



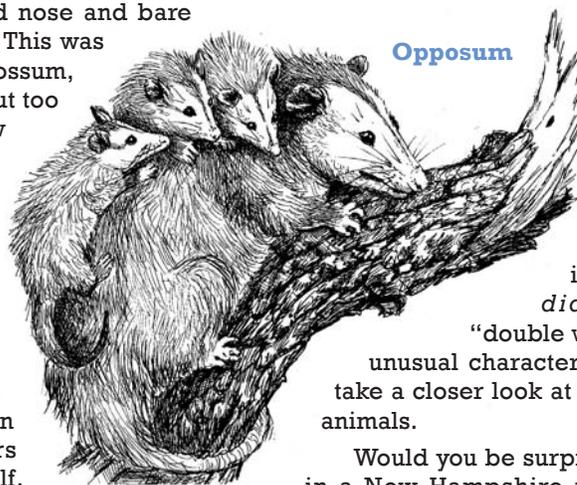
FURRY FOSSILS

By Margaret Gillespie, Illustration by Cheryl Johnson

At home in our 1810 farmhouse in Canterbury, my four-year-old niece made a surprising discovery. She was just the right height to see a small animal scurrying away under a dining room chair. In the piercing, far-reaching voice many children of that age possess, she screeched, "Papi, a rat." Upon close observation, the creature was the size of a large rat, had the characteristic pointed nose and bare tail but just did not fit the bill. This was not a rodent. It was a young opossum, large enough to be weaned, but too small to survive a chilly New Hampshire October without good shelter and some easy food. Since opossums have large litters, where there is one, more are bound to be close by. Apple storage in the root cellar proved to be an opossum magnet. As an alternative, hungry opossums strolled along the kitchen counters sniffing for left-overs or hung out on the bread shelf. This familiar arrangement was not sustainable for the human residents. In all, six young opossums were moved to safer living places.

Why are opossums sometimes called "furry fossils?" This is a mammal with a long history. Opossums roamed the Earth alongside dinosaurs over 70 million years ago. Despite a small brain – about one-sixth the size of a raccoon, opossums have weathered the test of time and thrived.

How do opossums fit into the New Hampshire landscape? Opossums originally moved north into the state around 1915 as climate and appropriate food sources permitted. Their range encompasses most of the eastern states, with limits to the north due to cold. Here in New Hampshire, the White Mountains are the northern boundary. The opossum



(*Didelphis virginiana*) was originally named in Virginia after an Algonquin word for "white animal." Its face has white fur but with a dark undercoat and white guard hairs, the overall impression

is silver. Its genus name *didelphis* is Greek for "double womb," adding to a list of unusual characteristics of opossums. Let's take a closer look at these amazing nocturnal animals.

Would you be surprised to see a koala bear in a New Hampshire maple tree? Of course. Surprisingly, opossums are close relatives. Both are marsupials or pouched mammals but the opossum is the only marsupial in the United States. Their abdominal pouch is well equipped for sheltering and nursing the tiny young. After a gestation period of just 13 days, baby opossums are born, each smaller than a honeybee. Well-developed front feet enable them to climb to the pouch where there are 13 nipples. At this stage each one's survival depends

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FORGING TRAILS

A NEW GIRL IN MY LIFE

Last November my wife Susan was forced to accept that there was "another woman" in my life. It was hard to cover up. The daily walks down to the pond, her perfume on my clothing, serving her lunch, checking her weight ... checking her weight? Before the "chauvinist pig" hate mail starts hitting my inbox, I should clarify that the girl in question has claws, a beak, an insatiable taste for raw fish, and an oily aroma that makes some people gag. This lady is an Osprey.

One of the goals of Project OspreyTrack that we launched last year was to create a new school program that highlights satellite migration tracking and raises awareness about Osprey ecology and conservation. It is a trademark of almost all of our programs that we include an up-close encounter with one or more of our ambassador animals. It would be hard to do a program about Ospreys without an actual Osprey, so Animal Care Manager Nancy Kitchen started a quest. As part of the deal, I committed to be primary care giver and find time in each day to train her so that she would be comfortable in programs.

Continued on page 2

FORGING TRAILS continued from page 1

Ospreys are notoriously difficult to keep in captivity. Their 100% fish diet (a major portion of which must be really fresh) can be a challenge. They don't easily adapt to exhibit or program use, so we were taking a chance. Nancy was also taking a chance on me. In all my years in the education and conservation business I have never worked with and trained a bird from scratch. Training is basically daily, patient contact, getting a bird used to a gloved hand – stepping on and perching in a relaxed manner on command; then off either onto a perch or a scale for daily weighing (an important part of health monitoring); and being comfortable in a carrier box for travel to programs. All of the birds and other animals in our program collection undergo extensive training at the hands of our amazing Education and Animal Care staff.

