



KESTREL CAPERS

By Margaret Gillespie

If you have never seen a kestrel, here are a few tips to increase your chances for fascinating sightings. Even if you are fortunate to be familiar with kestrels, there still may be surprises kestrels have in store for you. Kestrels often nest in tree cavities initiated by hungry woodpeckers searching for insects. The good news is kestrels also utilize old barns as excellent substitutes for holes in trees. Friends at a nearby farm dating back to the 1800s welcomed a pair, which returned to nest over a period of several years. The birds' arrival each spring culminated a long commute from wintering grounds in the southern United States or Central America. Let's delve into how a nesting season works in the life of a pair of kestrels.

The first item to decipher is who is who in the pair. In most raptors, plumage is the same for both sexes and size is the determining factor, with females being larger than males. Kestrels somewhat change the rules. Female kestrels are still slightly larger than males, but there is a striking difference in plumage. Female coloring is dominated by camouflaging rusty brown, whereas males have a slate blue hue to their wings as well as the top of their heads. Both have double black stripes on the sides of their faces. Both also sport two black spots on the back of their heads, the kestrel version of false eyes. Predators contemplating a meal hesitate a moment, thinking the kestrel is watching them.

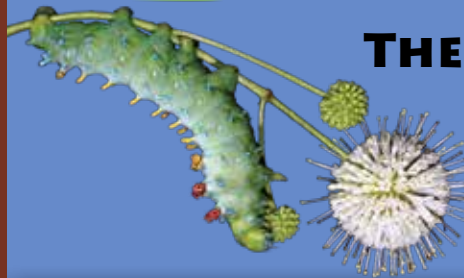
The reason old farms are a mecca for kestrels is the availability of insects and small rodents in overgrown fields. Power lines have a similar setup. Kestrels perch on an open tree limb scanning the area for prey, using a hunting adaptation I consider a kestrel "super power". They can see ultraviolet light. How is this trait helpful? Rodent urine reflects ultraviolet light, which allows kestrels to detect urine trails left by rodents and thus zone in on their activity areas. When kestrels sight prey, they snatch it with their talons in a swift dive and return to their perch. They also have the ability to hover when hunting. This technique is used in open spots away from tree perches and generally necessitates facing an oncoming wind. The hovering kestrel keeps its head still and eyes focused on the ground while its wings are flapping, kind of like a mini helicopter. A unique set of feathers on the flexion point of the mid-wing is instrumental in the kestrel's ability to hover. These feathers are part of the "thumb" or alula structure of kestrels and visibly separate from other wing feathers to aid in balance.

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THE CATERPILLAR LAB JULY 29 - AUGUST 2

See and touch a huge variety of New England caterpillar species and learn the incredible but true stories about the strange and surprising adaptations of these creatures.

Purchase your live animal exhibit trail and lake cruise tickets in advance at nhnature.org.

FORGING TRAILS: MOTUS TAKES FLIGHT



Some of you may remember our Osprey satellite tracking project from a few years back. Through that technology, we learned a tremendous amount of information about Osprey migration (to South America and back) as well as their foraging habits here in the Lakes Region. One downside of that technology was size . . . although the transmitters were light, they were still too heavy to track birds smaller than a plover or a dove.

Recently, I have been collaborating in a new tracking project that uses quite different technology and allows us to follow MUCH smaller animals. The Motus Wildlife Tracking System is a collaborative research network that uses automated arrays of radio telemetry receiving stations to study movements of small animals. NH Audubon is coordinating installation of Motus receiving stations throughout New England over the next two years. Motus transmitters are tiny enough that they can be placed not only on small songbirds, but also bats, and even dragonflies and butterflies.

Rather than communicating with satellites thousands of miles away, the tiny Motus transmitters “ping” receiver towers within a few miles. With enough “fence lines” of receivers crisscrossing the landscape, we can follow an animal’s migration . . . north and south. The other big advantage of Motus is the price of each transmitter. Rather than being over \$4,000 each for an Osprey-sized satellite tag, the Motus packs are less than \$200, allowing many more animals to be tracked.

We are going to install two receiver towers in the Squam area. One will be erected in May 2021 on a hilltop in New Hampton and will cover the western portion of the Squam watershed. A second tower is planned for the east side of the lake. Anything that flies over the watershed equipped with a Motus transmitter will be picked up by these two towers.

We also plan to help NH Audubon capture and tag some Monarch Butterflies this summer to watch how they move across the area. We won’t be able to follow them to Mexico (the battery life won’t allow that) but we should see several weeks of migration.

