



A WALK WITH *LYCOPODIUM*

By Margaret Gillespie, Illustration by Cheryl Johnson

There is always time to look where you are going. One day as I meandered up a woods road from the nearby pond towards home, I issued a challenge to a young neighbor accompanying me. "Find one thing you are especially curious about on our walk back." I was impressed as she bypassed some of my favorite trees, explaining that a relative had identified those with her. Finally she paused and pointed to some diminutive green plants resembling tiny trees creeping across the forest floor. Getting down on our hands and knees, we noted no woody stems but unearthed underground runners connecting the plants. Tiny clubbed stalks rose above the green. We had the thrill of coming face to face with *Lycopodium*.

Some 300 million years ago, before the age of dinosaurs, an audience with ancient species of the genus *Lycopodium* would have involved staring up 100 feet to tree-like species now long extinct. Those giant plants growing during the Carboniferous period contributed to coal deposits we now mine for energy. It's hard to connect those huge plants with many modern-day *Lycopodium*, which stretch to reach six to twelve inches.

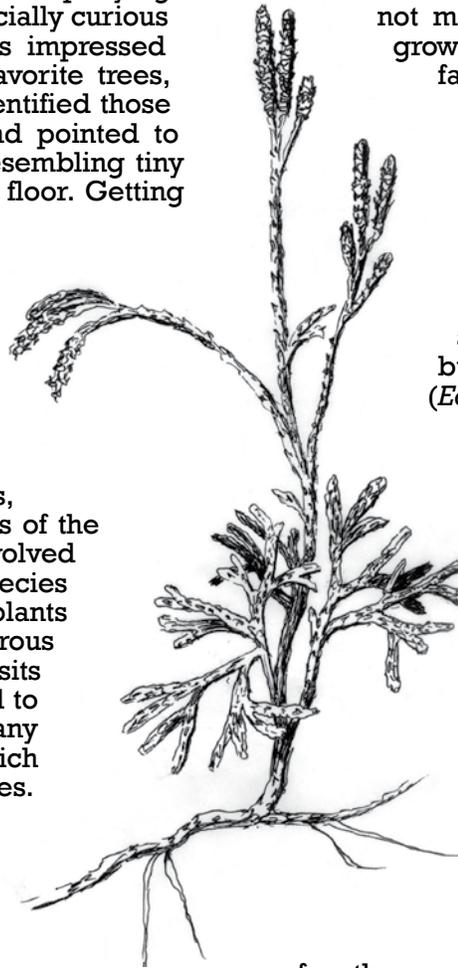
When we hear common names for *Lycopodium* like ground cedar, running pine, or princess pine, we think of miniature trees. Then we discover they are in a group commonly called "club

mosses." This name comes directly from the mossy appearance of their greenery topped by club-like spore structures. Are we dealing with mistaken identity here? What are they really? They are not mosses. True mosses stick close to their growing substrate – the forest floor, rocks, or fallen trees – having no vascular tissue to transport water to greater heights. Club mosses, in contrast, have a very simple vascular system, enabling them to rise above the mosses, if not the masses! Because of this vascular system and reproduction by spores, scientists categorize club mosses as more closely related to ferns. They are officially "fern allies" along with another fascinating but very different local plant, horsetails (*Equisetum*).

My young friend and I noticed how the club mosses propagate with runners called rhizomes spreading along and under the leaf litter, and then thrusting up fresh green plants. They also reproduce with spores from the yellow clubbed capsules in a much more complicated and lengthy reproductive effort. When a spore lands and germinates in a suitable site, an underground prothallium grows. It has the ability to reproduce with male and female sexual organs. The eventual result, years later, is once again the familiar club moss popping up from the forest floor.

People have a natural attraction for these plants. Being evergreen, they show up as Christmas decorations or in winter terrariums.

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And much more!

Eyes on Owls

Saturday, November 22

Two presentations: 11:00 a.m. and 1:30 p.m.

See page 7 for details



FORGING TRAILS

AS THE "EAGLE" WORLD TURNS



One of the great highlights of our Squam Lake Cruises is viewing "our" nesting pair of Bald Eagles. This year we've seen some changes. First, they built a new nest on Long Island, abandoning their traditional site on Little Loon Island. This was not a surprise to me, given the circumstances that befell them last year. Some of you may remember that in 2013, the nesting attempt failed during a particularly dreadful 24-hour ice storm on April 12 – three weeks into their 35-day incubation. Their new nest is in a fine live pine with

lots of good support branches and a healthy canopy above – a much more sheltered location.

