

SQUAM LAKES NATURAL SCIENCE CENTER

Summer 2007

P.O. Box 173, Holderness, NH 03245

Vol. 36, No. 2

SONG DOG'S NEW PERFORMANCE

By Margaret Gillespie, Illustration by Heather Lord

On a walk with my dog early one spring morning I reached the crest of the hill in the havfield of our 1810 Canterbury farm. I always relish the anticipation of scanning the green rolling terrain that descends to the forest edge. Will I see a deer bounding for cover, waving its white flag of a tail or perhaps wild turkeys foraging for insects in the grass? This particular morning was special - several yards ahead was a coyote, alert but outwardly calm, gazing at us. I whispered "sit" to my dog, which fortunately was not tall enough to see the excitement over the high grass. Looking up again, I just caught sight of the coyote as it melted over a rise in the landscape, not to be

seen again.

Coyotes are usually more easily heard than seen but both experiences are becoming increasingly common here in the northeast, bringing with them many questions. Where did this new canid come from? Coyotes have historically been part of the western landscape, finding their way into many legends of the Navajo and other native tribes who sometimes called them "song dog" for their varied and frequent vocalizations. The name "coyote" originally came from the Aztec Indian word, "coyotl," being changed to coyote by the Spaniards. This highly adaptable animal expanded its range toward the north and east, with the first official record of a coyote in New Hampshire being here in Holderness in 1944. The coyote that arrived in New England was distinctly larger than its western

counterpart and people's thoughts immediately turned to the possibility of interbreeding with domestic dogs, hence its nickname,

"coydog." Later, DNA testing actually confirmed that this new animal in the landscape was not part domestic dog but instead had some wolf blood, pointing to possible contact with wolves as coyotes moved through southern Canada.

Coyotes (Canis latrans) are in the same family, Canidae, as domestic dogs, wolves and foxes, with the coyote's scientific name meaning "barking dog." Obviously there are differences within the family as well as the new divergence emerging within coyotes themselves. The coyote here in the northeast is called the eastern coyote, the same species as the western coyote but a distinct variation.

So, what can we expect from this new resident which is now found throughout New England and beyond? Smaller than they look, eastern coyotes average 30 to 40 pounds and vary in color from cinnamon gray to a blondish red. Eastern coyotes generally live in family groups or "packs" which consist of the mated pair, their offspring of the year and sometimes adult young from a previous year. Coyotes have litters averaging from four to seven pups, with the pups learning to hunt in the company of adults at around nine weeks old. With about 70 percent mortality for the growing pups over their first year, and some pups dispersing in the fall, numbers in the family group vary considerably from about three to nine individuals. Depending upon the quality of the Continued on page 10

FORGING TRAILS

A NEW SEASON

Another trail season has started and the Center is humming with activity. With every season we try to add something new and fresh, while keeping the old favorites. Thanks to the Lovett-Woodsum Family Charitable Foundation, we have some exciting, new improvements at the Otter Exhibit, with greatly upgraded shift areas, new interpretation, and a better viewing area. The Mead Memorial Fund and the Squam Environmental Preservation Fund of the Lakes Region Charitable Foundation provided funding for new interactive exhibits about coyotes in the Mead Discovery Place (in the Trailhead Gallery). Last fall we completed reconstruction of the Upper Pond trail, which can now be seen and appreciated by all visitors, thanks to donations in memory of John Jacoby from his family.

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FORGING TRAILS continued from page !

With the crazy April weather it was touch and go whether we would be ready for our May 1 opening day, but thanks to our amazing staff and terrific volunteer efforts on our spring Clean Up Day, we made it — with a just a few snow patches and areas of mud lingering.

You'll also notice a new look to our brochures and flyers and a freshening up of our logo. This is all part of an extensive "re-branding" process we have undertaken over the winter to establish a new, vibrant, and immediately recognizable look. This will soon include some dramatic improvements to our website – including a virtual tour trail map, streamlined search and view features, a new audio pod cast series and – coming soon – "CritterCams." Check it all out at www.nhnature.org and let me know what you think.