The Motus website provides data on the receiving stations where each tagged individual is detected, making it possible to trace the origins and travels of all individuals detected by the Squam Lakes stations. To find out more about Motus, go to motus.org.

A huge thank you to the Lovett-Woodsum Foundation for supporting one of the towers and the Squam Environmental Preservation Fund of the New Hampshire Charitable Foundation for funding the other. Also a big thank you to Liz and Dennis Hager, the Lakes Region Conservation Trust, the Society for the Protection of New Hampshire Forests, and of course, New Hampshire Audubon.

Stay tuned for updates as this project gets off the ground.



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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 editors Janet Robertson and Amanda Gillen.

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TRUSTEE PROFILE

TONY WAGNER



As a child, I spent summers attending camp on Newfound Lake where I gained a deep appreciation for the beauty, magic, and mysteries of the natural world. My wife, PJ Blankenhorn, grew up in upstate New York where she, too, came to love the lake in her backyard and the surrounding hills. We were married on Church Island, bought a small camp on the backside of Little Squam one year later,

and quickly discovered the Science Center. Highlights of our time spent on Squam were always our trail walks with our children and then our grandchildren.

Nearly 20 years ago, PJ and I became involved with milfoil mitigation efforts on the lake, spending weekend time scuba diving to handpick and mat the large beds of the invasive weed. After several years, we organized a fundraising campaign on Little Squam that helped persuade the Squam Lakes Association to formally take on the problem. But we were both busy with careers in Boston and so had little time to become involved in other volunteer activities on the lake.

Honorary Trustee Carol Thompson secretly engineered a change to all of that. We had enjoyed dinners with Carol and her husband John where we had often talked about education. It was a subject of great interest to them, but education for me was both a vocation and a passion.

Knowing this, Carol had arranged for PJ and me to be invited to meet with Iain and several trustees for a lake cruise and a behind-the-scenes visit to the center. I had assumed we were being cultivated to become donors, but “the ask” turned out to be something much more. A few weeks after our getting acquainted evening, I was invited to join the board and to head up the Education Committee.

Fast forward nine years, I am coming to the end of the most rewarding time I’ve ever spent as a volunteer. It has been both a privilege and a joy to work with an incredibly dedicated group of trustees and staff. I am especially proud of the work the Education Committee did on the strategic plan (nhnature.org/support), developed six years ago, which led to improvements in our education programs and construction of a wonderful new building for the Blue Heron School.

Looking to the future, I believe the Science Center can and should do much more to educate citizens about the science of climate change. I also believe that we can do more to create programs for older students and attract a more diverse student and adult population to the Science Center. But with such a strong staff, a committed board, and an enthusiastic and engaged Education Committee, I have no doubt that we will meet these future challenges.

A former high school English teacher, Tony earned a Masters and Doctorate in education at Harvard University, where he held a number of positions over nearly twenty years. He is the author of seven books — a memoir, Learning by Heart, being his most recent. He and his wife PJ now live in Sandwich and enjoy hiking, kayaking, and photography.

NEWSBRIEFS

- Facilities Director Tom Klein retired in May with plans to move to Florida in the fall. Tom has filled several roles here since 2008, including Operations Manager and Cruise Coordinator. Tom has been a valuable employee, known for his sunny attitude and steady willingness to get the job done, no matter the task. Tom will be greatly missed. We wish him well on his new adventures.
- Facilities Supervisor Keith Hosking became Director in Tom’s place. Keith first joined the Animal Care staff in 2014 and moved to Facilities in 2018. Keith holds a B.S. in Environmental Biology from Plymouth State University and spends as much time outdoors as he can. Keith especially loves ice fishing.
- Blue Heron School Assistant Teacher Alexis Plunkett was hired in April. She is pursuing a B.S. in Mental Health Psychology at Plymouth State University. She enjoys hiking and hopes to summit all 48 four-thousand-foot mountains in New Hampshire. Alexis also enjoys sewing, painting, and being outdoors.
- Naturalist Margaret Gillespie was awarded the 2021 New Hampshire Environmental Educator of the Year award at the New Hampshire Environmental Educator’s annual meeting on May 6. Margaret has researched and written a natural history column for this newsletter’s front page for more than 35 years. Some of the articles were compiled in a book called *Nearer to Nature* in 2016 to commemorate the Science Center’s 50th anniversary.
- We are pleased to welcome interns back this year after a pause in 2020. Six young people will spend about ten weeks learning what it is like to work in various roles at a non-profit nature center.
- Marketing Intern Danny Holman graduated from the University of Vermont where he majored in Environmental Studies with a double minor in Business Administration and Studio Art. Danny is from North Andover, Massachusetts and summers with his family at their camp in Holderness.
- Education Program Interns include Hanna Hauck and Caitlyn Irish. Hanna finished her junior year studying Wildlife Conservation Education at Juniata College in Huntingdon, Pennsylvania. Caitlyn has local ties, growing up near Plymouth. She just completed her senior year at the University of New England in Maine with a degree in Marine Affairs.
- Kayla Bulthuis is from Illinois where she graduated with a Zoology and Environmental degree from Olivet Nazarene

