

News in Brief

Aquatic Monitoring

Progress continues on draft reports for 2005-2007 data. We continue processing FY08 samples and data. We expect initial results from contaminant metals monitoring by USGS in OZAR soon.

Bird Monitoring

Network staff will monitor birds at HEHO, HOME, PIPE, and EFMO this spring. Citizen Scientists in cooperation with park staff will conduct surveys in as many as seven additional parks.

Data Management

Staff have been updating several databases. We are also writing scripts, simple programs to link HTLN databases to R-statistical software. Scripts automate graphs, descriptive statistics and other statistical methods without the need to export data from the database.

Fire Ecology

Staff presented a paper on bird habitat structure in grassland with recent reductions in fire return interval and stocking rate to the Society For Range Management annual meeting in February. Staff contacted parks to learn about prescribed fire plans for 2009.

Fish Community Monitoring

Staff finished processing 2008 samples and reported species lists to parks and state agencies. Staff continue writing status reports and should complete them for distribution this summer. Staff gear up for the field season that begins in May.

Invasive Plant Monitoring

A scope of work has been developed for monitoring at HOSP during the 2009 field season.

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Special Feature: FIRE

Fire Ecology . . .

An HTLN Program

The NPS Fire Ecology Program was created to provide a scientific foundation to the agency's Fire Management Program. The fire program provides park managers with assistance from professionals with fire-science knowledge and experience in ecology to facilitate coordination between wildland fire and other resource management programs.

Fire effects monitoring is a large focus of fire ecology. A fire effects program provides short- and long-term monitoring of prescribed fire impacts on resources. Fire effects crews in the NPS program serve a group of parks, or cluster, and establish permanent vegetation and fuels plots for study.

The NPS Inventory and Monitoring Program (I&M) provided an opportunity to coordinate fire ecology and long-term monitoring efforts in fire ecology. The Midwest Region Fire Program provided funding to expand I&M monitoring in parks with active fire programs. The regional and I&M programs have worked to support each other and reduce duplication of effort.

The HTLN collects long-term monitoring data on important ecological indicators in Heartland parks. The NPS calls these indica-

tors "vital signs". After gathering data, the HTLN then analyzes it and interprets the results that they detail in reports to the parks. Natural resource managers use this information in adaptive management.

Parks in the central grasslands lacked an area specific fire ecologist. In June of 2007, the Midwest Fire Ecology Program filled the

void by hiring Sherry Leis as the HTLN fire ecologist. The program established Sherry's position using a three-year cooperative agreement with Missouri State Uni-

versity.

HTLN staff share responsibilities for collecting and analyzing vital sign data, much of which is relevant to fire ecology. This results in HTLN staff filling some of the functions of an ad hoc fire ecology monitoring crew.

Embedding the fire ecologist within the HTLN provides some unique opportunities. The fire ecologist has access to vast quantities of long-term data and to established monitoring sites that will

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Ray cornfield at WICR

The Weather Vane is published by the Heartland Network Inventory and Monitoring Program of the National Park Service. Visit www.nps.gov.

. . . protecting the habitat



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Landuse/Landcover

Plant Community Monitoring

Staff continue to work on vegetation monitoring protocol revision, including updating the database. Preparations are under way for the upcoming field season. A baseline vegetation report for GWCA is being finalized.

Rare Plant Monitoring

Staff assisted with questions from the National Park Conservation Association regarding Missouri bladderpod conservation at WICR.

Wetland Monitoring

Progress continues on the protocol narrative and SOPs. Early season field work has begun.

White-tailed Deer Monitoring

Deer surveys were completed February 17. Preliminary analysis indicate deer numbers are up in all three parks: ARPO, PERI and WICR.

Latest from the Board

The Board of Directors (BOD) recently grappled with the changing role of the Technical Committee (TC) comprised of resource managers within HTLN parks. The role changed when HTLN became fully staffed and implemented monitoring. Members of the TC are the critical link between parks and the HTLN, and careful consideration will go into defining its new role. Recommendations are welcome.

Other points of interest:

- The regional director expressed support for a Heartland Exotic

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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 Military Park
PIPE = Pipestone National Monument
TAPR = Tallgrass Prairie National Preserve
WICR= Wilson's Creek National Battlefield

George Wright Society — lives up to its reputation

The George Wright Society (GWS) held its 15th biennial conference on parks, protected areas and cultural sites the first week of March. With the theme “Rethinking Protected Areas in a Changing World”, the conference provided a full week of excellent presentations, seminars and workshops.

The network offered an opportunity for park interpreters and resource managers to participate in a workshop entitled Science Communication: Strategies for Successful Collaboration. The workshop included presentations by Dafna Reiner and Bruce Lombardo from Hopewell Culture NM, and Adam Prato and Sherry Middlemis-Brown from Herbert Hoover NHS, all of whom received HTLN support to attend.

