



TRACKS & TRAILS

Spring 2015 | Vol. 44, No. 1

SUN MAGNETS

By Margaret Gillespie, Illustration by Cheryl Johnson

You can cruise right past the spot without noticing. It's a tiny wetland in Concord, New Hampshire, flanked by Route 3A on one side and banks of shiny cars polished for sale on two others. Amid the bustle of hectic life, this place is a landmark welcoming spring. What is significant about this corner of the world is a large, flat rock rising above the water's surface at the west end. If the winter ice has recently melted, you can feast your eyes briefly (traffic can be impatient) on that rock and take in a sign that spring has indeed arrived. The sun magnets are lined up or perhaps piled up, basking on that rock, taking in those solar rays. You have probably guessed this is a haunt for painted turtles, *Chrysemys picta*. Undoubtedly you could spot these turtles in a wetland near you because this species is the most common one in New England.

Life for painted turtles literally revolves around the sun. As ectothermic creatures, painted turtles are dependent upon the temperature of their surroundings for everything from digestion to reproduction. Basking turtles are most obvious in the cool spring weather. Check for them throughout the summer as well, particularly in mornings. Look on rocks, partially submerged logs as well as along the shoreline. You can also find them close to the surface, suspended on aquatic plants. Painted turtles have distinctive yellow stripes on their heads, with a yellow spot behind each eye and bright red markings along the edge of the carapace (upper shell). Once

their metabolism is stoked by the sun, the turtles head off in search of aquatic insects, tadpoles, small fish, crustaceans, and aquatic plants as well as carrion. Nightfall finds them settling in on the pond's bottom for a rejuvenating sleep.

The other best (and worst) place to find painted turtles in spring is crossing roads. Our first instinct may be to help them off the road. Wait. Usually they can dart across on their own.



On a country road, we can slow down our car or stop and flip on the hazard lights to give them some extra time. Turtles may be heading to a wetland or away from it. A mystery? Just trust turtles to know their neighborhood and needs better than we do. Anywhere from May to July, painted turtles have their sights set on a nesting site relatively close to their wetland base. They choose spots carefully, with good sun exposure and relatively easy digging—gravel pits, sand banks, or mowed grassy areas work well. Using their hind feet, female turtles excavate a

cavity about four inches deep where they lay approximately four to eight eggs. As experts in concealment, painted turtles then fill in the nest with soil, packing the surface with their feet and the rear rim of their plastron (lower shell). As a final touch, they whisk stray leaves and vegetation across the spot. Then it's time to scurry back to their wetland home.

What becomes of the eggs, barring discovery by predators such as skunks, foxes or raccoons? The sun takes

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- And much more!

Get Nearer to Nature!
Trails open for the season
Friday, May 1, 9:30 a.m. to 4:30 p.m.
(last trail admission at 3:30 p.m.)
See you on the trails!

FORGING TRAILS

THE ARCTIC COMES TO NEW HAMPSHIRE



With the changing of the seasons comes a change in the avifauna of New Hampshire. Many species leave and head for sunnier locations – the real “snowbirds.” Warblers, vireos, flycatchers, and tanagers head south to where their thirst for tasty insects can be quenched. Ospreys head for South America where fish are abundant and, most importantly, not concealed under a blanket of ice. I often joke in my Osprey presentations that maybe after a few more million years of evolution they will have learned to use ice augers and won't have to migrate.

The changing of the guard goes both ways. As some birds leave New Hampshire, others arrive to spend part or all of the winter in the Granite State. For them, this is south. Many of these birds come from Arctic and Boreal forest regions where the “real” winter makes survival a challenge.

Some of these birds are what we birders call “irruptive.” Some years they are here in droves and some years they are like hen's teeth. Waxwings, Redpolls, Pine Siskins, Pine Grosbeaks, Crossbills, even Goldfinches are in that group of birds that “irrupt” when food supplies (specifically tree mast/seeds) boom and bust. When hemlock cones are scarce in the Canadian forests, vast flocks of Pine Siskins vacate the far north, and like hungry nomadic hordes, descend on cone crops further south . . . or our thistle seed feeders. There is a science to it. Every year a forester in Ontario makes his “finch predictions” based on his assessment of the forest crops. Last fall he predicted an irruption year for Pine Siskins in New England. As usual he was right. It seemed they passed through northern New England in the fall. Later in the winter they turned around and ate their way north again. My feeders were covered in Siskins (and Common Redpolls) during the last couple weeks of January.

