



# NCRN Natural Resource Quarterly

SPRING 2013

## New Weeds to Watch Out For

Mark Frey, Exotic Plant Management Team Liaison

Weeds are everywhere. And the parks in our region spend lots of time and money working to control them. Understandably, most attention goes towards well recognized problem species like kudzu, tree-of-heaven, and Japanese stiltgrass, but less well known species with a limited distribution may over time prove to be a major threat.

While we can't go back in time to stop weeds like Japanese stiltgrass or *Ailanthus* from getting into our parks, we can stop and slow down invasions by new species. It is in response to these emerging and potential invaders that the Exotic Plant Management Team (EPMT) for the National Capital Region has released a set of new "Invasive Plant Alerts" for 37 species.

Identifying these emerging species now (early detection) allows them to be removed with relatively small effort (rapid response). Waiting to act might create expensive and destructive problems down the road.

The new Invasive Plant Alerts are meant to be something like a most wanted poster—post them on the wall so staff and visitors can report these species. Many of the new species to watch out for are horticultural escapees, while others are simply expanding into new territory.

The list of 37 early detection targets was developed in



The Japanese stiltgrass of tomorrow? Clockwise from upper left: creeping lilyturf (*Liriope spicata*), fountain grass (*Pennisetum alopecuroides*), sawtooth oak (*Quercus acutissima*), and Italian arum (*Arum italicum*) are lesser-known invasive plants that have low distribution now, but could be a problem in the future.

2012 by the EPMT steering committee. Extra kudos are due to the 35 volunteers who helped create the alerts, and especially Amanda DuPrey who worked tirelessly to standardize the alerts and secure use of high-quality (*Continued page 2*)

Photos (clockwise from upper left): Forest & Kim Starr, Starr Environmental; Bonnie Million, NPS, bugwood.org; Chuck Barger, Univ. of Georgia, bugwood.org, and Missouri Botanical Garden

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### Coming to Your Park this Spring...

	ANTI*	CATO	CHOH	GWIMP	HAE	MANA	MONO	NACE	PRWI	ROCR	WOTR
I&M Amphibian Monitoring			x			x				x	
Exotic Plant Management	x	x	x	x	x	x	x	x	x	x	x
I&M Forest Vegetation Monitoring	x	x	x	x	x	x	x	x	x	x	x
I&M Macroinvertebrate Monitoring	x				x			x			
I&M Marsh Elevation Monitoring				x				x			
I&M Water Monitoring	x	x		x	x	x	x	x	x	x	x

\*Park acronyms on page 4

# I&M Monitoring of Invasives—A Report on the First 400 Plots

2,641.

That's the number of acres of forest completely covered with Japanese stiltgrass (*Microstegium vimineum*) in the National Capital Region as of 2009. Stiltgrass thrives in the low light of forest floors and forms a dense blanket that displaces native ferns, flowers, and other plants. In 2009 it made up 5% of the herbaceous cover in all NCR forests, a number that has only grown since.

This startling information comes out of a new I&M report on the first four years of monitoring forest pests, pathogens, and invasive plants (2006-2009) in the NCR. I&M monitors vegetation in 400 forest plots every 4 years. The completion of 2013 monitoring will mark a second complete round of monitoring and an opportunity to look for regional trends in vegetation condition.

The new report on invasives and forest pests and pathogens is available for download from the NCRN Forest Vegetation webpage: <http://science.nature.nps.gov/im/units/nrcn/monitor/forest/index.cfm>.

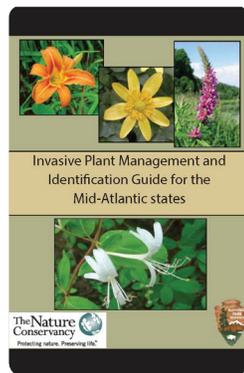


Photo: NPS/Paradis

A scenic roadway at first glance, this forest edge at Catoctin Mountain Park is blanketed by Japanese stiltgrass. (The lone shrub is Japanese barberry.)

