Tracks and Trails

Have you ever felt overlooked because of superficial attributes such as height, speed, sense of humor, or flashy looks? You are not alone! Let me introduce you to two characters of the forest understory that have fascinating stories to tell but many of us fail to notice them alongside their majestic woodland companions.

Our first character is witch hazel – *Hamamelis virginiana* – a shrub of about 10 to 25 feet in height, usually found in moist to dry hardwood forests. Getting a handle on this shrub’s name is a beginning, if challenging, step. The label “witch” evolved from the original old English word “wych,” meaning pliable or bendable, describing the flexibility of its branches. Surprisingly the original witch hazel, used for dowsing or searching for underground water in Britain, was actually an elm! However, our shrub was the perfect plant to take over the water divining job when early settlers arrived in North America, and the name “witch hazel” was transferred. When you come across a witch hazel shrub, you will notice its broad wavy-edged leaves. If you look even closer, you will probably find cone-shaped galls on the leaves, harboring the immature witch hazel aphid. While you are there, take a peak at the buds – poised on the end of short stalks, the miniature folded leaves look like tiny deer’s feet. Called a hazel, this shrub is not in the hazelnut family but more closely related to sweet gum trees. Witch hazel is also valued as a medicinal plant, originally used by various Indian tribes but still found on store shelves today. One of its attributes is as an astringent, treating inflammations from insect bites and hemorrhoids and swelling from varicose veins.

What important events happen for witch hazel in the fall? The witch hazel’s scientific name, *Hamamelis* comes from two Greek words, meaning “fruit” and “together.” In a most unusual habit, witch hazel produces its flowers at the same time as the fruit matures in the autumn. What a treat it is to find the yellow spider-like flowers clustered along the branches close to the stem – look for them as the leaves start to change color and even after

*(top) Hobblebush (bottom) Witch Hazel*

Continued on page 6

Foraging Trails

WHAT’S UP WITH SQUAM’S LOONS?

The plight of one of Squam’s most iconic symbols, the Common Loon, has been a topic of concern and debate for several years now, and this year the plot thickens and the debate rages on. If only we could ask the Loons what the heck is going on!

The daily trials and tribulations of each pair are witnessed by the thousands of people who go on our lake cruises and learn their stories through the interpretation of our tour captains and naturalists. For the past two years we have added special Loon Cruises, led by Tiffany Grade, the Squam Loon Biologist from the Loon Preservation Committee (LPC).

In July, LPC released a Progress Report on the Squam Lake Loon Initiative. The report highlights the decline of Loons on Squam, which started in 2005. That year LPC recorded a dramatic single-year decline of seven pairs of Loons (from 16 pairs in 2004 to nine pairs in 2005). This decline represented 44 percent of Squam’s Loon population, a drop unprecedented on Squam or any other large lake in LPC’s 34-year history of monitoring Loons in New Hampshire. It also brought Squam’s Loon population to its lowest level since LPC began to survey Squam Lake in 1975.

Continued on page 2
In 2007, LPC recorded three new pairs of Loons on the lake after two years of record low Loon populations. However, this welcome news was tempered by the near-complete reproductive failure of the Loon population. Only three chicks were hatched, and only one survived to late August and was presumed to have fledged. In 2008 and 2009, Squam regained two pairs of Loons, but reproductive success has remained far below its pre-2005 level.

A later section in the report discusses the worryingly high levels of contaminants found in Squam Lake Loon eggs. LPC staff collected 38 inviable eggs from failed Loon nests on Squam Lake from 2001 to 2010. In conjunction with the Biodiversity Research Institute (BRI), LPC has tested a large number of these eggs for mercury concentrations. LPC has also tested 12 of these eggs to date, as well as four eggs from control lakes, for a wide range of heavy metals and other contaminants. Eggs collected from Squam between 2005 and 2007 revealed high levels of a number of contaminants, including PBDE (flame retardants), PFOS (stain guards), PCB (industrial insulating/cooling agents), and chlordane (a pesticide). Statistical analyses of contaminants showed that levels of contaminants in eggs collected during the decline and subsequent reproductive failure of Loons (2005-2007) were significantly higher than levels in Squam Lake Loon eggs collected before or after this period, and significantly higher than levels found in eggs collected from other lakes in New Hampshire, and eggs collected from Maine and New York lakes by BRI. This cocktail of chemicals is just one of the hazards that Loons on Squam and all New Hampshire lakes face. Lead poisoning (from fishing tackle), fluctuating water levels, egg predation (by raccoons, mink, and gulls), boat collisions, and even gunshots have all reduced breeding success.

In 2010, Squam’s Loons had another difficult year. LPC provisionally reports that 11 pairs nested; seven pairs hatched nine chicks, but as of the date of this writing (August 5) only four chicks survived — two on Little Squam and only two on all of Big Squam.