Other winter visitors are showier and draw a lot of attention. Last winter was a record-breaking year for Snowy Owls throughout North America. Rather than cones, their boom or bust cycle is dictated by the lemming. In 2013, the Arctic tundra was crawling with these little voles and the Snowy Owls responded. They laid lots of eggs and raised lots of chicks and when fall came, all those chicks dispersed south. Snowy Owls were everywhere last winter. This winter was almost as good. Several Snowys took up residence in our state – particularly along the seacoast where the saltmarsh mimics the tundra and abundant seabirds make for good eating.

In late January, New Hampshire birders got a late Christmas present – not from Lapland, but certainly from similar snowy terrain. A spectacular Gyrfalcon took up residence along the coast. It was seen sporadically as it hunted birds (she seemed to favor Herring Gulls) from Massachusetts to Wells, Maine. I had to go see if I could spot this rare visitor. On January 26 my luck was in. For two hours I watched her strafing the nervous gulls in Hampton Harbor and roosting on the mudflats in between bombing raids.

The Gyr is the largest falcon in North America. Its arrival anywhere in the lower 48 brings birders and photographers in droves. This Gyr may have been born on Baffin Island or even Alaska. These sky wanderers think nothing of crossing a continent to find a safe place to spend the winter. As the first flakes of the January blizzard arrived in New Hampshire, I got a taste of the true Arctic – a really special avian tourist.

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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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MEMBER PROFILE

TIMOTHY O. FISHER



The Science Center owes its start to your grandfather Frank Webster. Your mother Nancy Grady was also a strong supporter throughout her life. What's your first memory of being involved here?

One of my earliest memories is being with my grandfather Frank Webster when he purchased the Holderness Inn and its property in 1966. He felt that a presence on Route 3 was important for the new organization. He made the gift in memory of his

parents – Laurence Jackson Webster and May Rogers Webster – who founded Lost River. My grandfather's purchase was combined with land that was owned by the Webster family (that later became Burleigh Land LP) and it was donated to create Science Center property. My grandfather thought that filling up Holderness with non-profits would help to prevent commercial growth and development in the town.

Do you have a favorite animal or exhibit?

My favorite animal exhibit is the bobcat. It's very special to me because Audrey and I contributed to the exhibit in memory of my brother "B" (Laurence B. Fisher) who died tragically at a young age. The bobcats are such interesting animals to view too. And of course I love seeing the mountain lion – they are amazing animals.

What interests you most about the Science Center and why?

Now I am very interested in the new wood fired boilers that Audrey and I recently funded for the Nature Matters capital campaign. I am so excited about this technology, which I think will soon be adopted in other areas across the country. And the best thing is that the wood is coming from a mile down the road – from Burleigh Land's logging operations. Other biofuel plants have to truck wood chips from 50-75 miles away, expending gallons of diesel fuel. The local wood supply aspect adds to the sustainability of this wood fired plant.

Audrey and I are also very excited about the upcoming Water Matters building and exhibits that are under construction as part of the Nature Matters campaign. It may have taken 50 years for the Science Center to create a water exhibit but what it will teach about Squam Lake and water is going to be wonderful. We love the plans and look forward to its opening in 2016.

Do you think it's important for children to have a strong connection to nature?

Yes, it's important for children to have a connection with nature. I'm proud of my work with the Squam Lakes Association (founded by Laurence Webster in 1904). Their Junior SLA programs educate children about the lake ecosystem. Adults also learn from their programs. Likewise, the Science Center reaches thousands of children every year and teaches

them about wildlife. My family's history of supporting land conservation has profoundly influenced my life. I have worked in land conservation for many years. Currently I am heading the campaign for Squam Lakes Conservation Society to conserve 12,000 acres of land that will connect protected lands around Squam with the White Mountains National Forest. When the project is complete, you will be able to hike from Squam all the way to Mt. Washington on conserved land.

Why do you give to the Science Center?

Audrey and I donate to the Science Center because it is well run. It has a good board and excellent management. It was a pleasure to work closely with Executive Director Iain MacLeod and Laurie Beeson (Nature Matters Campaign Co-chair) as we held discussions about our gift for the wood furnace.

You recently made a bequest to the permanently restricted endowment at the Science Center. Why did you make this gift?

