



## A BATTLE WORTH WINNING

By Margaret Gillespie



Little Brown Bats in cave. Photo by Al Hicks\_USGS



Tri-colored bat showing symptoms of White-nose Syndrome. Photo courtesy flickr.com/US Fish and Wildlife CC BY -2.0

You may have heard news about bats and their challenges with White-nose Syndrome. Perhaps you have noticed there are fewer bats patrolling backyards on summer evenings in search of flying insects - a culinary delights for bats. Maybe you are curious to discover if and how you could help bats. Let's explore the current situation for bats and see what opportunities are available to contribute to their well-being.

The North American range of this invasive White-nose Syndrome (WNS) fungus, *Pseudogymnoascus destructans* (or *Pd* for short), is across much of the United States and Canada. The fungus originated in Europe and is thought to have inadvertently been introduced to North America by people. The spores of *Pd* can persist for a long time on surfaces such as clothes, shoes, and backpacks, making it very easy for cave explorers to unknowingly move the fungus from one place to another. Current statistics for states with resident bats having WNS are 40 states in the United States and eight Canadian provinces. The fungus is continuing to expand its range with serious consequences. Hibernating bats are susceptible to *Pd* because the bats are stationary, and caves that bats use for hibernation have the perfect conditions for the fungus to thrive.

How exactly does the fungus interact with bats in such a devastating way? Once *Pd* is established, it spreads from one bat to its neighbor in the winter cave hibernaculum. The irritating itch on the bats' whitened muzzle, ears, and wings caused by the fungus awakens the bats, interrupting their hibernation. As a result, bats may bypass much of their dormancy, to the extent that some will fly out into winter snow and ice in search of food. There they die of exposure. Millions of bats have succumbed. Bat species like the little brown bat, which were one of New Hampshire's more abundant bats in the past, are now endangered in the state.

What is being done to assist bats in this struggle with White-nose Syndrome? One new avenue is a vaccine specifically designed for bats in this particularly challenging situation. The vaccine moves bats towards naturally developing resistance to the disease. Another innovative approach is treating bats with bacteria already in the bats' environment which helps them resist the fungus. At the same time, hibernating cave sites and similar wintering refuges need protection so they are safe, available sites for wintering bats. Resist visiting sites where bats are hibernating. If you find yourself in a cave with bats roosting, retreat and decontaminate boots and clothing so as not to spread possible fungi to a new area. The health of our bats is

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# DINOSAURS RETURN OPENS JULY 1



# FORGING TRAILS: DINOSAURS RETURN



Did you think you would ever see or hear dinosaurs... return to the Lakes Region of New Hampshire?

This summer you will again! We first brought animatronic dinosaurs to the Science Center in the summer of 2019. Our intention was to bring a spectacular traveling exhibit that we could connect educationally to our native species here at the Science Center. We had no idea how popular dinosaurs would turn out to be. 2019 set the record for attendance on the live animal exhibit trail and our hope was to run with

that momentum, but a global pandemic derailed those plans.

The dinosaurs are back this summer beginning July 1. You'll see: Allosaurus – a bipedal carnivore with 6-inch long claws; Baryonyx – a fish eating dinosaur; Diabloceratops – its name meaning 'devil horned face'; Dimetrodon – a dinosaur with a spiny sail along its back. Plus, we have one more dinosaur located just past the Admissions window, that you can actually climb upon. The Parasaurolophus will greet all visitors to the Science Center. Be sure to stop and take a photo.

These dinosaurs of Dinosaurs Return will be placed along the natural setting of the live animal exhibit trail and are included with regular trail admission (free for members). Accompanying interpretation will explain about each dinosaur and make the direct link between these huge creatures and

our modern day "dinosaurs" – birds. The dinosaurs will also allow us to explore connections with evolution and climate change. Because of the popularity of the dinosaurs in 2019, we are extending their stay from July 1 through the end of the trail season, November 1. Be sure to stop by and visit these amazing creatures!



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*Diabloceratops. Photo courtesy Billings Productions*



*Dimetrodon. Photo courtesy Billings Productions*

## SQUAM LAKES NATURAL SCIENCE CENTER

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Squam Lakes Natural Science Center is a non-profit educational institution incorporated in 1966 as a charitable organization under statutes of the State of New Hampshire with its principal place of business in Holderness. Its mission is to advance understanding of ecology by exploring New Hampshire's natural world.

*Tracks & Trails* is a regular publication of Squam Lakes Natural Science Center distributed to members and contributors. Comments are welcomed by newsletter editor Amanda Gillen.