## Guide to Identify and Manage Invasives

“Invasive Plant Management and Identification Guide for the Mid-Atlantic States” is another new tool in the battle against invasives. This pocket-sized flip book, a collaboration between The Nature Conservancy and the NPS, includes standard treatment techniques along with identifying traits for



each invasive. Copies of this field guide are available at no cost by contacting Giselle Mora-Bourgeois by NPS email or at 202-339-8320.

## IPM Trainings for 2013

Several Integrated Pest Management (IPM) trainings are being offered this spring and summer. Please see the Calendar on the last page of this issue.

(Weeds continued)  
photographs.

The alerts are available from EPMT Liason Mark Frey and are posted on the EPMT page of the Center for Urban Ecology website at <http://www.nps.gov/cue/epmt/index.htm>. The alerts cover the following species:

**Vines:** Black swallow-wort, pale swallow-wort

**Trees:** sycamore maple, birch-leaf pear, corkscrew willow, Japanese angelica tree, Japanese corktree, pagoda tree, sawtooth oak

**Shrubs:** Amur honeysuckle, Chinese buckthorn, Chinese privet, five-leaf aralia, Himalayan berry, holly osmanthus, leatherleaf mahonia, linden viburnum, orange-eye butterfly bush, shiny buckthorn, thorny olive, wintergreen barberry

**Forbs:** creeping lilyturf, giant hogweed, giant knotweed, Italian arum, Spanish bluebells, summer snowflake, yellow archangel  
**Grasses & Sedges:** arrow bamboo, bog bulrush, fountain grass, giant reed, pygmy bamboo, Ravenna grass, wavyleaf basket grass  
**Aquatics:** alligatorweed, giant salvinia



An Invasive Plant Alert for giant knotweed, a lesser known species that may pose a future threat.



## Video About NCRN I&M

The National Capital Region Network, Inventory & Monitoring (NCRN I&M) is excited to share our new video. In just four minutes, it describes I&M's work in the National Capital Region and our monitoring of forest vegetation, water quality, amphibians, fish, macroinvertebrates, birds, and stream conditions.

We hope this video helps introduce and explain the work of I&M to new NPS employees, NPS employees who are new to the region, other federal agencies, and potential partners and collaborators. We also wanted to share how proud we are to be part of efforts to protect and care for the amazing resources in the National Parks of the NCR. Thanks for watching, and feel free to share on park social media or websites: <http://www.youtube.com/watch?v=JYXR1UMdmkk>.

Still shots from a new video about NCRN I&M showing (clockwise from upper left) fish monitoring at GWMP, forest vegetation monitoring at PRWI, stream amphibian monitoring at ROCR, and a wildflower walk at ANTI.

## NCRN I&M Website Redesign

The NCRN I&M website (<http://science.nature.nps.gov/im/units/ncrn/index.cfm>) has a new look and simpler navigation! Monitoring reports, briefs, data bundles, and other products are available through both vital sign "Monitoring" pages and the "Documents and Reports" page. A new "Featured Information" section at the bottom of the homepage highlights NCRN's newest publications and video content (including the new video described above!).

The change, part of a bigger redesign for all I&M networks webpages across NPS, aims to make park data easier to find, showcase monitoring protocols that are of interest to other federal agencies, and highlight available multimedia content.

Comments are welcome. Contact Megan Nortrup by NPS email or at 202-339-8314.

**National Park Service**  
Inventory & Monitoring (I&M)

NATIONAL CAPITAL REGION NETWORK (NCRN) NPS » Explore Nature » I&M » National Capital Region Network

**National Capital Region Inventory & Monitoring Network**

**Quick Links**

- Network Brochure
- Red de la Región de la Capital Nacional (en Español)
- NCRN Newsletter
- NCRN NR Sharepoint (NPS Only)

**Featured Information**

**NCRN Natural Resource Quarterly (Winter 2012)**

Articles concerning: Cultural Landscapes, How Soils Affect Forests, Hurricane Sandy & Continuous Water Loggers, and more. [View PDF](#)

**Pests and Exotic Plants Report**

A new report on the first four years of monitoring forest pests, pathogens, and invasive plants (2006-2009) in the NCR. The completion of 2013 monitoring will mark a second complete cycle of monitoring and an opportunity to look for regional trends in vegetation condition. This summary of the first 4 years sets the stage. [Download it here!](#)

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# Is that MRSA on Your Glove?