I have worked with many non-profits and realize that most do not have adequate endowments. I made bequests for endowments to both the SLA and SLCS a few years ago and also helped them with campaigns to build their endowments through planned gifts. I have also assisted the University of California at Santa Barbara's Arts and Lectures program and the Pittsburgh Cultural Trust by supporting their endowments. Now it's time for me to do the same for the Science Center – and I have made an irrevocable gift to the Science Center's permanently restricted endowment. It's hard for non-profits to raise funds for endowment which is so important for the long-range health of the organizations. I don't usually seek publicity for my philanthropic gifts, but I am sharing the news of this commitment publicly to encourage others to make gifts through their estates. It's so easy and quick to add a short paragraph in your will or trust. The Science Center is an asset to our community and I am happy to support its work.

Tim Fisher was raised in the Boston area and has been a part-time resident of Holderness his entire life. As a boy Tim spent his summers on Carnes Island on Squam Lake, the very first parcel of land purchased by his Great Great Grandfather, Frank Webster, in the 1890's. Tim, his wife Audrey, and their four grown children own a home in Holderness. Tim and Audrey also reside in Pittsburgh, Pennsylvania and Santa Barbara, California. Tim has been employed at The Hillman Company since 1972 where he now serves as Senior Vice President. Hillman is a private alternative investments company in Pittsburgh. Tim was a director or officer of the Squam Lakes Association from 1990 through 2004 and served four years as President. He is also a lifetime trustee of the Chocorua Island Association and is Chairman of the Leadership Council of the Squam Lakes Uplands Conservation Project. The Fisher family, through Burleigh Land LP, owns approximately 3,500 acres of land on the Squam Range and four Islands on Big Squam Lake. Tim also serves on the Advisory Council of The University of California Arts & Lectures program and is a member of the Santa Barbara Art Museum Investment Committee. Tim attended the Holderness School in Plymouth and received a BA from the University of Denver in 1971. He earned an MBA from the University of Virginia in 1976.



KIRKWOOD GARDENS PLANT SPOTLIGHT



By Brenda Erler

Trout Lily

Erythronium hybrid 'Pagoda'

Culture: Best grown in moist, acidic, soil rich in humus and in partial to full shade

Bloom: April

Height: 12-14 inches

This cultivar of our beautiful native trout lily may form colonies in woodland gardens, on pond and stream banks, and in naturalized areas if conditions are right. It is a spring ephemeral and will go completely dormant after blooming. Trout lilies are most easily started by planting corms (available from some nurseries and bulb catalogs) in the fall. They do not transplant well, so please leave wild colonies undisturbed. Deer don't like to eat them either!

Kirkwood Garden location: next to the lower garden pathway at the pergola end of the garden.



Photo by Paul Morris (flickr)



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

NEWSBRIEFS

In Memorium



1974-2014

A 40-year-old Great Horned Owl that arrived at the Science Center in 1974 was euthanized in December due to failing health. As a nestling, the owl had been taken illegally from the wild and later confiscated by authorities. Raised in this setting, she had a poor diet that caused her to be blind in one eye and partially blind in the other; she was also imprinted on humans. Unfortunately these disabilities kept her from surviving in the wild. After arriving at the Science Center, she served her species as an animal ambassador at education programs and other public presentations from 1974 to 1991. From 1991 to 2011 she was a star attraction at the Raptor Exhibit, often flying up to the observation window and hooting (defending her territory). As her vision declined she retired from exhibit status, but returned occasionally from 2012 to 2014 as a program animal. The longest lived animal at the Science Center ended her life receiving geriatric care behind the scenes.

- Squam Boat Livery was accidentally omitted as an in-kind donor from the article "Businesses Invest in Education" in the winter 2014-15 issue of *Tracks & Trails*. Sally and Tom Daigneault and Squam Boat Livery are longtime business and personal supporters and we sincerely regret our error.
- Thank you for your help exceeding the 2014 Annual Fund goal! We could not have done it without you! Unaudited financials predict that we will end the year with a slight surplus despite several unexpected costs including a new motor for a pontoon boat, a commercial washer and dryer replacement for animal care, a fire alarm system repair, removal of downed trees due to storms, and a telephone processor replacement part. The staff kept spending within budget too.
- Trail attendance set a record with 50,188 visits, compared to 48,925 in 2013. Lake Cruise passengers numbered 9,803, compared to 9,844 in 2013. Across the state, 14,608 school children and teachers attended a program at the Science Center or their school site, compared to 14,634 in 2013. Another 7,314 people around the state attended non-school outreach programs. Memberships numbered 3,384 at year end.
- The annual Volunteer Holiday Potluck was hosted by Trustee

Bruce Whitmore and his wife, Betsy, at their home in December. More than 40 trustees, staff, and volunteers attended to celebrate and thank our outstanding volunteer team who donated over 9,016 hours in 2014.

