



TRACKS & TRAILS

Summer 2015 | Vol. 44, No. 2

GROWING INTO SUMMER

By Margaret Gillespie, Illustration by Cheryl Johnson

Camping . . . does this one word flood your memory with sights and sounds of time spent outdoors? Maybe you remember a spectacular view or a surprise wildlife encounter. Here's a "nearer to nature" experience I had when I camped with friends on a Maine island late one spring. Once we had settled into our rustic shelter we set out to explore our new home. Not far away at the edge of a grassy clearing, we stumbled upon a good-sized hole accented by a large mound of earth and decorated with groundhog skull fragments. Suspecting we had found an active den, we backed off, returning later in the evening to view the site with binoculars. We were in luck. Out popped a furry, reddish face with bright eyes, topped by pointed ears. That red fox pup tumbled out, undoubtedly shoved by its three siblings. We watched with joy as the four chased each other, rolling and leaping in frantic play.

This field and forest intersection, or ecotone, welcomed the red foxes (*Vulpes vulpes*) while more brushy areas are suitable for New England's other fox species – the gray fox (*Urocyon cinereoargenteus*). Gray foxes have the distinction of being one of two expert tree climbers in the dog family, Canidae. The second, the Asian raccoon dog, makes its living half way around the world. Gray foxes, aided by sturdy, curved claws, can easily scale trees, even those with virtually no branches. They frequently use trees

as safe sleeping hideouts or find perfect den sites in large hollow trees.

Given the more open habitat where red foxes live, it's easier for us to observe some aspects of their family lives. You might wonder how you can keep track of a nocturnal creature like the fox. Usually the first hint that a fox den is in your vicinity is smell. Your senses tell you that a frightened skunk has sprayed but it's worth taking a second look. To announce their territory, red foxes lace their den areas with urine that is virtually indistinguishable to our noses from skunk "fragrance." Following the strong scent, you may find a remodeled groundhog burrow with widened and rounded holes and multiple entrances, most sporting a mound of excavated earth. By watching from a distance, it won't be long before you detect some activity.



Once the pups are born in early spring, the real work begins for the adults. With the possibility of six to eight or more pups, raising these youngsters is a full-time job. Moving their hunting into daylight hours, particularly the

morning, is a given for these hard-working parents. If you live near a meadow you might catch sight of one leaping after a meadow vole, a staple in their diet. They also feed on rabbits, groundhogs, birds, reptiles, insects, and carrion. The youngsters soon graduate from a 100% milk diet and add what I refer to as "fast food" to their repertoire. The adults return with food in their guts,

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- And much more!

NEW EXHIBIT OPENING JULY 1: Gordon Interactive Playscape A Predator-Prey Adventure

Go on an adventure as you play the role of a red squirrel. Climb rocks and logs, scramble through tunnels and balance on branches to escape predators. Located next to the Gordon Children's Center.

FORGING TRAILS

ON YOUR NEXT VISIT



Another new season starts at the Science Center. The long winter finally came to an end, the snow melted away, and now our trails are filled with happy visitors exploring and enjoying all the animals and exhibits.

Like every year, we have new things to see and enjoy that help make a visit here fresh. We have a new Raven out at the aviary in the Celebrate Birds Exhibit. We also have a Northern Goshawk in the Raptor Exhibit.

It was rescued this winter by NH

Fish and Game (with help from our staff). Its injuries were too severe for it to be released so it will remain here as an ambassador animal. Of course there are lots of old friends too – the three Bobcats, the four White-tailed Deer, the Mountain Lions, the Black Bears, and the ever-popular River Otters.

When you visit you will get a glimpse of the spectacular new Water Matters Pavilion. That exhibit building won't open until May 2016, but the exterior is finished and we are now filling it with exciting exhibits all about water. Having been involved in the design process and now seeing the various exhibits under construction I can say with all confidence that this exhibit building will be an amazing new addition to your visit. There will be an opportunity to get a sneak peak of our progress at the Annual Meeting in August.

Over on the other side of campus our new Gordon Interactive Playscape – a Predator-Prey Adventure is under construction. This outdoor playscape will allow your child (or you too if you are young at heart) to live the life of a Red Squirrel as it faces various hazards. Watch you don't get caught in the giant have-a-heart trap, crawl through the tunnels and avoid the hunting Fisher, beware of the car when you cross the road, swing through the canopy to get away from the hawk, jump from tree to tree, find giant acorns in the sandpit, and raid the bird feeder. End your adventure in the bird nest and slip down the slide. This exciting new adventure will open on July 1.

These new additions are made possible by the success of the Nature Matters Capital Campaign (see Trail's End article on page 11). In addition to the bricks and mortar projects, we decided that we needed to include funds in the campaign to share these exciting new attractions with a wider audience. We are not assuming that if we build it they will come. We need to tell people to come, so . . . look for some major new marketing initiatives this year, including . . . drum roll . . . our first ever TV commercial. We also have a billboard along Rt. 104 and a spectacular advertisement at the new north-bound rest stop in Hooksett. In addition, we are doing more print and web marketing and continuing our successful radio ads.

So, there is a lot going on at the Science Center and you make it happen through your support in so many generous ways. I look forward to sharing these exciting new attractions on your next visit.