Another factor that causes trauma in Loon productivity and much angst to biologists and casual observers alike is the aggressive actions of interloping Loons (likely males) who attempt to take over breeding territories and will attack and even kill the resident male and then systematically drown the offspring of the defeated male. This was documented twice on Squam this year and resulted in the deaths of at least three chicks and one adult male.

As a biologist who has studied breeding dynamics of birds (particularly Ospreys) for decades, I have been puzzled by the seemingly high instances of violent and fatal Loon-on-Loon attacks. Territorial disputes between birds are a constant factor in a healthy population. There should always be extra birds waiting in the wings to replace lost mates and claim viable territories. Reproduction is the driving force that motivates the actions and instincts of most creatures, and Loons are no different.

In the now healthy and growing population of Ospreys that I monitor in the Lakes Region, intrusions at established nests by newly adult Ospreys looking to establish a territory are a daily occurrence, but in almost all cases, the intruder is driven off by the resident male. Sometimes feathers fly, but usually an aerial dogfight and much whistling is all that’s needed to restore the peace. Why are Loon
VOLUNTEER PROFILE

DOT CHEKAS

Tell us about your background, hobbies, and interests.

Living on a small family farm in Connecticut, I grew up loving animals. I was encouraged by a nature-loving third grade teacher and spent hours in the woods and fields picking berries and flowers and watching insects. I read every book on nature and animals available to me in elementary school. Because of this interest, my college degrees were in Biology and Chemistry, plus an M.S. in General Science.

When was your first visit to the Science Center? What inspired you to become more involved?

In the mid 1970s I took my sons to the Science Center for the first time. At that time the Bird Exhibit was what is now the “tool shed,” behind Kirkwood Gardens. The first mini-talk I heard was in the barn and it was about owls. The naturalist had either a Great Horned or Snowy Owl on his hand. It was the first of several trips to the Science Center with my sons. To this day, I really enjoy working with the owls and other raptors.

When I retired from teaching Chemistry and General Science in 1997, we moved to Meredith full time. I noticed an article in the Penny Saver advertising about a course for “Docents.” Not even knowing how to pronounce the word or what it entailed, I signed up with then Volunteer Coordinator Elaine Melquist. I became a docent in 1999, continuing to nurture my love of the outdoors and animals. Because of my enthusiasm my husband, Sock, soon decided to volunteer too. Sock had been a teacher for 39 years and he enjoyed greeting visitors, giving directions, and talking with other volunteers and staff. Although tentative around animals, Sock eventually became a docent in 2001 shortly before his death.

In your opinion, what are some changes the Science Center needs to make in order to be successful in the future?

I am impressed with the improvements that have been made in the eleven years I have been connected with the Science Center. The “green technologies” that have been introduced, the expansion of the exhibits, and the addition of new exhibits have enhanced the experiences everyone can have.

Do you have any favorite moments or experiences while volunteering?

As a docent I enjoy all the facets of volunteering. Working with the Naturalists on outreach, I continue to learn more about each animal. I truly enjoy helping out with the students on the pontoon boats with the lake ecology classes, handling the various animals, and working with other volunteers, particularly the teenaged First Guides. I have made lasting friendships through volunteering. The staff and naturalists are knowledgeable and friendly. They go out of their way to make all volunteers feel appreciated. I am always happy to be here and am grateful for the privilege of volunteering at Squam Lakes Natural Science Center. It has allowed me to continue to live an active and vibrant life.

Dot Chekas has volunteered since 1999 and has given over 1,000 hours of her time.

NEWSBRIEFS

♦ With regret, we announce that Honorary Trustee Josiah H.V. Fisher, 89, passed away on July 29, 2010. Joe was a trustee from 1974 to 1980 when he became an Honorary Trustee. He served as Board President in 1976-77. He was a New Hampshire native and served as an artillery officer in World War II and the Korean War. Afterwards he spent 20 years in the CIA as an operations officer. He also served on the board of the Audubon Society of New Hampshire, was active in conservation causes in New Hampshire, and was an avid birder. Joe and his late wife of 58 years, Charlotte W. Parker “Parkie,” resided in Campton and wintered in North Carolina.

♦ We are pleased to welcome Laura Mammarelli as the Director/Lead Teacher of the Blue Heron Preschool. Laura received her BA in History from Middlebury College in Vermont. She was trained as a primary teacher at the New England Montessori Teacher Education Center in Boston, has taught in Montessori programs in Massachusetts and New Hampshire, and has consulted for Montessori preschools in the Plymouth area. She owned and operated the Montessori School of Plymouth for ten years and is a founding officer of the New Hampshire Montessori Association. Jordan McDaniel is Associate Teacher of the Blue Heron Preschool and Guided Discovery Instructor. Jordan attended the University of North Carolina at Wilmington where she obtained a BA in Education of Young Children. She has worked in various early childhood programs.