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# OPENING A WINDOW TO THE NATURAL WORLD

By Rachel Saliba, Development Director

## UPCOMING FUNDRAISING EVENTS

We are thrilled to extend a personal invitation to two events this summer that support the invaluable work of the Science Center. Come together to celebrate and contribute to our mission *to advance understanding of ecology by exploring New Hampshire's natural world.*

### **2024 Family Picnic – A Fundraiser for the Science Center** **Saturday, July 20, 5:00 to 8:00 p.m.**

Join the Science Center for our eagerly anticipated family fundraising event. This event is perfect for all ages so gather your family and friends for a casual evening filled with laughter, entertainment, and scrumptious delights. Tickets include incredible animal programs, fun games, live music, mouthwatering food and drinks from local food and beer trucks, and delectable ice cream treats. Please note that tickets sell out quickly, so be sure to keep an eye out for your invitation via email or visit [nhnature.org/picnic](http://nhnature.org/picnic) to secure your tickets. *Tickets go on sale July 1.*

### **Garden Party at Kirkwood Gardens - An adult-only fundraiser for the Science Center** **Thursday, August 22, 5:30 to 7:30 p.m.**

Join us for a cocktail party in Kirkwood Gardens that promises an evening of camaraderie amidst the breathtaking beauty of the gardens. As you mingle with fellow Science Center enthusiasts, indulge in cocktails and hors d'oeuvres provided by The Common Man. Lose yourself in the soothing music of a string trio. Don't miss the opportunity to participate in our silent auction, featuring exceptional items that showcase the best of the Science Center. Please note that tickets are limited, so be sure to keep an eye out for your invitation via email or visit [nhnature.org/gala](http://nhnature.org/gala) to secure your tickets. Tickets go on sale August 1.

Your attendance at either of these events will make a significant impact on our efforts to further education and environmental conservation. Thank you for your ongoing support and dedication to our shared cause.

## BUSINESS PARTNERSHIPS

We have been humbled by the positive responses we've received from the over 20 businesses who have become Business Partners with the Science Center by underwriting our events, programs, and exhibits.

If you'd like to learn about this unique, engaging, and meaningful way to reach potential customers and positively impact the community and the Science Center, please reach out to Development Director Rachel Saliba at [Rachel.Saliba@nhnature.org](mailto:Rachel.Saliba@nhnature.org) or visit [nhnature.org/support/corporate\\_gifts.php](http://nhnature.org/support/corporate_gifts.php)

## SPONSOR A PLAQUE ON THE MARSH BOARDWALK

The Wetlands Walk through the marsh area and near the Songbird Feeding Station features the popular Marsh Boardwalk. The boardwalk has been a part of the live animal exhibit trail since the 1980s with the last boardwalk being constructed in 2009. After many years of repairs, the boardwalk was completely rebuilt in the spring of 2024.

You can be a part of the new Marsh Boardwalk and support the mission of the Science Center by sponsoring a plaque in the name of a friend, family member, loved one, or pet by honoring them with a custom engraved message along our beautiful Marsh Boardwalk.

See full details at [nhnature.org/boardwalk](http://nhnature.org/boardwalk).

Thank you in advance for your continued support of the Science Center and its mission.



## SPONSOR A SPECIES



Northern Saw-whet Owl

Take your support of the Science Center animals to the next level by sponsoring your favorite animal. Your support helps with specialized diets, daily care, enrichment, and creature comforts. The animals thank you for your support!

## WHAT WILL YOUR LEGACY BE?



Become a member of the Naturalist's Legacy Society by including Squam Lakes Natural Science Center in your estate planning and help us to fulfill our mission for generations to come.

For more information email [Rachel.Saliba@nhnature.org](mailto:Rachel.Saliba@nhnature.org).

*The Science Center is here to connect you to the natural world and provide a consistent educational experience immersed in nature. Learn how to support us at [nhnature.org/support](http://nhnature.org/support) or scan the code. Thank you for your support. Squam Lakes Natural Science Center tax ID: 02-0271824.*





# ANIMAL CARE: BIOSECURITY

by Lauren Moulis, Animal Care Director



Great Horned Owl

The safety and security of our animals, staff, and visitors are some of the top priorities at Squam Lakes Natural Science Center. In addition to checking that physical enclosures and buildings are safe and secure, the staff must also guard against the multitude of invisible threats to the health and safety of our animals by addressing biosecurity.

In a world post SARS-CoV-2 (Covid), most people are aware of the steps you can take to mitigate against becoming sick. We practice many of these same safety measures, and more every day. Because of the continued threat of Covid among both staff and many of the animals who are highly susceptible (our felines and mustelids like fisher and mink) to getting sick, or worse, we continue to mask ourselves around these animals.

Another increased threat at this time is Highly Pathogenic Avian Influenza (HPAI). While this virus was previously mostly in birds, it has recently been seen in mammals and humans, with high mortality rates in species of birds. When it was first seen in great numbers, we worked with the NH State Veterinarian and began a biosecurity regimen that we continue to this day. All of the birds at the Science Center have their own cleaning supplies specific to them, staff working with them do not have pet birds at home, staff disinfect their shoes upon entering enclosures, and all enrichment is bleached between uses. Volunteers and staff working at our wild bird feeder station remove and disinfect all the feeders several times a week to ensure that wild birds are not becoming infected and carrying the virus to other populations.

New animals entering our facility enter a quarantine period for a minimum of 30 days and must have two fecal exams that are negative for any parasites. During this period, they are examined by our veterinarian and all products associated with that animal are kept separate from the rest of the population and cleaned with their own cleaning supplies.

