field season.

Bird Monitoring

While staff surveyed breeding birds at four parks, volunteers surveyed breeding birds at two parks and the University of Nebraska-Lincoln initiated research at three parks this spring. A summary report for HOCU is finished.

Black-tailed prairie dogs

Network staff conducted a joint vegetation monitoring and prairie dog surveying trip to AGFO and SCBL. Northern Great Plains Network joined the efforts to observe procedures. An annual report went to SCBL in August.

Data Management

Staff managed databases and performed data analysis for breeding birds and river invertebrates. Minor design changes improved data analysis. Staff organized GIS datasets for both MSU and WICR servers. Staff implemented new software and standard operating procedures to update files and databases shared between the two servers.

Fire Ecology

Fire ecology staff are planning sampling and activities for the next few years. Graduate student Jackie Ebert began working with HTLN and regional fire GIS staff to complete spatial fire histories for HTLN parks. The fire ecologist will begin fire monitoring plans for HTLN parks this fall.

Fish Community Monitoring

Staff completed fish monitoring at BUFF, EFMO, HEHO, PIPE, HOME

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A Data Gap To Fill — Invertebrates

The HTLN has done a great job completing inventories of most plant and vertebrate groups, and even some invertebrate groups, such as butterflies. However, our network parks have virtually no systematic inventories for aquatic insect groups.

As part of our stream monitoring, we calculate a suite of aquatic invertebrate community metrics used to assess stream condition. Principal among these are indices that rely on number of taxa belonging to particular insect orders. Therefore, the more specific the taxa identification, the more precise the metric results.

The HTLN invertebrate monitoring protocols rely on genus-level identification. However, our work suggests that this may not sufficiently be sensitive enough to assess stream quality accurately.

For example, caddisflies of genus *Cheumatopsyche*, as a group, tolerate disturbance. However, not all species of *Cheumatopsyche* tolerate disturbance and some are actually relatively intolerant, occurring only in high quality streams.



Cheumatopsyche adult, Tom Murray



Cheumatopsyche larva, California Department of Fish & Game

Ozark streams commonly have several species of *Cheumatopsyche* inhabiting them. In many cases, intolerant species grossly outnumber their tolerant counterparts. Index scores become inflated in this situation, suggesting impacts from disturbance where none exist.

This happens for other aquatic insect taxa also, and the error can just as easily suggest a lack of disturbance when disturbance exists. Using genus-level larval identification masks valuable sensitivity and diversity information.

Aquatic insect communities are in eminent danger of vanishing or impairment from human disturbance before we assess their diversity. If climate change results in regional warming, it may cause reduction or extirpation of locally restricted and cold adapted, intolerant species.

We could take a significant step toward completing inventories of aquatic insects in our parks quickly and cost effectively by using approaches such as Bioblitzes and All Taxa Biotic Inventories (ATBIs). These methods seek to identify the biological diversity oc-

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and TAPR. Fish and habitat sampling at OZAR commences in October. Staff continues processing fish samples and writing annual reports. The small stream protocol for fish monitoring was published.

Invasive Plant Monitoring

Field work was completed at HOCU.

Plant Community Monitoring

Staff completed QA/QC on 2008 field data. Field crews sample prairies at WICR and TAPR. See the updated Data Summary and Analysis SOP posted on the plant community monitoring page. We will be doing site maintenance at GWCA in September.

Rare Plant Monitoring

The Missouri bladderpod and western prairie fringed orchid protocols have been peer-reviewed and revised.

Wetlands

The CUVA wetland team continues field work at Wetlands of Management Concern. Staff completed Draft Standard Operating Procedures for the Wetland Monitoring Protocol.

White-tail Deer Monitoring

Reports on this year's surveying efforts went out to the parks.

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curring in a given geographic area. Collecting adult aquatic insects is considerably more simple than collecting the aquatic larval counterparts. Also, in the hands of qualified taxonomists, the identification of adults is generally straight forward and more accurate than identifications of larvae.

So, what are we waiting for?

Park Acronyms

ARPO = Arkansas Post National Memorial
BUFF = Buffalo National River
CUVA = Cuyahoga Valley National Park
EFMO = Effigy Mounds National Monument
GWCA = Geo. Washington Carver Nat. Mon.
HEHO = Herbert Hoover Nat. Historic Site
HOME = Homestead Nat. Mon. of America
HOCU = Hopewell Culture Nat. Historical Park
HOSP = Hot Springs National Park
LIBO = Lincoln Boyhood National Memorial
OZAR = Ozark National Scenic Riverways
PERI = Pea Ridge National Memorial Park
PIPE = Pipestone National Monument
TAPR = Tallgrass Prairie National Preserve
WICR = Wilson's Creek National Battlefield

Interpretive Writing at the Annual Meeting

Laura Miller of Central High School NHS and Jeff Wade of Harry S. Truman NHS facilitated an interpretive workshop at the HTLN annual meeting. Jeff presented interpretive writing and Laura covered writing for the web. Interpretive writing for the web differs from other forms and needs to include engaging photographs, provocative titles and links along with compelling text.

According to Laura, web site viewers relate to the scientists more than to the science. She encouraged interpreters to work with scientists to obtain photographs and video of monitoring and explanations as to why parks need science. That information intrigues the web viewer more than official reports.

Laura and Jeff tasked the interpreters to create their own web page, connecting their park to the HTLN program. Interpreters will post their pages after they are reviewed and approved.

— Sherry Middlemis-Brown

Annual Meeting — truly a park focused event

This year's annual meeting took on particular importance, serving as the three-year review and the program update for parks. Steve Fancy initiated the review by requesting HTLN parks and partners to evaluate the network's achievements. The results of the survey showed that HTLN has successfully met or exceeded the expectations of the parks and partners.

Everyone agreed that financial constraints would become the greatest challenge as the HTLN and other networks move forward. Budgets have not increased in the last several years. George Oviatt, a review panel member, said about the NPS budget process and network funding, "[NPS must ensure] that it [flat budget] takes just enough that it doesn't kill the host."

The review included updates on monitoring projects around the network. The HTLN park interpreters participated in the annual meeting once again this year. They listened to program updates before breaking into their own workshop. Program updates gave interpreters an understanding of the projects being done at their parks.

The Board of Directors (BOD) met, making decisions on several issues facing HTLN. It accepted a proposal to streamline vegetation

community monitoring. The HTLN will make the revised protocol available on its website.

The BOD also decided to reduce annual meetings to biennial and to encourage participation in the George Wright Society meeting in the odd years. The communication working group will continue to guide the interaction between park Interpretive Divisions and the HTLN. The BOD also supports working groups to establish an Ozarks Research and Learning Center and a Heartland Exotic Plant Management Team.

The Technical Committee (TC) met and asked, "What is the role of the TC now that the network is fully functioning?" The group recognized that the role has changed from guiding formation of the network. Further review of the Charter may help to define how the TC best fits into the HTLN programs.

Participants agreed that the annual meeting contributed to an understanding of the HTLN program.

— Sherry Middlemis-Brown

More on the Web

All Taxa Biotic Inventories <http://www.atbialliance.org/>

Data Summary and Analysis SOP <http://science.nature.nps.gov/im/units/htln/plants.cfm>

Reports listed in briefs <http://science.nature.nps.gov/im/units/htln/reports.cfm>