Josiah H.V. Fisher

Laura Mammarelli

Jordan McDaniel

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**Naturalist’s Corner**

**Is Any Little Fish a Minnow?**

*By Dave Erler*

As you peer into a small stream or the shallow water of a lake or pond, it's not unusual to see small fish swimming about. If they are small and silvery we often conclude they are some type of minnow. But are they? New Hampshire is home to over 50 species of freshwater fish. Of that total, there are 16 species of true minnows including the introduced Common Goldfish (*Carassius auratus*) and Common Carp (*Cyprinus carpio*). The minnow or Cyprinidae family (from ancient Greek “carp”) is the largest family of freshwater fish with over 2,000 species worldwide.

What makes a minnow a minnow? Well, size isn’t always a characteristic. Although many of the native species are small, the smallest being the Bridled Shiner (*Notropis bifrenatus*) at 1.5 to 2 inches in length, there are some that achieve impressive size. The largest native species is the Fallfish (*Semotilus corporalis*), which can reach 14 to 16 inches in length and weigh 2 to 3 pounds. The largest of all minnows in New Hampshire is the introduced Common Carp with the state record of just over 36 inches and weighing nearly 19 pounds (typically 3 to 4 pounds, with a world record of just over 80 pounds and some 4 feet in length).

The single most important distinguishing characteristic of minnows is the lack of teeth in the mouth and the presence of rows of teeth deep in the throat called pharyngeal teeth. This adaptation for foraging allows minnows to feed on a wide variety of microscopic and small food particles, both alive and dead. Depending on the size of the minnow, they consume everything from algae to snails.

If a small fish is not a minnow, what else could it be? Depending on the time of year, many species of young fish or fry take shelter in shallower depths of water, particularly in areas with submerged aquatic vegetation. The fry or fingerlings of other fish species initially compete with smaller minnows for food but quickly grow and most often change from competitor of minnows to predator of minnows. In fact, native minnows are the most important food source for both warm water and cold water species of game fish.

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**Squam Watershed National Register Nomination**

We all know that the Squam area is very different from other New Hampshire lakes. Have you ever tried to figure out how or why this came to be? Rachel Carley gives a wonderful historical description in her book *Squam*, and further information is provided in Derek Brereton’s new book *Campstading*. Our watershed is rich with historic places: barns, farmhouses, ice houses, summer cottages, and boat houses. The simple and rustic values that settlers and visitors brought to the watershed over a century ago are still prevalent today. We need a way to appreciate and celebrate the rich heritage that has been preserved through many generations.

An exciting new project has been launched to do just that! A committee of historians, preservationists, and conservation-minded people is working to nominate the entire Squam watershed to the National Register of Historic Places. This will not be a local historic district with design review restrictions but a National Register Multiple Property (also called a Thematic) nomination. Contrary to popular belief, National Register listings are strictly honorific and impose no restrictions on what an owner can do to his property.

The nomination will, however, recognize and document the unique cultural and historic values first brought by Squam’s earliest settlers and carried on by the seasonal and permanent residents who followed them. It will encourage the preservation of historic structures and landscapes by highlighting their value, and it may also encourage future development that is consistent with these values. The nomination will provide a unifying identity for the five towns within the watershed – Holderness, Ashland, Sandwich, Moultonborough, and Center Harbor. It will give us a voice on any government funded project that might negatively impact one of these historic structures. Moreover, it will foster a sense of pride and responsibility for this unique place we all share.

We are off to a great start on Phase I of the project, which consists of a nomination supported by a limited number of exemplary structures. Elizabeth Durfee Hengen, a preservation consultant, has been hired to help with the nomination, and we are working to raise money to cover her efforts. Participation by owners is entirely voluntary and will be open to all eligible properties in Phase II, which begins in 2012. For further information, please contact Iain MacLeod at 603-968-7194 or Betsy Whitmore, project chair, at 603-968-7548.

*Courtesy of Squam Watershed NRHP Nomination Committee*
Any gardeners looking for shrubs to add year-round interest to their gardens should consider hydrangeas. Hydrangeas are a group of shrubs that flower from early spring to early fall, are easy to grow, are wind resistant, and can be used to make unique flower displays.

Rich, moist soil is necessary for this plant to produce beautiful, lush blooms. If your soil tends to be dry, be sure to water regularly. Hydrangeas are well-suited to most areas of the garden, as they tolerate both full sun and partial shade. They fit well in shrub borders or can be used as accent plants. Groups of hydrangeas can even be used to create an informal hedge. The full form of big-leaf hydrangeas (Hydrangea macrophylla) makes them perfect for pairing with other shrubs or trees, while their flower clusters make them appropriate for pairing with other bloomers.

There are many different species of hydrangeas including the big-leaf, which features polished, light green, oval leaves and small clusters of single-colored flowers in shades of purple, red, blue, or white. The flower clusters are available in two different types – one with thick, solid flower clusters called hortensia and another with flatter, looser flower heads called lacecaps. Hortensia blooms look like pom-poms.