Article overview by Scott Bates, NCR Wildlife Biologist

A recent study in the *Journal of Wildlife Diseases* shows there's good reason to wear gloves before handling any wildlife, and to dispose of those gloves after use: wildlife can harbor methicillin-resistant *Staphylococcus aureus* (MRSA).

The study was conducted at the Wildlife Care Clinic at Iowa State University where samples were taken from 114 animals arriving at the facility, to test for MRSA. Sterile swabs were used to collect samples from the nasal mucosa, wings, wounds, and cloaca of 37 species of wildlife.

Of the 114 animals tested, three (2.1%) carried MRSA. Two were eastern cottontail rabbits (*Sylvilagus floridanus*) with positive nasal samples and one was a lesser yellowlegs (*Tringa flavipes*) with positive samples from nasal and wound samples.

The rabbit samples were resistant to erythromycin and tetracycline, and were positive for the Pantone-Valentin Leukocidin (PVL) gene. The PVL gene is a cytotoxin that is present in the majority of MRSA cases. It is the cause of the necrotic lesions in the skin or mucosa.

The yellowlegs samples were resistant to oxacillin, erythromycin, clindamycin, and levofloxacin.

The authors conclude that because of opportunistic sampling and the time required to process the samples that they may be underestimating the prevalence of MRSA in wildlife. Clinic workers were not sampled but wore gloves at all times when handling animals so that the risk of human transmission



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Wearing gloves is essential when handling wildlife. Pictured: bobcat kittens at Santa Monica Mountains NRA.

was unlikely. This should be a pointed reminder to all NPS employees to wear gloves prior to handling any wildlife, and to dispose of the gloves after use.

This article is available upon request from Scott Bates.

## Reference

Wardy, S.E., Lin K. Kauffm, and Tara C. Smith. Methicillin-resistant *Staphylococcus aureus* in Central Iowa Wildlife. 2012. *Journal of Wildlife Diseases*. 48(4): 1069–1073.

## Feral Hog Update

New guidance on feral hogs is now available. Per Environmental Analyst Joel Gorder: Categorical Exclusion E3 would likely be acceptable justification in relation to controlling feral hogs if the situation involves an individual animal or a small number of individuals that are transient and causing resource

damage or threatening human safety.

This update follows a previous article on feral hogs in the Fall 2012 *Quarterly* (p5), by Scott Bates, NCR Wildlife Biologist.

### Park Acronyms

ANTI = Antietam National Battlefield  
CATO = Catoctin Mountain Park  
CHOH = Chesapeake & Ohio Canal National Historical Park  
GWMP = George Washington Memorial Parkway  
HAFF = Harpers Ferry National Historical Park  
MANA = Manassas National Battlefield Park

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

# I&M Water Monitoring in 8th Year!

It's hard to believe, but 2013 marks the eighth year of NCRN I&M water monitoring in National Capital Region streams! NCRN has monitored 38 wadeable NCR stream sites every month since 2005.

The data from this monitoring, covering 2005 to the present, are available through EPA Storet (<http://www.epa.gov/storet/>) or by contacting NCRN Hydrologic Technician Jim Pieper. What kind of data exactly? Water quality is rated based on these parameters:

## I&M Water Monitoring Parameters

### Water Chemistry

temperature  
pH  
specific conductance  
salinity  
acid neutralizing capacity  
dissolved oxygen

### Nutrient dynamics

nitrate (NO3)  
phosphorous (PO4)

### Surface water dynamics

flow  
discharge  
water depth  
wetted width

We are excited to be reaching the point where we will be able to look for long-term trends in water quality. Some parameters already show seasonal trends (temperature, dissolved oxygen, and in some streams, acid neutralizing capacity).

These trends can already be seen in NCRN's annual water reports which look at each monitoring parameter and compare them against standards for maintaining the health

of stream organisms, drinking water standards, or Environmental Protection Agency and state water-use standards. (A full complement of water quality reports are available on

the water page of the NCRN website at: [http://science.nature.nps.gov/im/units/ncrn/monitor/water\\_quality/index.cfm](http://science.nature.nps.gov/im/units/ncrn/monitor/water_quality/index.cfm).)