Iain MacLeod, Executive Director
iain.macleod@nhnature.org
603-968-7194 x 23

SQUAM LAKES NATURAL SCIENCE CENTER

PO Box 173, 23 Science Center Road
Holderness, NH 03245

P: 603-968-7194 | F: 603-968-2229

info@nhnature.org | www.nhnature.org

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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BRYANT TOLLES



As long-time Squam Lake property owners, my wife Carolyn and I have had enriching and gratifying contact with Squam Lakes Natural Science for its entire existence. Early in its nearly 50 year history, we would visit there with our two children for whom New Hampshire wildlife ecology was a particular fascination. Ultimately, we became members, and introduced other family members and friends

to the Science Center and its natural environmental mission. In 2006, while I was still at the University of Delaware, I was asked to join the Board of Trustees. For the past nine years I have had the pleasure of serving in that role, with membership on the education and development committees.

My initial impression of the Science Center was extremely positive, influenced by its compelling mission, its location, its growing physical plant facilities, its superb natural history collections, its outstanding staff, and its large membership, and other supporters. In my estimation, it is the largest and most influential museum institution of its type in Northern New England, with a growing reputation for its collections and related educational offerings. Over the years, I have conveyed these thoughts (and will continue to do so) to those with whom I have spoken about volunteer service and financial support.

While working with the Science Center, I have been struck by the tremendous enthusiasm, knowledge, and

commitment of the staff as well as board members. The extent of this commitment, in my estimation, assures the long-term success of the institution, despite the ongoing challenge of financial growth and stability. In addition, the Science Center will continue to meet the challenge of outreach to educational institutions in central and northern New Hampshire, and to attract young students and their families to the rich resources of the collections and the scientific knowledge associated with them.

Over the next five years, I expect that the Science Center will not necessarily grow in physical size or number of professional staff, but it will continue to enhance and diversify its collections and related programming. Plans to increase the focus on the natural history of the Squam Lakes watershed, I am confident, will be successfully realized. The end result will be extended outreach to increasing numbers of New Hampshire residents, as well as people from other parts of the United States and other countries.

Bryant Tolles, a 1961 graduate of Yale, served as Assistant Dean at Tufts University from 1965 to 1971, and Assistant Director of the New Hampshire Historical Society from 1972 to 1974. From 1974 to 1984, he was Executive Director of the Essex Institute in Salem, MA. He then spent 23 years (1984-2007) at the University of Delaware as Professor of History and Director of the Museum Studies Program. He is a former trustee of the Mount Washington Observatory, the New Hampshire Historical Society, the Squam Lakes Association, and the New Hampshire Humanities Council. He and his wife Carolyn now live in Concord, and visit their Squam house often each year.

NEWSBRIEFS

- Three program interns join the staff this summer. James Black is from Rutland, Vermont. He is a junior majoring in Zoology at University of New Hampshire where he is also a resident hall assistant. He's spent the previous two summers in the Alaska tundra working as a graduate student research assistant trapping and tagging voles. Maggie Gaiero grew up in Rumney. She majors in Zoology at the State University of New York in Oswego where she'll be a junior this fall. She hopes to work in conservation issues with endangered species. Sabrina Stewart recently graduated from the University of Nebraska where she majored in Fisheries and Wildlife with a concentration in conservation biology. She has completed a previous internship with Omaha's Henry Doorly Zoo and also volunteered at the Lincoln Children's Zoo.
- Guided Discoveries Intern Jennifer Reilly is from Westborough, Massachusetts and is a rising junior

at Allegheny College in Meadville, Pennsylvania, pursuing a degree in Environmental Science. At school she is a member of the outing club and Alpha Chi Omega sorority, as well as a volunteer at the campus's fair trade student-run coffee shop.

- Marketing Intern Melissa Proulx is from Concord and will graduate from the University of New Hampshire in 2016 with a degree in English. She is a student blogger for UNH Tales and volunteers for the UNH chapter of Amnesty International.
- It was a hard decision but Clean Up Day was cancelled this year. With cold and snow continuing through early April, the trails were too snowy and muddy to handle the activity of our usual group of 150 volunteers. We did have help from some groups in limited areas. National Honor Society students from Plymouth Regional and Winnisquam Regional High Schools teamed up to work in Kirkwood Gardens. Plymouth State University's

Tau Omega sorority tackled cleaning the Gordon Children's Center. Staff members took on sweeping and raking around the Welcome Center, Webster Building, and adjoining areas. In addition, volunteer groups from Parker Academy, Moultonborough Academy, J Jill, Hypertherm, and Stonyfield Farm made time to help on other work days in late April. Thanks to the tremendous efforts of many volunteers and staff we were ready for opening day. We're grateful to these businesses for helping us to feed the workers: Bob's Shurfine Market, Ashland; Hannaford Supermarkets, Plymouth and Meredith; E.M. Heath Supermarket, Center Harbor and Holderness; Lakes Region Coca-Cola Bottling Company, Belmont.

- Water issues are critically important in New Hampshire and across the globe. To raise awareness about water and to build excitement about the new Water Matters Pavilion that will open in 2016, the Science Center partnered with the

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KIRKWOOD GARDENS PLANT SPOTLIGHT



By Brenda Erler

Flowering Crabapple

Malus 'Sugar Tyme'

Culture: Needs full sun in moist, well-drained, loamy, acidic soil. Vigorous and very disease resistant.

Bloom: Late spring. Pale pink buds open to fragrant white flowers.

Height: 15 to 20 feet

This crabapple is quite showy and fragrant. The flowers are attractive to bees and butterflies. It produces abundant red fruit that lasts well into the winter, providing a feast for hungry birds. Beautiful in every season.



Anise-scented Sage

Salvia guarantica 'Black and Blue'

Culture: Grow as an annual in average, evenly moist, well-drained soil in full sun or part shade. May be cut back to reduce height. Deadhead to encourage additional bloom.