We also now know that the male eagle is new. Local photographer Randy Roos has been sending me images of the nesting pair. His photos clearly show that the male bird has no leg bands. The previous male had a silver band on his right leg and a gold band with the code W86 on his left leg. The band told us that he was hatched in a nest on Quabbin Reservoir in Massachusetts in 1997, so he would have been 17 years old this year. He had been in residence since the Little Loon Island nest was first established in 2003. We know for sure that he was nesting here through 2010 (when excellent photos were taken of both birds showing their bands) and I have no reason to suspect that he was not breeding here in 2011, 2012, and 2013. There is no way to know at this point whether he died or was ousted by the new, presumably younger male. Bald Eagles will fight over territories and it's possible that he was fatally wounded in a territorial fight.

I am very confident that the same, now 15 year-old female eagle is still in residence. Randy Roos's pictures show clearly that the female at the Long Island nest has a silver band on the right leg and a gold band on the left, but his photos have not revealed the 3-digit code on the gold band. Our old female's gold band is inscribed with WA8, and she too was born in a nest on Quabbin but in 1999. I am made more confident of her being the same eagle by comparing photos from 2010 and 2014. I noticed that the female in 2010 (WA8) had some distinctive white feathers on the normally all-brown feathers on her right leg. Randy's photos show that this year's female has the matching white feather pattern on her right leg.

Despite the changes in the "marriage" our pair is successfully rearing three chicks this year. Triplets are exceptional for Bald Eagles, but this Squam territory has managed to raise three chicks in three of the last four years! As I write this column in mid-July, the three eaglets are taking their first flights. They will soon be spreading their wings and making their own way in the world.

This territory has now produced 21 chicks in 12 years, and we know that at least one (likely several more) of them is now breeding in New Hampshire. In 2012, a new eagle nest was found on Lake Winnepesaukee in Alton and the bands on the legs of one of the adults (black 6/N) showed that it was banded at the Little Loon Island nest in 2005 – the only youngster ever banded on Squam. It's nice to know that "our" Squam eagles are helping to repopulate New Hampshire's lakes and rivers with our national bird.

Iain MacLeod, Executive Director
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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. Our 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 all members. Comments are welcomed by newsletter editor Janet Robertson at 603-968-7194 x 12 or janet.robertson@nhnature.org.

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VOLUNTEER PROFILE

RACHEL CIRINCIONE



I'm a Tour Director with Tauck World Discovery, an American company with trips on all seven continents. I have worked for them for 16 years and spend much of the year overseas,

often in Africa, where I run safari tours and game drives. I have also worked in Central Europe, Russia, Great Britain, Egypt, and Jordan.

When I am not working, I am home. I grew up in Holderness and moved back to New Hampshire three years ago from New York City. So, it's been like coming home for me and I immediately looked into volunteering here as a docent.

As a child I was a Future Naturalist (which is like a First Guide) and loved it so much, that after the summer ended, my sister and I would still volunteer in the winter and help with Animal Care. I have wonderful memories of some animals then: "Nevermore" the Raven could talk and was found at a beach chasing women in bikinis, and the Fishers that chewed through my leather boots one day. I love so many aspects of volunteering. I do Otter Feeding and Enrichment, Turtle Talks, show live animals to visitors

on the trail, and added Up Close to Animals talks and docent-led trail tours this year. I also help with animal care one day a week. I have a special fondness for our new coyote exhibit. I think it's important to educate the public about this misunderstood animal that plays a vital role in our ecosystem.

Growing up, I always had a fascination with nature. Being a Future Naturalist allowed me to be close to animals and learn about them in ways I never could have otherwise. The experience taught me a great respect for the environment and the creatures that live in it. I feel that environmental education is vital if we are to preserve the nature we have left.

I wish other people knew how exciting it is to visit the Science Center. I have met so many incredible people volunteering here – not only the committed people who work here, but also the visitors. I love being on the trail and have guests tell me their stories about wildlife in their own backyards. One of the amazing things about living in New Hampshire is how much wildlife co-exists with us. I think that is a special thing that many people don't have.

As much as I love seeing the animals every time I volunteer, one of my favorite things is watching the children who visit. You haven't seen cute until you see an Otter Feeding and Enrichment and watch the little kids faces light up as they watch the otters go after the 'fishicles' fed to them through the chute. It is such an amazing feeling to be able to share my passion for the environment with others. I always hope that adults as well as children will incorporate the environment into their lives or careers because of what they learned at the Science Center - as I did.