Sara Melena from the Natural Resources Program Center facilitated the workshop that concentrated on how to disseminate information from monitoring and research for use in park planning, management and interpretation. Participants provided examples of successful communication efforts

targeting various constituencies. It included efforts to connect interpreters and other NPS staff to the wealth of scientific information about park resources.

One example focused on citizen scientists involved in bird monitoring at HEHO and the interpretive products that have spun off of the information gathered. Another example examined how HOCU uses inventory and monitoring information in decisions that balance protecting archaeological resources and interpreting site significance.

Mike DeBacker recapped HTLN's science communication strategy and products. Two examples of proactive communication used to protect park resources

came from San Francisco Area Network (Michelle O'Herron) and North Coast and Cascades Network (Lindsay Paulding).

The conference covered a full range of issues enveloping management of publicly held natural and cultural resources. All of the daily themes revolved around some type of collaboration. We cannot manage park resources in a vacuum, but must rely on divisions within parks and partners outside of parks to protect our resources for this and future generations.

— Sherry Middlemis-Brown



More on the Web

HTLN Fire Ecology: <http://science.nature.nps.gov/im/units/htln/fire.cfm>

Midwest Fire Management Program: <http://midwest.nps.gov/office/fire/>

NPS Fire Management Program: <http://data2.itc.nps.gov/fire/index.cfm>

Wilson's Creek NB fuel reduction success story: http://www.forestsandrangelands.gov/success/stories/2007/nfp_2007_q2_mo_nps_wicr_fuelsreduction.shtml

Midwest Region Fire Management GIS: <http://science.nature.nps.gov/im/units/mwr/MWRFireManagementGIS.asp>

Fire Effects Information System: <http://www.fs.fed.us/database/feis/>

Schedule of availability for banners: http://inpmwro_share:11122/default.aspx

George Wright Society: <http://www.georgewright.org/>

What and how to monitor?

Fuel Moisture Sampling

Fuel moisture contributes to fire intensity and fire severity. Although grasslands consist primarily of 1-hr fuels, we collect 10-hr fuel moisture using the standard 10-hr fuel moisture sticks, as well as 1-hr fuels by clipping.

Soil Moisture Sampling

We collect soil moisture samples from within a small circular frame by brushing away any herbaceous material and taking soil from the upper 2 to 3 centimeters. We fill a tin with a known volume of soil and weigh each sample as soon as possible after collection. After oven-drying for 48 hours at 65 C, we re-weigh the soil. The difference in weight tells us moisture content.

Immediate Post-burn Assessment

We assess burn severity and take photos of all plots, following prescribed or wildland fire. We rate burn severity by classes, using a code-system for organic substrate and vegetation conditions. We assess impacts to trees on forest plots. This includes tree condition, scorch height, scorch percent, bole scorch, and char height.

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benefit a fire ecology program.

The fire effects monitoring for HTLN is currently focused on grassland parks not covered by a regional fire ecologist or the Midwest Fire Ecology Program. Four HTLN parks, OZAR, PERI, HOSP, and BUFF, have support from the fire effects program based at Ozark National Scenic Riverways. Although seven parks of the HTLN will receive focused assistance, the HTLN fire ecologist is a resource for all HTLN parks.

Sherry Leis hit the ground running with several projects after being hired. She has created a prescribed fire resource kit, developed fire ecology site bulletin and pre-

Fire Season 2009

Sherry Leis has begun making her plans for monitoring and participating in prescribed fires this year. She requests that you tell her which units and roughly when you hope to burn. Sherry would like to participate in as many prescribed fires as feasible. Her role is multifaceted:

- Immediately prior to the burn, she collects soil samples where appropriate for long-term monitoring of soil moisture. She will also collect fuel moisture data.
- When assigned as the FEMO (Fire Effects Monitoring Officer), Sherry will be responsible for collecting weather and fire behavior data. She will work with the appropriate staff to complete the fire report and make sure copies are distributed to partners. When not assigned as FEMO, Sherry is happy to do whatever needs to be done.
- Post burn, Sherry would like to assess fire severity in long-term



scribed fire notice templates, and written three fire ecology reports. Additionally, she participates in prescribed fires.

Sherry has worked with Gary Sullivan at WICR on prescribed fires. According to Gary, her work has established that prescribed fires in Manley Woods have reduced the extensive hazard fuels created by the tornado and ice storms of the last several years. For more on the WICR successes, see More on the Web for a link to the full story.