Biosecurity practices happen every day even when we are not concerned with an emergent disease. Some examples include; footbaths outside our main animal care entry and exit doors, separate cleaning cloths between each enclosure, separate cutting boards for meat and vegetable products, gloves when handling food or fecal matter. Even with all these measures, vigilance and daily observation is key to keeping our animals and staff safe and healthy.

## NATURALIST'S CORNER: DINOSAURS, CAMERAS, AND POOP - OH MY!

By Eric D'Aleo

Just when you thought it was safe to walk in the woods, they're back. Dinosaurs!

There is something about dinosaurs that captures the imagination of people both young and old. I'm constantly amazed by a preschooler who can rattle off a list of dinosaur species and characteristics that I've never heard of.

The entertainment industry often portrays dinosaurs as large, fierce, and scary animals with loud, raucous voices; yet there are dinosaurs with a softer side. When I walk through the forest in summer I may often hear a haunting flute-like "ee-oh-lay" song that emanates from the forest. It's that small dinosaur relative, a bird, known as a Wood Thrush.

I have been captivated by this songster of deciduous and mixed eastern forests since I was young and always had difficulty determining their location with their ventriloquial sound. I have video of these birds as well as a similar looking species, the Hermit Thrush, searching through leaf litter on the forest floor. However, I did not often see them. That changed last year when a volunteer who helps monitor our trail cameras came across a nest of wood thrushes.

It was a wonderful opportunity to observe, photograph, and take video of the nest from a safe distance limiting disturbance to the parents: a nature documentary happening in our own "backyard." I spent the next two weeks visiting the area before work in the morning or after work in the late afternoon. I could see the adults foraging in the leaf litter for food on the forest floor, bringing back a beak full of caterpillars or other insects to feed to the hungriest, vocal chick. Shortly afterward, a fecal sac would be eliminated from the same chick and one of the parents would swallow it, a trait known as coprophagia. It's a behavior that may provide some additional nutrition to the

adult since the digestive system of the chick is not completely developed. It is also a way to keep the nest clean from bacteria and microorganisms, as well as limit detection of the nest by potential predators.

Yet all too quickly, like a summer vacation, the opportunity passed, the young fledged from the nest, and the Wood Thrushes disappeared back into the forest.

How often does this happen to each of us? Our schedules are busy, we miss opportunities to experience special moments in the natural world, or we don't fully appreciate them, even if we are present, until they are no longer available. So, take some time this summer to visit the dinosaurs at the Science Center, before they disappear in the fall. Or take the time to walk in the natural areas near your home and listen to the morning song of dinosaur relatives in the trees. And if you want to discover what's happening in the Science Center's own "backyard" visit the Hidden Stories page at [nhnature.org/hiddenstories](http://nhnature.org/hiddenstories).



Wood Thrush. Photo by Eric D'Aleo



[nhnature.org/hiddenstories](http://nhnature.org/hiddenstories)



# KIRKWOOD GARDENS

By Emma Erler

## BLACK KNOT

**Q: My flowering cherry tree has black, knobby growths on its branches. What can I do to treat it?**

**A:** Trees in the genus *Prunus*, which includes cherry and plum, are susceptible to a fungal disease called black knot. Trees infected with black knot have swollen, hard, black, tumor-like growths (knots) on their branches. The disease is common on both wild and landscape trees and is easily diagnosed by its symptoms. The fungus produces spores in the spring and early summer which are dispersed by splashing or windblown rain. When the spores land on the branches of susceptible trees, they enter through the thin young bark on the current season's growth or through wounds created by pruning, insect feeding, storm damage, etc. Infected areas on branches gradually swell throughout the growing season, progressively growing into obvious hard, black knots by the fall. The knots, which can grow to over six inches long, will continue to enlarge until

they girdle the affected branches, eventually killing them. The fungus overwinters in the knots on the stem, begins growth in the spring, and produces more spores to start the disease cycle all over again.

Control of black knot requires both prevention and sanitation. Prune out all infected branches in late winter (late February through the end of March) and destroy them by burning, burying, or throwing them away. Remove at least 3-4 inches of healthy tissue below each knot to ensure elimination of the fungus. Heavily infected trees should be removed completely, including wild host trees such as black cherry (*Prunus serotina*). However, the most effective way to avoid issues with black knot in the future is to plant resistant varieties of cherries and plums, or a different type of small flowering tree entirely. Gardeners who enjoy the look of flowering cherries may also like crab apples, hawthorns, red buds, and flowering dogwoods.

## PLANT SPOTLIGHT

### Cardinal Flower

#### *Lobelia cardinalis*

**Culture:** Easily grown in average, moist, organically rich soils in full sun to part shade. Soil should not be allowed to dry out. Cardinal flower is a New Hampshire native perennial that occurs naturally along streams, swamps, marshes, and the edges of ponds. Hardy to Zone 3.

**Bloom:** Upright spikes of large, cardinal red flowers on unbranched stalks, rising 2-3 feet tall. Peak bloom in late summer.

