

## News in Brief

*Park abbreviations are given on page 4*

### Aquatic Monitoring

Sample processing and identification are ongoing. Staff will monitor fish and invertebrates at GWCA and WICR in early May.

**Invertebrates** — Invertebrate reports for BUFF, OZAR, GWCA and WICR have progressed from peer review to management review. The PIPE report is in draft form.

**Fish** — Fish sampling at BUFF begins in May and goes through June. Staff are working on synthesis reports for OZAR springs, and for OZAR and BUFF fish monitoring.

### Data Management

Staff are entering summary water quality data into NPStoret, a database provided by WASO Water Resources Division that follows the standardized Environmental Protection Agency format. The water quality data come from 43 logging stations across several parks.

### Exotic Plant Management Team

The EPMT started their field season, working with Conservation Corps of Iowa crews throughout network parks. We hope to see many of you soon!

### Fire Ecology

Staff are working on sustainability planning. We wish our lead monitor, Chris Kopek, well as he moves to a new position. The lead fire-effects monitor position will remain vacant for now.

**Great Plains Fire Science Exchange** — The GPFSE distributed a new issue of The Lek. Staff finished two video projects. If you missed the April 14 airing of Preserving the Tallgrass Prairie, the video will be linked from the GPFireScience website.

### Vegetation Monitoring

**Plant Community** — Staff continue work on draft reports for GWCA, PERI and WICR. We are gearing up to sample at HOME, EFMO, HEHO and PIPE in June. In addition, we will conduct thematic accuracy

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## Collaboration Improves Deer Monitoring

White-tailed deer (*Odocoileus virginianus*) management in most parks relies on effective measures of deer density to determine park-wide deer population size. In the absence of harvest data from hunters, HTLN uses transect surveys to calculate an index of deer density within a defined, visible area. The transect routes are limited to improved park roads for safety reasons. Consequently, we must be cautious of inferring our results beyond the survey area, which limits our ability to estimate overall population size.

Distance Sampling is an alternative sampling technique that, when the underlying assumptions are met, yields an unbiased estimate of deer density. Transect-based surveys assume that the population disperses randomly, relative to the survey route. Although this assumption is difficult to test, our observations lead us to postulate that the transect sample at Wilson's Creek National Battlefield (WICR) is representative of the park as a whole. In particular, the park habitat is proportionately represented along the survey route, meaning that we are not over- or under-sampling any particular habitat type. Additionally, we believe that deer travel within their expected home range, and that range is not influenced by the transect route.

To support a change to Distance Sampling, we needed to test these assumptions. The HTLN collaborated with the College of the Ozarks (C of O)



and the Missouri Department of Conservation (MDC) to assess our current deer surveying method and Distance Sampling method in estimating deer densities. During the month of January 2013, six C of O students surveyed the deer population on more than 80% of the habitat area of WICR, using evenly spaced, infrared-triggered game cameras. Deer density estimates were determined and compared by method. Deer movement between the camera stations throughout the park was determined also.

It will take more years of data collection before we can confidently adopt Distance Sampling, but preliminary results are promising. Very few deer traveled between camera stations and no deer travelled greater than a nearest neighbor station. This suggests that deer maintain relatively small home ranges, and disperse across the park based on habitat.

Fewer than 20% of the marked deer (antlered bucks) traveled distances greater than their expected home range of 160 acres. Of these deer, 80% appeared to travel as a group between camera stations one and two. It is plau-

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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



## Giving Greater Meaning to Googling!

The National Park Service recently switched email services to BisonConnect, a ®Gmail service contract. With BisonConnect, we have many of the features of ®Sharepoint for project management, but located with our email. One feature that we find convenient is the creation of calendars that can be shared with others. Another

feature that we are exploring is the use of Google Sites.

Sites allows the creation of an Intranet web-page on BisonConnect, without the need for html or coding. It encourages collaboration by facilitating communication. The beauty of the site is that the site owner or page creator can extend various levels of permission (view only, edit, owner) by sharing. The drawback is that under the protections unique to BisonConnect,

we cannot share our calendars, sites, or documents placed on the BisonConnect Drive with people outside of the Department of Interior.

We have established a site for HTLN that we hope to make available to our entire network. Unlike our Internet site, this is a place for conversation, the flow of ideas and feedback. The general organization for the site (Fig. 1) and some tips for using the site follow.