NEWSBRIEFS

- Remember that you can see Up Close to Animals every Saturday and Sunday from September 6 through October 12, with presentations at 12:00 and 2:00 p.m. Plus, River Otter Feeding presentations continue every Monday, Wednesday, and Friday at 11:30 a.m. through October 31.
- Show your trail admission or cruise receipt to receive a 10% discount on lunch or dinner at Walter's Basin Restaurant in Holderness every Tuesday through October 31.
- Volunteers were active this summer. Lake Education Assistants were on board for Lake Explorers – Family Cruises on Tuesday mornings in July and August. Docents led Guided Tours on the live animal trail on Thursday mornings. We welcomed help from new and

returning Kirkwood Garden volunteers, in addition to Greeters, Lake Education Assistants, and Animal Care volunteers. Four new docents completed training along with eleven teen First Guides. Three former First Guides transitioned as docents this year.

- Festival of Flight is on Saturday, September 13, sponsored by Community Guaranty Savings Bank. With a focus on the wonders of flight and migration, the day includes a hawk watch, crafts for children, live animal presentations, and a Project OspreyTrack update by Executive Director Iain MacLeod.
- Halloween Hoot N Howl returns this year on October 18. Sign up by calling 603-968-7194 x 11 and receive a \$1 discount per person

if you reserve your spaces before October 10.

- The 2013 Annual Report, Audited Financial Statements, and 990 Tax Return are available for review on our website at www.nhnature.org/ support. You may request paper copies of these documents in the mail by contacting Development and Communications Director Janet Robertson at 603-968-7194 x 12 or janet.robertson@nhnature.org.
- Marcia and Mark Wilson will present Eyes on Owls on Saturday, November 22 with presentations at 11:00 a.m. and 1:30 p.m. This live owl program offers close-up views of these secretive birds of prey found in New England. See page 7 for more information.



KIRKWOOD GARDENS PLANT SPOTLIGHT



By Brenda Erler

Pink Turtlehead

Chelone lyonii 'Hot Lips'

Culture: Plants flourish in moist, well-drained, fertile soil in sun or part shade. Will tolerate nearly full shade.

Bloom: August – September

Height: 24-36"

This turtlehead is related to the native white turtlehead (*Chelone glabra*). It is a great plant for woodland or native plant gardens, or along streams and ponds. They can be used in perennial borders if the soil stays moist. Attractive to butterflies and an interesting cut flower. The flowers supposedly resemble the heads of turtles with their mouths open.



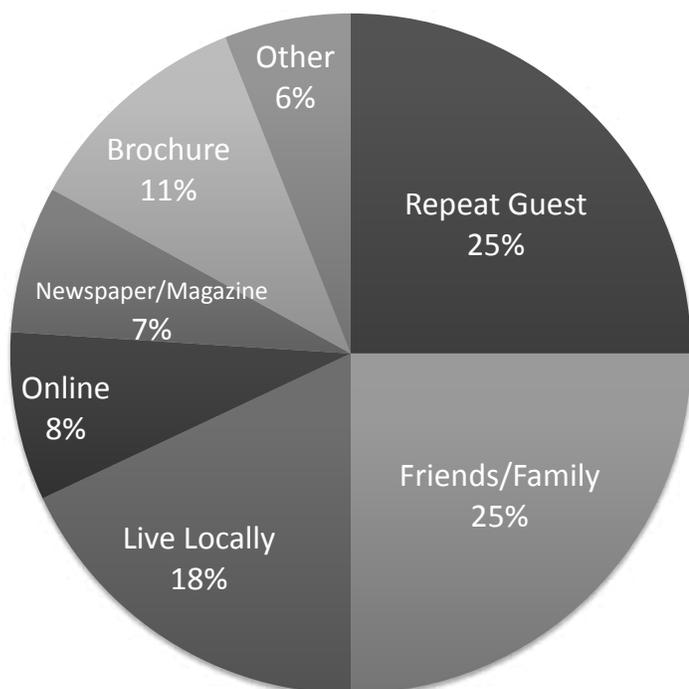
Plant Spotlight and Kirkwood Gardens are sponsored by Belknap Landscape Company, Inc. www.belknaplandscape.com

ABOUT OUR VISITORS

By Madeline Warren

As summer Marketing Intern for Squam Lakes Natural Science Center one of my ongoing projects was to collect demographic information to learn where our visitors are coming from and how they heard about the Science Center. The purpose of this study was to learn about what mediums of advertisements are effectively drawing in new guests and non-members.