**Height:** 2-4 feet

Cardinal flower is a clump-forming perennial which thrives in damp soils and will often self-seed under optimal growing conditions. It is a good choice for informal gardens, native plant gardens, woodland gardens, naturalized areas, or near ponds and streams. When in bloom cardinal flower is very attractive to hummingbirds and butterflies.

**Kirkwood location:** lower garden, driveway side.



### Azalea

#### *Rhododendron 'Gibraltar'*

**Culture:** Prefers acidic, organically rich, moist, well-drained soil in part shade to shade. Shallow, fibrous root system will benefit from mulch (wood chips, bark, pine needles, shredded leaves) to help retain moisture and stabilize soil temperatures. Hardy to zone 5.

**Bloom:** Flowers are bright orange and held in clusters. Peak bloom in May. It is one of the most asked about shrubs in Kirkwood Gardens.

**Height:** 4-6 feet

'Gibraltar' is an award-winning hybrid azalea that stays relatively small. It is noteworthy for its large trusses of vivid orange flowers that arise just as the foliage is expanding. The Genus name *Rhododendron* comes from the Greek *rhodo* for rose and *dendron* for tree. Very useful in native and woodland gardens or in shrub borders. 'Gibraltar' stays small enough at maturity to be used as a foundation planting.

**Kirkwood location:** Lower garden on Route 3 side.



Kirkwood Gardens are sponsored by Belknap Landscape Company, Inc. and Donovan Tree Experts.



# SUMMER 2024 PROGRAMS & EVENTS

Programs have limited capacities and advanced registration is required.  
Full details and tickets are available on the Calendar of Events at [nhnature.org](http://nhnature.org).



Learn more [nhnature.org/dinos](http://nhnature.org/dinos)

## DINOSAURS RETURN

### JULY THROUGH OCTOBER 2024






Generously sponsored by:



## JULY

<p><b>JULY 10</b> <b>WEDNESDAY</b> 6:00 to 7:00 p.m. For adults</p>	<p><b>Lecture: Climate Change and the Upslope Movement of Montane Birds</b> <b>by Jason Hill, Quantitative Ecologist at the Vermont Center for Ecostudies</b> Dr. Jason Hill, of the Vermont Center for Ecostudies, will talk about the current and future elevational trajectories of montane organisms, especially montane birds from the spruce-fir zone of New England. Dr. Hill oversees the community science program, Mountain Birdwatch, which tracks the population status of high elevation specialists like Blackpoll Warbler and Bicknell's Thrush across Northern New England and New York. Existing modeling efforts predict that New England will lose most of its montane bird specialists by the end of this century due to poleward range shifts of those species in response to climate change. We'll explore those scenarios and examine what the data already show about how our montane forests are changing. <i>Cost: No charge to attend. Advance registration is required.</i></p>
<p><b>JULY 11</b> <b>THURSDAY</b> 10:00 a.m. to 4:00 p.m. For all ages</p>	<p><b>Special Event: Birthday Bash for the Animals</b> You are invited to this one-of-a-kind birthday party to celebrate our animals with unique enrichment gifts. Learn how animal care staff provide a rich and stimulating environment for our animal ambassadors through daily enrichment activities. Watch the animals open their birthday presents at special Up Close to Animals presentations at 11:00 a.m., 1:00 p.m. and 3:00 p.m. and at different animal exhibits throughout the day. Visit the Giving Tree to make the animals' wishes come true! Select an item featuring an enrichment toy and donate to allow the Science Center to purchase it as a gift to our animals. Docents will be on hand with touchable objects and to answer questions. <i>Cost: Included with trail admission. Last admission at 3:30 p.m.</i></p>
<p><b>JULY 16</b> <b>TUESDAY</b> 3:00 to 4:00 p.m. For teens and adults</p>	<p><b>Kirkwood Gardens Guided Tour</b> Join Lead Horticulturist, Emma Erler, for a guided tour of Kirkwood Gardens. This is your chance to learn about the history of the garden, identify what's in bloom, and ask any gardening questions you might have in this personalized tour. Youth must be accompanied by a registered adult. <i>Cost: \$9 member/\$11 non-member</i></p>
<p><b>JULY 20</b> <b>SATURDAY</b> 5:00 to 8:00 p.m. For all ages</p>	<p><b>Special Event: 2024 Family Picnic – A Fundraiser for the Science Center</b> Join us for this family-friendly event featuring food trucks, live animal programs, ice cream, lawn games, live music by the Audrey Drake Trio, and more in a fun, casual atmosphere for all ages. All food and drinks are included in the ticket price and include food from Cheese Louise, The Barn Food Truck, Pours &amp; Petals, Tin Can Co., and SubZero Nitrogen Ice Cream. Open bar includes local beer, wine, signature cocktail, and non-alcoholic butterfly nectar for the kids. Limited tickets are available and go on sale July 1. Look for your invitation via email in late June. Or visit <a href="http://nhnature.org/picnic">nhnature.org/picnic</a>. <i>Tickets: \$75/ ages 21+; \$30/ ages 12-20; \$15/ages 6-11; Free for 5 and under.</i></p>

