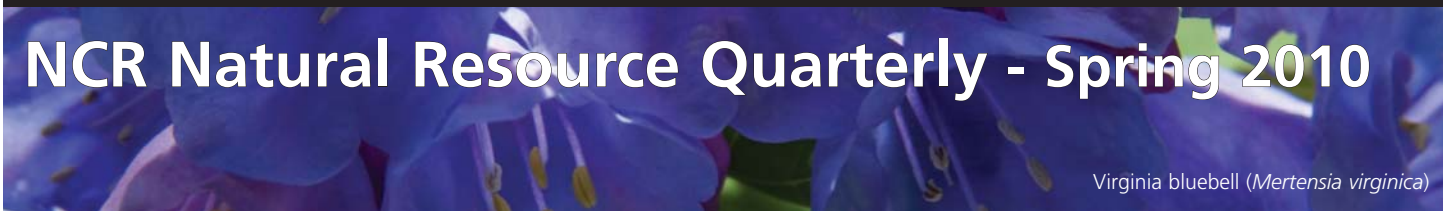
National Capital Region Network
Inventory & Monitoring Program

National Park Service
U.S. Department of the Interior

NCR Natural Resource Quarterly - Spring 2010



Virginia bluebell (*Mertensia virginica*)

Why to Read this Quarterly

The NCRN I&M program is here to serve you—the parks of the National Capital Region. Since 2002, I&M has been conducting inventories and long-term monitoring of natural resources (vital signs) that were selected by park managers, and the goal of this quarterly publication is to keep you informed about what's being learned.

I&M collects, analyzes, and shares data to help support informed natural resource management decisions. These data can be used for immediate management needs and for long-term planning tools like Resource Stewardship Strategies (RSSs) or Natural Resource Condition Assessments (NRCAs).

We hope this quarterly newsletter will provide a quick and handy reference to the latest I&M information. ***Feedback or suggestions for topics you'd like to see covered are welcome*** and should be sent to Megan Nortrup by email or at 202-342-1443 x214.

Coming to Your Park this Spring...

-The I&M ***forest vegetation monitoring*** team led by botanist John Parrish will be doing field work in all parks from May through September, monitoring forest vegetation along with ***forest insect pests, invasive/exotic plants, and soils***. A full four-year forest monitoring cycle was completed in 2009 and this year plots are being revisited for the first time.

-A team of plant ecologists will be out in all parks also from May to September, conducting ***accuracy assessments for veg maps*** (see veg map article in following pages).

-A ***macroinvertebrate monitoring*** team from Versar, Inc. will monitor benthic macroinvertebrates from March through May in the lower third of the following streams: Youngs Branch in MANA*, Bush Creek and Visitor's Center Creek in MONO, and Big Hunting Creek, Whiskey Still Creek, and Owens Creek in CATO.

-An ***amphibian monitoring*** team from the USGS Patuxent Wildlife Research Center will be working in CHOH and ROCR from March through June. An I&M staff team will monitor amphibians in MANA during the same period.

-A ***forest bird monitoring*** team from the University of Delaware will be in the field in all parks from May through August.

-NCRN I&M ***water monitoring*** continues in all parks year round.

*Park acronyms on next page

In This Issue:

Attendees of the NPS National Capital Region Natural Resources Round-Up, November 2009. Photo: NPS.

-The NCR's ***Exotic Plant Management Team*** (EPMT) headed up by EPMT Team Leader Frank Archuleta will be treating lesser celandine (formerly *Ranunculus ficaria*, now *Ficaria verna*) at GWMP's Teddy Roosevelt Island, CHOH's Cabin John Island, and at WOTR starting in mid-March. In April they plan to treat tree of heaven (*Ailanthus altissima*) in CHOH and HAFE and Japanese honeysuckle (*Lonicera japonica*) at Assateague Island. During May new seasonal staff will train in ROCR.

Spring Wildflower Walks in PRWI and CATO

Learn to identify spring wildflowers and spring blooming shrubs and trees with I&M Botanist John Parrish. John, who has been botanizing in the Washington region for more than 30 years, will lead wildflower walks this spring in PRWI and CATO.

The PRWI walk (April 14, 9:15 am - 2:45 pm) will follow the South Valley Trail along the South Fork of Quantico Creek.

The CATO walk (April 27, 9:15 am - 2:45 pm) will explore the headwaters of Owens Creek along the Deerfield Nature Loop.