One beautiful variety is “Nikko Blue” which produces cobalt blue flowers and has light green foliage. Hortensia varieties bloom throughout the summer; their dry flower heads remain eye-catching into early winter as the heads stay in place. Lacecap varieties have flat, open flower heads. They feature pink, white, or blue flower heads which bloom throughout the summer. The variety “Bluebird” showcases light green foliage that turns dark red in fall.

Pruning, fertilizing, planting, and preparing are a must. In the spring, you should remove storm-damaged branches or dead wood and apply a balanced slow-release fertilizer to the soil at the base of hydrangeas. You can change the color of some blue and pink hydrangeas by adjusting the soil acidity – more acidic soil produces blue blossoms and more alkaline soil promotes pink blooms. In the summer, prune back old or damaged growth and old flowering stems, avoiding new shoots. Also, keep a look-out for powdery mildew which may appear as a white powder on the leaves. This may cause them to turn yellow and ultimately wilt. Good garden hygiene (removing infected parts, pruning to allow for air circulation) should help.

Hydrangeas are flourishing shrubs with attractive flowers. They are offered at nearly every garden nursery, so why not try planting them in your garden? If you want to see what they look like before putting them in your garden, visit Kirkwood Gardens to see a number of species and varieties in full bloom.

Dana Kass is a second-year “First Guide” and a local student with an interest in writing.

Gardener’s Notebook and Kirkwood Gardens are sponsored by the Belknap Landscape Company, Inc. www.belknaplandscape.com

If you like to prune, weed, water, fertilize, or work with plants, Kirkwood Gardens is the place for you! Volunteers work there every Thursday morning from 8:30 to 11:00 a.m.

Contact Volunteer Coordinator Carol Raymond at 603-968-7194 x22.

It’s time to replace your household cleaners, weed sprays, and pest repellents with something in your kitchen cupboards – vinegar! Due to vinegar’s high acidity it removes molds, bacteria, and unwanted germs from countertops and many other household surfaces. Vinegar also prevents ants and other pests from invading your home. Just spray around windows and doors and you should be ant free! Have problems with weeds intruding into your garden? Vinegar is a great alternative to herbicides for a delicious chemical-free, organic garden. There are many other uses of vinegar for pets, cleaning methods, healthcare, and even automotive.

To learn more about the many uses of vinegar, visit these helpful links:

http://www.thenewhomemaker.com/vinegar
http://www.vinegartips.com/scripts/pageViewSec.asp?id=7
WITCHES continued from page 1

leaves have fallen. Nearby, also on the stem, are the robust, brown seed capsules which hold a black seed in each of two compartments. Seed dispersal is dramatic, starting when the capsule explodes with a pop, ejecting the seeds up to 20 feet away! That is an impressive way of assuring that the new witch hazel plants will not grow up in the parent tree’s shade.

Our second character, witch hobble or hobblebush, *Viburnum lantanoides*, is a relative of nannyberry, wild raisin, and other viburnums, and grows not more than six to 12 feet in height. Look for it in moist woodlands. It’s not tall but has the ability to expand to the side! Where its branches droop to the ground, new anchoring roots form. With a firm foundation, the branches continue to grow upward from those points. These living hoops were said to trip or hobble witches as they ran through the woods, giving the shrub its name. It is best not to laugh because you may be the next one to inadvertently stumble!

Hobblebush has a surprise for all seasons! In the spring, its white flowers grace heads about five inches across. Along the outside fringe are large, dramatic flowers that are sterile but serve to attract insects. In the center are tiny, fertile flowers that will produce red fruits that ripen to purplish-black in late summer, providing food for various birds. To take advantage of any light filtering through the forest canopy, hobblebush has large leaves, like many of the understory plants. In autumn, these heart-shaped leaves turn a delicate burgundy and once they fall, the buds for next season’s leaves are strikingly apparent. Without scales to protect them, the buds show the furl of the tiny leaf waiting to open – almost like a clasped hand. To check out these buds, get there before the white-tailed deer which find the twigs and buds an attractive winter food.

On your forest forays, keep a lookout for these two characters – witch hazel and witch hobble – that brighten life in the forest right at your level. You may be delighted to find that they cheer up your world too!

LOONS continued from page 2

disputes so much more violent? Have they become more frequent on Squam during this recent Loon decline? Might there be unknown factors that make these fatal fights more common? We may have had a new clue this summer.

On July 17 LPC biologists recovered an injured male Loon which had beached itself after a prolonged and violent battle with another Loon. Staff from LPC took the beached Loon to Plymouth Animal Hospital, where it was examined by Dr. David Cote. X-rays showed a large fishing jig (a lead weight and a broken hook) in the stomach and the Loon was immediately euthanized. Analysis of blood drawn from that same Loon a week prior showed hugely elevated lead levels; twenty times the expected background level. The attacking male Loon, looking to claim a prime territory (and a female) likely sensed a weakness in the sickened male and took the opportunity to attack him and win the territory. Could it be that elevated levels of toxins (not just lead, but PBDE, PFOS, and PCB) in Squam’s Loons have left them weakened and vulnerable to territory loss and might explain the recent increase in fatal Loon fights? In the second documented case this year, analysis of blood taken prior to the attack revealed that the “defeated” Loon also had indications of a weakened immune system and was likely not healthy.