This particular Osprey came from a rehab center in North Carolina. She was picked up unable to fly and can't be released back into the wild. She needed a home, so as her wild brethren were arriving in their winter homes in the Amazon rain forest, she came north to a New Hampshire winter. Not being used to sub-freezing weather, she was treated to a heated indoor enclosure with other warmth-seeking residents – a Turkey Vulture and four Broad-winged hawks – for neighbors.

Over the last five months I have had the privilege of working with this Osprey, but even more importantly, I have come to really appreciate what it takes to manage our animal collection. Having daily, direct contact with Nancy, Lauren, Tom, and now Aaron, and the volunteers who help out in the animal room and seeing them prepare the diets and manage the well-being of such a diverse collection of creatures is enlightening and inspiring. Seeing Amy, Dave, Eric, Margaret, and Jeremy (our education staff) spend time each day with the bird assigned to their care and training is equally rewarding.

I look forward each morning to my chance to escape my desk and spend a little time in an Osprey's world. Seeing her eyeing the little fish in the marsh pond and "shrinking" all her body feathers as she spots an eagle flying overhead, or just watching the surgical precision of her beak as she tears a fish apart on my glove are experiences that enrich my day.

Thankfully, Susan has accepted that for now there is another woman in my life. Her eating habits may lack refinement and her nails may need a trim, but she's a pretty 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.

NEWSBRIEFS

- ◆ After almost three years as Animal Care Assistant, Tom Anderson left in March to take a new position at the Prospect Park Zoo in Brooklyn, NY. We wish him the best.
- ◆ New Animal Care Associate Aaron Snyder earned his Bachelor's degree from the University of Montana in Wildlife Biology. He relocated to New Hampshire from Montana with his wife and two children. Aaron has experience as a veterinary technician and as a field assistant with U.S. Fish and Wildlife Services and Montana Fish, Wildlife, and Parks. Most recently, Aaron was an intern at the Lowry Park Zoo in Tampa, Florida, assisting with Elephants and Rhinos.
- ◆ Marketing Intern, Tianhen "Hank" Geng, will be a senior at Bates College in Lewiston, Maine, majoring in Environmental Studies. He has studied abroad in both China and Denmark. His marketing experience ranges from Copy Editor of his high school music magazine to Public Relations Manager of Bates College's *TakeNote* and Publicity Manager for *Outfront*. Hank's responsibilities here include daily event-based marketing and projects including photography, testimonials, development of video, and online advertising and publicity promotions.
- ◆ We welcome three Program Interns. Peter Kleinhenz is from Ohio. He

SQUAM LAKES NATURAL SCIENCE CENTER

PO Box 173, Holderness, NH 03245
Phone 603-968-7194 Fax 603-968-2229
e-mail: info@nhnature.org
web site: www.nhnature.org

Squam Lakes Natural Science Center is a non-profit educational institution incorporated in 1966 as a charitable organization under statutes of the State of New Hampshire with its principal place of business in Holderness. 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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TRUSTEE PROFILE

MARGARET CONVER



I remember visiting the Science Center in 1966, its very first year, and being fascinated by the displays of the lake when it was used to transport logs and industrial waste. It was awful and I was so glad that the Science Center could celebrate how far we had come in returning Squam to the beautiful pristine paradise God had intended.

My love for the lakes and the Holderness community comes directly from my mother, Helen Mathieson, former trustee and niece of Ferris "Big Buck" Thomsen the original owner and head of Deerwood Camp for Boys. Mom spent several of her teenage summers there with Ferris's wife Hellie, as did I, helping my cousins Len and Heather with their three very redheaded infant boys. Those boys are now running the camp using the same principles and ethics passed to them from Big Buck, and his sons Tommy and Len, while adding ever more opportunities for the boys to explore their own personal ethics, fairness, and personal responsibility for leaving our environment and world a little better than they found it – all while having one heck of a great time on Squam Lake and surrounding mountain ranges.

I have spent much of my life wishing I had my mother's amazing talent for recognizing every little plant, flower, tree, bird, and animal in our natural world and most especially in the Squam Lake environs and New England region. She has devoted most of her life to helping people understand the importance of ecological balance and responsibility most especially in the area of watershed preservation, restoration,

and the related zoning and building restrictions. She educated my dad and the rest of us, and now has nine very involved and caring grandchildren who spend as much of their free time as possible climbing mountains, forging streams, and celebrating the natural world. They grew up at the Science Center through the camp programs and day trips and hikes. We all were thrilled to be at the opening of the Life Underground Exhibit that is dedicated to my father, Andrew Mathieson.