How Guests Heard About Squam Lakes Natural Science Center



Every day I would go out on the trail, randomly select guests, and ask them four questions:- “How did you hear about the Science Center, How often do you visit, Are you a member, What is your zip code?” Of the 262 visitor surveys I collected, 213 were non-members and 112 were visiting for the first time. Visitors traveled from as far away as Switzerland and the United Kingdom.

After analyzing the data, a trend that stood out to me was that how people heard about the Science Center varied from how far away they lived. The graph here illustrates how non-members heard about the Science Center. New Hampshire visitors often said they knew about the Science Center because they live locally or have been visiting for years. Visitors from Pennsylvania, New York, and Connecticut mostly found out about the Science Center online and through our brochures. Visitors outside northeastern United States all heard about the Science Center through friends and family they were visiting in the area.

I would like to thank everyone who took the time out of their visit at Squam Lakes Natural Science Center to take part in this project. The marketing department gained valuable information through your participation.

NATURALIST'S CORNER

AN EARLY MORNING VISITOR

By Audrey Eisenhauer



It was five o'clock one morning when our dog alerted us to the presence of something wild in the garden. Assuming it was yet another deer passing through to do some unwelcome, but minor pruning, we ignored the dog and fell back asleep. This one time I wish I had jumped up to investigate. Later that morning, standing on the deck and looking down into the garden, I discovered that our early morning visitor was definitely not a deer.

For the past several years we have had wild, two-foot tall Jack-in-the-Pulpits, *Arisaema triphyllum*, growing in our garden. Popping up between the perennials we have planted over the years, these wild garden volunteers are among my favorite flowers. The plant gets its name from its inconspicuous flower structure. The "Jack" refers to the spongy cylindrical structure, known by botanists as the spadix, which in turn wrapped inside the "pulpit." The pulpit is formed by a hooded leaf-like structure rolled into a deep cup, officially called the spathe. With a little imagination, you can see the minister standing in his old-fashioned church pulpit. Neither

of these structures is actually the flower. The true flowers are miniscule and located at the base of the spadix tucked away inside the spathe. To see the actual flowers, you must carefully open the front of the spathe and peer inside; a hand lens will help you to spot the tiny flowers.

It turns out that Jack-in-the-Pulpit attracts more than gardeners. Our early morning visitor was a black bear arriving to dig up the corm, the underground bulb-like storage structure of the plant. Bears heavily utilize this plant despite the berries, foliage, and roots being poisonous to humans. Microscopic crystals of calcium oxalate and associated poisonous chemicals are the source of the toxicity. I was impressed by the precision with which the bear dug up the corms, leaving the surrounding plants undisturbed. It left only a small hole in the ground and a few Jack-in-the-Pulpit stems as evidence. The bear ate not only the corm, but the foliage of the plants as well. If humans were to sample any part of Jack-in-the-Pulpit without first thoroughly drying the plant, they would experience an intense burning sensation in the mouth, and the lips and tongue could swell to the point of impairing breathing. Bears are apparently not bothered by these toxins and rely on Jack-in-the-Pulpit as an important food source during the summer months.

While I will miss the unique flowers of the Jack-in-the-Pulpit throughout our gardens, I appreciate knowing they are supplying natural food sources for wildlife like bear. Plus, I know that in the future, Jack-in-the-Pulpit will appear again as garden volunteers. Next time, I will listen to the whining dog, hustle out of bed, and watch the bear extract these tasty morsels from my garden.



FROM THE HERON'S NEST

By Laura Mammarelli

Spring was a wonderful time to explore the ponds at the Science Center. The Blue Heron School children, with the help of animal care staff, collected frog eggs at the vernal pool. The eggs lived in a tank in the classroom for weeks where the children were able to watch the tadpoles hatch and grow. Everyone helped take the tadpoles



back to the vernal pool and release them during the last week of school.

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

Hawk Watch

Sunday, September 14, 10:00 a.m. to 2:00 p.m.

For adults and families with children ages 10 and up

Mid-September marks the usual peak of the fall hawk migration. Start with an orientation to hawk watching at the Science Center, including up close views of live hawks that may be seen in our area. Then travel to the Lakes Region's best hawk watch site as we hike Little Round Top in Bristol. Bring a lunch and appropriate clothes for the weather. Binoculars are available for use or bring your own.

Animal Training

Saturday, October 4, 10:00 to 11:30 a.m.

For adults and families with children ages 8 and up

How and why are the animals trained at the Science Center? Is it hard to teach an animal? What types of behaviors are taught? You can observe exhibit trail animals during a training session, learn about the process, and then try your luck at shaping behaviors of other participants. Finish by assisting in a training session with a program animal.