- With our new upcoming Water Matters exhibits in mind, Education and Animal Care staff visited ECHO Lake Aquarium and Science Center in Burlington, Vermont on Lake Champlain in December for a behind-the-scenes tour and a question and answer session about aquariums.
- Watch for TV ads, new print ads, and even a billboard (Route 104 in Meredith) in 2015, thanks to funding from the Nature Matters capital campaign for enhanced marketing.
- In December, we received a \$10,000 grant from the Jane B. Cook 1983 Charitable Trust, renewing its support for the Osprey Tracking project. This grant provides the required matching funds for the 3M Eco Grant received in October. Plans are in place to create a network of nature centers and schools along the eastern seaboard (the Osprey migration corridor) that will receive special Osprey-related curriculum materials and resources. The funds also allow up to five new Ospreys to be tagged with satellite trackers this year.

NATURALIST'S CORNER

BUTTERFLIES

By Jeremy Phillips



Now that winter has waned and signs of new life are all around us, we can enjoy each new change we see. Spring hits fast and hard so I try to enjoy each new tree bud bursting and welcome the sound of each new bird returning from its travels. With so

much happening, sometimes it's easy to miss these things. One thing easily lost in the speed and chaos of spring is the sighting of the first butterflies.

Butterflies survive winter in many ways. They are poikilothermic, which refers to organisms whose temperature can vary greatly as opposed to homeothermic, which is where organisms maintain their body temperature. Butterflies have a variety of ways in which they survive winter.

The familiar orange and black monarch (*Danaus plexippus*) butterfly is highly recognizable. Its wingspan reaches just over 3.5 inches and its slow lazy flight over the tops of flowers is a brilliant sight. This coloration and slow flight might make monarchs easy prey, but also warns predators of a horrid taste, which protects them. Monarchs spend generations travelling from New England to Mexico and back again in an astounding migration that amazes me. This leads to a later spring arrival, usually sometime in the middle of May.

The cabbage white (*Pieris rapae*) overwinters here in New Hampshire as a pupa so it still takes some time for it to reach adulthood before we spot it in flight. This butterfly usually can be first spotted late in April. A cabbage white butterfly is common and under recognized. This small, white-winged butterfly can be found in almost any natural community but is prone to open areas, wild or cultivated.

Some butterflies actually overwinter as adults. The Eastern comma (*Polygonia comma*) and gray comma (*Polygonia progne*) are two that may be seen late in March. The two that usually win the prize for my first butterflies of the year are the Compton tortoiseshell (*Nymphalis vaualbum*) and the mourning cloak (*Nymphalis antiopa*). Each of these butterflies find shelter in crevices on trees, in outbuildings, and other protected areas during winter. Although less common than the mourning cloak, the Compton tortoiseshell is readily seen early in the year too. Generally dark with contrasting orange and white markings from the middle to outer part of its wings, it is a beautiful specimen. The mourning cloak is identified by a large white band on the bottom of its wings. The mourning cloak is even known to appear on warm winter days. Anytime the temperature starts to tip to 60 degrees Fahrenheit these butterflies may appear. What is interesting is that I have noticed there are not any flowers available for them to collect nectar for energy on those days. They eat nectar later in the summer, but they regularly search out rotting fruits, sap from trees, and scat before then.

Whether they migrate like the monarch or go through diapause (dormancy) as pupae, larva, or adults, it is always a pleasure to see the first butterflies of the year. Which butterfly will you spot first this year?

FROM THE HERON'S NEST

By Laura Mammarelli



Meet Sizmo, the newest member of the Blue Heron School community. He is a seven-year-old male painted turtle. When a family who could no longer care for Sizmo brought him to the Science Center, Animal Care staff realized that the Blue Heron School children would enjoy having a turtle in the classroom. The students feed him in the morning and observe his beautiful coloring and movements. Sometimes Sizmo swims under water and sometimes he basks on his island. If we are lucky we get to see him pull his head right into his shell.