The killing of the defeated male’s offspring by the victorious male seems horrible to us, but is not uncommon in the natural world. The new males in both territories have settled in with their new mates and we can only hope that these new pairs will be productive next year.

We may never know what event or series of events precipitated the apparent spike in toxin levels in Squam’s Loons. It seems possible that the worst is passing and that sickened or weakened Loons are being replaced by, we hope, healthier Loons from other lakes. We will continue to work closely with LPC and do our part to raise awareness about the plight of this very special bird.

Forging Trails is written by Executive Director Iain MacLeod. You may contact Iain at 603-968-7194 x 23 or iain.macleod@nhnature.org.
# Natural Adventures

## Raptor Migration
**Saturday, September 11**
7:00 a.m. – 5:00 p.m.
*Age 16+

Every fall, thousands of migrating raptors – hawks, eagles, ospreys, falcons, and harriers – fly from their nesting areas in northern North America to their wintering ranges in the southern U.S. and Central and South America. Meet at the Science Center and travel together (by van) to the Pack Monadnock Raptor Migration Observatory in Peterborough where Executive Director Iain MacLeod will use in-the-field techniques to demonstrate the finer points of identifying raptors up-close and at far. Iain will also explain the dynamics of migration. Mid-September is the peak time for viewing groups of hundreds of Broad-winged Hawks on their way south, so if the winds are right, we could be in for a show. This is also when Ospreys, Bald Eagles, American Kestrels, Sharp-shinned Hawks, Cooper’s Hawks, and Northern Harriers are on the move.

*Cost: $30/member; $40/non-member

## Fall Foliage Hike
**Monday, October 11**
10:00 a.m. – 12:00 p.m.
*Age 8+

With the fall foliage near its peak of color, join us for an easy hike on the Squam Lakes Conservation Society’s Unsworth Preserve. We will cover the basics as to why this annual autumn spectacle takes place and explore the folklore and natural history behind it.

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

## Woodland Landscape Ramble
**Saturday, November 6**
9:30 - 11:30 a.m.
*Age 14+

Why are some trees first to reclaim a field while others aren’t found until a forest has grown in its place? Why are some plants only associated with a certain area while others are found in a wide range of conditions? Join Naturalist Eric D’Aleo for a morning of exploration and interpretation as we investigate the natural communities at the Science Center. We’ll work on developing the skills to decipher what forces shape the location of plants within our local landscape and how this affects the wildlife in the area.

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

## Winter is Coming!
**Saturday, November 20**
10:00 a.m. - 12:00 p.m.
*Families, Age 6+

Join Education Program Director Amy Yeakel at this changing time of year to reflect on the seasons, what causes them, and the connection seasonal changes have to the natural world around us.

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

## Homeschool Programs

**ALL ABOUT SERIES**

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All Homeschool Programs are aligned with the New Hampshire Science Framework. One adult must attend with children for free. Each additional adult pays child fee.

*Cost $9/member child
$11/non-member child

**Reserve all six programs for a discounted rate:**

*Cost $8/member child
$10/non-member child per program

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Limited space available; reservations and advance payment required unless otherwise noted. Programs are subject to cancellation if minimum enrollment is not met.
GRANDPARENT’S DAY
Sunday, September 12
9:30 a.m. - 4:30 p.m.
Celebrate Grandparents Day with free admission to the Gephart Exhibit Trail for each grandparent accompanied by a paying grandchild. Bring the whole family “Nearer to Nature!”
Cost: free/member; $13/adults, $9/youth, age 2 and under free/non-member

WILD CAT DAY
Sunday, October 10
9:30 a.m. - 4:30 p.m.
Learn about New England’s native wild cats through special presentations and a demonstration. Senior Naturalist Dave Erler will give two illustrated indoor presentations on “Wild Cats of New England.” These thirty-minute programs will explore the biology and life cycles of the three large cats native to New England – Bobcat, Lynx, and Mountain Lion. There will be time for questions, and props on display will include mounts, skulls, and pelt. Animal Care Curator Katie Mokkosian will present a Mountain Lion Enrichment demonstration. She will put the Science Center’s two seven-year-old Mountain Lions through a sampling of learned maneuvers and exercises. These allow inspection of the lions’ overall health, including that of areas that may be hard to view otherwise, such as the abdomen, teeth, and paws.
Cost: free/member; $13/adults, $9/youth, age 2 and under free/non-member