The HTLN is fortunate to have an active fire ecology program with a very skilled staff. The program has already demonstrated its value. See HTLN's fire ecology website (More on the Web) for more information and examples of products.



monitoring plots. She would also like to cooperate with park and fire staff to record the perimeter of what actually burned. HTLN will process that data and share it with the parks.

The data that Sherry and her team collect will help us better understand the effects of fire over the short- and long-term. Sherry can integrate fire ecology into management and monitoring efforts by HTLN, park staff and fire staff.

Lastly, our new fire effects monitor, Maria Gaetani, will assist with data collection and spring fires. Please add Sherry and Maria to your contact lists. As always, Sherry is happy to talk with park managers about plans for fire effects monitoring. Call Sherry at 417 836-8919 or email her Sherry_Leis@partner.nps.gov.

Welcome, Maria, to the HTLN Fire Ecology Team!

Maria Gaetani joined the HTLN Fire Ecology team. She graduated from Indiana University with a degree in Environmental Science, concentrating in Surficial Processes. Finding herself interested in native plants and their response to wildfire, she worked on an Exotic Plant Management Team in Arizona. The experience while rewarding, was missing one key ingredient, wildfire. So, she signed on to a Fuels Crew and FIRE-MON team, providing her with an ideal combination of vegetation monitoring and wildland fire exposure. Maria expresses excitement about being here and looks forward to contributing to HTLN's projects while working with Sherry Leis.

A Banner Project –

The network has a set of six portable display panels available for loan to parks and partners. We started with the Science in the Parks, two single-sided 3' X 7' scroll-type upright banners. We have added two double-panel banners. One describes biodiversity as all of the colors in a 64-pack of crayons, and on the reverse side, invasive species as one way that the colors become diminished. Exquisite artwork makes this banner eye-catching. Another double-sided banner highlights the NPS role in preserving cultural resources, particularly those that rely on natural resource management. The opposite panel discusses the use of fire in restoring and maintaining landscapes. Both of these panels tell a story with photographs and brief text.

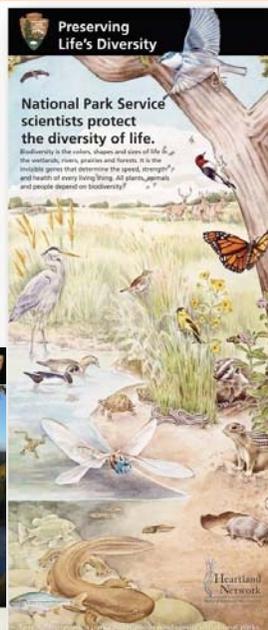
A literature rack for network information and park-specific bulletins, particularly Resource Briefs, accompanies the banners on a bi-monthly loan schedule. Partners are welcome to sign up for the banners also. Contact Michelle Lee (417 732-6438 X278; Michelle_Lee@nps.gov).



Cultural resources—the habitat of our heritage



Fire—essential to National Parks



Biodiversity



Invasive species—competing for survival

Need help with your Fire Management Plan?

The HTLN fire ecologist, Sherry Leis, can assist with revising your FMP, particularly with developing a Fire Effects Monitoring Plan. Sherry is working closely with HTLN staff to integrate goals and objectives among various planning projects including park management plans, natural resource condition assessments, and resource stewardship strategies.

Sherry has produced a Fire Resource Kit. The kit gives summary information on ignition sources, fire history, heterogeneity in plant communities, and exotic and woody plant species control. Influential research papers on these topics and a set of annotated references and websites allow the reader to research the subject in depth. Ultimately, the resources in this kit will assist with writing measurable fire management objectives.

Fire Season 2009 Reminder Sherry Leis requests that park managers provide her with plans for prescribed fire. She would like to implement fire effects monitoring and participate in as many fires as possible. Call Sherry at 417 836-5126 or email her at Sherry_Leis@partner.nps.gov. Thank you.

(Continued from page 2: Latest from the Board)

Plant Management Team (EPMT), as proposed by HTLN-TC. Funding may become available in 2010. Until then, the region may provide funds to continue planning and perhaps initiate projects on-the-ground.

- The basic climate-change traveling trunk, in final stages of development, received attention from several individuals attending a joint meeting/training on climate change between NPS and NASA. Dave Hutson (WICR) and Pam Barnes (CUVA) indicated interest in adapting material for their specific park issues.
- The network established a SharePoint site to encourage communication within the TC.
- Dave Peitz worked with the TC to initiate volunteer bird monitoring in parks.
- Craig Young and Melanie Weber drafted invasive plant treatment recommendations for all HTLN parks. Park managers review and make suggestions concerning the plans. Craig and Melanie began bundling individual park plans into packages that can be implemented by shared treatment teams. These plans will guide future EPMT planning.

