



NCRN Natural Resource Quarterly

Summer 2015

What You Need to Know About Threatened Northern Long-Eared Bats

On May 4, 2015, the northern long-eared bat (NLEB; *Myotis septentrionalis*; also called northern myotis) was officially listed as threatened by the US Fish and Wildlife Service (FWS) due to the impacts of white-nose syndrome. It is the second federally protected bat species in the National Capital Region, joining the endangered Indiana bat (*Myotis sodalis*), which was listed primarily due to loss of habitat.¹

In summer, NLEB females roost underneath bark, in cavities, or in crevices of live or dead trees of many different species in upland and riparian forests. Males roost in rocks or hibernacula. NLEBs spend the winter hibernating in caves and mines. Parks must keep forest management (i.e., tree removal) a quarter mile from known, occupied NLEB hibernacula throughout the year.

From June 1-July 31 (NLEB pup season) female NLEBs move pups frequently, as often as every 2 to 3 days. During this period parks must avoid cutting or destroying known roost trees or clearcutting within a quarter mile of known maternity and roost trees. This means parks need to know where NLEBs are during the summer maternity period and plan to remove trees in winter when no NLEBs are present. The total area of tree removal cannot exceed 1 acre total (either clearcut or cuts within a larger area). Removal of hazard trees is allowed according to the FWS Chesapeake Bay field office.

Tree Removal and Section 7 Consultation

A Section 7 consultation is needed for any discretionary federal action, such as tree removal, that may affect the NLEB. Section 7 of the Endangered Species Act, called “Interagency Cooperation,” is the mechanism by which federal agencies ensure the actions they take, including those they fund or authorize, do not jeopardize the existence of any listed species.

Where Are They?

The National Capital Region Network, Inventory & Monitoring (NCRN I&M) program sponsored a bat inventory of NCR parks in 2003 and 2004, before the arrival in 2006

¹ Additionally, the little brown bat (*Myotis lucifugus*) and the eastern pipistrelle, also called the tricolored bat (*Perimyotis subflavus*) are Virginia State watchlist species.



A northern long-eared bat captured in a mist net at Catoctin Mountain Park, during the NCRN I&M bat inventory in 2004.

of white-nose syndrome (WNS). The inventory documented NLEBs in all NCRN parks except Manassas, Wolf Trap, and the National Mall. [Inventory report available at: <https://irma.nps.gov/App/Reference/Profile/591597>]

New, federally-funded surveys of post-WNS bat populations in NCR parks began this year and will continue through 2018. For 2015, surveying will include Harpers Ferry, Prince William, Manassas, Catoctin, and the C&O Canal. Surveys began in February with hibernating bats at John Brown’s cave in Harpers Ferry and continued with spring surveys of emerging bats in early April. During summer, work will focus on forested habitat and employ automated audio recording devices (Anabat units) to document the presence of various bat species. Surveying in fall prior to hibernation will target bats swarming and mating near hibernacula. (Continued page 2)

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(Bats continued)

From 2016 to 2018, Mark Ford (US Geological Survey) will lead bat population surveys of forest habitat in all NCRN parks to help determine population levels of NLEBs and other bat species and incidence of WNS.

In addition to these efforts in NCR parks, the Maryland Department of Natural Resources conducts annual winter hibernacula surveys for WNS and all bat species. In summer 2014 they surveyed for NLEBs at Catoctin. The District Department of the Environment is also beginning to mist net bats at NACE this year.

More Bat Resources

If you have questions regarding Section 7 consultation requirements related to the NLEB or any other federally threatened or endangered species, contact Threatened &

Endangered Species Coordinator Diane Pavek by NPS email or at 202-339-8309.

Parks interested in options for their own bat monitoring should be aware that five NCR park and region staff will attend an eastern bat survey techniques class this September (contact NCR Wildlife Biologist Scott Bates for details). Also, the I&M Division is currently working to finalize a standard protocol for multi-species bat monitoring which will be available to any interested parks upon completion.

A USFWS fact sheet on NLEBs is available at: <http://www.fws.gov/midwest/endangered/mammals/nleb/nlebFactSheet.html>. The NPS webinar (May 2015): “Northern Long-eared Bat: Ecology, Management, & Section 7 Consultation” is available at: <http://www.nature.nps.gov/biology/wns/webinars.cfm>.

