



# Friends of Thatcher State Park

Emma T Thacher Nature Center • 87 Nature Center Way • Voorheesville, NY 12186  
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## White-Nose Syndrome in Bats



Bats across North America are still contending with white-nose syndrome, or WNS. This deadly disease is caused by a fungus that grows primarily on the faces of bats, giving their noses a white appearance. During the winter, bats hibernate to preserve their body fat stores until spring. White-nose syndrome causes bats to wake up more frequently than normal during this hibernation period, which burns their fat stores more quickly. Many bats starve in their caves as a result. There is no known treatment for afflicted bats.

WNS was first documented here in New York, when an individual photographed a sick bat in Howes Cave in 2006. Signs of WNS spread quickly throughout the region. In March 2007 state biologists entered Hailes Cave in search of Indiana bats, but instead found thousands of dead bats strewn about. Over the next few weeks, biologists would also find hundreds of dead bats in nearby Knox Cave and Gages Cavern.

Sixteen years later WNS can be found in 38 states and eight Canadian Provinces, with some estimates placing the number of dead bats at over six million. What does that mean for the future of bats nationwide? Different species and roosting populations will likely have different outcomes over the coming decades. That said, since the northeast US has been afflicted by WNS longer than any other region, it may offer a glimpse of what other states can expect from their own bat populations in the years to come.

One of the species most afflicted by WNS is the little brown bat. The DEC notes that these common bats have sustained the highest total death count of any bat in NY, and biologists have estimated a 90% population loss for little brown bats in Vermont. But the narrative has started to change. In both New York and Vermont, there's evidence that little brown bat populations have begun to stabilize in the wake of WNS. The exact reason for this change is unknown, but one theory states that some little brown bats are naturally fatter going into the winter—and therefore

better equipped to survive WNS—than others. Whatever the case, any potential recovery efforts will be slowed by the fact that females will only give birth to one baby bat, or pup, each year.

Unfortunately, the little brown bat appears to be an outlier; similar population stabilization has not been observed for other bats decimated by WNS in NY. The once-common long-eared bat has experienced an estimated 98% population decline here in NY and will be placed on the federal Endangered Species List on March 31<sup>st</sup> of this year. For bats that were already considered historically rare in NY, WNS makes their presence even more precarious: the tricolored bat has lost an estimated 96% of its NY population since 2007 and is considered “Critically Imperiled in New York” by the New York Natural Heritage Program; the Indiana bat, which was already on the federal Endangered Species list before WNS, had lost around 70% of their NY population by 2015.

Although outcomes for these and other bats may appear bleak, organizations and agencies across the state have mobilized to protect remaining populations. The DEC is a partner in the White-Nose Syndrome Response Team, which coordinates monitoring, management practices, and outreach efforts nationwide. Local entities have also acted: the Northeastern Cave Conservancy, which owns numerous caves in an around the Capital Region, closes many of its caves from October 1<sup>st</sup> to May 1<sup>st</sup> to protect any potentially hibernating northern long-eared bats. Whether or not these efforts will have a long-term impact on bat populations in New York remains to be seen.

- by Peter Farquharson



Indiana bat. photo credit: Ann Froschauer/USFWS

## Hemlock Health at Thacher



Commonly living three to five hundred years, eastern hemlocks stand out because of their size and ability to alter their environment. Because of their slow growth rates and shade tolerance, hemlocks can grow in the forest understory for decades until they are tall enough to shade out the surrounding trees, creating dense stands with little to no understory. The dense canopy of hemlock stands blocks sunlight and cools the areas below them, providing a unique ecosystem service that supports biodiversity in terrestrial and aquatic environments. For example, hemlocks' ability to cool water allows streams to hold more dissolved oxygen, which is crucial for maintaining healthy aquatic ecosystems.

Hemlocks are most easily identified by their short, flat needles which have two, parallel white lines on their undersides. To see hemlock stands in Thacher, take a walk around the Campground Loop or the Blue Loop in the southern part of the park. As you visit hemlocks in the park, take a look at the undersides of the branches and you may see fuzzy, white masses at the bases of the needles. These masses are the egg sacks of an invasive pest known as Hemlock Woolly Adelgid (HWA). HWA is a small insect that sucks nutrients out of the needles causing defoliation and ultimately tree death.

Here at Thacher, we have multiple hemlock stands that face damage from HWA, which was first detected in the park in 2017. Beginning in 2018, infested hemlocks in ecologically important stands have been treated with an insecticide that gets absorbed directly through the trunk of the tree. In a recent informal survey with Stewardship Specialist Andy Damon, I had the opportunity to observe the health of treated and untreated hemlock communities in the park, and to learn about ongoing management initiatives for HWA.

Chemical treatments, such as those used in Thacher Park, are currently our best defense against HWA, but they can only be applied to a limited number of trees. Although these treatments cannot save every hemlock, they can buy us time to research and test long-term options like biocontrol – a management method that uses living organisms to naturally control a pest population. A few species of beetles and flies are known to feed on HWA in the western US making them good candidates for biocontrol, but our cold northeast winters pose a challenge to their survival. After ensuring that these possible biocontrol insects do not harm other native species, they are now being field tested for their ability to survive and control populations of HWA in the Northeast.

By observing hemlocks here in Thacher Park, we can witness each stage in the saga of HWA infestation and treatment. The park is home to healthy unaffected trees, infested trees that have not been treated, infested trees that have been treated, and hopefully in the coming years, we will see trees benefiting from biocontrol initiatives. As Friends and stewards of the park, we can all contribute to the management of HWA by keeping an eye out for those fuzzy, white masses, and documenting sightings using iMap Invasives – an online platform for collecting data about invasive species. <https://www.imapinvasives.org/>

- by Marina Dreeben

### Friends of Thacher Park Meeting Dates for 2023

Meeting dates are Wednesdays, March 8, May 10, July 12, September 13, and November 8.