## Site Organization

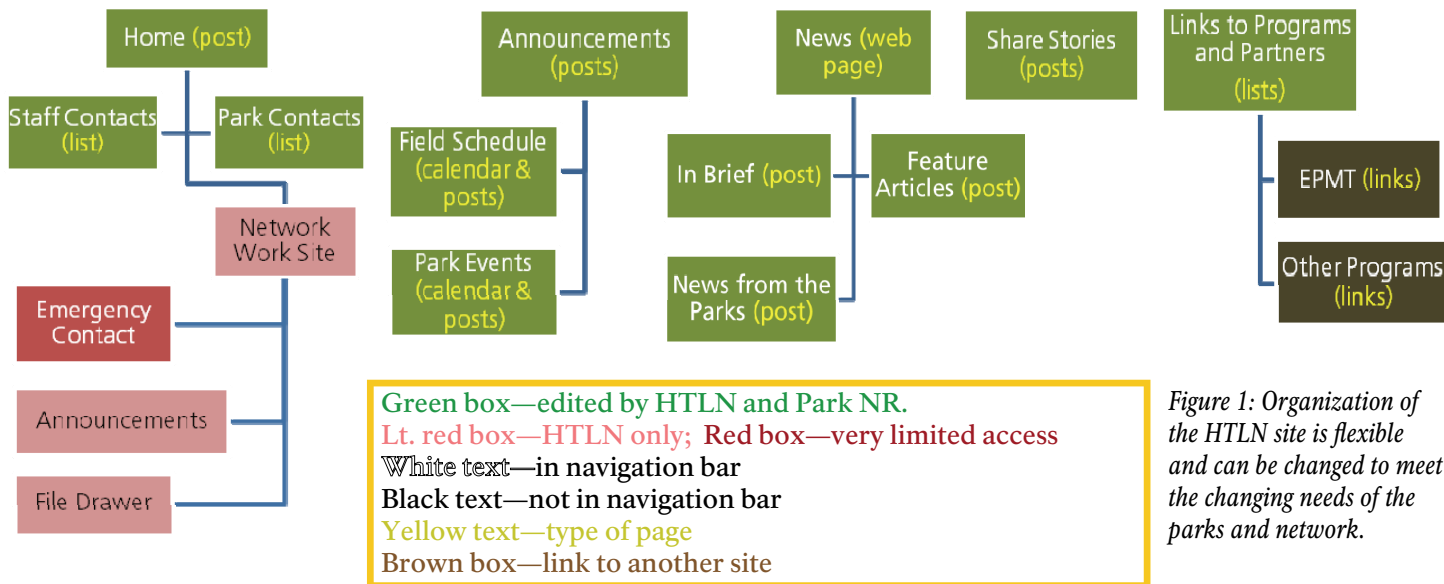


Figure 1: Organization of the HTLN site is flexible and can be changed to meet the changing needs of the parks and network.

## How Does the Site Work?

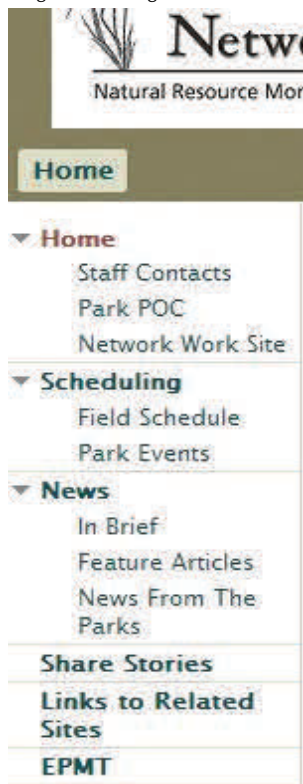
Currently, our site is only shared with HTLN program leaders. Soon, we will share the site with network parks. You will be notified by email when we share the site with you. If you would like to join the site, but do not get a notification, contact Sherry\_Middlemis-Brown@nps.gov.

Once you receive a notice, open the Sites tab from the top menu on your email page. The new tab will show you a list of sites that you created or that were shared with you. Simply select Heartland I&M Network.

A new tab will open and the Home page will appear. The Home page currently explains the site and how to use it. We will streamline this page once everyone is comfortable with the site. The organization will change, as we learn from user feedback. This site is more dynamic than a regular website.

A navigation bar appears on the left side of each page. Some pages in the organization chart (Fig. 1) do not appear in the navigation bar (Fig. 2). These sub-pages are embedded under another page in the hierarchy and access may be limited to certain users.

Figure 2: Navigation bar.



## What Can I Do on the Site?

At this time, only network staff and park staff associated with the network will access the site. We can Share the site with additional network park staff, but we do not wish to open this site to non-network viewers. The site is our informal, comfortable place for discussions. Our public face remains on the HTLN-NPS website.

The HTLN staff, natural resource managers and lead interpreters will be able to post to certain pages (green boxes on diagram). Add attachments and comments to existing pages. Simply select 'New Post' and type text and attach files. Comments can be added at the bottom of the page. If you find a page without posting or comments options, please let Sherry\_Middlemis-Brown@nps.gov know and she may change the design.