We are adding some new program features this July and August including Tuesday "Turtle Talks" at 10:30 AM in the pavilion next to the Gordon Children's Center. We are also adding special "Moose-ology 101" talks every Wednesday and Thursday at 1:30 PM as a preamble to a new weekly Moose Tour on Friday evenings in July. This tour will depart from the Center by van and take a two and half-hour jaunt into the backwoods to view (or your money back!) wild moose.

So . . . come visit, bring your friends and neighbors, and make this a busy 2007 trail season.

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

- We are pleased to welcome a number of new employees to our staff. Deb Joyce of Moultonborough and Sandy Smith of Thornton join returning Admissions and Howling Coyote staff Kirsten Pickel, Gloria Lindia, and Tirzah Abbott. Please say hello as you also browse through our new assortment of quality merchandise in the Howling Coyote! Beverly Heyduk of Meredith, who, with her husband Dan, served as volunteers last year, is the new Finance Assistant working with Finance Director Brian Eaton. Also joining us as Lake Cruise Coordinators, are Dave Joyce of Moultonborough and Tom Klein of Center Sandwich. They, along with returning Lake Cruise Coordinators Joe Oustecky and Rick Fabian, spent time in May getting the boats ready. Science Center Lake Cruises began on Saturday, May 26 with one daily cruise at 1:00 PM. On Saturday June, 16, full operations start, with three tours daily at 11:00 AM, 1:00 and 3:00 PM.
- ◆ Three new interns joined the staff in June. Abby Everleth holds a BS in Wildlife Management from the University of New Hampshire, where she is currently the president of the Wildlife Society. Abby has also interned at the Center for Wildlife in Cape Neddick, Maine, where she cared for injured wildlife including birds and small mammals. Samantha Hoff has a strong interest in conservation education and earned a BS in Biology from the University of New Hampshire. Samantha has studied in Auckland, New Zealand under the Eco-

- Quest Program. In her spare time she enjoys dancing, musical theater, and helping with wildlife rehabilitation in her home town. GenaAnn Johnson has volunteered at the York Center for Wildlife in York, Maine, and has also interned at Boston's New England Aquarium where she was responsible for caring for the penguins. In the future, she hopes to work at a zoo doing public education and animal rehabilitation. GenaAnn attended Unity College in Maine where she earned BS Wildlife and a minor in zoology.
- ◆ The Trustee Affairs Committee is looking for volunteers interested in serving as non-trustee committee members. There are openings on the Buildings and Grounds, Development, and Personnel Committees. Contact Development and Communications Director Janet Robertson if you are interested.
- ◆ To promote our new Moose Tours to view wild moose (Fridays in July), we will offer two talks per week about moose, included at no additional charge with trail admission. "Moose-ology 101" will be presented every Wednesday and Thursday at 1:30 PM in July and August in the Webster Building. Join us to learn about this amazing large mammal of the northern woods and see super pictures and other fun props, such as antlers.
- Peak your child's interest in the natural world this summer by attending "Turtle Talks" on Tuesdays at 10:30 AM during July

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SQUAM LAKES NATURAL SCIENCE CENTER

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The 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 Holdemess. Our mission is to advance understanding of ecology by exploring New Hampshire's natural world.

Tracks & Trails is a regular publication of the Squam Lakes Natural Science Center sent to all members. Comments about the newsletter are welcomed by newsletter editor Janet Robertson at 603-968-7194 x 12 or janet. robertson@nhnaturc.org.

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TRUSTEE PROFILE

PAUL MILLER

By Tiffany Teaford



TT: What, originally, was your connection to the Squam Lakes Natural Science Center (and the Squam Lake area) and what changes have you seen take place?

PM: The Miller family's first contact with the Science Center was in the late 1960's, shortly after it came into being. In those years we stayed at Rockywold. Among the friends we made there were a number of nature and wildlife devotees who got us interested in hiking, birding, and started me on the hobby of wildflower photography. So it was natural for us to be interested in the Science Center. When we, jointly with my sister and brotherin-law, built a house on Squam Lake in 1973, we developed a more serious interest and began to support the Center.