AUTUMN FESTIVAL
Saturday, September 25
9:30 a.m. - 4:30 p.m.
Enjoy live animal presentations and crafts for children at this enjoyable, family festival. Kids of all ages will enjoy the program “By Wings and Fins and Padded Feet” by award-winning author, storyteller, musician, and educator Michael Caduto (www.p-e-a-c-e.net). Michael will sign his books following the program. Volunteer docents will be on hand with live animals and demonstrations. Lunch will be available for purchase courtesy of Longhaul Farm.
Sponsored by Community Guaranty Savings Bank of Plymouth.
No reservations required.
Cost: free/member; $13/adults, $9/youth, age 2 and under free/non-member

MISSION: WOLF – AMBASSADOR WOLF PROGRAM
Saturday, October 16
Presentations at 11:00 a.m. and 2:00 p.m.
The Science Center is delighted to host Mission: Wolf on their only 2010 visit to New Hampshire. The Mission:Wolf refuge in Colorado cares for up to 40 captive-born wolves and wolf-dog crosses and provides hands-on educational experiences through field trips for schools and programs such as these with three socialized ambassador wolves that travel nationally. These public education programs teach about wolves and inspire people to care about and respect nature and to connect with wildlife. Come and make a face to face connection through the stare of a live wolf. Ignite your respect for wild things and learn how you can be involved in the conservation and preservation of wild ecosystems. Generously sponsored by the Noah Foundation.
Limited seating; advance reservations and payment are required.
Cost: $10/member; $12/non-member

HALLOWEEN HOOT N HOWL
Saturday, October 23
Eerily entertaining 40-minute guided tours along our jack-o-lantern-lit trail featuring family-oriented live skits, storytelling, and fun with a Halloween theme. Call 603-968-7194 to reserve your spaces and receive a 10% discount coupon (20% total for members) at the Howling Coyote Gift Shop from October 15 through November 1.
Cost: $8/member; $11/non-member. $1 discount for reservations made by October 15.

Are you interested in exotic travel? Would you like to provide financial support for Squam Lakes Natural Science Center? Meet our new partner Nature Treks & Passages (NT&P), a New England travel business located in Bryantville, Massachusetts. Through this exciting collaboration, NT&P will donate a portion of their booking fee to Squam Lakes Natural Science Center from any trip booked by our members.

Nature Treks & Passages has led unique tours in the U.S., Mexico, and South and Central America for the past nine years. Trips include birding, cultural attractions, and natural history. Group size is limited to a maximum of 12 participants and two tour guides for an overall better group experience. Tours also include the added consideration of low-impact disruption to the local environment.

Upcoming trips through 2011 include Copper Canyon birding trip; Mata Ortiz: Northern Mexico birding and Mata Ortiz pottery; birding in Alamos: tropical deciduous forest and Rio Mayo; and Alaska: Denali to the Sea, Colombia, and more.
Please explore the NT&P Website at www.naturetreks.net to review destination descriptions, tour guide biographies, testimonials, and breathtaking photographs. For immediate service, call NT&P at 781-789-8127 or e-mail info@naturetreks.net. Be sure to include your Squam Lakes Natural Science Center membership number when you book your tour and thank you!
The 2010 Annual Meeting of the Members of the Corporation of the Squam Lakes Natural Science Center was held on August 14, 2010 at the Science Center in Holderness. The minutes of the August 8, 2009 Annual Meeting were accepted unanimously. Treasurer Bruce Whitmore presented the 2009 Financial Report and copies of the 2009 Annual Report and financial audit were available for review.

Retiring trustees Diane Garfield, Carol Thompson, and Ellyn Tighe were recognized by Board Chairman Peter Wood for their dedicated board service.

Trustees Nancy Beck, Holderness; Laurie Beeson, Holderness; Andrea Eaton, Ashland; Alan English, Holderness and Summit, NJ; and John Fernandes, Ashland were re-elected unanimously to serve three-year terms commencing with election.

Officers elected unanimously to serve one-year terms commencing with election, were: Chairman Laurie Beeson, Holderness; Vice Chairman Nancy Beck, Holderness; Treasurer Bruce Whitmore, Holderness; and Secretary John Fernandes, Ashland.

Peggy Conver of Holderness and Flourtown, PA; David Martin of Holderness and Malvern, PA; and Susan McKimens of Ashland were elected as trustees to serve three-year terms commencing with election.

Executive Director Iain MacLeod, Senior Naturalist Dave Erler, and Education Program Director Amy Yeakel presented a series of close up encounters with Science Center ambassador animals and guests took part in a follow up quiz. A catered dinner by the Common Man Restaurant and music and a sing-along with David Conver followed. Member Bob Ziesing charmed the crowd with a special solo of “Secondhand Man” and trustees performed a song about Squam with lyrics by David Conver. Proceeds will support the Science Center’s education programs.