You may also be able to add events to a calendar. This brings us to the next subject: Calendars.

## Calendars

We have created two calendars that appear in the site. The first is the Field Schedule for the HTLN biologists. Only HTLN staff can change this calendar, but it is viewable by others. The second calendar shows Park Events, special activities at the parks. The lead interpreter at each park can access and edit this calendar. This allows us to avoid conflicts between events and field sampling, or to use a park event as an opportunity to piggy-back a demonstration for the public.

Calendars are not edited on the site, but rather within the Calendar application in BisonConnect. Only those with permission can edit calendars. Go to your calendar page. On the left, you will see 'My calendars' with calendar titles, <Your Name> and Tasks. If the Field Calendar or the Park Event Calendar have been shared with you, the name appears here.

Click on the drop-down menu next to your name and select Display Only This Calendar. What you see now should be only your personal calendar. Toggle between calendars. Toggle off your personal calendar by clicking on it, and toggle on another calendar. Now only the other calendar shows. You can toggle on as many calendars as you wish to see overlapping events.

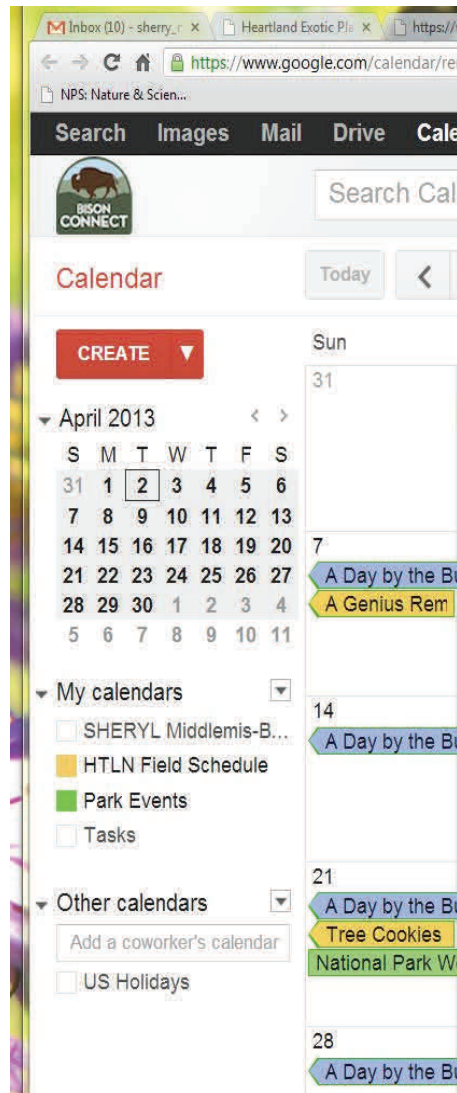
## Important!!!!!!!!!!!!!!

When adding an event or making any changes to a calendar, make sure that you have the correct calendar indicated in the Event Details (more below). You do not want to have your personal event (doctor's appointment) end up on the HTLN Field Schedule and published on the HTLN Site.

## Event Details Page

I tend to click on the calendar date/time, where I want to place an event, to open a quick window. First, I make sure that only the calendar where I want the event is showing.

Most of the time, I want more control over the details of the event than the quick window allows, and I select <Edit Event>. You can enter the particulars for your event here. If you are adding to a published calendar, the changes should appear in the calendar on the HTLN Site automatically, once you save the event.



## Add a Page to Site

In the top right corner of each page to which you have editing rights, there appears a small pencil and a rectangle (page) with a + sign. Click the page symbol. A window opens. Name your page. Select a template to use:

- Web — allows text and comments.
- Announcements — allows others to post blog-style.
- File Cabinet — save documents.
- List — spreadsheet list.

Select the location of the page, top level or under a parent page. Save.

Once you have a new page, fill in the text and add whatever you would like. Notice there are options for insertions in the top menu. Save.

Page Settings under More (top right) will allow you to change parameters on your page. Finally, share your page with as few or as many people as you wish. The default sharing level is the same as the parent page. It is al-

ways best to click on Share (top right) and ensure that you have shared your page with the right people. You cannot share with anyone not already having access to the parent page, but you can limit sharing to a subset of that group.

Remember to Save before moving to another page.

## Limited Number of Pages?

There is no limit, except for practicality. That is why the site owners will use discretion in organizing entries and removing old announcements. I recommend that all editors remove their own posts that are no longer needed.

## Can Multiple Users Edit?

Avoid editing the site while someone else is editing. The second person attempting to make changes will be warned of the conflict and will be offered the option to wait until the other person is done. The editing person's name will appear and you can take control away from that person. I suggest that you contact the other person before wresting control by breaking page locks.