We believe it is crucial to develop in young children an appreciation and respect for nature if

we are to save beautiful areas like Squam Lake and its watershed. For that matter, most adults also need to gain more respect for their natural surroundings. The Science Center has become an integral educational part of our lakes region community. And of course, the additions and improvements that we've seen at the Center have been truly dramatic, especially the most recent completion of the Horizon Project.

TT: Why, at an age when most people would have retired, do you continue to be so involved with the Science Center and so many other organizations?

PM: We have always believed in giving back to the community, and we think we've done pretty well on that score, having served on the boards of two major foundations, a university, Colonial Williamsburg, the World Wildlife Fund, and the Science Center, and having also been regular donors to many nonprofits, both personally and through our family foundation. We're not going to change now, although I must say that I notice in this, my eightieth year that I get out of bed a bit more slowly in the morning! But I'm still an early riser!

TT: What are the most significant developments and successes you have seen occur at the Science Center?

PM: No question but that the successful completion of the Horizon Project a few years

ago was an immense step forward, both in the quality and quantity we present to our public.

TT: What do you hope for the future of the Squam Lakes Natural Science Center?

PM: I hope we will continue to emphasize the quality of our educational programs for young people while not losing or diluting our focus on the local and northern forest environment. From a financial standpoint, I hope we can continue to build our endowment, not only for general financial security, but also so that we can attract and keep outstanding staff.



Paul Miller has served as a trustee since 1995; generously donating his time and experience to help govern the Science Center. Paul served as co-chairman (with Steve Woodsum) of the \$5 million Horizon Project campaign. He and his wife Warren were lead donors to the Horizon Project, which funded several new live animal exhibits, created enhanced facilities to attract and accommodate more school and public visitors, added to infrastructure with new management information systems, improved animal care, collections, maintenance and storage facilities and created a \$1 million Horizon Reserve to ensure our long-term financial stability. Paul will retire to 'Honorary Trustee' status at the July 2007 Annual Meeting.

NOTICE
TO MEMBERS
of the Corporation

2007
Annual Meeting

to elect
officers and trustees
will be held at the
Squam Lakes
Natural Science Center
Holderness, NH

July 28, 2007 4:30 PM

NATURALIST'S CORNER

OF STUMPS AND SNAGS

By Eric D'Aleo

Summer is a busy time of year to be a bird. With all the time spent defending a territory, attracting a mate, constructing a nest, and raising hungry chicks, it's amazing that the parents survive the ordeal. However, as I walk in the woods and work in our yard throughout the summer I'm ever watchful for the



undulating flight and the drumming sound of one of my favorite birds, the woodpeckers.

There are roughly 180 species of woodpeckers worldwide, although here in New Hampshire we have only nine. These energetic, busy birds are found in various types of forests and woodland areas throughout the state and some, like the downy woodpecker (Picoides pubescens) and the hairy woodpecker (Picoides villosus), will often venture into a backyard to feed on suet or sunflower seeds. During the summer I often spy these birds spiraling up a tree in search of various insects and spiders to eat. Using their zygodactyl feet, woodpeckers can use one of their toes somewhat like an opposable thumb making them well-suited to grasping bark to climb up trees. Stiff tail feathers help prop the bird

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NEWSBRIEFS continued from page 2

and August. These short programs, geared for children, will be offered at the Gordon Children's Center Pavilion on the Gephart Exhibit Trail and will feature live turtles. Children will learn all about turtles, listen to stories, and even make a simple craft. "Turtle Talks" are presented by Science Center Docents trained as Certified Interpretive Guides through the National Association for Interpretation. "Turtle Talks" are included with trail admission.

