



# Catoctin Mountain Park Maryland

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## PARK CLOSURES

### Security Closure

Date Posted: 6/30/2023

Due to increased security measures, portions of Catoctin Mountain Park will be closed at approximately 12 p.m. on Friday, June 30. Closures are scheduled to continue through approximately 8 p.m. on Tuesday, July 4, 2023.

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## NEWS RELEASE

# Reducing deer numbers and removing invasive plants are key to long-term forest health

New study analyzes condition of forests in 39 Eastern national parks

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Date: April 4, 2023

Contact: [Katie Liming \(https://www.nps.gov/common/utilities/sendmail/sendemail.cfm?o=4084CFBE91CAA18398B21EA6F7108BA3568E088853A0&r=/cato/learn/news/reducing-deer-numbers-and-removing-invasive-plants-are-key-to-long-term-forest-health.htm\)](https://www.nps.gov/common/utilities/sendmail/sendemail.cfm?o=4084CFBE91CAA18398B21EA6F7108BA3568E088853A0&r=/cato/learn/news/reducing-deer-numbers-and-removing-invasive-plants-are-key-to-long-term-forest-health.htm), 703-399-4547

WASHINGTON—Most forests in eastern United States national parks are at risk due to browsing by overabundant white-tailed deer and crowding by invasive plants, according to a National Park Service (NPS) [study published \(https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/eap.2837\)](https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/eap.2837) in the journal Ecological Applications.

Scientists with the NPS and Schoodic Institute at Acadia National Park in Maine analyzed data from 39 national parks from Virginia to Maine to understand the condition of the forests. Scientists specifically studied forest regeneration – the ability of each forest to sustain itself through the growth and survival of seedlings and saplings that replace large trees as they die.

Based on 12 years of data, including measurements of the number of seedlings and saplings, scientists placed each park into one of four forest regeneration categories: secure, insecure, probable failure or imminent failure. Only the forests in Acadia National Park were classified as “secure”; failure was “imminent” or “probable” in most park forests in the study.

“In a healthy forest, when a big tree falls or dies, seedlings and saplings in the forest understory grow to fill the gap in the canopy. This regeneration is how forests continue to be forests,” **Kate Miller, NPS quantitative ecologist and lead author of the study, said.** “If there’s a lack of seedlings and saplings, the forest can’t maintain itself. This is what we found in the majority of eastern national park forests, and it’s very concerning.”

Forests in the imminent failure category may be one major disturbance (e.g., major storm, non-native pest attack) away from forest loss and in some cases, forest loss is already occurring. For example, in 2012 Hurricane Sandy blew down more than 50 acres of forest in Morristown National Historical Park in New Jersey. With few seedlings present, the damaged area quickly converted to invasive shrub thickets of Japanese barberry, multiflora rose and wineberry, rather than returning to forested area. The loss of forests affects habitat for many wildlife species and can affect the visitor experience too — shrub thickets can obstruct walking and obscure the ability to picture historic events that occurred on the landscape.

Non-native forest pests, such as emerald ash borer and hemlock woolly adelgid, are causing similar patterns of forest loss throughout the region.

Browsing by overabundant deer was a primary reason for the lack of canopy species represented in the understory in almost every park included in this study.

“As deer populations grow in these national parks, they eat the understory vegetation to such low levels that canopy regeneration can’t occur,” **Stephanie Perles, NPS vegetation ecologist and study co-author, said.** “Without native seedlings and saplings, invasive plants, which deer don’t like to eat, take over. Both the forest and, ultimately, the deer and every other forest creature, suffer without enough food and no place to go.”

While most forests in Eastern national parks are in a dire state, they can be restored to a healthy condition through management actions such as reducing deer, removing invasive plants and planting native seedlings and saplings. These actions would also support all the animals that rely on forests for survival from songbirds to foxes and flying squirrels. Eastern national parks are taking steps to improve forest regeneration through a new collaboration called the [Resilient Forest Initiative](https://www.nps.gov/articles/series.htm?id=B9C6B751-A7E3-F246-5628389A0B80A4F7) (<https://www.nps.gov/articles/series.htm?id=B9C6B751-A7E3-F246-5628389A0B80A4F7>).

“Although ‘imminent failure’ sounds permanent, it’s not,” **Nicholas Fisichelli, president of Schoodic Institute and study co-author, said.** “If we act now, we can make changes to promote regeneration and reverse the losses that forests in eastern U.S. national parks and the broader region are experiencing.”

Eleven national parks in New York, Pennsylvania, Maryland, Virginia, West Virginia and the District of Columbia, are currently reducing deer populations, and nearly as many parks are beginning the planning process for future reduction efforts. Parks with long-term and consistent deer management have seen dramatic increases in seedlings of canopy species, which is a first step in forest recovery. Long-term commitment to deer management is needed in order to translate that early success into increases in saplings, and ultimately mature trees of canopy species.

At Catoctin Mountain Park in Maryland, the NPS has worked to reduce deer populations since 2010, resulting in a 19-fold increase in seedling density. At Gettysburg National Military Park in Pennsylvania, where the NPS has been reducing deer since 1996, the forest

has a consistent and regenerating layer of saplings. The NPS is also working to increase forest resiliency by managing invasive plants and pests in national parks.

Several eastern national parks are slated to receive funding through the Bipartisan Infrastructure Law for forest resiliency projects, and the NPS is actively seeking additional funds to improve forest resilience in eastern parks.

-NPS-

### **About the National Park Service Inventory and Monitoring Program**

The National Park Service Inventory and Monitoring Program conducts long-term ecological monitoring within national park sites, collaborates with a variety of partners, and provides valuable data to park managers and the public. The information we collect helps parks make sound, science-based management decisions that help us preserve America's special places.

<https://www.nps.gov/im/index.htm> (<https://www.nps.gov/im/index.htm>)

### **About Schoodic Institute**

Established in 2004, Schoodic Institute at Acadia National Park is a nonprofit organization and Acadia National Park's primary partner in science and education. Based at the largest of 17 National Park Service Research Learning Centers in Winter Harbor, Maine, in Wabanaki homeland, Schoodic Institute's mission is inspiring science, learning, and community for a changing world.

<https://schoodicinstitute.org/> (<https://schoodicinstitute.org/>)

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Last updated: April 4, 2023

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