All are welcome, but space is limited. Participants should bring their lunch. John is also available between now and the end of May to lead park staff in walks in their own parks. To sign up for a wildflower walk or for more information contact John Parrish by email or at 202-342-1443 x203.

Wild blue phlox (*Phlox divaricata*). Photo: Thomas Paradis.

Park Acronyms
ANTI = Antietam National Battlefield
CATO = Catoctin Mountain Park
CHOH = Chesapeake & Ohio Canal National Historical Park
GWMP = George Washington Memorial Parkway
HAFE = Harpers Ferry National Historical Park
MANA = Manassas National Battlefield
MONO = Monocacy National Battlefield
NACE = National Capital Parks - East
NAMA = National Mall and Memorial Parks
PRWI = Prince William Forest Park
ROCR = Rock Creek Park
WOTR = Wolf Trap National Park for the Performing Arts

New GIS Products

NCRN recently received a set of 20 GIS products from the national I&M office in Ft. Collins as part of NPScape, the NPS landscape monitoring project database (http://nrinfo/Landscape.mvc/Welcome).

These products cover all NCRN parks with a 30 kilometer buffer around each park. They fall into roughly six categories including products on: land conservation status, housing density, landcover, pattern (morphology of natural areas), population levels, and roads (see table below).

Newly Arrived NCRN GIS Data	
Conservation Status	Area Protected
	Ownership Area / Category
	Ownership
Housing	Current Density
	Historic Density (100m cells)
	Projected Density (100m cells)
Landcover	Percent Natural vs. Converted
	Change in Natural vs. Converted
	Area/ Category
	Percent Impervious
Pattern	Forest morphology; # = edge width scale
Population	Total;# = 1990, 2000
	Density; # = 1990, 2000
	Recent Change 1990-2000 (% total and density)
	Historic Change, by County
	Projected Change, by County (% total and density)
Roads	Road Density
	Distance from Roads
	Area without Roads

NCRN hopes to host a workshop this year on how to make the best use of these products, and what types of analyses we might create locally to build on these products.

If you have not yet received this data, or have ideas for what you'd like to see covered in the workshop, contact Mark Lehman by email or at 202-342-1443 x225.

Draft Final Vegetation Maps

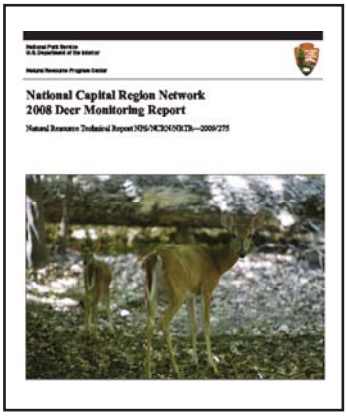
After eight years of aerial photos, rapid assessments, vegetation plots, classification analyses, GPS and GIS plant community delineations, and map validation, the draft final vegetation maps (veg maps) for all NCRN natural resource parks will be arriving by July 2010.

Veg maps will be finalized by 2012 after map errors are estimated. Error estimates indicate a map's level of accuracy and should meet the NPS standard of 80% accuracy per map class. To generate error estimates, plant ecologists will conduct accuracy assessments in the parks during the summers of 2010 and 2011.

Once the veg maps are complete, parks will receive plant

classifications, keys to plant communities, hard copy maps, digital GIS data layers, and all metadata. All final veg maps will be available online at the USGS/NPS vegetation mapping website http://biology.usgs.gov/npsveg/index.html. The completed veg maps are intended to be dynamic and kept up-to-date by the parks.
The Urban Ecology Research Learning Alliance, and NatureServe are creating reader-friendly field guides to natural communities in hard copy and online formats, and interactive vegetation maps. For more information contact Diane Pavek at 202-342-1443 x209.

2008 Deer Monitoring Report


National Capital Region Network
2008 Deer Monitoring Report

The recently released 2008 Deer Monitoring Report details the results of spotlighting surveys and fall-winter pellet-group counts for white-tailed deer in the region for 2008. To view a copy visit https://science1.nature.nps.gov/naturebib/biodiversity/2009-12-7/NCRN_Deer_Monitoring_Annual_Report_2008.pdf.