Visit the Howling Coyote Gift Shop to see bright new inventory from New Hampshire, New England and around the world. There are many new "green" items this year, such as 'green bags,' organic cotton T-shirts, recycled plastic water bottles, glass, crayons and papers. There are new T-shirt designs as

- well as jewelry, gift items, and toys for all ages. Our book selection is wonderful this year and will include books on the Ivorybilled Woodpecker.
- ◆ Eighty-nine volunteers, ranging from 8 to 88 years, celebrated Earth Day by volunteering on Clean Up Day, held April 21. Although there was still snow in places due to two April snowstorms, volunteers pitched in to work a total of 310 hours preparing the trails for opening day on May 1. Several community groups participated, including Girl Scout Troop 178 of Newbury, the Lakes Region Community Services Council, Mount Prospect Academy students, and from Plymouth State University the Outing Club, Volunteers Club, and Tau Omega Sorority. Thank you also to Dunkin Donuts, Ashland,
- Hart's Turkey Farm Restaurant, Meredith, Lakes Region Coca-Cola Bottling Company, Peppercorn Natural Food, Plymouth, Shaw's Supermarket, Gilford, Stonyfield Farm Yogurt, and Wal-Mart, Plymouth for inkind donations to supply lunch for the volunteers.
- New Hampshire Day was held on May 6 with 1,713 people enjoying a beautiful spring day. We are grateful to the New Hampshire Electric Co-op Foundation for generously sponsoring this special event.
- Spring cleaning? Kirkwood Gardens Day is on Saturday, June 9. Garden-related items, especially porch or yard furniture donations are needed for a garden 'treasures' sale. We would also love to have your extra garden

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Gardener's Notebook

PURPLE PLAGUE

By Volunteer Joan Mayerson

Purple loosestrife (Lythrum salicaria), a handsome perennial of moist or wet areas, is one of 14 nonnative invasive plants banned from sale in New Hampshire. Would you recognize it if you saw it? And you have seen it - in ditches, in wet, sunny areas along the shore of a pond, lake or stream. It's a lovely plant with tall spikes of purple bloom that come in mid summer. The stems are six sided, the leaves lance-shaped and opposite. Each year a few clumps are discovered blooming in the wet fields to either side of the exit drive here. And each year a staff member digs them out before they go to seed, hopefully without leaving any bits to grow again another year. In so doing at least we are preventing these fields from being taken over by this aggressive nonnative plant.

Purple loosestrife arrived from Europe over 100 years ago and since then has spread across both the U.S. and Canada. Originally it may have come as seed from a European garden someone's reminder of home. Problem is - on this continent it has no natural predators. It can take the cold and isn't too fussy about its environment. Thousands of small, very light seeds are produced each year and are carried by wind, water or birds to new locations. Plant bits break off, float elsewhere, grow new roots and begin a new plant colony. No wonder, over time, purple loosestrife has spread aggressively, invading waterways, choking out native plant species thus reducing plant diversity and natural habitats. If left alone, this beautiful weed (called the Purple Plague by some) soon chokes out the native vegetation and takes over. At this point it becomes almost impossible to eradicate.

So - this is why Science Center



staff and volunteers watch for it in our moist fields and try to get rid of the entire plant before it can set seed or spread to other areas. And this is why you will not see it growing in Kirkwood Gardens. To help control its spread - don't plant it in your own garden! Early detection and careful removal if you do find a bit growing on your property will make the task easier (get those roots before they spread). Removing and burning flower heads will also help. But adding plant matter or seed to a land fill will not!

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

Kirkwood Gardens

on the grounds of the historic Holderness Inn are available for your wedding or special event. Contact Operations Director Liz Rowe at 603-968-7194 x 15 or liz.rowe@nhnature.org for details.