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.



NATURAL ADVENTURES

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

Amazing Migrators

Saturday, April 11, 10:00 to 11:30 a.m.
For families with children ages 7+

The arrival of spring means that many animals are on the move. Join us to learn the how and why of animal migration. Outdoor activities, stories, and a craft will help us understand what it would be like to migrate. We'll also meet a live animal to learn the story of its migratory journey. Adult must accompany children at no additional cost.

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

Celebrate Spring

Saturday, April 25
10:00 to 11:30 a.m.

For families with children ages 5+

Celebrate Earth Day having fun exploring the woods, meadows, and ponds of the Science Center in search of signs of spring. Hunt for the colors, smells, and clues that tell us winter is over. Meet a live animal to learn about its springtime activities after a long winter slumber. Adult must accompany children at no additional cost.

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



Find us on
Facebook

Natural Adventure Series

Spring Birding

Fridays - May 15, 22, 29, June 5, 7:00 to 10:00 a.m.

For adults and families with children ages 14+

Squam Lakes Natural Science Center is partnering with the Squam Lakes Conservation Society to offer a weekly bird ID program. Join Science Center Executive Director Iain MacLeod for a series of beginning birding programs. Learn how to identify the huge variety of birds that fill our woods, meadows, and wetlands each spring. Explore a variety of habitats in the Lakes Region. Learn identification by sight and sound and build upon your bird ID skills.

Cost per program: \$12/SLNSC & SLCS member; \$15/non-member

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

Vacation Week Camp

Junior Wild Animal Keepers

Monday, April 27 to

Thursday, April 30

9:00 a.m. to 3:00 p.m.

For ages 8 to 12

Otter popsicles? Training time for a coyote? Treats and puzzles for opossums? Do you love caring for animals? Do you wonder what the Science Center's animals eat for dinner? Join us for a week of learning how New Hampshire's wild animals survive. Then apply that knowledge by helping with the care and feeding of the wildlife at the Science Center. Go behind the scenes to watch staff train animals and then build puzzles and treats to engage our resident animals. On Thursday, family, friends, and Science Center staff will stop by to learn about your adventures.

Cost: \$220/member; \$240/non-member

All About Turtles

Friday, May 1, 10:00 to 11:30 a.m.

For families with children ages 4 to 8

Come along to explore the places turtles call home. We'll read a turtle story, have fun with a turtle craft, and meet live New Hampshire turtles as well. Adult must accompany children at no additional cost.

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

Vernal Pool Exploration

Saturday, May 16

10:00 to 11:30 a.m.

For families with children ages 7+

Melting snow and spring rains collect in shallow depressions forming what are known as vernal pools. Although these pools are temporary, they create an ideal place for several species of amphibians and invertebrates to reproduce. Our exploration will include collecting and observing some of these amazing creatures. We'll begin inside with an overview of what we hope to find and then take a short hike to a seldom-visited vernal pool.

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

Annual Breeding Bird Census

Saturday, June 6, 2015

Session 1 - 5:30 to 8:00 a.m.

Session 2 - 8:00 to 9:30 a.m.

For 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.

No charge but reservations are required.

**Annual Meeting
 for Members
 Saturday,
 August 8**

**Raptor
 Spectacular
 Saturday,
 September 12**

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

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.

River Otter Feeding is included with trail admission

UPCOMING EVENTS

Clean Up Day

Saturday, April 18

9:30 a.m. to 1:00 p.m.

Volunteer for our annual Clean Up Day! You can choose from all kinds of jobs to help prepare trails and grounds, including Kirkwood Gardens, for opening day on May 1. Wear old clothes and work gloves because some projects are messy or dirty, such as painting, pruning, raking, and sweeping. Most work is outdoors, so dress for the weather too. Extra leaf rakes are helpful. Volunteers and staff share a complimentary picnic lunch at noon. Groups and families are welcome. Contact Volunteer Coordinator Carol Raymond to register at 603-968-7194 x 22 or carol.raymond@nhnature.org.

New Hampshire Day

Saturday, May 2

Trails open at 9:30 a.m.

A discounted admission fee of \$5 for New Hampshire residents! Shop for bargains at the Howling Coyote Gift Shop sale. Live Animal presentations at 11:00 a.m., 1:00 p.m., and 3:00 p.m. Get energy saving ideas and giveaways from Dead River Company.

