

# The Weather Vane

The Newsletter of the Heartland Inventory and Monitoring Network

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## News in Brief

[Park acronyms are given on page 2](#)

### Aquatic Monitoring

Invertebrate sample processing and analyses continue. Report on spring communities entered internal review. We sampled HEHO invertebrates and fish, and OZAR springs in July. Five-year report on BUFF and OZAR invertebrates and fish community is in preparation.

### Breeding Bird Monitoring

We completed data collection, entry, and verification for 2011. Ten of the 11 parks with breeding bird monitoring finished surveys this spring. Draft reports for ARPO, LIBO, and HOCU near completion. Reports from surveys by volunteers in each of seven remaining parks near completion as well.

### Data Management/GIS

We updated GPS software and installed Service Pack 2 for ArcGIS 10. We will soon finish protocol for land cover classification, standardizing assessment of land cover changes. Staff installed a test version of Microsoft SQL Server database software that will be used to develop client / server versions of HTLN monitoring databases.

### Fire Ecology

We completed pre-burn surveys at GWCA, HOME, and WICR. Fuel load surveys were completed at TAPR.

### Fish Community Monitoring

The WICR fish report was published in June. Reports for HOSP and PERI should be completed by fall. Staff monitored fish at HEHO and OZAR springs in July.

### Invasive Plant Monitoring

Staff completed a report for TAPR. Field work continues at ARPO, HOCU, and LIBO.

### Rare Plant Monitoring

HTLN and park staff surveyed a record number of Western Prairie Fringed Orchids this year at PIPE. A total of 684 orchids were found within three sample units. Five of the six glades that support Missouri bladderpod

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## Midwest Coordinated Bird Monitoring Partnership



The HTLN biologist, Dave Peitz and data manager, Gareth Rowell, participated in a meeting of the

[Midwest Avian Data Center \(MWADC\)](#), part of the [Avian Knowledge Network \(AKN\)](#) of the [Midwest Coordinated Bird Monitoring Partnership](#) and [PRBO Conservation Science](#). The regional

partnership is committed to informed bird conservation decision making, coordinated action and exchange of monitoring information. The AKN helps biologists, biometricians, data managers, wildlife administrators, and citizen scientists achieve five principal goals:

- Integrate monitoring into bird management and conservation;
- Prioritize efforts towards species with the greatest need;
- Coordinate programs among organizations and across areas;
- Improve survey design, field methods, and data analysis; and
- Deploy modern data management strategies.

The MWADC integrates bird and ecosystem data, and makes it accessible to organizations, agencies, and citizen scientists. Since 2009, participants have engaged in workshops and contributed to an interactive website, a registry of bird monitoring programs, and a state-of-the-art system for archiving, analyzing, and accessing data.

The MWADC hosts a website with comprehensive resources for avian conservation and powerful online tools to study trends, indi-

ces, interactive maps, histograms, and other products from data collections of participating partners. The web content has two functional categories: data management and decision support.

“My MWADC” is an unusual web tool for data management. Each user is granted access to one or more projects. Users may obtain permission to use certain data management applications, named after their functional roles: Project Leaders, Biologists, Citizen Scientists and Analyst Tools.

The Project Leaders application manages project-wide properties and attributes. The Biologists application allows entering, verifying and editing data, and can also access maps and spatial data associated with study sites. Users can enter new observational data in the



Citizen Scientists application. All users can summarize results with the Analyst Tools to calculate density, abundance and species richness.

My MWADC is just one of several unique data management tools available at the MWADC website. The HTLN will remain interested and involved in this unique opportunity to take science into and beyond the borders of our parks.

*By Gareth Rowell and David Peitz*

*The Weather Vane* is published by the Heartland Inventory and Monitoring Network of the National Park Service. Visit <http://science.nature.nps.gov/im/units/htln/index.cfm>.

... protecting the habitat  
of our heritage



## Helpful Tips for Using Spatial Software

Park staff and HTLN scientists use maps and map products to navigate, and to collect and analyze data for a variety of park tasks. The more stable and organized the data is, the easier it is to use. Whether you use ArcGIS daily, weekly, or rarely, the following hints will help you achieve the best results:

1. **The most important tip:** never use spaces in file names or paths of spatial data. Spaces make data files unstable. Over time files with spaces in their name corrupt and become unreadable. Example of corruptible file name: C:/GIS/Park Data/Park trails.shp; example of a good file name: C:/GIS/Park\_Data/ParkTrails.shp.

