The Weather Vane

The Newsletter of the Heartland Inventory and Monitoring Network

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News in Brief

Aquatic Monitoring

Invertebrate sample processing and analysis continues. We drafted the spring communities report and began tributary sampling at BUFF and OZAR. We initiated preparations for a 5-year report on invertebrate and fish community data from BUFF and OZAR.

Breeding Bird Monitoring

We drafted reports on 2010 volunteer birding efforts, sending drafts to parks and their citizen scientists monitoring birds. Staff is working with TAPR and The Nature Conservancy on a report summarizing management influences on selected bird species and species groups.

Data Management/GIS

Staff are working with the Midwest Coordinated Bird Monitoring Partnership, hosted by the US Fish & Wildlife Service. The partnership will develop a Midwest Avian Data Center modeled after the California Avian Data Center. Some data management technologies may prove useful for several of our monitoring programs.

Fire Ecology

Rx-fire reports for WICR and GWCA are in review. Monitoring protocol entered final revision. Staff will participate in the expanding your horizons workshop at Missouri State University.

Fish Community Monitoring

We completed the fifth year of fish monitoring at OZAR. We will review BUFF and OZAR fish data to identify trends and needed protocol changes this winter.

Invasive Plant Monitoring

Contractors completed invasive plant monitoring at TAPR.

Land Cover Project

Accuracy assessment field work at OZAR will continue throughout the winter.

Rare Plant Monitoring

Network and park staff surveyed 92 orchids

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Dotting the "i" in HTLN

The HTLN staff has focused recently on the monitoring portion of the Inventory & Monitoring program. However, we still have work in the inventory portion of the program to complete. The final step in inventory will tie all terrestrial inventories and monitoring together by allowing assessment of habitat and extrapolation of vegetation characteristics into park areas not monitored currently.

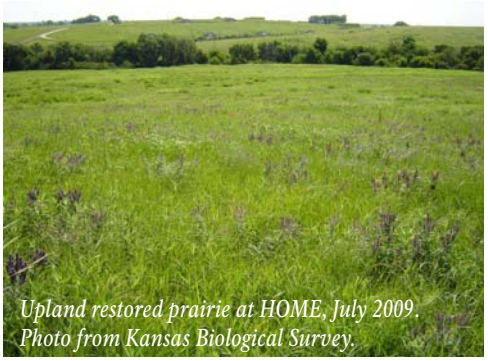
For each network park, NPS standards require completion of up to 12 biological inventories. These 12 core inventories analyzed across 32 networks provides a solid baseline for long-term monitoring and for addressing natural resource issues at multiple spatial scales. Fortunately, we near the completion of all inventories for HTLN parks with reports posted on our website.

Park vegetation inventory maps will conclude the 12 required inventories. We have finished EFMO and OZAR with completion of HOME and TAPR expected soon. Completed projects can be accessed from the vegetation inventory website (More on the Web).

The US Geological Survey, NatureServe and park staff will carry out CUVA's mapping project. A cooperative venture with Missouri Resource Assessment Partnership will complete mapping projects at the remaining parks.

Each mapping project adheres to a standardized 12-step guide, ensuring national continuity in products. The NPS partners accomplish the majority of these steps. However, HTLN staff conducts some accuracy assessments.

We will complete projects in three groups over the next five years. This schedule coincides with the Natural Resource Condition Assessments (NRCA) for the first group of parks. The order of initiation is GWCA, PERI and WICR; HEHO, HOCU, LIBO and PIPE; and finally ARPO and HOSP with an anticipated completion in 2015.



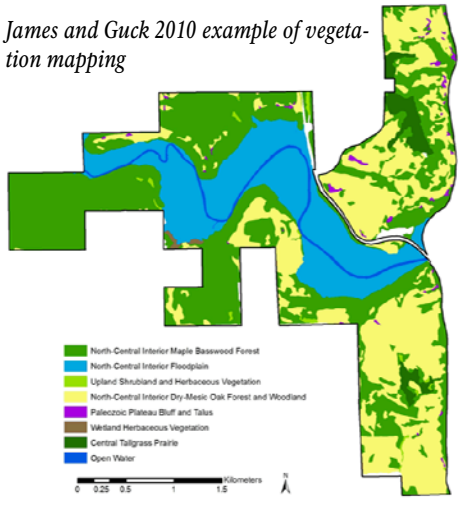
Upland restored prairie at HOME, July 2009. Photo from Kansas Biological Survey.