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NATURALIST'S CORNER

THE SIMPLE PLEASURES

By Eric D'Aleo

How often have we heard the adage to enjoy life's simple pleasures; family, friends, health, the natural world, and other things we take for granted? If there is any message from the past year with all its concerns brought on by the pandemic, being aware of life's simple pleasures is a big one. The ability to go outside and be in nature helped many of us survive. Hiking in the woods, sitting by a river and dipping your toes into the cool water, swimming in a lake, or listening by an open window on a quiet night to the distant sound of an owl hooting. All these experiences help to ground and remind us: we are dependent on and a part of the natural world. I hope you take the opportunity this summer to reflect on how being outside helps you and make it a part of your new routine.

Just the simple act of sitting quietly and mindfully for five minutes every day can be helpful. Try this exercise we do with the Blue Heron School children. Find a quiet place outside to sit by yourself. Close your eyes and focus on your breathing. Breathe in deeply... and slowly. Then release it as you notice the solid feeling of what you're sitting on. Breathe in again ... deeply and slowly. Release this breath and notice the sensation of a breeze or the sun's warmth. Breathe in deeply and slowly a third time. Release

this breath and now listen. What do you hear? Notice where the sound is coming from. Is it close or far away? Is it repetitive? Does the sound move? Is it a sound you've heard before?

Now with your eyes still closed, cup your hands behind your ears and listen again. Are the sounds louder? Can you hear other sounds you didn't hear before? Listen silently, like an owl, and slowly turn your head and body. After several minutes, place your hands in your lap and focus on the sound of your own breathing. Slowly count ten deep breaths in and out. Open your eyes and see what you've been hearing.

You can get an idea of what this may sound like at the new raptor exhibit. Two eight-foot diameter sound dishes, each covered to look like the face of an owl, will allow you to simulate an owl's hearing. The sound dish funnels sound to you as an owl's facial disk does to its ears. Sit still at one dish and focus on the sounds around you. Maybe you can hear people talking down the trail or a raptor moving around in its aviary. If someone sits at the other sound dish, you may be able to have a whispered conversation. And if you're really lucky, maybe you can hear the quiet stillness of the afternoon and enjoy the simple pleasure of listening to the natural world.



A young visitor tests the owl sound dishes.

NEWSBRIEFS *continued from page 3*

University in Bourbonnais. Kayla looks forward to teaching science to children as the Guided Discoveries Intern.

- Volunteer Program Intern Stephen Mellen completed his senior year as an Environmental Science major at the University of Massachusetts, Boston. He has a strong background working with animals at Capen Hill Nature Sanctuary and the Boston Museum of Science.
- Animal Care Intern Josephine Samarjian graduated with a major in Captive Wildlife Care and Education with a Zoology minor at Unity College in Maine. She has experience with domestic animals and is interested in learning about and working with captive native wildlife.
- New Hampshire Day took place on May 8 and 899 people enjoyed the beautiful day. We thank our generous sponsors, Dead River Company and the New Hampshire Electric Co-op Foundation for their support.
- While Kirkwood Gardens Day is cancelled for 2021, some plants will be for sale in the garden on the terrace next to the Holderness Inn from May 24 until they are sold.

LIVE ANIMAL OUTREACH PROGRAMS

Invite us to bring outdoor live wildlife programs to your site or enjoy a virtual presentation for your group!

Squam Lakes Natural Science Center animal outreach programs feature live animals and are led by our expert naturalists. Select from a variety of informative and inspiring programs or let us create a customized program to match your interests.

Visit nhnature.org/programs for information.