Sponsored by:



Predators of the Sky

Saturday, May 9

Two shows only with limited seating!

11:00 a.m. to 12:30 p.m.

1:00 to 2:30 p.m.

For all ages

Bald Eagle, Golden Eagle, Red-tailed Hawk, Great-horned Owl, and Peregrine Falcon are among the impressive live birds of prey you'll see close up in this remarkable presentation by Tom Ricardi, a licensed rehabilitator and wildlife biologist. Ricardi spent more than 35 years as a Fish and Wildlife Game Warden. He now runs Massachusetts Birds of Prey Rehabilitation Center in Conway, Massachusetts, where his groundbreaking work with Bald Eagles resulted in captive-bred Bald Eagles reproducing in the wild and captive-bred chicks being adopted into wild nests. He started the rehab center in 1972 and has since taken in more than 100 birds every year, 60% of which are released back into the wild. The other birds have injuries that prevent survival in the wild, but allow Ricardi to showcase their specialized traits in his great family programs. Reservations are required.

Cost: \$12/member; \$14/non-member;
\$25/non-member program and trail pass combo

Wild Trivia Challenge

Save the date for our annual
summer celebration.

Saturday, July 25 at 5:30 p.m.

Drinks, Dinner, Live Auction, Fun!

Kirkwood Gardens Day

Saturday, May 30

9:00 a.m. to 1:00 p.m.

Gain inspiration from Kirkwood Gardens

Find beautiful plants for your own garden

- Fine perennials from a prestigious New England nursery
- Silent auction of desirable plants and garden items
- Plants from knowledgeable local gardeners
- Vendors including Nancy Benjamin's lampshades, Diane Hulse's herbal products, and Ripple Pottery
- Expert gardening advice
- Hot and cold drinks and baked goods for sale

TO BENEFIT KIRKWOOD GARDENS, established 1995

Sponsored by:

Belknap Landscape Company, Inc.
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603-528-2798 | www.belknaplandscape.com



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 hosted by volunteer docents 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.

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

Sponsored by:



StoryWalk™

July 2 through August 15

Daily 9:30 a.m. to 4:30 p.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 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:



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 nesting 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.

Bald Eagle Adventure

May 19 to June 23 - Tuesdays at 3:00 p.m.

Join a naturalist for a special Bald Eagle Adventure to view these magnificent birds in their natural habitat. The cruise focuses on the recovery of Bald Eagles as a nesting species in the state, with particular discussion about the Bald Eagles that have nested on a Squam since 2003.

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,
Bald Eagle Adventure, 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.**

Dock sponsorship generously provided by Walter's Basin Restaurant in Holderness.

SCIENCE CENTER NATURE TOURS

Hebrides and Highlands

June 10-23, 2015

Limited space still available

Find full trip itinerary at

www.nhnature.org/programs/nature_tours.php

Contact Iain at 603-968-7194 x 23 or

iain.macleod@nhnature.org to book your place.



The State of the Lake: 2014 Squam Watershed Report

In 2013, the Squam Lakes Association (SLA) published its first Squam Watershed Report, which compiled results of decades of study on Squam to review the watershed's health, including topics such as water quality, loons, fisheries, boat counts, and invasive plant management. While the first report examined the history of data collected, in 2014 its focus is data collected in 2013. If you haven't seen it, visit the SLA website to learn about the Squam Lakes' health: http://www.squamlakes.org/sites/default/files/uploads/2014_SWAR_web.pdf

SPONSOR A SPECIES



The animals at Squam Lakes Natural Science Center serve as ambassadors for their species, here for the purpose of teaching about New Hampshire's natural world.

The cost of caring for wildlife is considerable. All the animals need specialized diets, daily care, and creature comforts. You can help to provide food, health care, and housing for the animals - for your favorite feathered or furry species - through Sponsor A Species. You may sponsor a species for yourself, your family, or your company, school, or club. You can even send a sponsorship package as a gift. It's a unique way to learn about a particular species and help us to care for its live animals.

Complete your sponsorship online at nhnature.org/support.



nature matters

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.