Wise About Beavers

Saturday, November 8, 10:00 to 11:30 a.m.

For families with children ages 5 and up

We'll all be "busy as beavers" discovering the special lives of these amazing creatures through activities, story, crafts, and, of course, visiting with a live beaver! What do beavers do to prepare for winter? How do they find food? How do they stay warm? Come join the fun as we explore how beavers design parts of their own habitat.

**Cost for all Natural Adventures:
\$7/member; \$9/non-member
(\$10 day of program)**

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

Homeschool Series

Earth Cycles

Thursdays, 10:00 to 11:30 a.m.

November 6, December 4, January 8, February 5, March 5, April 2

Two sessions available: Ages 4 to 6, Ages 7 to 10



This educational series is specifically for homeschooled students. Programs focus on the cycles you can observe in the natural world. Topics include rock cycle, water cycle, life cycles, and more!

Cost: \$9/member child per session; \$11/non-member child per session

Reserve all six programs for a \$1 discount per session.

*Fantastic, a great place to bring the entire family no matter the age.
- Heather McKenzie*

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.

Up Close to Animals

**Saturday and Sunday through
Columbus Day weekend**

Meet live animals up close and learn from an experienced naturalist. These engaging talks feature a variety of animals, including birds, mammals, and reptiles.

Above programs are included with trail admission

New Hampshire Young Birders Club Events

Hawk Season!

Saturday, September 20

9:00 a.m. to 2:00 p.m.

Vacation in the Tropics (of Massachusetts)

Saturday - Sunday, September 27 and 28

Birds in the Hand

Saturday, October 4

8:00 to 11:00 a.m.

Sharpies, Sparrows, Cider Donuts

Sunday, October 23

10:00 a.m. to 1:00 p.m.

Programs are free with New Hampshire Young Birders Club membership (\$25/year). See all programs or learn more at www.nhyoungbirders.org.



**Looking for the perfect gift?
A gift membership brings
your family or friends Nearer
to Nature all year long! Visit
nhnature.org/membership for
information.**

UPCOMING EVENTS



Festival of Flight Saturday, September 13

Join us for a day devoted to the wonders of flight and migrations.

Schedule of Events:

- 9:30-11:00 a.m. - Hawkwatch
- 10:00 a.m. - 1:00 p.m. - Crafts for Kids
- 11:00 a.m. - Osprey Program
- 12:00 p.m. - Up Close to Animals - PEREGRINE FALCON
- 1:00 p.m. - Osprey Program
- 2:00 p.m. - Up Close to Animals - BROADWIND HAWK and RED-TAILED HAWK

All Festival of Flight activities are part of regular trail admission. No reservations required.

Generously sponsored by:



Community Guaranty Savings Bank
People who know you. People you know.



Eyes on Owls

Saturday, November 22,

Two presentations: 11:00 a.m. and 1:30 p.m.

For all ages

Marcia and Mark Wilson of Eyes on Owls present a live owl program with close-up views of these secretive birds of prey found in New England and other parts of the world. The program begins with a slide show, followed by a hooting lesson, and finally the live owls are brought out one at a time. Participants will learn field marks, signs and naturalist's skills to use to find wild owls without disturbing them. Participants will also learn tips on how to attract and protect owls in New Hampshire.

Cost: \$10/member; \$12/non-member
(\$15 day of event)

Eyes on Owls is generously sponsored by:



with golf raffle provided by:



HALLOWEEN HOOT N HOWL

Saturday, October 18

6:00 to 8:30 p.m. | For all ages

Rain or shine

Enjoy an eerily entertaining 40-minute guided tour around the Science Center grounds. Trail walks feature live skits with a seasonal theme and depart every 10 minutes from 6:00 to 7:30 p.m. Come in costume and dress suitably for outdoor weather. After your journey, warm up with Halloween games and tasty treats!

Cost: \$8/members; \$11/non-members

\$1 off each reservation if paid by
Friday, October 10

Squam Lakes Artisans Gallery
Open Friday to Monday through October 13.

ATTENTION TEACHERS

Back to school! It's a busy time for you and your students but a great time for a field trip to the Science Center.



Beaver

After days of intensive testing, reward your students with the opportunity to connect to the natural world through a Squam Lakes Natural Science Center program.