KIRKWOOD GARDENS PLANT SPOTLIGHT

By Brenda Erler

Japanese Painted Fern

Athyrium niponicum var. pictum

Culture: Easily grown in organically rich, medium moist, well-drained soil in part to full shade. Best frond color appears in light shade. Divide clumps in early spring. May spread by rhizomes and form large colonies in good growing conditions.

Height: 12 to 18 inches

Lovely fern with silvery fronds and dark maroon midribs that is effective in woodland gardens, shaded gardens, and border fronts, as well as along streams or ponds.

Kirkwood location: Small area along border edge of upper garden on driveway side; also on bank between upper and lower gardens, close to granite steps.



flickr/Florence Ivy, CC BY-ND 2.0

Mexican Sunflower

Tithonia rotundifolia 'Torch'

Culture: This warm weather annual is easily grown in average (even poor), dry to medium, well-drained soils in full sun. Avoid rich soils. Deadhead to encourage continuous bloom.

Bloom: June to September. Beautiful 3-inch intense orange blooms with orange-yellow centers appear over a long bloom period.

Height: 4 to 6 feet, so best for the back of the border. Mexican sunflowers are native to Mexico and Central America. Plants thrive in the summer heat. May be direct-seeded in the garden after the last frost date, or started indoors 6 to 8 weeks before the last frost for an earlier bloom. Good cut flower. Very attractive to butterflies and hummingbirds!

Kirkwood location: Driveway entrance and lower garden on driveway side.



flickr/Carl Lewis, CC BY 2.0



Plant Spotlight and Kirkwood Gardens are sponsored by Belknap Landscape Company, Inc. belknaplandscape.com



FROM THE HERON'S NEST

By Laura Mammarelli


In addition to traditional signs of spring, like seeing robins, daffodils, crocuses, tree swallows, and watching the piles of snow melt, here at the Science Center spring is clean up time. There are sticks and leaves to remove from lawns and trails. The Blue Heron School children helped out by raking the picnic area and clearing the sticks and leaves off the Water Matters Pavilion deck to be ready to welcome visitors in May.



Blue Heron School is a nature-based Montessori school for children ages three to six. For more information please visit nhnature.org/programs or contact Laura Mammarelli, Blue Heron School Director, at 603-968-7036 or blueheron@nhnature.org.

CALENDAR OF PROGRAMS & EVENTS

JUNE

<p>JUNE 25 THROUGH SEPTEMBER 6 For all ages</p>	<p>StoryWalk™ :On Meadowview Street Stroll along the trail by the channel as you read <i>On Meadowview Street</i> one page at a time. Written by Henry Cole, the story is about Caroline and her family, who have just moved to Meadowview Street. But where's the meadow and where's the view? When a small wildflower begins to grow in her backyard, Caroline and her family soon transform the yard into a wildlife habitat. StoryWalk™ surrounds the Holderness Town Gazebo behind the Holderness Post Office at Curry Place. Presented in partnership with Holderness Library and Holderness Recreation Department. <i>Cost: No charge and no reservations required.</i> Sponsored by: </p>
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JULY

<p>JULY 1 THURSDAY 10:00 a.m. to 4:30 p.m. For all ages</p>	<p>All About Birds Celebrate birds and the opening of our new Raptor Exhibit. Get up close to live raptors at Pop Up Animal Encounters throughout the day. Have your questions answered by naturalists stationed at the new exhibit. <i>Cost: Included with trail admission. Last entry at 3:30 p.m.</i></p>
<p>JULY 8 THURSDAY 7:00 p.m. For adults</p>	<p>Virtual Ecology Series: A Night of Moths by Rick Van de Poll, PhD, Founder, Ecosystem Management Consultants of New England Do you know New Hampshire is home to about 1,800 moth species, many of which rival butterflies in their beauty? Do you want to know why moths are attracted to light or why most moths fly at night? Noted ecologist Rick Van de Poll will answer these questions and more during this virtual presentation. Learn about the variety of moths living in this area, some identification tips, and the beneficial role moths play in the environment. <i>Cost: No charge to attend. Advance registration required. Zoom link will be sent with registration confirmation.</i></p>
<p>JULY 15 THURSDAY 10:00 a.m. to 4:30 p.m. For all ages</p>	<p>Fur, Feathers, and Scales Get up close with mammals, birds, and reptiles at trailside Pop Up Animal Encounters throughout the day. Find out what separates these groups of animals and what they have in common. <i>Cost: Included with trail admission. Last entry at 3:30 p.m.</i></p>

Winged Wonders: Virtual Summer Splash



Saturday, July 24, 7:00 to 8:00 p.m. via Zoom

The raptors are enjoying their new quarters in the Raptor Exhibit but we want to give them a special evening of R & R (Rats and Relaxation).