I&M Expands Amphibian Monitoring

Thanks to NCRN’s ongoing efforts to map amphibian habitat in the region, amphibian monitoring is expanding to three new parks for 2015 and 2016! This year the crew will visit sites at Monocacy, Catoctin, and Harpers Ferry, in addition to annual monitoring at Manassas, Rock Creek, and the C&O Canal.

The habitat mapping effort which began in 2014, sets NCRN up to take advantage of opportunities to expand amphibian monitoring in the future. In 2015 amphibian habitat will be mapped at Antietam, Prince William, and possibly at Wolf Trap as well. In 2016, mapping will continue at GWMP*, NACE, and (if not already complete) at WOTR.

Over the long term, NCRN is exploring the possibility of an amphibian monitoring strategy that would allow expansion to more parks over 10 years.

Amphibian monitoring data and reports from NCRN

are available at: <http://science.nature.nps.gov/im/units/nrcn/monitor/amphibians/index.cfm>.



Photo: NPS/Nortrup

NCRN amphibian crew members Andrew Dietrich (left) and Anna Ormiston (right) search a vernal pool near the Stone Bridge at Manassas NBP for amphibian egg masses and larva this spring. In summer the same pools will be searched for adult amphibians using dip nets.

NCRN Welcomes GIS Specialist Leslie Frattaroli

The National Capital Region Network, Inventory & Monitoring team is pleased to welcome aboard new GIS Specialist Leslie Frattaroli. Leslie comes to us from Cape Hatteras National Seashore where she worked on GIS and database administration for shorebird projects. Her NPS experience also includes work at Grand Teton National Park focusing on black bear ecology and bird monitoring. Leslie earned her bachelors in biology at Indiana University of Pennsylvania and a masters of Wildlife Management from Montana State University.

In her new position with NCRN, Leslie is responsible

for implementing the remote sensing based aspects of the NCRN monitoring program, and acts as a GIS and data management liaison to the regional parks.

Her interests include wildlife management and night skies management/ecology.



Leslie

I&M Summer Field Schedule

Check the "NCRN I&M Activity" google calendar for specific dates or contact Megan Nortrup by NPS email for details.

Special for 2015: the NCRN I&M program will conduct an inventory of Eastern hemlocks (dead or alive) and has expanded amphibian monitoring and amphibian habitat mapping (see page 2), grassland bird monitoring, and forest soil monitoring!

June, July, August 2015	Amphibian Monitoring	Amphibian Habitat Mapping	Eastern Hemlock Inventory	Forest Birds	Forest Vegetation & Soils	Grassland Birds	Water (quarterly)	Water (continuous)
Antietam National Battlefield		X	X	X	X	X	X	
Catoctin Mountain Park	X		X	X	X		X	X
Chesapeake & Ohio Canal NHP	X		X	X	X			
George Washington Memorial Parkway			X	X	X		X	
Harpers Ferry NHP	X		X	X	X		X	
Manassas National Battlefield Park	X		X	X	X	X	X	X
Monocacy National Battlefield	X		X	X	X	X	X	
National Capital Parks - East			X	X	X		X	
Prince William Forest Park		X	X	X	X		X	X
Rock Creek Park	X		X	X	X		X	X
Wolf Trap NP for the Performing Arts		X	X	X	X		X	X

Who's the Crew?

Amphibian Monitoring and **Amphibian Habitat Mapping** conducted by collaborators from the USGS Patuxent Wildlife Research Center, led by Andrew Deitrich.

Eastern Hemlock Inventory conducted by NCRN crew, led by Liz Matthews.

Forest Bird and **Grassland Bird Monitoring** conducted by collaborators from University of Delaware, led by Conor Higgins.

Forest Vegetation and **Forest Soil Monitoring** conducted by NCRN I&M crew, led by Liz Matthews.

Water (quarterly) and **Water (continuous) Monitoring** conducted by NCRN I&M water crew hydrologists Margie Shaffer and Tonya Watts.



Bird crew leader
Conor Higgins

Getting the Dirt on Forest Plots...