### ON THE TRAIL

-  **River Otter Feeding** - Mondays, Wednesdays, and Fridays in June, July, and August at 11:30 a.m. at the River Otter Exhibit  
*Sponsored by: Holderness School*
-  **Turtle Talks** - Tuesdays in July and August at 10:00 a.m. on the Bluestone Terrace of the Webster Education Building
-  **Up Close to Animals** - Daily in July and August at 11:00 a.m. and 1:00 p.m., and 3:00 p.m. at the Amphitheater  
*Sponsored by: Rockywold Deephaven Camps; Squam Boat Livery; TESco*
-  **StoryWalk™** - Open daily through September 6 at the Holderness Town Gazebo at Curry Place. Presented in partnership with Holderness Library and Holderness Recreation Department.  
*Sponsored by: Meredith Village Savings Bank*
-  **It's A Wild Life Exhibit** - A visual project highlighting IF/THEN Ambassadors, women and gender minorities, whose careers intersect with the natural world. Daily along the live animal exhibit trail.

# AUGUST

<p><b>AUGUST 2 FRIDAY</b> 6:30 to 7:30 p.m. For adults</p>	<p><b>Lecture: Climate Up Close</b> <b>Speakers: Dr. Aaron Match, New York University; Dr. Jake Seeley, Harvard University; Dr. Nathaniel Tarshish, Harvard University; Dr. Andrew Williams, Princeton University</b> Climate Up Close is a group of climate scientists committed to making the essentials of climate science accessible to a broad audience. They address: Where is the boundary of climate knowledge? How has climate change impacted extreme weather? What does the future hold? Have we triggered a climate “tipping point”? In addressing these questions, we develop a Landscape of Climate Knowledge, categorizing climate impacts by whether they are highly confident or still uncertain. Our presentation is non-partisan and non-prescriptive. <i>Co-hosted by: Squam Lakes Association, Squam Lakes Conservation Society, and Squam Lakes Natural Science Center. Cost: No charge to attend. Advance registration is required.</i></p>
<p><b>AUGUST 8 THURSDAY</b> 6:00 to 7:00 p.m. For adults</p>	<p><b>Lecture: Bats on the White Mountain National Forest: A brief history since the onset of White-nose Syndrome</b> <b>by Leighlan Prout, USFS White Mountain National Forest</b> Bats across North America have been devastated by a new disease called white-nose syndrome. Learn how White Mountain National Forest biologists have been surveying for bats over the last 15 years, what they’ve discovered, and the conservation strategies that may be part of future management. <i>Cost: No charge to attend. Advance registration is required.</i></p>
<p><b>AUGUST 14 WEDNESDAY</b> 9:30 to 11:30 a.m. For teens and adults</p>	<p><b>Growing a Garden for Pollinators with Lead Horticulturist, Emma Erler</b> During this two-hour workshop, participants will learn the basics of attracting pollinators to their gardens. You’ll learn who the pollinators are, the best host plants and nectar sources to attract pollinators, how to provide shelter and water, and how to build a simple solitary bee nesting box. Whether you have a large sunny garden or a small patio, you’ll come away with the knowledge and tools to create and enhance habitat for pollinators. <i>Cost: \$25 members/\$30 nonmembers</i></p>
<p><b>AUGUST 22 THURSDAY</b> 4:30 to 5:15 p.m. For members</p>	<p><b>Annual Meeting for Members</b> <b>At Kirkwood Gardens</b> Business includes electing officers and trustees, honoring retiring trustees, recognizing employee service, and presenting the Horizon Award. Election slate and biographies of nominees will be posted after July 1 to <a href="http://nhnature.org/programs/annual_meeting.php">nhnature.org/programs/annual_meeting.php</a>. <i>Cost: No charge to attend but reservations are requested by emailing Amanda.Gillen@nhnature.org.</i></p>
<p><b>AUGUST 22 THURSDAY</b> 5:30 to 7:30 p.m. For adults</p>	<p><b>Special Event: Garden Party to Support the Science Center</b> <b>At Kirkwood Gardens</b> Join us for a Garden Party at Kirkwood Gardens to celebrate the wonders of nature while supporting the Science Center. This exclusive event promises an evening of camaraderie amidst the breathtaking beauty of nature. Enjoy cocktails and hors d’oeuvres provided by The Common Man, while you mingle with fellow Science Center enthusiasts. Immerse yourself in the soothing melodies of live music from a string trio. Don’t miss the chance to participate in the exciting silent auction, featuring items highlighting the best of the Science Center. From unique experiences to exceptional treasures, there’s something for everyone to bid on and support the Science Center’s important work. Limited tickets are available and go on sale August 1. Look for your invitation via email and mail in late July. Or visit <a href="http://nhnature.org/gala">nhnature.org/gala</a>. <i>Tickets: \$100 per person</i></p>
<p><b>AUGUST 23 FRIDAY</b></p>	<p><b>Kirkwood Gardens Guided Tour</b> <b>11:00 a.m. to 12:00 p.m.   For teens and adults</b> <i>Cost: \$9 members/\$11 nonmembers</i> <i>See description for July 16.</i></p>