Celebrate these incredible Birds of Prey, go behind the scenes to learn about their care and training, and enjoy a virtual evening of entertainment from the Science Center.

Watch for your invitation by email.



<p>JULY 29 - AUGUST 2 THURSDAY-MONDAY 9:30 a.m. to 4:30 p.m. For all ages</p>	<p>Caterpillars in Residence with The Caterpillar Lab The Caterpillar Lab moves into our Tamworth Pavilion for a five-day exhibit featuring a huge variety of New England caterpillar species with plenty to see and touch! Educators from The Caterpillar Lab will teach all about metamorphosis and tell incredible but true stories about the strange and surprising adaptations of these creatures. Some caterpillars are camouflaged to look like twigs or snakes. Some have stinging spines or brightly colored baubles. Find out about these little-known native critters munching on their food plants right in front of you. You are sure to see and learn something new! For more information, see thecaterpillarlab.com. <i>Cost: Included with trail admission. Last entry at 3:30 p.m.</i> Sponsored by:  </p>
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AUGUST

<p>AUGUST 3 TUESDAY 7:00 p.m. For adults</p>	<p>Virtual Ecology Series: Restoring New Hampshire's Bald Eagles by Chris Martin, Senior Biologist, NH Audubon During this virtual presentation, Chris Martin will discuss the recovery of the Bald Eagle population in New Hampshire and describe the management efforts and partnerships that helped to restore these amazing birds. A conservation biologist who has worked for NH Audubon for nearly 31 years, Chris has focused on recovery of the state's endangered and threatened birds of prey, including Peregrine Falcons, Northern Harriers, and Ospreys, in addition to eagles, in close collaboration with NH Fish & Game. He recruits, trains, and supervises an enthusiastic corps of volunteer raptor watchers who monitor these species all across the state. <i>Cost: No charge to attend. Advance registration required. Zoom link will be sent with registration confirmation.</i></p>
<p>AUGUST 5 THURSDAY</p>	<p>All About Birds <i>Cost: Included with trail admission. Last entry at 3:30 p.m.</i> <i>See description for July 1.</i></p>
<p>AUGUST 10 TUESDAY 10:00 a.m. to 4:30 p.m. For all ages</p>	<p>Have to Have a Habitat Food, water, shelter, space, air, and sun – all living things need the same six things to survive. Their habitat is where they live and find these survival essentials. Meet some live animal ambassadors at trailside Pop Up Animal Encounters throughout the day and learn about the habitats they call home. <i>Cost: Included with trail admission. Last entry at 3:30 p.m.</i></p>
<p>AUGUST 17 TUESDAY 7:00 p.m. For adults</p>	<p>Virtual Ecology Series: The Elusive Saw-whet Owl by Trudy Battaly and Drew Panko Some current scientific research is focused on Saw-whet Owls to learn more about the migration patterns of these small and elusive owls. At this virtual presentation, bird banders Trudy Battaly and Drew Panko will share their work banding Saw-whet Owls and tracking their movements using radio telemetry in southeastern New York. There will even be a cameo appearance by one of our ambassador Saw-whet Owls! <i>Cost: No charge to attend. Advance registration required. Zoom link will be sent with registration confirmation.</i></p>
<p>AUGUST 21 SATURDAY</p>	<p>Annual Meeting for Members Save the date for the Annual Meeting on Saturday, August 21. Whether we can meet in person or not, we will still elect officers and trustees, honor our retiring trustees, recognize employee service, and more. The meeting format, election slate, and biographies of nominees will be posted after July 1 to our website, nhnature.org</p>
<p>AUGUST 25 WEDNESDAY 10:00 to 11:30 a.m. For ages 5+</p>	<p>From Leafhoppers to Lacewings: Field Exploration Head into a field armed with a sweep net to discover the many shapes, sizes, and types of insects that call this natural community home. From leafhoppers that eat plant sap with their sucking-piercing mouthparts to the carnivorous lacewing with its delicate lace-like wings, be astounded by the wild diversity of insects. <i>Cost: \$9/member; \$11/non-member</i></p>