Thank you to these Wild Encounters sponsors:

- Charles Darwin - Anonymous, Warren and Paul Miller, Stephen Woodsum and Anne Lovett; John Muir - Nancy and Lawrence Coolidge, Winky and David Merrill, The Murdough Foundation,
WISH LIST

6 or 8-foot plastic folding tables

Electrical outlet and wall plate insulators

Food processor for animal care

Little Tyke or Playskool plastic toys for animal care

Utility golf cart

Trailer for riding lawn mower

Digital camera

TREE AND SHRUB QUIZ

1. What is New Hampshire’s State Tree?

2. In what part of the tree or shrub are next year’s leaves and flowers concealed and shielded from winter temperatures?

3. What two deciduous trees retain dry, brown leaves throughout the winter?

4. What New England shrub’s seeds are dispersed through a mini explosion?

5. What triggers the leaves of deciduous trees to begin changing color in the fall?
   A. The first frost
   B. Decreasing length of daylight
   C. Clear days and cool nights

Answers:

1. White birch (also called paper birch)
2. Beech and oak
3. Buds
4. Witch hazel
5. B
TRUSTEE JOHN McRAE

I retired in 1988 and we moved full time to Moultonborough in 1996 but had visited New Hampshire since 1975 with our two kids, John and Laura. We always took our children to visit the Science Center and I became more involved later. When I heard there was a timber frame raising – the Bird Exhibit building – and because my house is a timber frame, I was interested. I wandered over to watch and was collared by Will Abbott (former Executive Director) … and the rest is history! I started helping to finish the interior with Dennis Capodestria, then Director of Exhibits.

After the Bird Exhibit was finished, I was asked if I would like to build a bench. So I built a bench for Kirkwood Gardens, and then nine or ten more benches. I joined the Board of Trustees in 1997. Because of my background at IBM – where I worked for 27 years in finance, planning, and some systems development – I was asked to chair the strategic planning committee. We put together a strategic plan that became the Horizon Project and next I was enlisted to execute it. We started on trails and exhibits, then the Welcome Center, and finished with the Webster Building. When the Welcome Center was dedicated, I was surprised and delighted that the meeting room was named the “Coach Room” in honor of my Leonberger dog, Coach, a certified therapy dog. I was also privileged to be recognized by the Board of Trustees in 2005 when I was presented with the Horizon Award for exemplary service. Since then I have helped with many other projects and chaired the Buildings and Grounds Committee of the Board.

The Horizon Project was very rewarding for me; it was close to a fulltime job but a great stimulus. I got to use my planning and financial capabilities and my woodworking skills as well as work with a terrific group of people. I think the Science Center is a unique organization, not only in what is done in trying to increase the understanding of the natural world, but unique because of the people who work and volunteer here. They are not your normal run of the mill people – they all have a love for what they are doing. I think that contributes to the overall satisfaction my wife Mary Ann and I get from volunteering. As part of the whole, we are part of something very special. Mary Ann enjoys volunteering as much as I do; she’s been doing it for 12 years. She is a retired physical education teacher, so she has a lot of experience with kids and teaching. Volunteering helps her keep in contact with her profession.

We have supported the Science Center in many ways, including gifts to the Annual Fund. We are excited to share this place with our grandchildren and want it to be here for future generations. So I set up a bequest in my will to help ensure that the Science Center will be here for many years to come. I know this legacy gift can make a lasting difference and it is a commitment I am proud to make. I hope you will consider making a legacy gift too.

Opening a Window to the Natural World is written by Development and Communications Director Janet Robertson. You may contact Janet at 603-968-7194 x 12 or janet.robertson@nhnature.org.
We are grateful for these memorial and honorary gifts received from April 1 through June 30, 2010:

In memory of John C. Gabriel
Deb Bucuk, Seaneen Caron, Garrett Clark, Doris and Richard Crater, Ruth Crater, Mary Beth Farrell, Laura Hardin, Pat Harris, Sue Keating, Cynthia Merwin, and Barbara Pasciucco
Kathryn and John Coyne
Nancy and Robert Daugherty
Judith and John Farmakis
Mary and John Friedman
Sharon and Robert Kiss
Pam and Chris McHugh
Leslie and James Wolf

In memory of Patricia Keiver
Joan and Herb Ahrens
Anderson & McQuaid Company
Atlanta Hardware Corporation
Nancy and Kevin Barrett
Shirley Berry
C.M. Goodrich & Son
Priscilla and Fred Carone
Champlain Hardwoods
Joan Champlin
Mr. and Mrs. Rodney Comeau

James Cornish, III
Family Shield Estate Planning
Nancy and Richard Farrell
Carol and Ben Forester
Kinsley Goodrich
Phyllis and Karl Gray
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Joan and Osmund Keiver
Keiver-Willard Lumber Corporation
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Mr. and Mrs. Rufus L. Titus
Tradewinds International
Sharon and Marc Tucker
Pamela White
Williams Lumber of North Carolina
James Woodberry and Laura Pratt

In memory of Elmer Morrison
Helen and Anthony S. Baudanza

In memory of Betty Schoonmaker
Mary and John Noyes

In memory of Greg Smith
Gail Smith and Frances Chalmers

If you have already named the Squam Lakes Natural Science Center through your will or other estate plans, please let us know. As a member of the Naturalist’s Legacy Society, you will be invited to donor recognition events and recognized in the Annual Report, unless you prefer to remain anonymous. Recognizing planned giving donors allows us to express our appreciation and may also inspire others to give support through their own estate plans.