To support its monthly monitoring program, NCRN is also pilot testing continuous water monitoring at some sites (see Winter 2012 *Quarterly*, p3). This continuous monitoring uses data loggers that record water level, dissolved oxygen, conductivity, and temperature on a continuous basis throughout the year. New loggers were recently added at Wolf Trap and Rock Creek.

NCRN also continues a pilot test of conductivity monitoring (and soon water level) in the Potomac River at Piscataway (NACE) and near Fort Hunt (GWMP). Continuous loggers there monitor for changes above the transition zone from fresh to brackish water. They should show annual patterns of salinity and provide early warning of increasing salinity levels that could effect fresh-water tidal marshes in GWMP and NACE.



NCRN Hydrologic Technician Tonya Watts collecting stream discharge data.

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## Bobcat at Prince William Forest Park



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This nighttime image of a bobcat (*Lynx rufus*) was captured by a camera trap in Prince William Forest Park in November 2012. The daytime image was captured at neighboring Quantico Marine Base in August 2011.

## Calendar

**\*Several Integrated Pest Management (IPM) trainings are being offered this spring and summer. They are noted below with an asterix. For additional event information, please contact Regional IPM Coordinator Jil Swearingen by NPS email or at 202-339-8318.**

2013

### MARCH

11-15. George Wright Society Conference on Parks, Protected Areas, and Cultural Sites. Denver, CO. <http://www.georgewright.org/>

\*28. Capital Region Invasive Pest Symposium. Brookside Gardens, Wheaton, MD. 10 am- 2 pm.

### APRIL

18. NAT (Natural Resources Advisory Team) Meeting. HAFE /Mather Training Center.

\*23. Cooperative Weed Management Areas Training. National Conservation Training Center, Shepherdstown, WV. Free. 9 am- 4 pm.

### MAY

\*14. Integrated Pest Management Principles and Practices. Museum Resource Center, Landover, MD. 9 am- 2:30 pm.

\*23. Integrated Pest Management Principles and Practices. National Conservation Training Center, Shepherdstown, WV. 9 am- 12 pm.

### JUNE

6. EPMT-Sponsored Invasive Plant Training. National Conservation Training Center, Shepherdstown, WV. 8:30 am- 3 pm. Contact Mark Frey for details: 202-339-8317.

27. EPMT-Sponsored Invasive Plant Training. Fort Dupont 8:30 am- 3 pm. Contact Mark Frey for details: 202-339-8317.

### JULY

18. NAT (Natural Resources Advisory Team) Meeting. NAMA.

\*31- August 1. Mid-Atlantic Invasive Plant Council 2013 Conference "Ensuring Restoration Successes" National Conservation Training Center in Shepherdstown, WV.

## I&M Results Revue

The NCRN I&M is now making special trips, en masse, to visit with park staff and talk about park-specific monitoring results. The meetings are a chance to go beyond printed reports and briefs, answer questions, and discuss findings. So far I&M has visited ROCR, ANTI, NACE, and CATO. More visits are in the works. To learn more contact Megan Nortrup by NPS email or at 202-339-8314.



CATO and I&M staff discuss I&M landscape data, February 2013

NPS, Pieper

### National Capital Region Network Inventory & Monitoring (NCRN I&M) Staff:

Program Manager: Patrick Campbell  
Botanist: Vacant  
Data Manager: Geoff Sanders  
GIS Specialist: Mark Lehman  
Hydrologic Technician: Jim Pieper  
Hydrologic Technician: Tonya Watts  
Quantitative Ecologist: John Paul Schmit  
Science Communicator: Megan Nortrup

Visit NCRN I&M online at:

Website: <http://science.nature.nps.gov/im/units/ncrn/index.cfm>  
Sharepoint: <http://imnetsharepoint/NCRN/default.aspx>  
RSS: [http://science.nature.nps.gov/im/units/ncrn/rss/ncrn\\_rss.xml](http://science.nature.nps.gov/im/units/ncrn/rss/ncrn_rss.xml)  
Twitter: <https://twitter.com/#!/NPSNCRN>

*NCRN 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 Network (NCRN).

Questions or comments? Contact Megan Nortrup by NPS email or at 202-339-8314