Squam Lakes Artisans Gallery
Locally crafted New Hampshire gifts
Open daily 10:00 a.m. to 5:00 p.m.
starting Wednesday, May 20

VOLUNTEER OPPORTUNITIES

Docent Training

Adults

Docents are volunteers trained to interact with guests on the live animal exhibit trail. Docents represent the Science Center at off-site events and also travel to assist naturalists with educational programs. Docents must commit to 40 hours of training in their first year and 16 hours annually after that.

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

Ages 14 to 17

First Guides are teens trained to provide an educational presence on the live animal exhibit trail and at special events.

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 training, contact Volunteer Coordinator Carol Raymond at carol.raymond@nhnature.org or 603-968-7194 x 22.

SUMMER 2015 GUIDED DISCOVERIES



Guided Discoveries are week-long outdoor natural adventures for children ages 4 to 14. Programs taught by experienced naturalists and educators allow

participants an in-depth exploration of nature and science. Learn more at www.nhnature.org.

OPENING A WINDOW TO THE NATURAL WORLD

Charlotte M. Barnaby

A Bequest in Memory of John M. Barnaby

Over the years I've worked with many talented, dedicated, and quite amazing people who volunteer to serve on our Board of Trustees. Often I get to know their spouses too since they frequently end up volunteering their time as well. One spouse that I didn't know in person, but through written letters, was the late Charlotte B. Barnaby. Her husband John M. Barnaby, known as Jack, was a trustee from 1977 to 1992 and Honorary Trustee from 1992 to 1995. He served as Interim President and Board Chair in 1989 and 1990. Jack died in 2002 at the age of 92 after a long career coaching tennis and squash at Harvard.

I send monthly membership renewal notices and try to write personal notes on many of them. Not everyone writes back, but Charlotte Barnaby usually did. One letter she sent in 2004 said, "As time goes by, I often look back on the days when the Science Center was so much a part of the Barnaby lives. I know Jack would be proud of his small part in its growth, and I always read the mailings which come my way. I'm impressed by the involvement of so many Squam Lakers – and beyond!" Yearly, she renewed her membership, made membership gifts to her children and Annual Fund gifts. And she sent me a note every year right through 2013. In 2006 she told me that she had made a bequest in her will to the Science Center. Mrs. Barnaby passed away in September 2014 at the age of 98. Her unrestricted bequest of \$10,000 in memory of Jack was received in December and was allocated to the Annual Fund. Unaudited figures indicate there will be a budget surplus for 2014, which means this gift will become part of the Board Designated Reserve Fund. There, it will help to fund capital improvements in the future, building on the legacy of the Barnaby family. Thank you Charlotte!

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

CD player for Blue Heron School
Tablecloths
Little Tikes or Step 2 playground climbers or slides
for animal enrichment
iPods, tablets, and laptops in good condition for
education programs
Grocery store gift cards for animal food
Animal crates
Hav-a-hart traps
Couch in good condition
Hiking or skiing poles for snowshoeing

These generous donors made tribute gifts, which were received between October 1 and December 31, 2014:

In memory of Anne and James Alvord
DeHaven Family

In memory of John M. Barnaby
Charlotte B. Barnaby

In memory of Ellen Fabian Barry
Georgene and Rick Fabian

In memory of Betty Main Cannon
Merry and William Berkowitz
California Rifle and Pistol Association
Diane Francis

Goodrich, Thomas, Cannon & Reeds, LLP
Matt and Kim Haller

In honor of George Carr
Ann Giles

In memory of Virginia Chartier
Mary Ann Schulz

In memory of James Henry Cooke
Robert Keiver

In memory of Dr. and Mrs. L. Betts Copenhaver
Marcia and Richard Barrere

In memory of Mary Smith Denison
Elizabeth and William Dewey

In memory of Holly Goodrow
Robert Keiver

In memory of Don Parsons
Priscilla and Wayne Fletcher
Natalie Parsons

In memory of Barbara Ridgely
Joan and George Wadsworth

In memory of Ted Ryan
Pam and Peter Graesser

In memory of Greg Smith
Frances Chalmers and Gail Smith
Rich and Ann Chalmers
Barbara and Ron Geigle
James Talcott Fund of the New York Community Trust

In honor of Carol Thompson
Jane and Eric Philippi

In memory of Marjorie Tuttle
Betsy Athan

In memory of Sara Vogel
Ellen and Kent Albright
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Molly and Byrd Gwinn
Joan and William Carpenter
Patricia and Gerald Corso
Dana Dortone

Katherine and William Humm
Jane Krumrine
Paul F. Miller III

Montgomery Bar Association
Mimi O'Malley

Tad Sperry and Ellen Harvey
Miriam Stanton and Richard Hanscom
John Vogel

In memory of Elizabeth and Rawson Wood
Ellen Barth

TRAIL'S END

THE HOLDERNESS INN



At recent board meetings we have been discussing The Holderness Inn. The Inn, which was built in the late 1800s, is owned by the Science Center. We have not used the building for at least ten years other than to provide space for local New Hampshire artisans to display and sell their wares and to host a small café during the summer months.