Bloom: July to frost. The cobalt blue flowers with black calyces are held on spikes above the foliage.

Height: 2.5 to 3 feet

This Salvia is native to Brazil, Argentina, and Paraguay. Its long bloom time and beautiful color makes it a great addition to beds, borders, and cottage gardens. Better yet, it is very attractive to butterflies and hummingbirds.



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

See upcoming Kirkwood Garden programs on page 7.

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non-profit organization Art for Water to stimulate thought about water issues and create a three-dimensional Stream of Conscience public participation art installation. It will be displayed through November 1, 2016, and is made possible by generous funding from the Steinwachs Family Foundation. Additional support came from an anonymous donor, Cottage Place on Squam Lake, and the Science Center's Innovative Project Fund.

- Dead River Company and the New Hampshire Electric Co-op Foundation generously supported New Hampshire Day on May 2. Dead River Company representatives shared energy efficient ideas with visitors. There were 1,277 visitors on a beautiful spring day. New Hampshire Electric Cooperative also provided free admission to Co-op Members.
- At the New Hampshire Environmental Educators (NHEE) Annual Meeting in April, Naturalist Jeremy Phillips was elected to the NHEE Board of Directors. In this role, Jeremy will help

to provide professional development, networking, and communication opportunities for environmental educators around the state.

- Education Director Audrey Eisenhauer is co-chairing the New England Environmental Education Alliance annual conference at the Waterville Valley Conference Center in November 2015. The conference theme is "Climate of Change" and will bring together environmental educators from across New England.
- Naturalist Jeremy Phillips hosted a Science Center exhibit at the New Hampshire Science Teachers Association April conference to share information about Science Center school programs with teachers.
- The Association of Nature Center Administrators (ANCA) New England Regional Meeting in April was attended by Executive Director Iain MacLeod and Education Director Audrey Eisenhauer at the South Shore Natural Science Center in Norwell, Massachusetts. Iain gave a talk about

the Project OspreyTrack Network, a new project that uses satellite tracking of Ospreys as a model for multi-state, nationwide, and global interactions between students. The project includes ANCA member nature centers and schools in 13 states from New Hampshire to Florida.

- Squam's Bald Eagle pair failed in their nesting attempt this year. Both adults were seen throughout the winter and did rebuild their nest on Long Island. Executive Director Iain MacLeod checked on them regularly but by early April he became concerned that they had failed at nesting or at least were late in starting. He saw them together on their favorite perch tree on April 9, which suggested that they were NOT sitting on eggs then. In late April, Iain again saw them sitting together, indicating that their nesting season was done since it was too late to nest. As a result, the Bald Eagle Adventure cruises have been cancelled this spring.

NATURALIST'S CORNER

WILDLIFE SEEN, LEAVE THEM BE!

By Eric D'Aleo



Summer is here. You're out enjoying the bright sunshine in your yard, on a trail, or by the lake, and then you see it. A young bird, recently feathered, is moving awkwardly on the ground. It doesn't seem like it can fly as it flaps about. You stop for a moment and then move

below. However, don't assume that the bird is abandoned if it's found on the ground. This is the time when a young bird learns how to survive on its own. Chances are good that the parents are nearby and waiting for you to leave so they can feed their offspring. If you can locate the nest that the bird fell out of, pick it up and put it back in the nest or on a branch nearby. However, if the bird is active and not easily captured it's probably best to leave it where it is.

This is also the best idea with young mammals, including deer, rabbits, squirrels, raccoons, and fox. These animals are often found living near humans and it is not uncommon for the adults to leave the young as they go off in search of food. Leave the babies where you find them and watch from a distance. It may be that you will see the parent return to the site several hours later. Don't worry about the "human smell" in the area as the parental instinct of these animals to care for their young is strong and will override any scent left behind.

If the animal is obviously injured or orphaned, what should you do? The best idea is to locate and call a wildlife rehabilitator for advice and help. These individuals and organizations are the only ones who can legally accept and treat wildlife. They have the experience, knowledge, and facilities to successfully care for these animals. Their goal is to release a healthy animal back into the wild where it belongs. For a list of wildlife rehabilitators in New Hampshire see the New Hampshire Fish and Game website at wildlife.state.nh.us/Wildlife/wildlife_rehabbers.htm.

closer to inspect. The bird freezes in place and doesn't move. What do you do?

If you are like most people you might make the assumption that somehow the animal is injured or has been abandoned by its parents and needs your care. Many people bring wildlife into their homes with good intentions, but unfortunately this often proves to be a fatal error despite our best efforts. Although people who "rescue" these animals mean well, they are often unaware, misinformed, or realize too late that they don't know how to care for wildlife. So what should you do? The answer often depends on the circumstances and the species of animal involved.

For young birds that have fledged (grown feathers) and "fallen" out of the nest, it's best to observe them for a few hours. Often when young birds get too large to fit into the nest they may get pushed out or scramble out to explore the surrounding branches. Sometimes they fall because of their ungainly balance and have a brief "flight" to the ground



FROM THE HERON'S NEST

By Laura Mammarelli



The abundant snowfall this winter provided a wonderful opportunity for the Blue Heron School children to build a Quinzhee or snow cave. With the help of Naturalist Jeremy Phillips, the children dug two tunnels and an open space in a big pile of snow. They enjoyed climbing in and out and getting cozy together in the great room they created.