# SEPTEMBER

<p><b>SEPTEMBER 7 SATURDAY</b> 10:00 a.m. to 12:00 p.m. For adults</p>	<p><b>Gardening for Wildlife Workshop with Lead Horticulturist, Emma Erler</b> Join the Science Center’s Lead Horticulturist, Emma Erler, in Kirkwood Gardens to learn how to establish a haven for animals, while still having an attractive, appealing garden. In this workshop you’ll discover how to plant and maintain trees, shrubs, perennials, bulbs, annuals, and grasses to benefit insects, birds, and small mammals. <i>Cost: \$25 members/\$30 nonmembers</i></p>
<p><b>SEPTEMBER 14 SATURDAY</b> 10:00 a.m. to 4:00 p.m. For all ages</p>	<p><b>Raptor Migration Celebration</b> Fall is a season of transition and many animals are on the move to wintering grounds. Join us to see migratory raptors at Up Close to Animals presentations in the amphitheater throughout the day. Learn about where our raptor species go each winter, how long it takes them to get there, and why they bother to return. Do not miss the special Birds of Prey program at 10:30 a.m. or 12:30 p.m. by the Vermont Institute of Natural Science (VINS), featuring a flight demonstration with their raptor ambassadors. <i>Cost: Included with trail admission. Last admission at 3:30 p.m.</i></p>





# SQUAM LAKE CRUISES

## Discover Squam Cruise

May 18 to June 30: Daily at 1:00 p.m.

July 1 to October 19: Daily at 11:00 a.m. and 1:00 p.m. | Wednesdays, Saturdays, and Sundays also at 3:00 p.m.

Enjoy Squam Lake and learn about the natural history, wildlife, culture, and people of the lake.

## Loon Cruise

June 24 to August 23: Mondays and Fridays at 3:00 p.m.

See Common Loons as a Science Center naturalist and Loon Preservation Committee biologist discuss loon conservation, biology, and monitoring. The cruise route changes to maximize loon observations.

## Cruise with a Naturalist

July 2 to October 10: Tuesdays and Thursdays at 3:00 p.m.

See wildlife on every memorable trip with a Science Center naturalist. Cruise route changes to maximize wildlife observations.

### Squam Lake Cruise Rates:

Adult \$32; Senior (65+) \$30; Youth (up to age 15) \$28 - Not recommended for children under age 5.

Cruises may be cancelled if minimum attendance (4 passengers) is not met or for severe weather.

Members receive a \$4 discount per person.

Conveniently purchase cruise tickets online at [nhnature.org](http://nhnature.org)

## Squam Lake Charters

Host your own unique gathering on Squam Lake with a private cruise customized to fit your occasion, or transport wedding guests to Church Island. Our four canopied pontoon boats and experienced tour captains are ready to help with your special outing. Contact Erick Amero at 603-968-7194 x110 or [erick.amero@nhnature.org](mailto:erick.amero@nhnature.org) for reservations.

\$375 per hour per boat



## FROM THE HERON'S NEST

Blue Heron School students have enjoyed warm weather and the excitement that comes along with it! Students completed their time with the Naturalists with a big journey to scoop at the Upper Pond, collecting many interesting creatures. The children spent hours playing with mud and water, began prepping the garden, and enjoyed lunch outside before the bugs arrived. The outdoor classroom is in full swing and the kindergarten children are reaching academic milestones while eagerly anticipating their big end-of-the-year celebration. Both School Directors have children graduating from Blue Heron School this year, so it feels extra special. We enjoyed connecting with Blue Heron School Alumni at our Pie For Breakfast gathering and are busy preparing for our summer program. It's been another wonderful year and as usual we all feel so grateful!



Blue Heron School is a nature-based Montessori school for children ages three to six. For information please visit [nhnature.org/programs](http://nhnature.org/programs) or contact Blue Heron School Co-Directors Jordan Fitzgerald and Jordy Gianforte at 603-968-7036 or [blueheron@nhnature.org](mailto:blueheron@nhnature.org).

## 2024 BONUS MEMBER BENEFITS

 MOUNT WASHINGTON OBSERVATORY SOCIETY <a href="http://mountwashington.org">mountwashington.org</a>	 BOAT MUSEUM	 CANTERBURY Shaker Village	 VERMONT INSTITUTE OF NATURAL SCIENCE	 Middlebury College Discovery Center bringing the outdoors in	
JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER

Reciprocal admission is generally good for up to two adults and two youth per visit. Be sure to take your membership card with you when you go. Check with specific organizations for hours, directions, and information.

Remember as a Science Center member, you receive discounted admission all year at participating ANCA organizations like VINS in Quechee, VT and Seacoast Science Center in Rye, NH.