This summer, the NCRN forest vegetation crew will have a special 2-person unit (Adam Lee and Daniel Colopietro) dedicated to monitoring forest soil. Of the 431 NCRN forest plots in the region, NCRN has already gathered soil data at 297 and hopes to complete monitoring at the remaining 134 plots by the end of 2016.

This soil data has the potential to offer up a much higher resolution picture of soil



Forest soil monitoring.

Photo: NPS/Paradis

classification than is currently available from USDA data and could reveal where the region's most unique soils are, and which are the most common. Soils data could also help explain patterns in vegetation data and other biological phenomenon.

To learn more about NCRN I&M forest vegetation monitoring, visit http://science.nature.nps.gov/im/units/ncrn/monitoring_veg.cfm.

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 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

Invasive Plant Alerts and IPM Pest Briefs

Trying to keep track of the latest invasive plant or forest pest? Luckily, folks at the NCR Office of Natural Resources and Science (ONRS) have been busy and two series of fact sheets are now available!

Mark Frey and the NCR Exotic Plant Management Team (EPMT) have been busy creating Invasive Plant Alerts! There are 20 new alerts for 2015 that describe plant species that in most cases are not present in the region in large numbers, but have the potential to be. The alerts cover the following species: fountaingrass, Brazilian waterweed, common water hyacinth, giant knotweed, mudmats, common St. John's-wort, yellow archangel, large-flower primrose-willow, parrot feather water-milfoil, Eurasian water-milfoil, brittle water nymph, heavenly bamboo, yellow floating heart, Amur corktree, trifoliolate orange, common buckthorn, glossy buckthorn, Japanese spiraea, smallflower tamarisk, and black swallowwort. All are available on the EPMT sharepoint page at: <http://goo.gl/28sQQB>. Invasive Plant Alerts for previous years are

also available online in the same spot.

Another series of fact sheets was created by NCR Integrated Pest Management (IPM) Coordinator Jil Swearingen. The "IPM Pest Briefs" cover insect, disease, and plant threats to natural areas and structures. So far briefs have covered: winter aconite, thousand cankers disease, spotted lanternfly, bushkiller, Japanese cedar longhorn beetle, chestnut blight, swallowworts, European paper wasp, Japanese knotweed, boxwood blight, Asian longhorned beetle, and most recently, cankerworms. All are available in the IPM Pest Brief folder on the IPM sharepoint page at: <http://goo.gl/q0mL7s>.



An Invasive Plant Alert about heavenly bamboo (*Nandina domestica*) from the NCR EPMT program.

Calendar

JUNE

11. **Invasive Plant Management Training**, sponsored by the NCR Exotic Plant Management Team. Re-certification credits from DC, MD, VA, WV, and PA available. To be held at WOTR. Contact Mark Frey by NPS email or at 202-339-8317.

JULY

16. **Natural Resources Advisory Team (NAT) Meeting**. Rock Creek.

AUGUST

18. **NCR IPM Training: Integrated Pest Management for Concessions**. 9 am - 3 pm. NCR Headquarters- Classroom B. For details contact Jil Swearingen at NPS email or 202-339-8318.

SEPTEMBER

1. **NCR IPM Training: Protecting Natural and Cultural Resources**. 10 am - 3 pm. MONO Historic Preservation Training Center. Contact Jil Swearingen at NPS email or 202-339-8318.

15. **NCR IPM Training: Forest Health Protection**. 10 am - 3 pm. MONO Historic Preservation Training Center. Contact Jil Swearingen at NPS email or 202-339-8318.

OCTOBER

15. **Natural Resources Advisory Team (NAT) Meeting**. WOTR.

2016 NPS's Centennial Year!

APRIL

21. **Spotlight on National Park Resources Biennial Meeting**. NCTC.

Visit NCRN I&M online at:

Website: <http://science.nature.nps.gov/im/units/ncrn>
 Facebook: <http://www.facebook.com/NPSNCRN>
 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

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

- Program Manager: Patrick Campbell
- Botanist: Liz Matthews
- Data Manager: Geoff Sanders
- GIS Specialist: Leslie Frattaroli
- Hydrologic Technician: Tonya Watts
- Hydrologic Technician: Margie Shaffer
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