Blue Heron School, a nature-based Montessori school for children ages three to six, operates Monday through Friday, 8:30 a.m. to 1:00 p.m., or 8:30 a.m. to 3:30 p.m., September to June. For more information please visit www.nhnature.org/programs/blue_

heron_school.php or contact Laura Mammarelli, Blue Heron School Director, at 603-968-7194 x 40 or blueheron@nhnature.org.

Summer Guided Discoveries

Week	Program	Age
June 22-26	Wild Tales I	4-6
	Wild Art: Forests	7-10
	<i>Extended Day Option</i>	7-10
	Predator Prey I	6-8
June 29-July 3	Creature Features	4-6
	Rhythms of the Forest	6-8
	<i>Extended Day Option</i>	6-8
	All About H ₂ Ooooh!	7-10
July 6-10	GeoCamp	9-12
	Night & Day	4-6
	Mad Science I	7-9
July 13-17	AquaCamp	9-12
	Wild Tales II	4-6
July 20-24	Predator Prey II	7-9
	Be a Survivor I	10-14
	Be a Survivor II	12-14
	Summer Sensations	4-6
July 27-31	Eco Art Construction Zone!	7-10
	Up, Down, and Around	4-6
	Spectacular Raptors	6-8
August 3-7	Nature Explorers	4-6
	The Nature of Clay	9-12
	<i>Extended Day Option</i>	9-12
	Mad Science II	7-9
August 10-14	Junior Animal Keepers	9-12
	Wild Art: Fields & Ponds	7-10
	<i>Extended Day Option</i>	7-10
	Sky Hunters	4-6

See full program details and times at www.nhnature.org/programs/guided_discoveries.php

NATURAL ADVENTURES

Pre-registration is required for all events unless otherwise noted.
Please call 603-968-7194 x 7.

Annual Breeding Bird Census
Saturday, June 6, 2015
Session 1 - 5:30 to 8:00 a.m. or
Session 2 - 8:00 to 9:30 a.m.
Adults and families with children
ages 12+

For over three decades Senior Naturalist Dave Erler has conducted a census in early June of bird species that nest on the Science Center campus. The census is done primarily by ear, listening for territorial songs of male birds, indicating probable nesting. This is a great opportunity to hone your bird song identification skills. Session 1 involves canvassing two forested zones, including Mt. Fayal. Session 2 covers fields, exhibit areas, and Kirkwood Gardens. Binoculars are available at no extra charge or bring your own.

Cost: No charge but reservations are required.

Tales and Trails
Tuesday, July 7 or
Thursday, August 13
10:00 to 11:30 a.m.

Families with children ages 5 to 8

Join us for a story time adventure in the great outdoors. We'll read a favorite nature-themed children's book in a cool shady spot. Inspired by the story, we'll set off to explore, armed with hand lenses, bug boxes, and nets. We'll end by meeting a live animal connected to the story. Adult must accompany child at no additional charge.

Cost: \$7/member child; \$9/non-member child

Pond Exploration
Friday, July 10 or
Friday, August 7
10:00 to 11:30 a.m.
All ages

On the surface, the Upper Pond looks tranquil. But underwater is another story. Collect and learn about critters camouflaged and hiding, predators and prey, large and small. All equipment is provided but your sharp eyes are needed. We'll finish with a visit from an aquatic animal.

Cost: \$7/member; \$9/non-member

**Squam Fishing
Excursion for Children**
Thursday, July 16 or
Wednesday, August 5
9:00 a.m. to 12:30 p.m.
Ages 7 to 12

Learn about the fish that live in Squam Lake. Fish from the "Heron," a 28-foot pontoon boat, and witness firsthand how fish fit into Squam's food web.



Cost: \$18/member; \$22/non-member

Wise About Owls
Friday, July 24 or
Thursday, August 20
10:00 to 11:30 a.m.

Families with children ages 4 to 10

"Wise as an owl" isn't really a compliment. Scientists think owls are not as smart as ravens and crows, but you can have an amazing time finding out about owls. We'll learn through storytelling, outdoor activities, an owl craft, and visits with live owls. Adult must accompany child at no additional charge.

Cost: \$7/member child; \$9/non-member child

Salamander Search
Wednesday, July 29
10:00 to 11:30 a.m.

Adults and families with children
ages 8+

Amphibians are stirring in the woods and wetlands. Explore for salamanders in nearby aquatic environments and under logs and collect these amphibians for gentle, up-close study before returning them to their homes.

Cost: \$7/member; \$9/non-member

Camouflage Hide and Seek
Friday, July 31
10:00 to 11:30 a.m.

Adults and families with children
ages 7+

Animals are very aware of their surroundings yet remain hidden from danger. This makes them experts at camouflage and other techniques of concealment. Challenge your ability to "stay alive" by remaining hidden from predators, locating prey, and stalking silently in the Science Center's woods. Both adults and children will be encouraged to discover their ability to remain unseen. Meet an animal camouflage artist and how it uses these skills to survive.

Cost: \$7/member; \$9/non-member

Natural Adventure Series

Discover Your World

Wednesdays - June 10, July 8, August 12, September 9, 9:30 to 10:30 a.m.
For ages 3 and under

Foster your child's own 'natural curiosity' and sense of wonder with a visit to a different natural community each month. These adventures will build a foundation for a lifetime of enjoyment and appreciation of the natural world. Adult must accompany children at no additional cost.

Cost per session: \$5/member child; \$7/non-member child

Yoga Wild

Wednesdays - June 17, July 22, August 19, 10:00 to 11:00 a.m.
For ages 4 to 7

Explore animal movement through fun yoga poses. Children will learn spatial concepts, stimulate their senses, and develop motor skills as they use their imaginations to mimic animals. Each session will include a visit with a live animal.