SEPTEMBER

<p>SEPTEMBER 2 THURSDAY</p>	<p>All About Birds <i>Cost: Included with trail admission. Last entry at 3:30 p.m.</i> <i>See description for July 1.</i></p>
<p>SEPTEMBER 11 SATURDAY 10:00 a.m. to 4:30 p.m. For all ages</p>	<p>Raptor Migration Celebration Fall is a season of transition and many animals are on the move to wintering grounds. See migratory raptors at trailside Pop Up Animal Encounters throughout the day. Learn where our raptor species go each winter, how long it takes them to get there, and why they bother to return. <i>Cost: Included with trail admission. Last entry at 3:30 p.m.</i></p>
<p>SEPTEMBER 12 SUNDAY</p>	<p>From Leafhoppers to Lacewings: Field Exploration <i>Cost: \$9/member; \$11/non-member</i> <i>See description for August 25.</i></p>

ON THE TRAIL

Pop Up Animal Encounters with live animals will take place along the trail throughout the day in July and August. It's always a surprise what animal you will see and what you'll learn about them!

To help keep everyone healthy, all programs have limited capacity and other restrictions. Visit nhnature.org/reopen for Know Before You Go information.

Program tickets must be reserved and paid for online in advance for all events.

**Trails are open daily, 9:30 a.m. to 5:00 p.m.
(last trail admission at 3:30 p.m.)
Pre-purchase tickets at nhnature.org.**

SQUAM LAKE CRUISES

Discover Squam

May 15 - June 30: Daily at 1:00 p.m.

July 1 - August 30: Daily at 11:00 a.m. and 1:00 p.m.

Learn about the natural history of Squam Lake, look for majestic Bald Eagles, and listen for the haunting call of Common Loons. Hear about the people who have lived on its rocky shores surrounded by scenic mountains for over 5,000 years. Cruise on this beautiful lake where *On Golden Pond* was filmed 40 years ago.

Loon Cruise

June 11 - 25: Fridays at 3:00 p.m. | June 28 - August 27: Mondays and Fridays at 3:00 p.m.

Observe Common Loons with a Loon Preservation Committee (LPC) biologist and Science Center naturalist as they share the latest news about loon conservation, biology, and monitoring. Learn about the work LPC does across the state and on Squam to protect these unique migratory birds, the only loon that breeds as far south as New Hampshire. The cruise route maximizes the likelihood of loon observations and changes weekly.

Cruise with a Naturalist

July 1 - October 7: Tuesdays and Thursdays at 3:00 p.m.

Learn about the rich natural history of Squam Lake with an experienced naturalist. See Common Loons and Bald Eagles and view their nesting sites. Watch for other wildlife too - you never know what you might see amid Squam's scenic mountain ranges, charming islands, and quiet spots. The route is chosen to maximize wildlife observations; see something different on every memorable trip.



Squam Lake Cruise Rates:

Adult: \$27

Senior (65+): \$25

Youth (up to age 15): \$23

Members receive a \$4 discount per person.

Not recommended for children under age 3.

Tickets at nhnature.org

Squam Lake Charters

Host your own cocktail party or other unique gathering on Squam Lake. Transport wedding guests to Church Island. Charter a private cruise customized to fit your occasion. Five canopied pontoon boats and experienced tour guides are ready to help with your special outing. Contact Paul Brochu at 603-968-7194 x110 or paul.brochu@nhnature.org for reservations.

\$250 per hour per boat

Water Music

Wednesday, July 14, 6:00 to 7:00 p.m.

On Livermore Cove, Squam Lake

Enjoy a free outdoor concert as New Hampshire Music Festival musicians play from the Science Center's pontoon boats anchored in Livermore Cove on Squam Lake. (Rain date is Friday, July 16.) Presented in partnership with: Chocorua Island Chapel Association, Loon Preservation Committee, Squam Lakes Association, and Squam Lakes Conservation Society. See nhmf.org for more information.



THANK YOU VOLUNTEERS

Thank you to the many individual volunteers and groups including Plymouth Regional High School National Honor Society, Moultonborough Academy, Stonyfield, Hyperthem, and Holderness School, who helped get the trails, grounds, and exhibits ready for opening day! We couldn't have done it without you!

Learn about becoming a volunteer at nhnature.org/who/volunteer.php



Caryl Olmstead helps plant berry bushes at the Songbird Feeding Station.



Volunteers from Hyperthem help at the Bear Exhibit.



A volunteer from Moultonborough Academy sweeps the Bluestone Terrace.