# MEMBERSHIP UPDATES

## SHIFTING MEMBERSHIP RENEWALS AND COMMUNICATIONS FROM PAPER TO DIGITAL

In today's digital age, environmental consciousness is more important than ever. One of the simplest yet most impactful ways we can contribute to sustainability is by transitioning from paper-based communication to email. Hopefully, you are reading this newsletter digitally; if not please consider signing up for email communications by going to our website to register. Moving forward, all membership communications, from renewals to member benefits, will be through email. We know change is hard, but as an environmental organization, we need to lead by example towards sustainability. By embracing digital communication, we can reduce our environmental footprint, enhance operational efficiency, and contribute to a healthier planet.

Let's take this step together towards a more sustainable future. Embrace the power of email and join the sustainable revolution today.

You can renew your membership at [nhnature.org/membership](http://nhnature.org/membership) or at the admissions window when you visit. If you need additional assistance please contact the Membership Office at 603-968-7194 x146.

Thank you for being a member of Squam Lakes Natural Science Center!

Your dues provide support for the care and feeding of the animals; education programs; upkeep and maintenance of trails, exhibits and buildings; keeping Kirkwood Gardens free and open to the public; educational lake cruises; and general operating expenses. We look forward to seeing our Members out on the trails, and on the lake, for another great season!

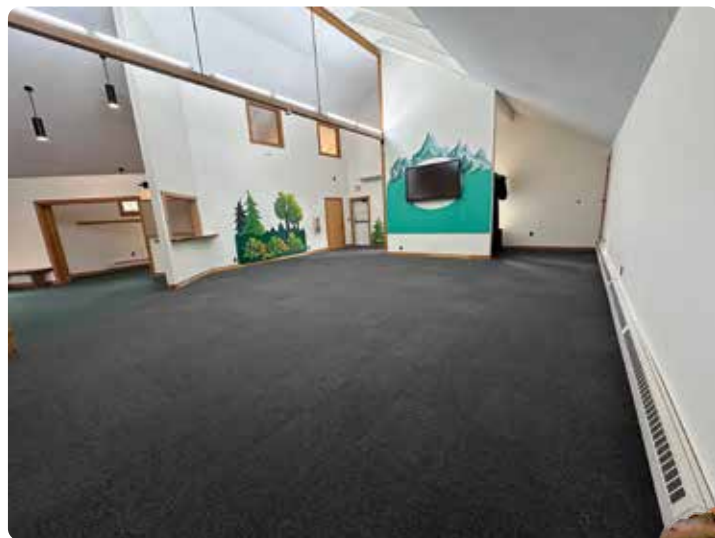
**Purchase or renew your membership at [nhnature.org/membership](http://nhnature.org/membership)**

**Check out the Membership FAQs at [nhnature.org/membership](http://nhnature.org/membership)**

## TRAILHEAD EVENT SPACE

We are excited to unveil our new event space - the renovated Trailhead. Visitors may remember that the Trailhead Gallery was the home to our introductory exhibits, Barred Owls, mouse cube, Mead Discovery Place, and also served as the original home of Blue Heron School. We have been working hard on the renovations over the past two years and are excited to offer this for private rentals. The Trailhead holds 100 people seated and 80 with tables and chairs.

See full details at [nhnature.org/programs/room\\_rental.php](http://nhnature.org/programs/room_rental.php) to reserve this space for your next event.



## GUIDED DISCOVERIES SUMMER DAY CAMPS



Week-long outdoor natural adventure day camps for children ages 4 to 14.  
**Register at [nhnature.org](http://nhnature.org)**

# KIDS' ACTIVITIES: PAINT WITH NATURE

Summer is a colorful season. Take a walk outside to see how many colors you can discover in the natural world around you. You can use all the different colors in nature for inspiration for a painting... and also as the paint itself. Follow the steps below to paint your own masterpiece with nature.

Directions:

1. Collect natural objects you find outside – things like green leaves, brown soil, yellow dandelions, and other flowers. Or you can collect natural objects around your house – things like cinnamon, spinach leaves, dirt from a houseplant, and onion skin.
2. Use these items as your paintbrush to create a piece of artwork on a blank piece of paper. Rub the dirt on the paper where you want brown paint. Smash up a green leaf and rub that on the paper where you want green paint. Smear a dandelion flower across the page where you want yellow paint.
3. See how many different colors you can make by collecting different items. Can you combine colors to make a new color?



Photo courtesy Steve Buissonne from Pixabay



Scan the code to print a nature journal page that includes these directions. Enjoy your explorations and happy painting!

## MEET OUR INTERNS



The Science Center is fortunate to have an amazing group of interns who join our staff for the busiest season. Meet our 2024 class of interns (from L to R):

### **Laura Patterson, Nature Day Camp Intern:**

Laura is a senior at Utah State University majoring in evolutionary biology. She is from Utah and is experiencing the humidity of New Hampshire for the first time. She is very excited to try new things.

### **Tim Cantwell, Animal Care Intern:**

Tim is a senior at the University of New England majoring in animal behavior with a minor in marine biology. He grew

up in New Hampton, NH and is excited to learn about caring and feeding (and cleaning up!) for the animals.

### **Adele Tilden, Education Program Intern:**

Adele is a senior at Eckerd College majoring in environmental studies with dual minors in communications and sustainability. She grew up in Orford, NH and is excited to push herself outside of her comfort zone and learn through it.