Cost per session: \$7/member child; \$9/non-member child

On the Trail

River Otter Feeding
May through October
Mondays, Wednesdays, and
Fridays at 11:30 a.m.

See our two playful river otters have an early lunch. Our expert volunteers will tell you all about otter biology and ecology, while also serving up a tasty treat or two.

Turtle Talks
July and August
Tuesdays at 10:30 a.m.

Volunteer-led talks are hands-on using a live turtle to teach about turtles. This fun session involves interactive discussions and questions.

Up Close to Animals
Daily during July and August

Meet live animals up close and learn from an experienced naturalist. These engaging talks feature a variety of animals, including birds, mammals, and reptiles (Mountain Lions every Thursday at 12:00 p.m.; Coyote every Wednesday at 1:00 p.m.)

All programs above are included with trail admission

Docent Guided Tours
July and August
Thursdays at 10:30 a.m.

Get an in-depth look at the animal exhibit trail on a Docent Guided Tour. Learn more about the animals, exhibits, and landscape of the Science Center.

Cost: \$2 per person with trail admission

New Hampshire Young Birders Club
View events and information at
www.nhyoungbirders.org

WATER MATTERS: EXPLORING WATER QUALITY ISSUES

- Adult Lecture Series -

No charge to attend but reservations are required

State of the Loon in New Hampshire

Tuesday, July 7 at 7:00 p.m.

by Harry Vogel, Executive Director, Loon Preservation Committee

Have you ever wondered why a loon's eyes are red? Why do loon chicks ride on their parents' backs? What are loons saying with those eerie calls in the night? Hear about this unique symbol of New Hampshire's wild lakes and its special place in the hearts of New Hampshire residents. Learn about challenges facing loons and the LPC's work to safeguard New Hampshire's threatened population.

Squam Watershed Report

Tuesday, July 14 at 7:00 p.m.

by Rebecca Hanson, Director of Conservation, Squam Lakes Association

Hear about the health of the Squam Lakes Watershed and the newly published *2015 Squam Watershed Report* that examines water quality, fish populations, invasive species, boat traffic, land conservation efforts, and the loon population. The SLA, working with many conservation partners, has compiled decades of study into one document to give a comprehensive picture of the watershed's health.

Detecting Road Salt in New Hampshire's Streams and Rivers

Tuesday, July 21 at 7:00 p.m.

by Dr. Mark Green, Associate Professor of Hydrology, Center for the Environment, Plymouth State University

While road salt helps maintain safe winter roads, it is also increasingly being detected in New Hampshire's streams and rivers. A collaborative water-sensing network in New Hampshire has detected road salt in flowing waters. This talk will present that evidence and discuss the implications.

Arsenic and Other Contaminants in Groundwater

Tuesday, July 28 at 7:00 p.m.

by Laurie Rardin, Research Translation Coordinator, Dartmouth Toxic Metals Superfund Research Program and Pierce Rigrod, Source Water Protection, New Hampshire Department of Environmental Services

Experts Laurie Rardin and Pierce Rigrod will discuss how naturally occurring arsenic is present in New Hampshire's groundwater, potential health effects from long-term, low-dose exposure, and how to test and treat your water for arsenic and other common contaminants that could be present in your private well.

The People's Forest: The Story of the White Mountain National Forest

by David Huntley, filmmaker

Tuesday, August 4 at 7:00 p.m.

In the late 1800s, New Hampshire's White Mountains were ground zero for an environmental disaster caused by ruthless logging and the massive forest fires, erosion, and flooding that followed. The vast destruction launched a national battle over the fate of America's forestlands and sparked one of the first grassroots conservation movements. Leading the way was a unique partnership of citizens, politicians, and business and civic groups that believed conservation could benefit both the environment and economy. This is the dramatic film of how those unlikely allies saved the White Mountains and created over 50 new National Forests and Grasslands in 40 states, totaling more than 20 million acres of public lands.

KIRKWOOD GARDENS PROGRAMS



State of the Plants of New England

by Dr. Elizabeth Farnsworth, Senior Research Ecologist, New England Wild Flower Society
Wednesday, July 29 at 7:00 p.m.

Adults

New England Wild Flower Society (NEWFS) recently released a major report *State of the Plants of New England*, authored by Dr. Farnsworth. This comprehensive report gives up-to-date data on the status of plants in New England. It describes changes in both rare and common species across all six states and identifies hotspots of rare plant diversity. Dr. Farnsworth will discuss the report and efforts to conserve and manage rare plants and habitats. Program held in the Red Barn by Kirkwood Gardens.

Sponsored by The Inn on Golden Pond.

Cost: No charge/member; \$5/non-member

Beneficial Insect Habitat Sculpture Workshop

by Ryan Hvizda, permaculture designer, consultant, artist, educator, community organizer, and real estate professional
Thursday, August 6, 10:00 a.m. to 2:00 p.m.

Adults and youth ages 12+

Design and build a beneficial insect sculpture for Kirkwood Gardens from recycled, repurposed, and natural materials. Merging elements of visual and ecological design, the sculpture and insect hotel will create an environment to welcome beneficial insects



including pollinators, pest controllers, and amphibians. Learn this permaculture technique to take home and create an insect hotel in your own garden. Program held in the Red Barn by Kirkwood Gardens. Sponsored by Brian Davis Excavation.

Cost: \$10/member; \$15/non-member

Squam Lakes Artisans Gallery
Locally crafted New Hampshire gifts
Open daily 10:00 a.m. to 5:00 p.m.