The building requires significant maintenance to continue to be used for its current purposes. A new roof, replacement of some rotten siding, as well as painting the entire exterior, and a new septic system are the primary needs. We have cost estimates totaling \$70,000 for this work, but realistically expect the costs will exceed \$70,000 as it is likely that repairs will be needed to some structural elements that are currently hidden from view.

The board and staff have been discussing whether to use Science Center resources to cosmetically restore the exterior of the building. We have considered a variety of alternatives ranging from razing the building to outfitting it for some type of year-round hospitality facility. To modernize the building for year-round use would cost in the neighborhood of \$2+ million.

More recently we have thought about reconfiguring the interior to some form of seasonal meeting space. Initial estimates for such a reconfiguration are around \$250,000-\$350,000. We have not fully considered how we might recover such an investment and whether there is a need for such space in our community outside of our programs and events.

We are aware that the Inn is listed on the National Register of Historic Places. It is one of a few buildings that are representative of the early tourism industry in the Squam region. We have met with historic preservation experts to seek input and guidance.

The key question for the board is whether to use funds of the Science Center to maintain the building. The property on which the building sits is important to the operations of the Science Center. The mission of the Science Center is to advance understanding of ecology by exploring New Hampshire's natural world. Spending money on preservation of a historic building might be construed as outside the primary mission of the Science Center. One additional consideration is that if we spend money on the building now, we know we will also need to spend additional funds on it in the future.

We are endeavoring to make as many people who have an interest in the Science Center and an interest in the building aware of our deliberations. We expect to make a decision in the next few months as to a course of action.

We would be happy to hear suggestions and comments that you may have. Please contact any board member or Executive Director Iain MacLeod with your input.

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

SUN MAGNETS

continued from page 1

over of course! Over a period of two and a half to three months, the sun's warmth fosters the development of the eggs into tiny turtles. The sun also determines the sex of the hatchlings. Warmer temperatures produce female turtles while cooler temperatures result in males. Thus a nest could hatch females and males if there were an appropriate temperature gradient in the nest or potentially all turtles of the same sex. Once hatched, turtles can follow one of two courses. Most often in the north, hatchlings stay in the security of the nest over a cold winter, insulated by soil topped with snow, to emerge the next spring. Alternately, they emerge from the nest shortly after hatching and head for water. There they hibernate in the soft mud of the pond or lake bottom. Relative to the water, the mud maintains a higher temperature. Oxygen is the key limiting factor. Painted turtles absorb oxygen dissolved in the water through their skin but are also able to survive for periods of time with no oxygen.

In a cosmic sense, we too revolve around the sun. I, for one, am glad that our portion of planet Earth is tilting closer to that burning globe during this spring season. With the painted turtles, we can emerge to experience the new life that is bursting from every nook and cranny.

PAINTED TURTLE QUIZ

1. What time of the day are you most likely to see painted turtles basking?
A. Morning B. Noon C. Afternoon
2. Are turtles ectothermic or endothermic?
3. True or False? If you see a turtle crossing the road, always place it in the nearest wetland.
4. True or False? Painted turtles usually travel short distances in search of ideal nesting sites.
5. The sex of painted turtle hatchlings is determined by _____.

ANSWERS:

1. A; 2. Ectothermic; 3. False; 4. True; 5. Temperature

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www.mvsb.com/values

Member Benefit: Little Church Theater



A Gathering Place for Creativity

Squam Lakes Natural Science Center members receive 10% off tickets during the summer of 2015. Tickets may be ordered via email to info@littlechurchtheater.com or by calling the Box Office at 603-968-2250. Mention that you are a Science Center member and use ticket code ScienceCenter113.

THE HOWLING COYOTE GIFT SHOP

Welcome back for another great season!



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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