## Subscribe to a Site Page

To see any changes or new postings on a page, select Subscribe to This Page under More (at top).

## What Happens If I Screw It All Up?

First, contact Sherry\_Middlemis-Brown@nps.gov as soon as possible. A really neat feature of the site is that we can revert to a previous version. So no matter what you did, we can fix it. We can even recover the site for 30 days after you accidentally deleted it!

So don't worry. Be happy. Take a walk on the wild side, and have fun with the HTLN site.

## SUCCESS!

The success of this site is predicated on network users. We have not had a network-wide meeting in many years, and have lost some of the synergistic energy that flows from discussion. This is a way to discuss and share ideas with others, remotely. Join in!

## Bet Your Sweet Ash, a Successful Treatment for EAB

Most people in the Midwest are aware of the emerald ash borer (*Agrilus planipennis*, EAB), an exotic insect discovered 11 years ago that has spread to 16 states, including seven of the eight states with HTLN parks.

The EAB larvae feed on sapwood of ash trees (*Fraxinus* spp.), disrupting flow of water and nutrients. Once infected, trees usually die within 2-3 years. According to the Emerald Ash Borer website (More on the Web), EAB has killed tens of millions of ash trees in the Midwest and East.

Several parks in the HTLN have large numbers of ash trees contributing to their park settings and cultural landscapes. Hopewell Culture National Historical Site has undertaken to control EAB with emamectin benzoate injection and imidacloprid ground drench to prevent or kill EAB larvae.

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assessment's for draft vegetation inventory maps at HEHO, LIBO and PIPE.

**Rare Plants** — Staff have set up plots and are ready to perform the Missouri bladderpod annual census.

### Wetland Monitoring

Volunteer monitors are back in full swing. Doug Marcum returned for his third field season. Our focus is still on writing.

### Wildlife Monitoring

**Breeding Bird** — Bird reports for GWCA, PERI, and WICR went out to the parks and are posted on our website.

**Whitetail Deer Monitoring** — Data have gone through quality checks (QA/QC). Reports will be finalized and sent to parks.

### Abbreviations

NPS = National Park Service  
ARPO = Arkansas Post National Memorial  
BUFF = Buffalo National River  
CUVA = Cuyahoga Valley National Park  
EFMO = Effigy Mounds National Monument  
EPMT = Exotic Plant Management Team  
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

A Forest Service (U.S.D.A.) Forest Health grant allowed HOCU to hire a contractor to treat 28 high-value ash trees in 2012. Sequestration placed a hold on the Forest Health grant this year, jeopardizing the project at HOCU. Contracting for injection services is costly, but the work could be done by trained park personnel. Therefore, HTLN assisted HOCU by purchasing injection equipment that can be used by all HTLN parks. Staff received training on injection equipment in April, and they will continue treatments in the spring this year.

Unfortunately, EAB can fly a half mile, making death, removal or treatment of ash trees on neighboring land important to long-term success. Budget cuts have hampered coordination with local park departments, but HOCU remains hopeful that collaboration will affect a treatment program.



*Contractor injecting tree at HOCU*



*Dave Adkins from the Ohio Department of Agriculture presents information on EAB and how to protect ash trees.*

In March, HOCU held a public presentation about EAB and other tree pests. The presentation was co-facilitated by Dave Adkins from the Ohio Department of Agriculture and Dafna Reiner of HOCU. The attendees asked many questions about treatment options. They also discussed other pests, such as Asian longhorn beetle, hemlock woolly adelgid, gypsy moth and thousand cankers.

By working together, HOCU, HTLN, the Forest Service, the Ohio Department of Agriculture and park neighbors addressed a need to preserve forest resources and cultural landscape of HOCU. The equipment will remain available for use by the 12 HTLN parks within the EAB range.

— by Sherry Middlemis-Brown

*(Continued from page 1)*

sible that the center of this deer group's home range was equally spaced between the two stations.

Camera estimates of deer density were 74% lower than estimates from our current methods. However, camera estimates of deer density were 18% higher than those determined using Distance Sampling. Over the next several years we will be watching to see if the relationship among the three techniques remains the same.

While our findings are preliminary, important results were realized in 2013. The HTLN strengthened an already great working relationship with the MDC. The HTLN also developed a new working relationship with the C of O. The C of O has already agreed to survey deer at WICR in 2014 with the possibility of expanding their work to other parks. One professor and six students who had never visited WICR have joined the many volunteers at WICR, contributing to resource management.

— submitted by Dave Peitz

## More on the Web

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

Great Plains Fire Science Exchange: <http://GPFireScience.org>

Emerald Ash Borer information: <http://www.emeraldashborer.info/>

HTLN BisonConnect site: <https://sites.google.com/a/nps.gov/heartland-i-m-network/>