I followed more in my father's financial footsteps, becoming a CPA and later a financial software consultant, which I was then able to use to help administer school and university finances. I was the Comptroller of Drexel University in Philadelphia and Business Manager of Chestnut Hill Academy, managing the accounting, reporting, investment, personnel, and all sorts of other operational areas. My husband David and I have one daughter, CC, whom I am very happy to report has inherited her grandmother's acumen about all things nature based. We aren't able to spend as much time on Squam as we would like, but try to get there to cross paths with my brothers and their families at some point during July and August.

I urge you to support and stay involved with the very special treasure that is your Science Center. Rarely will you be able to spend the day in a more beautiful, peaceful, and educational spot. An annual membership lets you come and go at will. Stay tuned for some exciting programs in the coming months on ways you can learn and help preserve and better the world around us.

TOP LEFT: Peggy Conver and her mom, Helen Mathieson

RIGHT: CC Conver on the Maine Coast at Chewonki Semester School



NEWSBRIEFS *continued from page 2*

will be a senior at Miami University, Oxford, Ohio with a double major in Zoology and Media Production. He has researched and published papers on amphibians and reptiles. An avid caver, he studied abroad in Tasmania and Australia surveying and creating trails in caves to protect fragile cave formations. Peter has volunteered at the Columbus and Cincinnati Zoos. Kevin VanGorden may be familiar to staff, volunteers, and visitors as he is a volunteer docent. A native of Franklin, Kevin is a recent graduate of the University of Maine at Machias with a degree in Biology. He has worked in the genetics lab of Mount Desert Island Biological Laboratories researching the cause of soft-shell disease in lobsters. His senior thesis was an immunology experiment on maternal

antibodies in mice. Miranda Furrer will be a senior at Iowa State University. She is majoring in Animal Ecology and Agricultural Business. She was an intern at Wildlife Prairie State Park in Iowa, where she worked with small native animals and presented public programs on wildlife. At ISU she served as College of Agriculture and Life Sciences Ambassador giving tours to prospective students.

- ◆ In July, Science Center members may visit The Fells Historic Estate and Gardens in Newbury, New Hampshire once at no charge, and The Fells members may enjoy a free visit here. Be sure to take your membership card with you when you go. Consult their website (www.thefells.org) for information about hours and directions.

- ◆ Several volunteer groups helped before and after Clean Up Day, including employees from Northway Bank, Stonyfield Yogurt, J. Jill, and Hypertherm, as well as Holderness School students in conjunction with Belknap Landscape Company employees. On April 21, Clean Up Day, almost 90 volunteers and 13 staff members painted, washed windows, scrubbed, vacuumed, cleared debris, moved picnic tables, pruned branches, supplied baked goods, and more. Several groups helped, including: Plymouth State University Tau Omega Sorority, Plymouth Regional High School National Honor Society, and Friends. Thank you also to these area businesses for in-kind donations to

Continued on page 11

FROM THE HERON'S NEST

By Laura Mammarelli



Blue Heron School celebrated the arrival of spring in April with a maple syrup day. Tony Gillespie (Margaret's brother) and his family, including his three children, brought a sap boiler and other accessories to demonstrate how to collect sap and boil it to make syrup.



After collecting sticks for the fire under the boiler, drilling a tree, and learning how Native Americans discovered sweet maple sap, the children enjoyed an alfresco treat of homemade waffles and syrup.

Blue Heron School, a nature-based Montessori school for children ages three to six, operates from Monday through Friday, 8:30 a.m. to 1:00 p.m., September to June. Interested parents may contact Laura Mammarelli at 603-968-7194 x 40 or blueheron@nhnature.org.

ADULT LECTURE SERIES

LAKE SUNAPEE'S GLEON BUOY

Tuesday • June 5 • 7:00 p.m.

GLEON, the Global Lake Ecological Observatory Network, (www.gleon.org) is a grassroots group of limnologists, ecologists, information technology experts, and engineers with a common goal of building a network of lake observatories. June Fichter, Executive Director of the Lake Sunapee Protective Association (LSPA), will talk about LSPA's participation with GLEON. She will discuss Lake Sunapee's data retrieving buoy and the effects of extreme weather such as Hurricane Irene.

No charge, but reservations are required.

THE SCIENCE BEHIND HOW PLANTS AND SOIL WORK: A PROGRAM FOR GARDENERS

Thursday • June 21 • 6:30 p.m.

Bruce Roberts, retired Director of Horticulture for the Massachusetts Horticultural Society, will present what could be a very dry subject in an entertaining lecture that covers the basic knowledge of what is going on undetected by our own eyes that contribute to the success and enjoyment of gardens. How do plants grow? Why do plants branch when we pinch them? Why do the seeds planted on window sills often not do well? Why do plants turn toward the sun? What is loam, why is it good and why can't it be made by adding compost to sandy, gravelly material?

Cost: \$4/member; \$6/non-member

BARNs OF NEW HAMPSHIRE

Tuesday • July 10 • 6:30 to 7:30 p.m.