A NATURAL ADVENTURES &

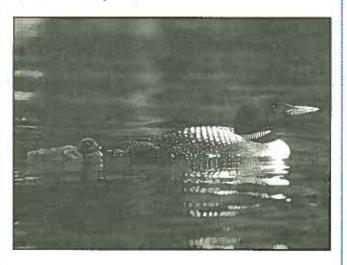
SCIENCE CENTER LAKE CRUISES



EXPLORE SQUAM

May 26 to June 15 ◆ 1:00 PM daily June 16 to October 14 ◆ 11 AM, 1 PM, 3 PM daily

Experience the wonders of the area where *On Golden Pond* was filmed. Hear a bit of Squam's human history through stories of those who have enjoyed this area for more than 5,000 years, from Native Americans to modern moviemakers. Learn about loons and other wildlife that make Squam so special, as well as the natural forces that created and still shape these beautiful lakes.



THE NATURE OF THE LAKES

July and August

Tuesdays, Wednesdays and Thursdays ◆ 5:00 PM

This tour focuses on the science of the lakes and the creatures that make Squam their home. From geologic to cultural changes, the story of Squam is still unfolding today. Explore the lakes with an experienced naturalist as we search for wildlife, including the common loon and bald eagle. We will observe loon behavior and communication first-hand. Learn about the interactions that occur among the lake, people, and wildlife as you take in the surrounding landscape. Come away with an enhanced appreciation and understanding of the lake and the wildlife that call it home.

Cost: \$18/adult member; \$20/adult non-member \$16/senior member; \$18/senior non-member (age 65+) \$14/youth member (age 3-15); \$16/youth non-member (age 3-15) Age 2 and under free.

All cruises are 90 minutes.

GLOBAL WARMING: CHANGING CO2URSE

NEW!

Sundays, June 10, July 15, August 12, and September 9 6:30 PM-8:00 PM

This adult discussion group led by the Vermont Earth Institute of Norwich, Vermont will help you to explore your personal values and habits as they relate to climate change, to understand the history and science of global warming, and empower you to take action to curb global warming. For more information, visit vei@valley.net.

Cost: \$18/person for the series (materials included)

GREEN P FAST

Here is one small thing that will make a big difference!

People often idle their cars—even in the summer. Perhaps they think it is convenient or they just don't want to turn off that AC but remember a good rule of thumb for



smart, earth friendly driving is: If you are going to be parked for more than 10 seconds, turn off the engine. Ten seconds of idling can use more fuel than turning off the engine and restarting it.



MOOSE TOURS Fridays in July: July 6, 13, 20, and 27 6:30 PM-9:00 PM

Have you seen a moose in the wild? Would you like to? For the first time ever, the Squam Lakes Natural Science Center is offering naturalist-led minibus tours to look for these leviathans of the north woods. The tours start and end in Holderness. Make an evening of it with a special pre-tour dinner at Walter's Basin Restaurant for \$19.95 extra. Seating is limited. Reservations and advance payment required.

Cost: \$18/member; \$20/non-member



A NATURAL ADVENTURES &

GARDEN TAI CHI

Tuesdays, June 5 through July 24 8:00 AM - 9:30 AM ◆ Adults

Tai Chi is a Chinese martial art of self defense, now done in a modified style mainly as a health practice. Its forms combine relaxed, fluid, slow movements with a calm and alert mental state. By practicing Tai Chi movements, one can build endurance and enhance flexibility, balance, and coordination. Join us in the Squam Lakes Natural Science Center's lovely Kirkwood Gardens on Route 3 in Holderness.

Cost for eight weeks: \$48/member; \$64/non-member

STREAMBOAT RACE Saturday, June 9

10:00 AM - 12 NOON ◆ Ages 5+

You bring the brains! We supply the materials! This is fun for the young and the young at heart as we design and build tiny boats to float down one of the Science Center's streams. See how your boat deals with obstacles and how it handles in rapids. How do creatures that live in streams full-time adapt? We'll explore the underwater stream world searching for hidden creatures and also meet a large stream dweller face-to-face. Minimum enrollment 5, maximum 16.

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

LOONS OF SQUAM Tuesday, June 12

7:00 PM ◆ Adults

Senior Biologist and Executive Director of the Loon Preservation Committee Harry Vogel will share with us the life history of loons, some of the challenges facing loons in New Hampshire, and the Loon Preservation Committee's efforts to keep loons common on Squam Lake and throughout the state.