Kirkwood Cafe
Open daily July and August
11:00 a.m. to 3:00 p.m.



H₂Ooooh! Day
Saturday, June 20

9:30 a.m. to 4:30 p.m. (last admission 3:30 p.m.)

Meet Aquatic Animals such as mink, turtles, beaver, and osprey at Up Close to Animals presentations. See the River Otters get a special fishy treat. Visit the Aquatic Discovery Table and learn hands-on how watersheds work. Find out just how much fresh water there is at a "Drop in the Bucket" demonstration. Learn how the Squam Lakes Association monitors Squam Lake's water quality. Enjoy children's games and crafts throughout the day. Share your ideas about water in a Stream of Conscience public art installation project – sign up for presentations and workshops with Christine Destrempe of Art for Water. Learn about water conservation and take the "I'm for Water" pledge. Stream of Conscience is made possible by generous funding from the Steinwachs Family Foundation. Additional support came from an anonymous donor, the Science Center's Innovative Project Fund, and Cottage Place on Squam Lake.

Cost: included with trail admission; Free admission for Squam Lakes Association members

Sponsored by:



VOLUNTEER OPPORTUNITIES

Docent Training (for adults)

June 27 8:00 a.m. to 4:00 p.m.
 June 29, 30, July 1 4:00 to 8:00 p.m.
 Cost: \$50 (financial aid available)

First Guides Training (for ages 14 to 17)

June 22, 24 9:00 a.m. to 4:00 p.m.
 June 26 9:00 a.m. to 1:00 p.m.
 Cost: \$50 (financial aid available)

For more information or to register for Docent Training and First Guides Training, contact Volunteer Coordinator Carol Raymond at carol.raymond@nhnature.org or 603-968-7194 x 22.

StoryWalk™

July 2 through August 15, Daily 9:30 a.m. to 4:30 p.m.
Opening July 2, 10:00 to 11:30 a.m.

StoryWalk™ features an award-winning children's book about nature and the life cycle of the dragonfly, *Eliza and the Dragonfly*, by Susie Caldwell Rinehart. Get outside and enjoy this free fun family activity, presented by the Science Center in collaboration with the Holderness Library and Holderness Recreation Department. StoryWalk™ opens, rain or shine, with family activities and refreshments on July 2 from 10:00 a.m. to 11:30 a.m. Find StoryWalk™ near the NH Fish and Game parking. Please park in town or at the Science Center, not in the lot reserved for boat trailers. No charge and no reservations required.

Sponsored by:



WILD TRIVIA CHALLENGE
SATURDAY, JULY 25 AT 5:30 P.M.



Don't miss this evening of fun. Help raise funds to benefit the Science Center's educational programs and to help feed and shelter its 75 animal ambassadors. There will be a dinner by the Common Man, an open bar, and a live auction. Enjoy six nail-biting rounds

of challenging team trivia featuring live animal appearances.

Purchase tickets by contacting Administrative Assistant Mary Noyes at 603-968-7194 x 11 or register online at www.nhnature.org.

Cost: \$75/per person

Sponsored by:



SQUAM BOAT LIVERY



Matthew Lessard, First Vice President – Investment Office

Annual Meeting for Members

Saturday, August 8, 8:30 to 10:00 a.m.

Get a sneak peak at the spectacular new Water Matters Pavilion (opening May 2016) and enjoy a complimentary continental breakfast on the deck. Business meeting starts at 9:00 a.m.

- Elect officers and trustees
- Honor retiring board members
- Recognize employee service
- Present Horizon Award



SQUAM LAKES
NATURAL SCIENCE CENTER

All members are welcome and encouraged to attend. For the election slate and biographies of nominees, please visit http://www.nhnature.org/programs/annual_meeting.php. Please call 603-968-7194 x 11 to reserve your seat or if you would like paper copies of the meeting materials.

Predator-Prey Day

Saturday, August 8

9:30 a.m. to 4:30 p.m. (last admission 3:30 p.m.)

To catch or not to catch – that's the challenge of predator and prey. This special day celebrates these opposites. From bats to mountain lions, predators come in all sizes. Test your survival skills in the new Gordon Interactive Playscape: A Predator-Prey Adventure. Meet live predators – Mountain Lion, Coyote, Peregrine, Barred Owl, and Bats – during five Up Close to Animals talks. Join in games and crafts. Spend a day of fun and learning for the whole family.

Cost: included with trail admission; no charge for Holderness residents today

SQUAM LAKE CRUISES

New Hampshire is famous for its picturesque lakes and mountains and Squam Lake is a gem among many. See its amazingly clear water, rocky shores, celebrated islands, historic homes, scenic mountain views, and remarkable wildlife. If you are looking for a memorable experience, choose from one of these fabulous 90-minute guided tours on beautiful Squam Lake.

Explore Squam

May 16 to June 30 - Daily at 1:00 p.m.

July 1 to August 31 - Daily at 11:00 a.m., 1:00 p.m., 3:00 p.m.

September 1 to October 12

Tuesday, Wednesday, Thursday at 11:00 a.m., 1:00 p.m.

Friday through Monday at 11:00 a.m., 1:00 p.m., 3:00 p.m.

This unforgettable guided tour has something to delight everyone. Learn about the natural history of the lake, the wildlife that makes Squam so special, and the people who have enjoyed these lakes for over 5,000 years. See the beautiful lake where *On Golden Pond* was filmed over 30 years ago. Watch Common Loons and Bald Eagles, regularly seen, but best viewed while raising young from May through August.