Professor Thomas C. Hubka, author of *Big House, Little House, Back House, Barn: The Connected Farm Building of New England*, will describe the barns and farmsteads of New Hampshire. He will identify various building traditions behind common barns, including English and new American construction. He will also discuss farming practices that have shaped the rural landscape of New Hampshire and New England. This program is a great introduction that will enrich the tour of local farm buildings on July 28, see page 7.

No charge to attend, but reservations are required

INVASIVES AT SQUAM LAKE

Sunday, July 15 • 12:00-4:00 p.m.

Learn about some of the most common invasive non-native plants in our local landscapes and a few less common at the moment. Chris Matrick, White Mountain National Forest botanist, will instruct through lecture, discussion, examination of dried specimens, and a walk, for you to become familiar with identification clues as well as the habits of these plants that are so disruptive of natural ecosystems. Discuss management techniques on both a home and a landscape scale and visit some demonstrations as we explore Squam Lakes Natural Science Center.

Co-sponsored by the New England Wild Flower Society
Cost: \$48/member; \$58/non-member



NATURAL ADVENTURES



SPRING BIRD ID SERIES

Fridays • June 1, 8, 15, 22
7:00–10:00 a.m.
Age 14+

Thanks to the Squam Lakes Conservation Society's land protection efforts, there are many protected acres of woods, meadows, and wetlands that provide outstanding and diverse habitats for birds. Join Iain MacLeod (6/1), Bob Ridgely (6/8), Tony Vazzano (6/15), or Rick Van de Poll (6/22) for this series of beginning birding programs to learn identification by sight and sound. Meet at the Science Center to travel by van to each site.

**Cost: \$12/SLNSC or SLCS member;
\$15/non-member per date**



Sunday • June 17 FATHER'S DAY

**FREE admission for dads
with another paid admission**

INVASIVE INSECTS

with **Laura Beard**

Forest Pest Outreach and Survey Coordinator

BE A BEETLE DETECTIVE!

Thursday • July 12 • 10:00 a.m.–12:00 p.m.
Ages 7–10

Become a forest sleuth and learn how to track down two alien invaders of New Hampshire's forests – the Asian Longhorned Beetle and the Emerald Ash Borer. Inspect trees for signs of activity of these voracious visitors. Learn how to protect New Hampshire's trees!

Cost: \$8/member; \$10/non-member

BREEDING BIRD CENSUS

Saturday • June 9 • 5:30 a.m. and 8:00 a.m.
All ages

Every spring, Senior Naturalist Dave Erler conducts a yearly breeding bird census on the Science Center's campus. You can participate, rain or shine, and get a snapshot of which breeding birds are on territory by listening to their unique songs. Come early at 5:30 a.m. to help inventory forested sections, including a hike up Mt. Fayal, or start at 8:00 a.m. to cover the fields and forest edges. Binoculars are available at no extra charge, or bring your own.

No charge, but reservations are required.

CANOEING WITH BINOCULARS

Saturday • June 16 • 7:00–9:00 a.m.
Adults, Ages 16+

The Squam Lakes Natural Science Center and the Squam Lakes Association are teaming up for a birding by boat expedition. Enjoy a serene paddle along Squam's shoreline where many birds make their home. Scan the trees and water with binoculars to explore the lives of birds that live near or on the water. How many can we find? Which species will we see? We'll explore other natural history opportunities as well. Canoes are available at no extra charge, or bring your own.

Cost: \$15/member; \$18/non-member

THE SUN AND YOU

Tuesday • July 3 • 10:00 a.m.–12:00 p.m.
Ages 10+

Sunlight is Earth's primary source of energy. But how important is the Sun for people as an energy source? Find out with Naturalist, and solar enthusiast, Eric D'Aleo, through experiments comparing how sunlight heats different materials. Construct an inexpensive, yet functional solar cooker, and use sunlight to heat up a snack. Adult must accompany children.

Cost: \$8/member; \$10/non-member

PEST IDENTIFICATION AND CONTROLS:

*Volunteer to Survey for Emerald Ash Borer
and Asian Longhorned Beetle*

Thursday • July 26 • 10:00 a.m.–12:00 p.m.
Adults

These invasive insect species are found are found within 100 miles of New Hampshire's border and both pose a significant threat to the health of our forest ecosystem. Learn how to recognize signs of these pests, identify and distinguish them from look-alikes, report findings to state agencies, and how to train others to conduct surveys. Volunteers are an integral part of early identification and intervention in infestations.

Cost: \$8/member; \$10/non-member

WALKING INTO THE SUNSET: AN EVENING HIKE

Thursday • July 5 • 7:30–9:30 p.m.
Wednesday • August 1 • 7:00–9:00 p.m.
Ages 8+

Dusk is a busy time for animals. Join Naturalist Jeremy Phillips for an evening hike up Rattlesnake Mountain to learn about adaptations of crepuscular and nocturnal animals. In the waning daylight, you will try to hear, see, or find evidence of evening animals. As the full moon lights the way, you will long remember this walk. Adult must accompany children.