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

WISE ABOUT COYOTES Friday, July 6

10:00 AM-11:30 AM • Ages 6-10

Are "wily coyotes" really that clever? Why do they howl and where do they live? The eastern coyote is a relative newcomer to New Hampshire so we will explore some of the mysteries about them. Join us to become wise about coyotes through activities, story-telling, wild snack, and a visit with a live coyote. Program repeated August 2. Minimum enrollment 4; maximum 12.

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

MOVERS, SHAKERS, AND RHYTHM MAKERS

Thursday, July 12

10:00 AM-12 NOON ◆ Ages 6-10

Do you ever wonder how some animals get around or why so many animals make different noises? Did you know that the natural world is full of fascinating rhythms? Join us for a fun-filled adventure into the animal world! Program repeated August 10. Minimum enrollment 4; maximum 14.

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

EVENING BAT VIEWING

Thursday, July 12 7:30 PM-9:00 PM ◆ Ages 6+

Approximately 400 bats reside in the Science Center's bat houses. Midsummer is a great time to see them emerge on their nightly forays. This program begins with an introduction to bat biology including a visit from one of the Center's live program bats followed by an outdoor viewing of wild bats in action. Minimum enrollment 4; maximum 25.

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

WATER DRAGONS

Wednesday, July 18

9:30 AM-11:00 AM Ages 6-10

Dragonflies and damselflies are some of the most noticeable insects we see during the summer. Discover the lives of these tiny predators below the water's surface and above it as we explore their wet world, life cycle, and the adaptations these insects have for survival. Program repeated August 1. Minimum enrollment 4; maximum 15.

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

THREE SANDWICH GARDENS ON TOUR

Saturday, July 21

9 AM-1 PM ◆ Rain or Shine

Tour three very different gardens in Sandwich at your own pace, in order of your choosing. Enjoy an "Empirical Garden" with multiple colorful 'rooms' using stumps, rocks, and boulders as focal points. Empirical gardening reigns here as an experiment in design, creation, implementation, and maintenance. Visit a "Gardener's Dream" of expansive lawns, carefully mown, meticulously tended beds, a pond and stream, and views of the Ossipee Range. Delight in the "Sculptor's Garden," which reflects a love of nature and overlooks a wildlife sanctuary. Plants, trees, and shrubs were carefully chosen to attract birds and wildlife. Visit www.nhnature.org for full description of gardens. Driving directions will be provided upon registration and payment.

Cost: \$15/person







CELESTIAL DELIGHTS IN A SUMMER NIGHT'S SKY Saturday, July 21, cloud date July 22 8:00 PM-10:00 PM ◆ Ages 10+

Have you ever wondered about some of the amazing objects in the night sky? Join Astronomer Tiffany Picard from the Christa McAuliffe Planetarium as she talks about various celestial delights in the summer night sky. See what many of them look like through a telescope (weather permitting). The Moon will definitely be featured. Have you ever seen craters within craters or enjoyed observing the shadows of mountains that are on the Moon? Don't miss this fascinating and informative program. Minimum enrollment 5, maximum 25.

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

GARDEN REFLECTIONS: GARDEN EXPERIENCE AND WRITING

Sunday, July 22 1:00 PM-4:00 PM ◆ Adults

How have authors and artists expressed the experience of the natural world? Explore and observe the wild and tamed areas of the Science Center, discuss several styles of written and visual works, and create your own personal reflection on your experience. Minimum enrollment 4; maximum 15.

Cost: \$12/member; \$15/non-member

EVENING ADVENTURE Tuesday, July 24 8:00 PM-9:30 PM ◆ Ages 8+

Explore our natural world using secondary senses such as touch and hearing. Can your eyes adapt at night to be used the same as in the daytime? Learn how nocturnal animals find their food or keep from becoming food, without the aid of the sun. Program repeated August 24. Minimum enrollment 6; maximum 14.