Our outdoor programs offer hands-on explorations of fields, forests, and ponds at the Science Center or the natural areas in your schoolyard. Our indoor programs provide a unique and up close encounter with live native New Hampshire wildlife. All our programs are aligned with the New Hampshire Science Frameworks. Learn more and explore our programs at www.nhnature.org/teachers or contact us at schools@nhnature.org or 603-968-7194 x18 to make your reservations.

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

September 1 to October 13

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. View locations where the movie *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

September 2 to October 9

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.

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)

Not recommended for children under age 3

Ask about our combo passes.

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. Our Operations Manager will personally arrange your charter for any occasion.

Contact Operations Manager, Sharon Warga at
603-968-7194 x 10 or info@nhnature.org

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.

www.nhnature.org/programs/lake_cruises.php

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

SCIENCE CENTER NATURE TOURS

Land of Enchantment: Natural Wonders of New Mexico

November 3–13, 2014

November is a special time to visit New Mexico. Join Iain MacLeod for an outstanding small group tour when temperatures are comfortable, the light is fantastic, and tens of thousands of cranes and snow geese arrive for winter.



In addition to wildlife and stunning scenery, the trip includes visits to the Bandelier National Monument, the Valley of Fires Lava Beds, Carlsbad Caverns, Santa Fe National Forest, and beautiful old town Santa Fe. Highlights include the Bosque Del Apache National Wildlife Refuge, and Bitter Lakes in the Pecos Valley. See Pronghorn Antelope, Prairie dogs, Roadrunners, vast flocks of waterfowl, raptors galore, and incredible sunrise and sunset flights of Sandhill Cranes.

Cost: \$3,300 (assumes double or twin occupancy room*)

All-inclusive cost includes: round-trip airfare from Boston to Albuquerque, ground transportation (15-passenger van), 10 nights hotel accommodations, all meals, admission fees, and leaders' fees. *There is an additional \$300 single room supplement.

Hebrides and Highlands

June 2015

Join Iain MacLeod on this 13-day trip to see the very best of Scottish scenery and hospitality. Fly from Boston to Glasgow and then go by van to Oban and ferry to the spectacular island of Mull. Stay five nights at Tioran House Hotel (voted best small House Hotel, 2013). The spectacular loch-side setting and beautiful gardens make this a memorable location. Day trips will include a boat excursion to the Treshnish Isles for lunch among the Puffins and a chance to explore Fingal's Cave on Staffa. Visit the beautiful village of Tobermory and take a day trip to Iona and tour of the ancient Abbey. Wildlife highlights include White-tailed and Golden Eagles, Otters, Seals, and Red Deer. On the second part of the trip travel to the beautiful Spey Valley nestled next to the Cairngorm Mountains. Stay at another of Iain's favorite hotels - Corrou House near Aviemore. Explore lochs and ancient forests and the shores of the Moray Firth, including a day trip to the Black Isle and Cromarty. Go east over to Aberdeenshire for the final couple of days. Visit Royal Deeside, including a tour of Balmoral Castle, and then to Edinburgh for a free day to explore this wonderful and historic city. View the full itinerary for the Hebrides and Highlands trip at www.nhnature.org/programs/nature_tours.php.



Cost: \$5,500 (assumes double or twin occupancy room*)

All-inclusive cost includes hotel accommodations and all meals, round-trip airfare from Boston to Aberdeen, van transportation in Scotland, ferry and boat trips and admission fees to nature reserves and other destinations listed on the itinerary. *There is an additional \$300 single room supplement.

Contact Iain at 603-968-7194 x 23 or iain.macleod@nhnature.org for full itineraries or to book your place on either trip.

2014 ANNUAL MEETING AND SUMMER CELEBRATION



Erin Riley and her "wild cats".

Squam Lakes Natural Science Center's Annual Meeting was held on Saturday, August 9, 2014. A quorum of members reviewed and unanimously accepted the minutes of the 2013 Annual Meeting. Treasurer Ken Evans presented the 2013 Financial Report.

Retiring trustees John Fernandes and David Merrill were honored for their dedicated service. Members re-elected trustees Harriet Harris, Bill Lee, Sandy McGinnes, and Lea A. Stewart to serve three-year terms. Two new trustee candidates were elected to serve three-year terms: Carl Lehner and Patricia Sava. Members re-elected officers to serve one-year terms: David Martin, Chair; Nancy Beck, Vice Chair; Kenneth Evans, Treasurer; and Lea A. Stewart, Secretary.

Executive Director Iain MacLeod reviewed the events of 2013. He also recognized staff members for their service: Senior Naturalist Dave Erler (35 years), Naturalist Eric D'Aleo (20 years), Finance Director Brian Eaton (10 years), and Administrative Assistant Mary Noyes (10 years). Former chair Laurie Beeson presented former trustee Tashia Morgridge with the Horizon Award.