### **Corinne Cloutier, Volunteer Program Intern**

Corinne is a senior at Plymouth State University majoring in sustainability. She is from Goffstown, NH and is looking forward to getting to know our volunteers and the stories they bring with them.

### **Sam Castle, Marketing Intern:**

Sam is a senior at Plymouth State University majoring in global tourism. He is from Hampstead, NH and considers the Lakes Region to be his home away from home.

### **Abby Leahey, Education Program Intern:**

Abby is a senior at Fitchburg State University majoring in biology with a concentration in environmental biology. She is from Winchendon, MA and is very excited to work with the staff and the public and to explore this beautiful area of New Hampshire.



## FROM THE ARCHIVES:

Construction of the Celebrate Birds Exhibit in 1996.

## WISH LIST

- **For Animal Care:** Pet toys; local hardware and grocery store gift cards; baby blankets; dog/cat beds; cologne/perfume; PVC fittings/caps
- **For Trailhead Event Space:** Simple coffee maker; working newer microwave; working refrigerator/freezer combo.
- **For Exhibits:** Genuine black bear rug
- **For Kirkwood Gardens:** Six to eight foot orchard ladder; garden spades and forks
- **For Lake Cruises Headquarters:** Boat hooks
- **For Staff:** Airline miles to attend professional development experiences



# TRAIL'S END

I assume that many of you reading this newsletter have visited the Science Center, or plan to do so very soon given the dinosaur exhibit, which is such fun. In so doing, you have probably met or at least seen volunteers as well as staff members who have with them an animal to show and discuss with visitors as they make their way around the trail. The volunteers are most likely one of the many docents who have been trained to do this happy and interesting task (and many others as well), thanks to the efforts of Volunteer Manager Carol Raymond and her colleagues who, among other things, recruit and train dozens of volunteers every year.

I had the privilege of becoming a docent years ago and just loved that role. My favorite activity was taking an animal onto the trail to engage and talk with visitors. I recall taking several bird species out, as well as some turtles and – with the help of two others – our wonderful red-tailed boa constrictor. I loved discussing the animal on display and offering a few interesting facts and stories. But on reflection, what most interested me was simply meeting and getting to know a wide range of individuals and families - all of whom, without exception, were engaging, interested in the Science Center, and enthusiastic visitors. I met people from many other states and countries, groups from various religious communities in the area, first time visitors, and others who had been on the trail countless times already.

My favorite encounter a few years ago was with a gentleman who was by himself and stopped to visit with me. I was holding one of the Science Center's Blanding's turtles which is native to our area, though increasingly scarce and considered an endangered species. It is notable for the bright yellow skin around its neck and legs, and its active agility. We talked for some time and I found my new friend to be deeply well-informed

about all things Blanding's. It was a wonderful conversation and I was sorry to see him move on. But I did get his name.

When I was next at my computer, I Googled the man I had talked with and discovered he was an internationally recognized and widely published expert on Blanding's turtles. That didn't surprise me, given our conversation, but it made me reflect again on how many interesting and accomplished people visit our Science Center.

In truth, when my nine year term on the Board is completed next year, I cannot wait to return to the trail with a critter to share – the Blanding's turtle for sure, but also my true favorite, the Saw-whet Owl. I am already excited about the people I will meet!



Sarah with a Northern Saw-whet Owl.

*Trail's End* is written by Sarah Brown, Chair of Squam Lakes Natural Science Center's Board of Trustees. You may contact her at sarahbrown1948@gmail.com.

## A BATTLE WORTH WINNING *continued from page 1*

strongly connected to thoughtful human actions. Certainly, spreading awareness of the challenges bats face with White-nose Syndrome is an important step. Sharing barn space with bats could be an enlightening experience as you watch them swoop out into the evening sky, zigzagging to catch insects on the wing. Share your observations and help biologists track how our bat populations are doing in New Hampshire by participating in a summer bat colony count. Learn more at [wildlife.nh.gov](http://wildlife.nh.gov).

Would you like to see a bat safely at close range? The Science Center has ambassador bats which are part of public programs at the center and on outreaches to communities. Get to know a bat and its challenges and adaptations up close and natural!

Learn more about Bats of the White Mountain National Forest at the August 8 lecture. See page 7 for full details.

Learn about bat conservation, how to build, and where to place bat houses at Bat Conservation International and <https://www.batcon.org/about-bats/bat-gardens-houses/>

## A BATTLE WORTH WINNING QUIZ

1. White-nose Syndrome (WNS) is caused by a \_\_\_\_\_.
2. What once abundant species of bat is now listed as endangered in New Hampshire due to WNS?
3. T or F? Bats help control insect populations including mosquitoes.
4. Where did the fungus that causes White-nose Syndrome originate?
5. T or F? A vaccine has been developed to help protect bats from White-nose Syndrome.

Answers:

1. Fungus
2. Little Brown Bat (*Myotis lucifugus*)
3. T
4. Europe
5. T



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