2. Use ArcMap to navigate and open your project file (.mxd). Windows Explorer or My Computer will open ArcMap project files, but over time projects become unsta-

ble. Similarly, Use ArcCatalog, not Windows Explorer for managing all ESRI files. This ensures that renaming, copying, deleting, etc. changes all components of the file. Many spatial files are composed of four or more files. ArcCatalog makes all of the appropriate changes, but with Windows Explorer, you may miss files that belong to the renamed shapefile. This may corrupt the shapefile.

3. Tired of *<all other values>* in your layout legend (see graphic below)? In ArcMap, right click on the layer feature and open properties. View Symbology and uncheck *<all other values>*. Or just rename *<all other values>* in the Label column.

It can also affect the function of tools, such as clip or intersect.

5. Try to enter at least some metadata! This allows you to identify a file's purpose later. The more metadata you input, the better. At least add one sentence that states, "Line collected by X. Smith with Trimble Juno SB represents a water line installed on 3/7/2011 at PARK."

6. Some users may be color blind. Try not to use red/green or blue/purple combinations together.

7. Some printers cannot print shades of the color green. You might be able to see 30 different shades of green on your monitor, but the printer may only print 4. Check printer capabilities of the end user.

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at WICR matched historically high population sizes.

### Vegetation Community Monitoring

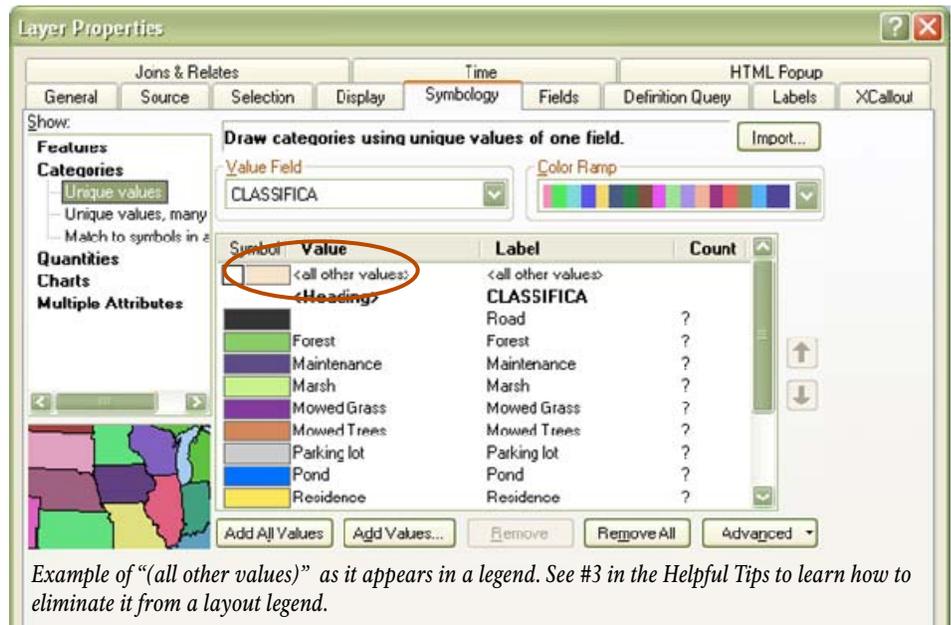
We monitored savanna grasslands at WICR for the third year and have a report in internal review. A report characterizing upland forest at LIBO is in internal review also. We posted reports and briefs for HEHO, HOME, PIPE and TAPR to the website .

### Wetland Monitoring

Craig Young spent a week at CUVA in July surveying vegetation at the Ira Road Beaver Marsh. We have eight new volunteers for well monitoring this year.

### Acronyms

NPS = National Park Service  
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



Example of "*<all other values>*" as it appears in a legend. See #3 in the Helpful Tips to learn how to eliminate it from a layout legend.

4. Create multiple polygons in the same direction, clockwise or counter-clockwise. Creating them in different directions can cause some area values to become negative, resulting in incorrect calcula-

Relational and spatial data require cautious handling within a framework and rules. Follow the rules and your data will serve you for many years.

by Jennifer Haack

### More on the Web

Midwest Coordinated Bird Monitoring: <http://midwestbirdmonitoring.ning.com/>

Midwest Avian Data Center (MWADC): <http://data.prbo.org/partners/mwadc/>

Avian Knowledge Network: <http://www.avianknowledge.net/content/>

PRBO Conservation Science is available at: <http://www.prbo.org/cms/index.php>

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

For prairie park interpreters: <http://theprairieproject.okstate.edu/5-8/index.html>