RENEW YOUR MEMBERSHIP ONLINE AT
www.nhnature.org
A guru in the not-for-profit sector summarized the responsibilities of a board as fundraising, directing and evaluating the staff head, setting strategic direction, and replenishing itself.

Peter Wood mentioned in recent newsletters how blessed we have been with loyal donors and strong community support, and that the Center operates like a “well-oiled machine” under Iain’s excellent management. But, YIKES!, to quote Carol Thompson, do we have some matters to attend to in strategic direction and board replenishment.

This month marks the first in the Center’s 43-year history that term limits affect who rotates off the board. In the next two years 12 trustees with an aggregate of 185 years of experience will leave us. We’re confident that over time diversity and fresh ideas will prove the wisdom of the new policy, but in the short term we have many big shoes to fill and not much time to do it.

And our wise, diverse new board will have several strategic issues awaiting it. The perennial question, which takes on more importance each year as the shingles, joists, and mortar age, is what to do with the Holderness Inn. “It’s a fabulous historic building in a perfect location,” say some, “Use it!” “Use it how?” ask others, “it’s a maintenance money pit with no clear application to our mission.” An ad hoc board committee spent considerable time on this subject last winter and outlined some options. What do you think?

For my nickel, the most intriguing strategic question is the Blue Heron Preschool which we’re pilot testing this fall. Many on our staff and board consider this a near-perfect fit to our mission, advancing understanding of ecology by exploring New Hampshire’s natural world. Others fear it will divert resources from the trails and programs which have defined the Center to date. What do you think?

As always, we dearly appreciate your engagement and your feedback. And, as rookie gavel-banger for the board, I look forward to your help on issues like these. Onward!

Trail’s End is written by Laurie Beeson, Chairman of the SLNSC Board of Trustees.
You may contact Laurie at 603-968-2409 or lbeeson@worldpath.net.

Science Center members may enjoy a special opportunity to visit the McAuliffe-Shepard Discovery Center for free in September. Be sure to take your membership card with you. For information, visit www.starhop.com or call 603-271-7827. This offer is not valid for special events or planetarium shows.

Autumn Festival is Saturday, September 25. Storyteller and musician Michael Caduto’s program “By Wings and Fins and Padded Feet” will appeal to all ages, as will the delicious food for sale by Longhaul Farm, live animal presentations, and crafts for children. Thank you to Community Guaranty Savings Bank for generously sponsoring this event.

Make your reservation for Halloween Hoot N Howl! This year’s event will be on Saturday, October 23. Sign up by calling 603-968-7194 and receive a 10% discount coupon (20% total for members) at the Howling Coyote Gift Shop good from October 15 through November 1.

Please make a donation to our 2010 Annual Fund by December 31. The Annual Fund is used to support general operations, which help to care for and feed our live animals, maintain our buildings, trails, and exhibits, and to offer a wide variety of quality natural science programs for all ages and audiences. We could not do what we do without your support! In October we will contact you with a request for a donation. Please consider making a new gift or increasing your donation this year. Thank you.

Autumn Festival
Saturday, September 25  9:30 am - 4:30 pm

Enjoy live animal presentations and crafts for children at this enjoyable, family festival. Kids of all ages will enjoy the program “By Wings and Fins and Padded Feet” by award-winning author, storyteller, musician, and educator Michael Caduto (www.p-e-a-c-e.net). Michael will sign his books following the program. Volunteer docents will be on hand with live animals and demonstrations. Lunch will be available for purchase courtesy of Longhaul Farm.

Cost: $13/adults, $11/seniors, $9 youth (ages 3-15), 2 and under free. No charge for members. No reservations required.

Generously sponsored by:

Community Guaranty Savings Bank
The Howling Coyote Gift Shop

Open through November 1
9:30 a.m. – 5:00 p.m.

Thursday – Saturday
10:00 a.m. - 3:00 p.m.
December 2, 3, 4
December 9, 10, 11
December 16, 17, 18

Holiday Sale

Visit online at www.nhnature.org

The Wolves Are Coming!

Saturday, October 16

Mission: Wolf
Ambassador Wolf Program

Presentations at
11:00 a.m. and 2:00 p.m.
Make a face to face connection through the stare of a live wolf.

Generously sponsored by the Noah Foundation.

Limited seating; advance reservations and payment are required.
Cost: $10/member; $12/non-member

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