Nature of the Lakes

July 1 to August 31

Tuesday, Wednesday, Thursday at 4:00 p.m.

September 1 to October 8

Tuesday, Wednesday, Thursday at 3:00 p.m.

Uncover the rich natural history of Squam Lake with an experienced naturalist educator. Observe Loons and Bald Eagles and their nesting sites along with other wildlife. Learn how animals survive and adapt to their aquatic world. Gain an appreciation and deeper understanding of Squam Lake from mountain ranges to island stories to quiet spots during this memorable lake experience.

Loon Cruise

June 8 to August 28 - Mondays and Fridays at 3:00 p.m.

We are delighted to join forces with our friends and colleagues at the Loon Preservation Committee (LPC). Offered twice a week these cruises focus on Common Loon conservation, biology, and monitoring. A Science Center naturalist joins an LPC biologist who guides the tour and discusses the work LPC does across the state and on Squam to protect these extraordinary birds. This special cruise route is designed to maximize Loon observations.

Explore Squam, Nature of the Lakes, and Loon Cruise:

Cost: \$21/adult member; \$25/adult non-member

\$19/senior member; \$23/senior non-member (age 65+)

\$17/youth member; \$21/youth non-member (to age 15)

Discounts available for combination trail and cruise tickets

Not recommended for children under age 3

Dinner and Sunset Cruise

July 9 to 30 - Thursdays

Dinner at 5:00 p.m.

Cruise departs at 6:30 p.m.

Start your evening with a delicious, fixed-price dinner at Walter's Basin Restaurant, followed by a sunset cruise on Squam Lake. This guided tour showcases Squam's beauty as dusk falls. The guide discusses the natural history, wildlife, and people of Squam Lake.

Cost: \$50.00 per person; not recommended for children

Lake Explorers – A Family Cruise

July 7 to August 11 - Tuesdays at 10:00 a.m.

For ages 5+

Experience the excitement of Squam Lake as active explorers. This family-style cruise gives children an opportunity to use binoculars, search for loons, collect microscopic life, watch live fish, participate in a scavenger hunt, and test their navigational abilities. Get on board for a cruise that could spark an interest to last a lifetime.

Cost: \$15/member; \$17/non-member

Squam Lake Charters

Treat your visiting family or friends to a truly memorable experience in the Lakes Region. Host your own cocktail party or other unique gathering on Squam Lake. Transport wedding guests to Church Island. Any of these are possible by chartering a private cruise customized to fit your plans. Five canopied pontoon boats and experienced tour guides are ready to help with your special outing. Operations Manager Sharon Warga will personally arrange your charter for any occasion or celebration.

Contact Operations Manager Sharon Warga at 603-968-7194 x10 or sharon.warga@nhnature.org for reservations.

All Squam Lake Cruises depart from the dock on Route 3 at the bridge, next to Walter's Basin Restaurant in downtown Holderness. Squam Lake Cruises are 90 minutes in length and aboard canopied pontoon boats. Binoculars are available for wildlife viewing at no additional cost.

Space is limited on Squam Lake Cruises.

Call 603-968-7194 x 7 for information and reservations.

OPENING A WINDOW TO THE NATURAL WORLD

50 by the 50th

By Development Chair Bill Lee

The Science Center celebrates its 50th anniversary in 2016 and we're excited. Staff members have proposed some creative ideas and a few board members also have taken on a significant challenge that is truly a big deal. The Development Committee set itself the goal of identifying 50 new legacy donors by August 1, 2016 – 50 by the 50th in other words. Since last July, this group composed of members who have already made their own legacy gifts, has been talking to current trustees and soon will be calling on other supporters.

While the Science Center has met its financial goals for its first 49 years through the extraordinary generosity of our Annual Fund donors, the board is aware that we may not always be able to rely on Annual Fund donations to meet all of our needs. This is where permanently restricted endowment and reserve funds come in because income from these funds helps to pay for annual general operations. Legacy gifts are the most important way for the Science Center to add to its reserve funds and endowment, which is critical for the organization's future.

One way to think about it is that your legacy gift will, in effect, continue your annual fund contributions after you're gone. You'll gain a great feeling of satisfaction now, knowing you can continue to help an organization you care about be strong for the next 50 years.

Have you already included Squam Lakes Natural Science Center in your estate plans? We'd love to know so we can follow your wishes, thank you, and welcome you into the Naturalist's Legacy Society.

Questions about how you can support the Science Center? Contact Janet Robertson, Development and Communications Director, at 603-968-7194 x 12 or janet.robertson@nhnature.org

Naturalist's Legacy Society

Your planned estate gift will help Squam Lakes Natural Science Center to continue to achieve its mission to teach about the natural world for generations to come.

Learn more at http://www.nhnature.org/support/planned_giving.php



These generous donors made tribute gifts, which were received between January 1 and March 31, 2015:

In honor of Susan and Laurie Beeson

Ward J. and Joy A. Timken Foundation
Pete and Kathy Woodward

In honor of Emma Carlson's birth

Carol and Rick Carlson

In memory of Mary Smith Denison

Elizabeth and William Dewey

In Memory of Eveyln Ann Osterhaut

Everett and Sandy McLaughlin

In Memory of Richard Sanderson

Anne Fosse

In Memory of Ruth Underwood

Dennis Card and Maureen McCanty
Donald and Elizabeth Ouellette

In Memory of Sara Vogel

Paul and Mary Bartle
William and Catherine Nicholas
Bruce and Betsy Whitmore

Recent model digital camera in good condition

Tablecloths

Little Tikes or step 2 playground climbers or slides for animal enrichment

iPods, Tablets, and laptops in good condition

Grocery store gift cards for animal food

Animal crates

Hav-a-hart traps

Member Benefits

The Fells Historic Estate and Gardens, Newbury August 2015

During August 2015, Squam Lakes Natural Science Center members may enjoy a free visit to The Fells Historic Estate and Gardens in Newbury through a reciprocal member exchange. Science Center members may visit The Fells at no charge. Be sure to take your membership card to show at The Fells admission desk. See www.thefells.org for information about hours and directions. This offer is not valid on special event days at The Fells.