The map of vegetation types is the most obvious product, but the utility of this project extends to additional deliverable products:

- detailed vegetation report
- digital vegetation map
- vegetation plot data
- accuracy assessment and analysis
- dichotomous vegetation key
- photo-interpretation key

Once incorporated into a Geographic Information System, these

James and Guck 2010 example of vegetation mapping



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. . . protecting the habitat of our heritage

Heartland Network

Power of Friends . . .

to convert farmland to prairie

Through grants and the Opal Shum bequest, the Friends of Homestead National Monument of America purchased 140 acres of cropland located south of and contiguous with the monument. This created an opportunity to support landscape and habitat in the park, including the oldest restored tallgrass prairie in the region.

In spring of 2009, the Friends group enrolled the parcel into the State Acres for Wildlife Enhancement (SAFE) program administered by the US Department of Agriculture. The Friends received a grant to hire Prairie Plains Resource Institute from Aurora, Nebraska to begin restoration of cropland into high diversity tallgrass prairie.

During the 2009 growing season, the area was dominated by mares tail (*Conyza canadensis*), an annual weed species. By 2010, some of 160 different species of local genotype seed planted in 2009 started to appear.

The land increases the park-managed, 100-acre prairie by 140 acres. It also provides a landscape buffer for historic hedgerow trees listed on the National Register of Historic Landmarks, and it buffers rare lowland bur oak forest. The additional land will reduce agricultural runoff into Cub Creek. Planned walking trails will add recreational and educational opportunities for visitors.

An unconfirmed sighting of a greater prairie chicken (*Tympanuchus cupido*) on the monument may be the result of efforts to increase habitat. The park and Friends group are encouraged that this additional prairie restoration will likely benefit this once abundant, but now rare native bird.

Congressman Jeff Fortenberry introduced legislation (H.R. 112) to include this property within the boundary of Homestead National Monument of America. Once Congress approves monument expansion, the Friends of Homestead NM of America plan to donate the land to the NPS.

-- Jesse Bolli

During planting: Bill Whitney and Mike Bullerman with the Prairie Plains Resource Institute prepare to plant the Friend's Land.

(News Briefs continued from page 1)

at PIPE during annual summer monitoring.

Vegetation Community Monitoring
Staff completed field work and data entry at TAPR. We near completion of HOME and PIPE reports with input from park staff. Staff completed review of HOME and TAPR vegetation inventory reports.

Wetland Monitoring
We received positive feedback from other I&M networks on protocol design. We wrap-up field season with deployment of digital water level recorders at eight reference sites.

White-tailed Deer Monitoring
Deer surveys will begin January 3rd at ARPO, PERI, and WICR, and will continue through the week of February 7th.

Before planting: November 2008, photo monitoring by HOME staff begins

After planting, August 2009, photo monitoring continues

(Dotting the "i" continued from page 1)

products augment all of the HTLN terrestrial vital signs monitoring programs. This augmentation benefits park management of both natural and cultural resources. For example, a recent HTLN report (James and Guck 2010) utilized detailed vegetation descriptions to analyze spatial changes between current and baseline conditions in five upland terrestrial communities.

As more vegetation inventory maps become available for HTLN park units, vital signs monitoring data can be placed into a broader community context for each park. This type of work can expand the spatial area of inference for HTLN monitoring sites to larger areas of the park that have been found to be similar to the areas that contain long-term monitoring sites.

-- Kevin James

Acronyms

I&M = *Inventory and Monitoring program*
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*

More on the Web

Vegetation inventory website http://science.nature.nps.gov/im/inventory/veg/

James, K. M. and M. M. Guck. 2010. Logic-based approach to evaluating plant communities at Effigy Mounds National Monument, Iowa. Natural Resource Report NPS/HTLN/NRR—2010/181. National Park Service, Fort Collins, Colorado. http://science.nature.nps.gov/im/units/htln/library/Vegetation/PlantComm/EFMO_PlantCom_201003_r.pdf

HTLN website: http://science.nature.nps.gov/im/units/htln/index.cfm