Future Biological Stream Monitoring

The NCRN is now in its third year of biological stream sampling. A team from Versar, Inc. (who also contributes to Maryland's Chesapeake Bay Water Quality Monitoring Program) is under contract to continue spring benthic macroinvertebrate monitoring (March to May) and summer fish monitoring (June to August), through the 2013 field season. Benthic macroinvertebrates are monitored using a modified version of the Maryland Department of Natural Resources Biological Stream Survey (MBSS) sampling protocol, and fish are monitored using stream electrofishing.
Fish and benthic macroinvertebrate monitoring is part of NCRN's overall stream health monitoring which also includes monitoring of water quality and physical habitat. Biological stream monitoring is slated for the lower third of the following locations for 2011 through 2013.
For 2011, monitoring will be done in PRWI on the North Branch of Chopawamsic Creek, Middle Branch of Chopawamsic Creek, Carters Run, Mawavi Run, North Fork Quantico Creek, Orenda Run, Taylor Run, and Mary Bird Branch.
For 2012, monitoring will be done in GWMP on Pimmit Run, Turkey Run, and Mine Run; and in WOTR on Courthouse Creek and Wolftrap Creek.
For 2013, monitoring will be done at ANTI in Sharpsburg Creek; at HAFE in Flowing Springs Run; and at NACE in Henson Creek, Accokeek Creek, Still Creek, and Oxon Run. Each park will receive an individual progress report for the year it is monitored. Regional monitoring results will be published by I&M staff in 2013.

Freshwater Sponges

The I&M water monitoring team recently collected samples of freshwater sponges from riffles of the South Fork of Quantico Creek in PRWI. The sponges, first spotted in 2007, were collected with a permit in 2009. Klaus Rutzler at the Smithsonian's National Museum of Natural History examined the samples using a scanning electron microscope and identified them as the species *Ephydatia muelleri*. There is no previous record of this species in this location.
Freshwater sponges are most likely to be found where water quality is high. They appear green or dull yellow in color and are easiest to spot in summer and fall when their symbiotic algae (which they are sometimes mistaken for) is at its brightest green. If you have seen a freshwater sponge in your park, please let us know. For additional information contact Marian Norris at 202-342-1443 x206.

This freshwater sponge, colored green by symbiotic algae, coats a streambed rock at PRWI. To the touch, sponges feel like a patch of coarse yet pliable hairs, unlike algae alone which feels slimy. Photo: Tonya Watts.

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Regional Natural Resources Sharepoint Site

A reminder: the National Capital Region has a Natural Resources sharepoint at **http://inpncrosp.nps.doi.net:8094/default.aspx**. The site is a clearinghouse for regional natural resource information and includes pages for NAT (the Natural Resources Advisory Team), Funding Calls and TACs (Technical Assistance Calls), and CUE (the Center for Urban Ecology). Under the NAT tab, NAT Chair Erik Oberg has posted a variety of helpful materials including DI-1s to assist with sourcing and pricing supplies and materials, volunteer position descriptions, IPM work plan templates, and other materials. Please add any documents that may be of use to others. New headings/topics can be created as needed.

The NCRN I&M program also has its own sharepoint, **http://imnetsharepoint/NCRN/default.aspx.** The site is a clearinghouse for network documents and information where you can see, among other things, draft versions of Natural Resource Condition Assessments (NRCAs) for MANA, MONO, and ANTI.

Spring Calendar

March

23-25. Adapting to Climate Change in the Mid-Atlantic Workshop. Cambridge, MD. http://www.georgewright.org/macc.

April

7. Climate Change 101. 1:00 to 2:00 pm. Main Interior Building Library.

14. Spring Wildflower Walk at PRWI. 9:15 am to 2:45 pm. Contact John Parrish by email for details.

20. Spotlight on National Park Resources Conference. 9:00 am to 3:30 pm. Frederick Community College Conference Center, Frederick, MD. Contact Giselle Mora by email for details.

22. NAT Meeting. HAFE.

27. Spring Wildflower Walk at CATO. 9:15 am to 2:45 pm. Contact John Parrish by email for details.

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Quantitative Ecologist: John Paul Schmit
Science Communicator: Megan Nortrup
Visual Information Specialist: Thomas Paradis
Water Resources Specialist: Marian Norris

Visit NCRN I&M at:
http://science.nature.nps.gov/im/units/ncrn/index.cfm
http://imnetsharepoint/NCRN/default.aspx

NCR Natural Resource Quarterly offers updates on the status of park natural resources and Inventory and Monitoring (I&M) "vital signs" for the NPS National Capital Region (NCR).

Questions or comments? Contact Megan Nortrup by email or at 202-342-1443 x214.