



Amphibian Update 2013

Manassas National Battlefield Park

Overview

This update presents data from 2007 to 2013 on pool-breeding amphibians at 9 pools in Manassas National Battlefield Park (MANA). The National Capital Region Network Inventory & Monitoring program (NCRN I&M) has monitored amphibians at these pools since 2007.

The goals of this amphibian monitoring include determining the current distribution and status of amphibian populations, determining possible causes for changes to amphibian populations, and providing park managers with the information necessary to make management decisions.

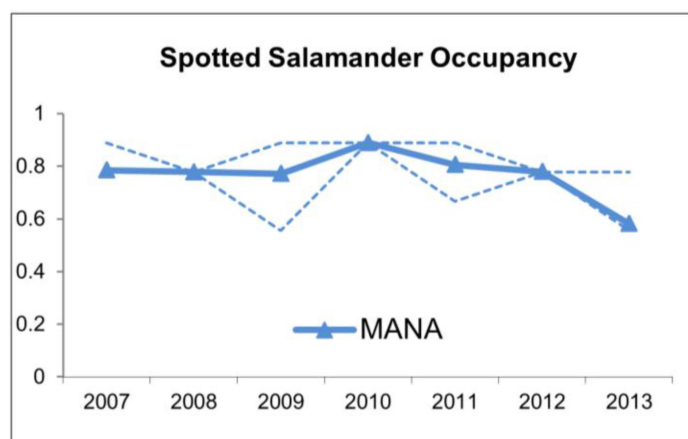
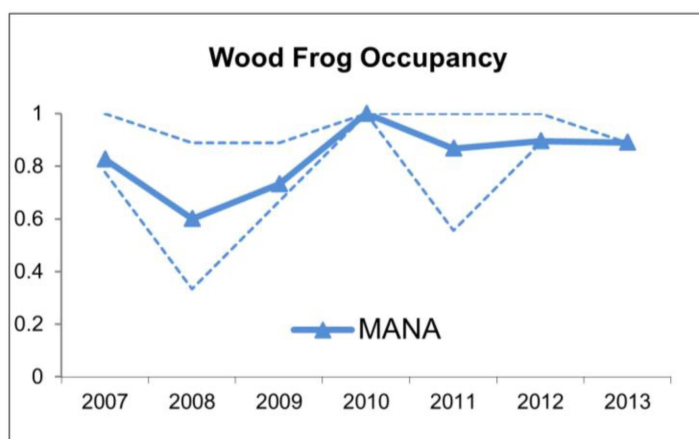
Vernal Pool Species Occupancy

In 2013 we visited 9 vernal pools in MANA during the spring to detect breeding activity. Both wood frogs and spotted salamanders had high estimated occupancy (of egg masses), possibly because sites chosen for monitoring were known to have past breeding activity and are not a

representative sample of all breeding habitats in the park. No trends were observed in occupancy estimates for the monitoring period. However this does not mean populations are stable across the park, only that they appear stable at the 9 sites monitored.

Data from vernal pool monitoring locations at fifteen other national parks and wildlife refuges across the northeast United States showed little difference in the average estimated occupancies of breeding effort between wood frogs (*Lithobates sylvatica*) and spotted salamanders (*Ambystoma maculatum*). There were no substantial declines in occupancy of egg masses in the northeast, though a shallow downward trend is indicated in the data for both species.

To compare occupancy estimates at Manassas with this northeast monitoring program, it is recommended that park monitoring be modified to occur in a random subset of all available amphibian sites.



More Information

Campbell Grant, E. H., E. F. Zipkin, and A. B. Brand. 2011. National Capital Region Network 2009 amphibian monitoring: Synthesis of 2005-2009 data. Natural Resource Technical Report. NPS/NCRN/NRTR—2011/414. National Park Service, Fort Collins, Colorado. https://irma.nps.gov/App/Reference/DownloadDigitalFile?code=423765&file=NCRN_Amphibian_Monitoring_Report_2010.pdf

Mattfeldt, S. D., E. H. C. Grant, and L. L. Bailey. 2008. Amphibian Monitoring in the National Capital Region: A focus on lentic and lotic habitats. Natural Resource Technical Report. NPS/NCRN/NRTR—2008/088. National Park Service, Center for Urban Ecology, National Capital Region, Washington, DC. https://irma.nps.gov/App/Reference/DownloadDigitalFile?code=152608&file=NCRN_Amphib_Monitoring_Rpt_2007.pdf

NCRN I&M Amphibian Monitoring Webpage: <http://science.nature.nps.gov/im/units/ncrn/monitor/amphibians/index.cfm>

Northeast Amphibian Research and Monitoring Initiative of the USGS: www.pwrc.usgs.gov/nearmi/