Cost: \$8/member; \$10/non-member

HIDING IN PLAIN VIEW

Tuesday • July 17 • 10:00–11:30 a.m.
Tuesday • August 14 • 10:00–11:30 a.m.
Ages 6–10

Find out how camouflage works through games and activities, exploring field and forest. You will be amazed at what you can find if you know how to look. You'll also meet a live animal dependent on camouflage for survival.

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

INSECT INVESTIGATIONS

Wednesday • July 25 • 10:00–11:30 a.m.
Tuesday • August 7 • 10:00–11:30 a.m.
Ages 4–8

With over a million kinds of insects in the world, there are bound to be some exciting ones right under your nose. You will search for insects in some strange spots and learn about their wild lives.

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

MEDICINAL PLANTS WALK

Friday • July 27 • 10:00 a.m.–12:00 p.m.
Ages 10+

Plants have long been used for medicinal purposes. Join Senior Naturalist Dave Erler for an easy hike to learn about traditional and folk uses of common wild plants. Adult must accompany children.

Cost: \$8/member; \$10/non-member

FABULOUS FERNS

Thursday • August 9 • 10:00 a.m.–12:00 p.m.
Ages 10+

New England's climate and geography is well-suited to support a wide variety of ferns. Take this opportunity to find out how to identify New Hampshire's most common ferns and learn about these primitive yet highly successful plants. Adult must accompany children.

Cost: \$8/member; \$10/non-member

Limited space available; reservations and advance payment required unless otherwise noted. Programs are subject to cancellation if minimum enrollment is not met.

SPECIAL EVENTS

Kirkwood Gardens Day

— NEW DATE —

Saturday • June 2

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

Gain inspiration from Kirkwood Gardens and find beautiful plants for your own!

- Fine perennials from a prestigious New England nursery
- Silent Auction of desirable plants and garden items
- Plants from knowledgeable local gardeners
- Garden collectibles and treasures
- Expert opinions and advice
- Coffee, cocoa, tea, cold drinks, and baked goods for sale
- Exceptional craft vendors, including:
- South African handmade linens, herbs, pottery, lampshades

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Wild New Hampshire Canines

Sunday • June 3

Why do coyotes howl? How sly is a fox? Can you tell the difference between fox, coyote, and dog tracks? Find out about foxes and coyotes through crafts and a scavenger hunt or take a challenge to survive in a wild canine game.

Cost: \$15/adults, \$12/seniors, \$10/youth
No charge for members and children 2 and under

StoryWalk™

Sponsored by Meredith Village Savings Bank

June 28–August 7 • Daily 9:30 a.m. to 4:30 p.m.

This year's featured book is

The Summer Visitors by local author Karel Hayes.

Presented in collaboration with the Holderness Library and Holderness Recreation Department. StoryWalk™ opens with family activities and refreshments on June 28 from 10:00 a.m.–12:00 p.m. Karel Hayes will sign your book; a limited supply will be available for purchase. There is no charge to visit the StoryWalk™, which is located in the field behind the NH Fish and Game parking lot (park in town or at the Science Center as this lot is reserved for boat trailers).

Come Play the WILD Animal Way! Animal Enrichment Day

Sponsored by Northway Bank

Wednesday, July 18 • Trails open at 9:30 a.m.

This fun-filled day focuses on educating the public about animal enrichment. 'Enrichment' means providing stimulating activities for captive wildlife to keep them engaged in their surroundings and allows them to lead the best possible lives in captivity. Live animal presentations, crafts, and demonstrations take place all day.

Cost: \$15/adults, \$12/seniors, \$10/youth
No charge for members and children 2 and under



Live comedy show!

featuring

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TWO WILD AND CRAZY LOONS • AND MORE

Featuring Board Members and staff, plus local talent including Terri Dautcher • Diane Downing • Gary Hirshberg • Woodie Laverack

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With your host, Earl Hansen • Live music by Postage Due

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Variety of FABULOUS live and silent AUCTION ITEMS including:

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WITH YOUR AUCTIONEER PAT KELLY OF WLNH

www.nhnature.org/2012gala.html

Don't miss out! MAKE YOUR RESERVATIONS NOW—\$35 PP



SPECIAL EVENTS



Barn Tour

Co-sponsored by the New Hampshire Preservation Alliance
In affiliation with the Squam National Register Initiative

Saturday • July 28 • 9:00 a.m.–1:00 p.m.
Not recommended for children under 12.

Take a self-guided tour to explore four historic farm buildings—three barns in Holderness and a carriage house in Center Harbor. Learn about wildlife that depends on barns, such as swallows and bats. A history of each building and directions will be provided upon registration.