GREEN TIP: PREVENTING BIRD STRIKES

North American bird populations have declined dramatically since 1970. While there are many reasons for the decline, including habitat loss, pesticide use, and pet and stray cats preying on birds, window collisions are a top cause. Approximately one billion birds are killed each year from window collisions!

While birds see differently than humans - for instance, they can see ultraviolet (UV) light, they don't understand glass as barrier. Window reflections may appear to be habitat, which birds are attracted to, especially migrating birds in unfamiliar surroundings. Tall buildings in cities located along migratory corridors are a particular source of fatalities due to birds striking windows.

See examples of how to protect birds at the new Songbird Feeding Station near the Marsh Boardwalk. These are methods you might find easy to use at home to decrease or eliminate bird-window collisions.

- Hang para-cord vertically on the outside of the glass four inches apart.
- Paint vertical stripes of UV liquid on the glass
- Put decals that reflect UV light on the window

You can find out more at the American Bird Conservancy's website page: abcbirds.org/glass-collisions/



Our Wish List is at <https://amzn.to/3qhZDBN> or shop with Amazon Smile to support the Science Center with every purchase. <http://smile.amazon.com>.

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You shop. Amazon gives.



SPONSOR A SPECIES!

Your sponsorship helps provide food, health care, and housing for the animals. It's a unique way to learn about a particular species and help us to care for our live animals.

Visit nhnature.org/support/sponsor_species.php.

HOWLING COYOTE GIFT SHOP: Visit the outdoor gift kiosk when you visit or shop online anytime!

OPENING A WINDOW TO THE NATURAL WORLD

Education Matters



Since 1990, the Science Center has completed three major capital campaigns - the Quarter Century Fund, the Horizon Project, and Nature Matters. Now we are on the brink of finishing a fourth one - Education Matters.

Each campaign started with a strategic plan shaped by trustees, volunteers, and staff with countless hours of time spent discussing, preparing, organizing, creating, designing, and building. So many wonderful improvements were built and funded - new buildings, exhibits, trails, and more - over the past 30 years through these campaigns. The generous donations and goodwill from our community and supporters that made these developments possible are truly amazing.

The Education Matters Capital Campaign four goals focus on enhancing the quality of education we provide by:

- Building an Early Childhood Education Center (new home of the Blue Heron School);
- Paying off a line of credit used to buy the land and build the Lake Cruise Headquarters;
- Replacing and updating our Raptor Exhibit;
- Establishing a significant education scholarship fund.

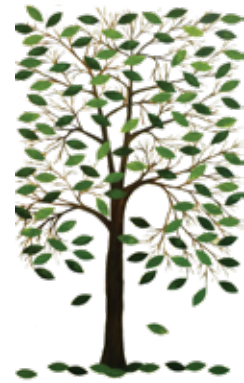
At the time of this writing at the end of April, we have almost met our \$2.8 million campaign goal. Please consider joining our supportive community to help us raise the last \$50,000 needed to finish. For more information, visit nhnature.org/em

Opening a Window to the Natural World is written by Development and Communications Director Janet Robertson. You may contact Janet at 603-968-7194 x 112 or janet.robertson@nhnature.org.

IN MEMORIAM



We are sad to share news that Trustee Tom Cowie passed away in March from cancer. Tom served on the Board of Trustees from 2016 until his death in 2021. He was Chair of the Human Resources Committee, Board Secretary, and a member of the Finance Committee. Tom had recently retired from his law practice, Deachman & Cowie, P.A., in Plymouth. Tom was an amazingly kind and dedicated man - his gentle presence will be greatly missed.



**What will your legacy be?
Become a member of the
Naturalist's Legacy Society.
Visit nhnature.org/support**

These generous donors made tribute gifts, which were received between January 1 and March 31, 2021:

In memory of Thomas Cowie
Barb and Sam Laverack

In memory of Doris Phippen
Sonya Clay
Kathy Ebeling

Pamela Magrath for
Kirkwood Gardens
Beth Phippen-Lepine for
Kirkwood Gardens

In memory of Gregory Smith
Gail Smith and Frances Chalmers

In honor of Carol Thompson for
Kirkwood Gardens
Diane Garfield and Peter Gross

In memory of Davis Thurber
Eric and Joanne Andrews
Suzanne Hanson and Jon Cumpston
Gary and Brenda Diederich
David Gregg
Peter and Irene Labombarde
Claudia Lep Presser
Carol and Philip Scheiber