7:00 pm at Thacher Visitor Center. Come join us!  
(Mask guidelines will follow CDC recommendations)

# Annual Spring Amphibian Rescue



Spring is rapidly approaching and that brings the annual spring migration of amphibians to vernal pools to release and fertilize eggs. The Friends of Thacher State Park has been assisting with the rescue of a Yellow Spotted Salamander crossing site along Thacher Park Road (Rt 157) since 1997.

“Why save the salamanders? Spotted salamanders, like many other species of amphibians, are in decline due to habitat loss most often to development. Besides, spotted salamanders are among the most spectacular of Thacher Park’s notable amphibian fauna (9 species of salamanders, 6 species of frogs). Toward the end of March, early April, when the air temperature rises above 40 degrees F and an extended rain begins and early and continues into the evening, the salamanders will start their annual migration to ponds where they perform a courtship dance, mate and deposit hundreds of eggs. In our area, they have been performing this ritual for at least 8,000 years.” (Doug Fraser, 2012 Vol 16 Friends Newsletter)

A sizeable population of Yellow Spotted salamander crossings regularly occurs near the Hop Field parking area, but they can also be seen crossing almost anywhere along this corridor. It is important to use caution while driving during these warm spring nights, or better yet, avoid driving this or other known crossing corridors if possible. The purpose of the salamander rescue program is to reduce road crossing mortality rates.

Can you get involved with helping our amphibians cross the road each spring? – absolutely. At Thacher, a call list of volunteers is maintained. Volunteers, are required to check

in, receive instructions and must wear reflective materials for safety. A limited supply of reflective vests is available to borrow upon check-in. Also, with the addition of new guard rails along the road edge across from Hop Field, a small blinky clip on light is also recommended along with rain coat, clean bucket and flashlight. The difficult part of the rescue is determining when this will occur because it is weather dependent.

If you wish to try your hand at rescuing Salamanders at Thacher, please call the Emma Treadwell Nature Center at 518 872-0800 and ask to be on the Salamander Rescue Call list.

To learn more about Amphibians Road Crossings Project (AM&RC), you can contact NYS Department of Conservation for more details. The project is part of a larger NYSDEC Hudson River Estuary Program and Cornell University effort to partner with local communities to conserve the diversity of plants, animals, and habitats that sustain the health and resiliency of the entire estuary watershed. Go to <https://www.dec.ny.gov/lands/51925.html> to obtain a Volunteer Handbook, Amphibian Identification Guide, to register for a training workshop in person and online, or to learn how to sign up for Migration Alert Emails. For those with children, check out the beautifully illustrated, “Salamander Sky” by Katy Farber and illustrated by Meg Sodano and starring our very own Yellow Spotted Salamander.

- by Bert Schou



Check for updates at [www.friendsofthacherpark.org](http://www.friendsofthacherpark.org)

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As always, call (518) 872-0800 or (518) 872-1237 to verify activity times and dates.

Please feel free to call board members with questions or suggestions.

Many thanks to Peter Farquharson, Marina Dreeben, Bert Schou and Brian Horl for their contributions to this newsletter.—Christine Gervasi (Editor)



**Friends of Thacher Park  
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<https://etc.usf.edu/clipart/>

**Wednesday, March 8, 2023**

**Next:**

**Board Meeting**

**7:00 pm at Thacher Visitor Center (masks may be required)**

## *The Snowy Owl*

Also known as the Polar Owl, White Owl, Ghost Owl and Artic Owl. Native to the Artic and Sub Artic regions of North America, Europe and Asia. They belong to the owl family Strigidae. Meaning "True Owl" family. The males are almost totally white while the females and juveniles have dark brown markings on their wings. The young males will lose these markings as they mature. These markings are the most reliable way to age and sex them.

They are one of the largest species of owls with a body length of 21 to 25.5 inches and a wingspan of 49 to 59 inches. They are also the heaviest owl found in North America at a weight of about 6.5 pounds. But they are not the largest. That title goes to the Grey owl that has a slightly larger body on average. Unlike most owls, they are diurnal meaning that they are active day or night.

The conservation status for the Snowy owl is listed as vulnerable with an estimated world population of about 28,000. It is thought that this number could be as low as 14,000 individuals. Scary when you look at pre 2018 numbers that show a world population of between 200,000 and 257,000. A pretty major reduction over a relatively short

period of time. It is thought this is due to the loss of breeding grounds due to global warming. Seeing one in the wild is rare though occasionally a juvenile will be seen in the northern areas of the United States.

Their breeding grounds are in the northern tundra. They typically mate for life but occasionally a male will take more than one mate. When they do the nests will be built about a kilometer apart. They will build their nests on high ground or even a rock were they can look over the surrounding area. A typical nest will contain between 3 and 11 eggs usually laying one every other day. Depending on the region, weather and abundance of food, they will lay their eggs between mid May and early June. The eggs will incubate for about 32 days. At about 2 to 3 weeks of age the owlets will start to leave the nest and wander around the nest area under the watchful eyes of the adults. They will fledge at around 7 to 8 weeks and will reach reproductive maturity at 2 to 3 years old. These owls are important to their ecosystem for their control of rodent populations. A typical adult will catch between 7 and 12 mice per day. Their preferred food is lemmings. A typical adult will consume more than 1600 per year. Because of their thick layer of feathers on their feet and bodies the are virtually silent in flight which make them very successful hunters.

- by Brian Horl

**As always, you can find a color version of the newsletter at [www.friendsofthacherpark.org](http://www.friendsofthacherpark.org)**