Little Church Theater, Holderness Summer 2015

Squam Lakes Natural Science Center members receive 10% off Little Church Theater tickets during the summer of 2015. Tickets may be ordered by calling the Box Office at 603-968-2250 or via email to info@littechurchtheater.com. Mention that you are a Science Center member and use ticket code ScienceCenter 113.

TRAIL'S END

THANK YOU!



During 2011 the staff and board began discussing the idea of a capital campaign to raise funds for an unknown, at that point, expansion of our exhibit offerings. After surveying a portion of our constituency and many staff and board members, we decided to embark on an ambitious campaign to raise \$3.5 million dollars. In 2012 we started the “quiet phase” of the Nature Matters Capital Campaign fundraising and in 2013 we commenced the public campaign.

The funds from this campaign have financed the wood heating facility, which began operations in 2014 and became a new exhibit as well that year. In July of this year, the new Gordon Interactive Playscape will open – a fantastic area to help younger children explore the natural world. As many of you have seen, the new Water Matters Pavilion has been constructed and we are currently purchasing and constructing the exhibits for this major expansion on our trail. There will be 18 new exhibits related to water in this addition when it opens in 2016.

In early 2014 we realized that our campaign was progressing very well and we thought we should continue to challenge ourselves by raising our campaign goal to \$4 million. We still had items on our wish list that were becoming critically in need of funding. Most importantly our winter bird quarters needed to be replaced. A significant portion of the increase in the campaign goal has been allocated to a new raptor mews that will be constructed in 2015. While this addition will not be part of our exhibits, it will provide much needed housing for our avian friends.

Another very important aspect of our capital campaign is to increase the funds that are used in a manner similar to an endowment. One million dollars of the proceeds from the campaign are slated to be allocated to a fund that will support compensation for our staff. We will use the investment income from this fund on an annual basis to supplement funds received from our normal sources of admissions, memberships, and contributions. Our Board Designated Reserve will also be increased by \$250,000. This reserve is used at the board's discretion to fund unexpected expenses and to take advantage of circumstances to make timely purchases when the need arises.

I am thrilled to report that as of April 2015 we have met our \$4 million campaign goal!

Thank you for your part in making this happen. Our board and staff have spent countless hours developing the campaign, visiting with potential donors, arranging special events to increase awareness of the campaign, and making follow up calls with many people. Our donors have been fabulous. Whether your gift was small or large it was important in helping us achieve our dream. If you are reading this and realize you intended to make a gift, but just haven't gotten around to it, we want you to know that we are still open to receiving gifts and in fact we will still be receiving payments on pledges over the next several years.

Thank you to everyone who has helped with any aspect of this campaign. Nature Matters and we very much appreciate your support.

Trail's End is written by David F. Martin, Chair of Squam Lakes Natural Science Center's Board of Trustees.
You may contact David at dave.martin@nhnature.org.

GROWING INTO SUMMER

continued from page 1

regurgitating it for the fox pups. The signal for this transfer is the same behavior our dogs use to greet us on our return – licking at the face. It's lucky our dogs are content with pats, walks, and food in a bowl. As the fox pups progress to solid food, adults load up their jaws with multiple rodents, saving trips. Before long, the pups start their own stalking expeditions, focusing on ease and abundance – grasshoppers, crickets, and other insects found in their grassy home. By three months, they embark on hunting trips with the adults.

Raising the pups takes its toll but another process adds to the ragged appearance of the adults. Late spring and early summer is shedding season for foxes. They look scruffy, with patches of fur dangling or missing and little fur remaining on their legs. Mange seems to have taken hold with a vengeance but it is all part of their yearly cycle. Slowly old fur will slough off and next winter's coat will thicken, culminating in thick insulation just in time for cold weather.

If you are an early riser, a twilight enthusiast, or just thrive on keeping a sharp lookout, your path is bound to cross with wildlife. Summer is an optimal season to bank some wildlife sightings. It's time.

FOX QUIZ

1. Gray foxes can climb trees mainly because of their
 - A. arched backs
 - B. curved claws
 - C. bowed legs
2. Red fox dens smell like _____.
3. True or False? Both male and female red foxes share in raising their pups.
4. What rodent is very helpful to red foxes by providing den sites?
5. What major change happens to a red fox's coat over the summer?

ANSWERS:

1. B 2. Skunk spray 3. True 4. Groundhogs 5. Shedding

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Save the Date

Raptor Spectacular

Saturday, September 12

Featuring Nancy Cowan of the New Hampshire
School of Falconry

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THE HOWLING COYOTE GIFT SHOP

Featuring new nature-inspired items and many local goods from New Hampshire and Vermont. Plus, a whole new look and layout to the store. Be sure to visit!



A sample of the themed merchandise featuring local honey and products about bees.

All proceeds from sales at The Howling Coyote Gift Shop benefit the mission of Squam Lakes Natural Science Center: to advance understanding of ecology by exploring New Hampshire's natural world.

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