Reservations and advance payment required. Rain or Shine

Cost: \$25 per person
Proceeds benefit Kirkwood Gardens



Annual Meeting for Members

Saturday • August 11

Science Center (Tamworth Pavilion) in Holderness
Business meeting starts at 9:30 a.m.

- Elect Officers and Trustees
- Honor retiring board members
- Recognize employee service
- Present Horizon Award

Presentation of Association of Zoos and Aquariums Accreditation and an overview by AZA Executive Director Kris Vehrs

COMPLIMENTARY CONTINENTAL BREAKFAST

With Kris Vehrs and Board of Trustee members after the meeting. For the Officer and Trustee election slate and biographies of nominees for election to the Board of Trustees visit www.nhnature.org/2012annualmtg.html

All members are welcome and encouraged to attend.
Please call 603-968-7194 to reserve your seat or if you would like to receive paper copies of the agenda, new trustee bios, and other meeting materials.

FALL 2012 — SAVE THESE DATES!

Festival of Flight

Sponsored by Community Guaranty Savings Bank of Plymouth

Saturday, September 8

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

Learn about the wonders of flight and migration. Enjoy live animal presentations and activities throughout the day at this enjoyable, family festival. Volunteer docents will be on hand with live animals and demonstrations.

Cost: \$15/adults, \$12/seniors, \$10/youth
No charge for members and children 2 and under

Halloween Hoot N Howl

Saturday • October 27

Register now! — SUMMER 2012 — GUIDED DISCOVERIES

Week-long Adventures in Learning for Ages 3 to 14.

Week	Program	Age
June 25-29	Nature Explorers	FULL 4-5
	Wild Art	FULL 7-10
July 2-6	Night and Day	4-6
	Sky Hunters	7-9
	GeoCamp	9-12
July 9-13	Nature Sense	4-6
	Fabulous Flyers	6-8
	AquaCamp	10-14
July 16-20	Nature Explorers	4-5
	Reptiles and Amphibians	6-8
	Critter Theater	9-10
	Be A Survivor	11-14
July 23-27	Nature Sense	4-6
	Life Down Under	6-8
	How Does Your Garden Grow?	8-9
July 30-Aug 3	Fabulous Flyers	5-6
	Science Sleuths	6-8
	Nature Notes	8-11
August 6-10	Nature Sense	4-6
	Night and Day	7-9
	Wild Art	7-10
August 13-17	Nature Explorers	4-5

PRESCHOOL SERIES

DISCOVER YOUR WORLD

June 13 • July 11 • August 8 • September 5

9:30–10:30 a.m.

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 child at no additional cost.

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

SCIENCE CENTER LAKE CRUISES

EXPLORE SQUAM

Through June 30 • Daily at 1:00 p.m.
July 1–October 14
Daily at 11:00 a.m. • 1:00 p.m. • 3:00 p.m.

EAGLE CRUISE

Tuesdays • Through June 26 at 3:00 p.m.

LOON CRUISE

Fridays • June 15–August 24 at 3:00 p.m.

NATURE OF THE LAKES

July 3–August 30
Tuesday • Wednesday • Thursday at 4:00 p.m.
September 4–October 11
Tuesday • Wednesday • Thursday at 3:00 p.m.

DINNER AND SUNSET CRUISE

Thursdays at 5:00 p.m. • July 19–August 23

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OPOSSUM QUIZ



- Which of these animals is NOT a marsupial?
A. Opossum B. Black Bear
C. Kangaroo D. Koala Bear
- True or False? Opossums have a prehensile tail.
- Gestation period for opossums is ...
A. 30 days B. 13 days C. 46 days
- Opossums have little or no fur on their
A. tail B. ears C. toes D. all of the above
- Opossums are...
A. herbivores B. carnivores C. omnivores

ANSWERS:

1. B 2. True 3. B 4. D 5. C



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NATURALIST'S CORNER

LONG LIVE THE KING ...FISHER

By *Eric D'Aleo*

Everybody has favorite birds. It may be the robin because it is a sign of spring, the loon due to its haunting calls over the lake, or the hummingbird because of its tiny dazzling body and hovering flight.

Each species has its own fascinating qualities, but one I find particularly interesting is the Belted Kingfisher. There are many reasons to be intrigued by this bird. Even though the Kingfisher is approximately the size of a blue jay, its large head, shaggy crest, and heavy, dagger-like black bill seem oversized for its body, making me wonder how it holds its head level in flight. Its short tail and large wings also highlight its body's stocky appearance and make it seem like a composite of several different birds.

The Belted Kingfisher is also unusual because it has reverse sexual dimorphism, in which the female is more brightly colored than the male. Both sexes have slate blue colored heads and backs, with a white throat and belly, but the female also has a rufous colored band across her chest and flanks.