In memory of John G. Waters
Ted Decareau
Rosemary Lionetta

In memory of Charles Zaroulis
Elaine and George Basbanes
Ann Burghardt
Christine and Timothy Driscoll
Louise Lasna

WISH LIST

For Animal Care - newspapers; heavy-duty storage tubs; limb cutters; gift cards to local hardware and grocery stores

For Blue Heron School - children's shovels/rakes/any sort of tool; metal pole with hook for hanging bird feeders; bird feeders; milk crates; 10x10-foot tarp

For Education - large (size 11) waders

For Facilities - chain saw vice; loppers and pruners for invasive species removal

For Kirkwood Gardens - 1-quart, 2-quart, and gallon pots

For Marketing - newer model GoPro camera; USB recording microphone

TRAIL'S END

WELCOME BACK



My family and I just got back home after visiting the Science Center for the 2021 opening weekend. It is always a wonderful experience seeing so many families interact with our animals and exhibits but this year seems especially exciting. I suspect we are all anxious and excited to get outside and do something fun!

I found this year's visit to the Science Center to be much more like a pre-Covid visit. Yes, we are of course, still masked up but the process of getting onto the trails was much easier and much faster. There are a handful of places that are still closed but to the obvious joy of the kiddos visiting, the Gordon Interactive Playscape is open.

Our new Raptor Exhibit is coming along nicely. Our birds all seem to be happy in their upgraded new homes and I thought the new set up vastly improved the viewing experience. It was fun to watch kids (and parents) figure out the new exhibit on owl hearing. Everyone figured out the migration flyway exhibit much more quickly (which isn't surprising given that it involves an ever-popular zip line!)

As of now, we are still requiring reservations but personally, I rather like the system. Even on a busy opening weekend, I think it helped manage the crowds to a comfortable level.

The thing I enjoyed the most was just how much my children still enjoy the trail. At 8 and 10, they've spent a good portion of their lives at the Science Center (they each spent four years at Blue Heron School) and I was worried that our visit would be accompanied by the "I'm bored" refrain that is becoming all too common as they get older. Instead, my kids insisted on visiting every single one of the animals, playing their way through every one of the exhibits, and once again, we needed to encourage them to move it along a little faster. For kids during Covid, life has unfortunately become a lot more screen focused. Today, it was great just to see all these kids being kids and romping their way through our otherwise serene forest trail!

So, start thinking about your first visit to the Science Center in 2021! We are all excited to welcome folks back and to help them learn about and experience New Hampshire's natural world.

Trail's End is written by Justin Van Etten, Chair of Squam Lakes Natural Science Center's Board of Trustees.
You may contact him at justin.vanetten@gmail.com.

KESTRELS *continued from page 1*

Perhaps a surprising but promising spot to scan for kestrels is telephone lines. These wires form convenient surveying spots for kestrels searching for insects and mice in adjoining fields. How can you quickly confirm if you have spotted a kestrel? Perching on a line requires balance. With a breeze or unexpected distraction, the kestrel regains its balance by bobbing its tail, a signature movement for kestrels.

Kestrels in the northeast are facing challenges not totally understood so being aware of their habitat needs can offer them a real boost. Locating nesting sites is challenging for kestrels as a variety of competitors are also searching for tree cavities such as squirrels, starlings, small owls, and bats. Larger wildlife, including opossums, raccoons, and gray foxes also benefit from holes in trees. If you are a landowner and can resist the urge to "clean up the forest" by cutting dead or dying trees or ones with holes, you have contributed significantly to wildlife habitat in general.

Consider sharing your old barn with kestrels and thus bring wildlife action right to your doorstep. You can also use your carpentry skills to construct a kestrel box or perhaps take the quicker route of purchasing one. With three to six eggs in a nest, each successful pair is a positive step forward for kestrels in your area and a natural boost to insect and small rodent control. So on your journeys, keep your eyes open for that hovering kestrel, a welcome sight unless, of course, you are rooting for the mice.



AMERICAN KESTREL QUIZ

1. True or False? Female kestrels are larger than male kestrels.
2. What special kind of light can kestrels see, which helps them catch rodents?
3. Kestrel's ability to _____ is a result of balance provided by feathers on a thumb like structure of their wing called an alula.
4. Why are dead and dying trees such an important part of kestrel habitat?
5. If you see a bird on a telephone line occasionally bobbing its tail for balance, what might it be?

Answers:

1. True
2. Ultraviolet light reflecting from rodents' urine
3. Hover
4. Nesting sites for kestrels
5. American Kestrel



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