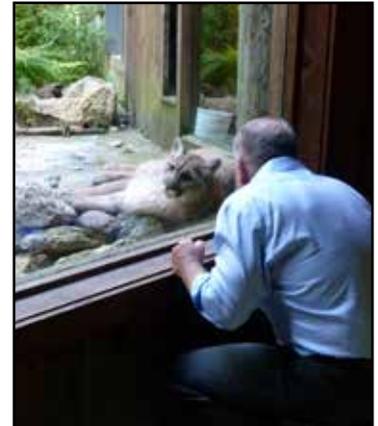


Dr. Alan Rabinowitz speaks at the Summer Celebration

Attendees received copies of the 2013 Annual Report.

Those not at the meeting may request a copy of the Annual Report or view it at http://www.nhnature.org/files/PDF/2013_AnnualReport.pdf

A Summer Celebration followed the Annual Meeting with a presentation by Dr. Alan Rabinowitz, CEO of Panthera, a nonprofit organization devoted to saving the world's wild cat species. Dr. Rabinowitz shared his amazing life story and showed spectacular photos of his work. Guests enjoyed appetizers and drinks during a live auction before the program.



Dr. Rabinowitz gets up close with one of the Science Center's resident Mountain Lions

We are grateful to these sponsors for their support: Trintje and Andrew Gnazzo, Fran Mandeville, McLane Law Firm, Noah Foundation, Lea A. Stewart, Christopher P. Williams Architects, and Zoo New England. Special thanks to Asquam Marina at Holderness Harbor, Chase Street Market, Cottage Place on Squam Lake, The Common Man Restaurant, Lakes Region Tent & Event, and Tuckerman Brewing for their in kind donation of services. Special thanks to George Butler and White Mountain Films. Volunteer Event Committee members Nancy Beck, Andy Eaton, Trintje Gnazzo, and Carol Thompson were led by Lea A. Stewart, Chair.



Retiring trustee John Fernandes



New trustee Carl Lehner



2014 Horizon Award recipient, Tashia Morgridge



Dave Erler is recognized for 35 years of employee service

OPENING A WINDOW TO THE NATURAL WORLD

Have You Planned Your Estate?

More than ever, nonprofit organizations like Squam Lakes Natural Science Center benefit from strong financial assistance from people like you to continue their work. You can make a lasting contribution to environmental education by remembering Squam Lakes Natural Science Center in your will.

A simple charitable bequest is anything you leave from your estate to a nonprofit organization through your will. Most people leave an estate when they die – property, money, personal belongings – even if they do not have a great deal of wealth.

To leave a charitable bequest in your will or trust, use direct language naming Squam Lakes Natural Science Center and the assets you wish to give. For cash gifts, this may be a specific dollar amount or a percentage of your assets. Also, a bequest may be added to an existing will through an amendment (codicil).

Here is one example for wording in a bequest:

I give to Squam Lakes Natural Science Center the sum of \$ __ or __ percentage of my estate for its unrestricted use.

Please consider making a contribution to Squam Lakes Natural Science Center from your estate through a bequest. Thank you.



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

These generous donors made tribute gifts, which were received between April 1 and June 30, 2014:

In memory of Ellen Bennett
John T. Bennett, Jr.

In honor of Lisa Davis
Altrusa Club of Meredith

In memory of Mary Smith Denison
Elizabeth Dewey

In memory of Marybelle 'Teedee' Klein
Gilbert W. Klein

In memory of Nancy Grady
George Carr

In honor of David Martin
Sally and Robert Schwabe

In memory of Susan Page
Susan and Tom Stepp

In memory of Richard Sanderson
Anne Fosse

Help Support the Science Center by using Goodsearch.com

This Yahoo!-powered search engine donates about a penny per search to a charity you designate. Simply go to Goodsearch.com and specify your charity as Squam Lakes Natural Science Center. Use it as you would any search engine and help support the Science Center.



YESTERDAY / TODAY / TOMORROW

Squam Lakes Natural Science Center matters because Nature Matters..

The community response to the Nature Matters Capital Campaign has been overwhelming and our \$4 million goal is nearly in sight. Help put us over the top with your contribution. Learn more about the project and make a secure online contribution at www.nhnature.org/naturematters.

For more information about the campaign, contact Executive Director Iain MacLeod at iain.macleod@nhnature.org or 603-968-7194 x 23.