Belted Kingfishers are found throughout North America during the summer breeding season, but migrate for winter from the northern parts of their range to the southern United States and into Central America where they are found along the shores of streams, lakes, or at the coast. However, these birds can handle the northern winter temperatures as long as there is open water available for feeding.

Belted Kingfishers are active throughout the day and are solitary except during the breeding season. During the summer, they are often spotted along small streams, rivers, and the margins of ponds and lakes, perched prominently on trees, snags, or other "watch points" close to the water. Breeding pairs set up territories along the shoreline roughly one kilometer (0.6 miles) long. They actively defend their territory from neighboring Kingfishers by uttering loud, rattling calls and aerially chasing the intruder, if necessary.

Clear water and an unobstructed view are necessary for a Kingfisher's hunt to be successful. A bird usually perches near the water's edge or hovers briefly in flight while searching for prey in the water below. Once prey is spotted, the bird dives into the water headfirst to catch its food in its bill. Belted Kingfishers usually eat small fish, such as minnows and sunfish, but they may also feed on crayfish, amphibians, and aquatic insects. Once its prey is caught, the Kingfisher flies to perch on a rock or tree and stuns its prey by slamming it against a hard surface. Then the bird maneuvers its meal in its bill and swallows it head first, regurgitating any undigested remains hours later as a pellet.

Keep an eye out for this small fisher and listen for its dry, rattling calls as you spend time near the water this summer. You may be pleasantly surprised by what you find.

GARDENER'S NOTEBOOK



INVASIVE PLANTS

By *Volunteer Karin Karagozian*

Despite the fact that there has been much talk about invasive species, most of us don't know what they are. We are most familiar with milfoil in our lakes, but we have little understanding of our terrestrial invasive plants. Perhaps we have heard the sad news that burning bush (a favorite shrub of the home gardener and prized for its beautiful red fall color) is no longer sold in nurseries and is on the list of invasive species in New Hampshire. We look at our well-behaved shrub, growing nicely where we planted it, and wonder what the problem is. We expect an invasive species to have overrun our property. These were my thoughts exactly until about 12 years ago when I was walking in the woods across from my house, and there was a burning bush that I knew came from my 50-year-old specimen.

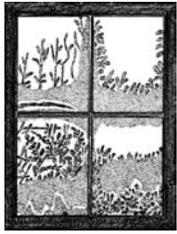
So, what is an invasive species? It is a non-native species that has traits which give it a leg up over native species and it grows rapidly, competing with and eventually edging out native species and producing great numbers of offspring, seeds, or both. In 2000, the State of New Hampshire passed the Invasive Species Act. We now have a list of species that may not be legally sold in our state. This list includes barberry, certain honeysuckles, Norway maple, burning bush, multiflora rose, and many others. So are we safe? Is that the end of our concerns?

No. Many of us have these plants in our gardens (as did Kirkwood Gardens just a few years ago) and they are producing huge numbers of tasty fruits that birds and small rodents run off with, eat, and leave behind the seeds in droppings. New plants then grow in the woods and soon out compete and suppress native species. We must learn to identify these species and remove them from our property. A good source of information is the "Guide to Invasive Upland Plant Species in New Hampshire". This document has good photos of invasive species and information on how to control them: extension.unh.edu/forestry/Docs/invasive.pdf. **Find out more at the July 15 lecture, Invasives at Squam Lake (see page 4).**

Gardener's Notebook and Kirkwood Gardens are sponsored by the Belknap Landscape Company, Inc.
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More than ever, nonprofit organizations, like Squam Lakes Natural Science Center, need strong financial assistance from people like you to carry on our 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, 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 sample bequest wording: 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.

You may contact Janet Robertson, Development and Communications Director at 603-968-7194 x 12 or janet.robertson@nhnature.org.

NATURALIST'S LEGACY SOCIETY

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.

OPOSSUM continued from page 1

upon latching onto a nipple where it stays for about two months. As three months draws close, the young opossums emerge from the pouch, some riding on the female's back and grasping her fur. Soon the young will be weaned and on their own. Opossums in New Hampshire can have two litters per year. Facing the freezing fall temperatures and approaching winter can be challenging for the second litter. Opossums accumulate fat in fall and inhabit shelters like old groundhog burrows in winter. When they come out to forage on warmer winter days, it is often in daylight. They are still hampered by lack of insulating fur on ears, toes and tail and may suffer frostbite.

Opossums have the closest thing to a monkey's tail in the United States. Both have prehensile tails that can grasp and wrap around tree limbs but monkey tails are much stronger. Neither can nap suspended by their tails. An opossum's tail is an excellent fifth appendage, assisting them in climbing. Opossums also carry nesting material into trees by curling their tail around leaves. Another climbing aid is the opposable thumb on their hind foot—good for gripping branches.