- Bar Stool
- CD player for Blue Heron School
- 10 tablecloths for 8-foot tables or fabric to make them
- Dehumidifiers
- 4-drawer lockable file cabinet
- Little Tikes or Step 2 playground climbers or slides for animal enrichment
- iPods, Tablets, and laptops in good condition for education programs

TRAIL'S END

CHARTERS



As I write this column in mid-summer, I'm thinking about charters – boat charters that is. This summer is my sixth season driving tour boats for the Science Center and I wanted to share some of the experiences I've had and reflect on why I drive tour boats. In addition to the regular daily tours at 11, 1 and 3, the Science Center offers tours of Squam Lake to many groups and bus tours. We also provide charter service – charters are boats that are hired by the hour, generally by an individual or family. We pick up some charter groups at their own dock somewhere on Squam and many times these charters are in the evening – but not always.

One group that I picked up this summer was a group of four families that have rented a house on Squam for a week for many summers. There were around a dozen folks in this group and they were all dressed in 1970s garb – just having a fun night. My first thought when approaching the dock to pick them up was that we would just take a cruise around the lake while these people enjoyed themselves. But, I found that even though they have been coming here for years, they wanted to know about the water quality, the loons, and the eagles. We had a great time.

Some of the other charter groups have been celebrating 50th birthdays and one group this year was celebrating an 80th birthday. A few years ago I took a Squam family out who were celebrating the 50th wedding anniversary of the parents/grandparents. One group I remember was four couples who live on Lake Winnepesaukee who chartered a boat for a quiet Sunday evening sunset cruise – a peaceful time to be on the lake and see many loons.

I enjoy sharing the lake, the history, and the wildlife with others. It's very satisfying talking with others about the lake and their life experiences. No matter how many times you go out on the lake, it is different each time. No matter how many groups you take out on the lake, it is special each time.

Boat drivers have much in common with the other paid staff and volunteers who work and give their time to our land-based campus activities. We all enjoy interacting with others who have a common interest and providing an interesting experience to those who visit the Science Center. We have so many people who have found a niche – the men who work up the wood for the wood burning boiler, the folks who feed the animals, the people in the office who prepare mailings, the docents on the trail, and many others who help out in numerous ways. The Science Center provides an outlet for many people with many talents.

If you haven't joined one of our tours of the lake recently, please consider taking a ride. The boat captains enjoy learning from residents as well as providing education to those who are new to the lake. Please think about chartering a boat for your next special occasion – we will provide a memorable experience!

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.

A WALK WITH LYCOPodium

continued from page 1

Appreciating them in their natural habitat helps their survival and is an excellent excuse for photography opportunities of wild subjects that remain conveniently in place. Early photographers were able to light their subjects with a flash of light from club moss spores set aflame. Native Americans used the spores medicinally to stop nosebleeds and to control bleeding wounds. Other medicinal remedies quickly followed. All in all, club mosses are talented for their size.

Intriguing even in translation, *Lycopodium* is derived from the Greek *lukos* (wolf) and *podos* (paw). Observers thought roots of *Lycopodium* resembled wolf's claws. There is also a likeness between fuzzy branch tips of some species and wolves' feet. The forest walk up from the pond proved to be a valuable launching pad for me into the world of the wolf's paws.

My friend initiated this journey; now it's your turn to follow your curiosity.

CLUB MOSS QUIZ

1. Club mosses are most closely related to:
A. Ferns B. Mosses C. Pine Trees
2. True or False? Club mosses living millions of years ago contributed to the formation of coal used today as an energy source.
3. True or False? Club mosses can spread by the growth of runners above and below ground.
4. *Lycopodium* is derived from Greek words meaning _____.
5. Club mosses are named for the cone-like capsules rising on stalks above the greenery. What do the capsules hold?

Answers

1. A.; 2. True; 3. True; 4. Wolf paw; 5. Spores

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Love! Love! Love it here! It's my kids' home away from home. They love every second, even though they go there often. You can go through in 30 minutes or you could spend a few hours. The docents are very knowledgeable. Well worth the money.

- Emily Cooley

THE HOWLING COYOTE GIFT SHOP

Product Spotlight: Squam Lake merchandise including hand-painted tiles, carved wooden loons, embroidered tea towels, *Fascinating Loons* book, map tote bag, map coasters, embroidered tote bag, and more.

Retail: varies

Member Price: 10% discount on non-sale items

The Howling Coyote Gift Shop is open daily May 1 through November 1. Members always receive a 10% discount on non-sale items.



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