The most curious, fascinating but complex behavior of opossums may be their ability to “play possum” to avoid capture by predators. It is not a game. Happening rarely, mostly in daylight and when escape routes are limited, opossums appear to play dead. The opossum falls, is limp and curled on its side, drooling with its mouth agape showing numerous teeth. It adds to the unpleasant atmosphere by defecating and exuding green mucus – not a choice meal for most predators. The onset of this behavior appears automatic. However opossums can reverse the process when danger is gone and speed to safety.

Do opossums live near you? Unfortunately, we can sometimes tell by road kill because opossums scavenge carrion along roads, sometimes becoming victims themselves. If open woodlands crossed by streams are in your vicinity, opossums probably are too. They are omnivores, eating a variety of insects, fruits and small mammals as well as earthworms and frogs. Opossums in our midst may make the world seem like a smaller place. Many marsupials like kangaroos and koala bears live in Australia but we may have our own pouched mammal right in the neighborhood.

We are grateful for these memorial gifts received from January 1 through March 31, 2012

In memory of Mary Denison
Elizabeth Dewey

In memory of Fran Fernandes
Andrea and Peter Hacker

In memory of Brianna Lee Paul
Maureen and Scott Taylor

TRAIL'S END

NO-BOX RETAILING

Last year when Iain and I were discussing how sensitive our trail admissions are to weather (up on overcast days, down during heat waves) a random thought occurred to me: in many respects, our enterprise quacks like a retail business. Our boat tour sales, trail admissions, even walk-in traffic to programs seem responsive to many of the same factors that affect shops, restaurants, and big-box stores.

If you were looking for indicators that our staff is aggressively dedicated to the same sort of customer service that pure retailers pursue, you might see—in a typical summer week:

- facilities staff washing every glass panel at every exhibit, every day,
- Priscilla, Deb, Pam, Laura, Jennifer, Abby, and Kirsten making sure every trail customer knows about discounts on membership and combo tours, and about animal enrichment happenings,
- Operations Director Liz Rowe, in the middle of Route 113 with radio in hand, directing special event boat customers to prime parking spots,
- Iain driving six customers through the North Country on his Saturday night, in search of moose and bear (usually successful!),
- docents “surprising and delighting” visitors via bonus encounters with program animals.

A business school professor I knew used to say, “What’s the ‘so what’ of that?” in response to virtually any observation. In this case—to the extent the Science Center-as-retail construct has validity, the “so whats” might include how important it is for us to remember that:

- our customers have many options for their time and dollars,
- value is always going to be part of the purchase equation, especially value relative to other options,
- location is huge; in our case an important asset; and perhaps one we could market more effectively,
- novel offerings, merchandised in a novel manner, will keep customers coming back—particularly if they complement existing fare that no one does as well as we do.

The analogy could be stretched tortuously thin, but I like to think the Science Center has as much in common with FAO Schwartz or an Apple store as it does with, say, New York’s Museum of Natural History. Our staff takes customer service extremely seriously, both out of commitment to our loyal customers and out of dedication to our mission. We can do a better job educating people about ecology if they come back, and if they bring their kids and grandkids back.

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.

NEWSBRIEFS continued from page 5

provide lunch for the volunteers: Bob’s Shurfine Market, Ashland; Golden Pond Country Store, Holderness; Hannaford Supermarkets, Plymouth; Hart’s Turkey Farm Restaurant, Meredith; Lakes Region Coca-Cola Bottling Company; Shaw’s Supermarket, Gilford; Stonyfield Farm Yogurt; and Tootsie Roll. Many thanks to everyone!

- ◆ Dead River Company generously sponsored New Hampshire Day on May 5, with additional support from the New Hampshire Electric Co-op Foundation. Representatives from Dead River Company greeted and showed an energy efficiency display. More than 1,200 visitors turned out on a perfect day.
- ◆ River Otter Enrichment is every Monday, Wednesday, and Friday at 11:30 a.m. Turtle Talks are every Tuesday in July and August at 11:30 a.m. Daily Up Close to Animals presentations resume July 1 and continue through August 31 at the amphitheater. Up Close to Animals continues every Saturday and Sunday at 12:00 p.m. and 2:00 p.m., through October 7 (Columbus Day weekend).
- ◆ Learn about gardening – join a group of hands-on volunteers in Kirkwood Gardens Thursday mornings from 9:00 to 11:00 a.m. Contact Volunteer Coordinator Carol Raymond at carol.raymond@nhnature.org or 603-968-7194 x 22 to register.
- ◆ The Howling Coyote Gift Shop carries nature-inspired gifts, toys, apparel, and books for all ages. Members receive a 10% discount on most items.

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GoodSearch.com is a new Yahoo-powered search engine that donates half its advertising revenue, about a penny per search, to the charities its users designate. Use it just as you would any search engine, get quality search results from Yahoo, and watch the donations add up!

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