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



TRADITIONAL WEST AFRICAN **DRUMMING WORKSHOP**

Thursday, July 26 ◆ 11:00 AM-12 NOON Performance to follow workshop ◆ 12:00 Noon-1:00 PM Both held in Kirkwood Gardens ◆ All Ages welcome

Nature uses sound to communicate in many ways, people do too. Humans have been using drums for thousands of years. Explore the world of West African drumming with members of NH's own Black Bear Moon Rhythm Ensemble. In this fun and energetic workshop, we'll uncover the art of playing the djembe and dunun drums using traditional rhythms of Guinea, West Africa. Discover your rhythmic potential and unlock the great enjoyment of this beautiful rhythmic tradition! Drums provided.

> Cost for workshop: \$15/member; \$20/non-member. No cost to attend performance

THE GREAT WOODPECKER OUEST

Saturday, July 28 2:00 - 4:30 PM • Age 7+

Teams will seek out clues and use combined brainpower to solve riddles and decipher clues in this fun, family activity. Staggered start times between 2:00 and 2:30 PM, with two hours to complete the quest. Search off-trail and on the trails, armed with a quest map and compass to find hidden 'cache' boxes. Leave your unique mark in each box with a stamp you create. Will you find them all? Teams will also compete to raise the most contributions - and Squam Boat Livery will donate an Old Town Canoe as the grand prize for the team raising the most money. The top three teams with the fastest time and most completed quests will also be awarded prizes. Prizes awarded at the Gala dinner following the Quest and Annual Meeting.

> Quest Tickets (includes trail admission) \$30/group of four or \$8 per person

WATER DRAGONS

Wednesday, August 1 9:30 AM-11:00 AM • Ages 6-10 See July 18 for description.

WISE ABOUT COYOTES

Thursday, August 2 10:00 AM-11:30 AM ◆ Ages 6-10 See July 6 for description.

BUILD A NATURE BOOK

Saturday, August 4

10:00 AM-12 NOON ◆ Ages 6-8

Create your own nature storybook. Enjoy a nature walk, collect natural materials, and combine them with drawings and words in your own handmade book. Minimum enrollment 4: maximum 15.

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

MOVERS, SHAKERS AND RHYTHM MAKERS

Friday, August 10 10:00 AM-12 NOON ◆ Ages 6-10

See July 12 for description.

BIRD I.D. SERIES

SESSION VI - SANDPIPERS, PLOVERS, AND OTHER COASTAL SHOREBIRDS

Thursday, August 2, 7:00 PM-9:00 PM Saturday, August 4, 8:00 AM-5:00 PM

Join Iain MacLeod to learn about the migratory sandpipers and plovers that pass through New England's coastal habitats on their southbound migration. To learn to identify this diverse group of birds, Iain will use audio visual presentations at the Thursday program. On Saturday, we will travel to the New Hampshire coast and Plum Island in Massachusetts for a spectacular show that should include Semi-palmated Sandpipers, Dunlin, Red Knot, Whimbrel, Least Sandpipers, Willets, Short-billed Dowitcher, Greater and Lesser Yellowlegs, and maybe a Godwit or two.

Cost: \$45/member; \$55/non-members

WILD EDIBLES WORKSHOP Saturday, August 11

9:00 AM-1:00 PM • Adults

Foraging for wild edible plants is a great way to get out and experience nature in a multi-sensory way. Join us as we explore the Science Center's grounds focusing on how to identify and utilize common native plants and introduced "weeds." We'll even taste a few samples. Minimum enrollment 4; maximum 16.

Cost: \$14/member; \$18/non-member



HERBS AS PARTNERS IN LIFE Tuesday, August 14 6:30 PM

Join Master Herbalist Heidi Herzberger to learn about the Shaker influence on American herbalism. Heidi Herzberger, artist, educator, and herbalist, was the Herbalist and Landscape Curator at Canterbury Shaker Village, Canterbury, for fourteen years. We will explore culinary, medicinal, and common household gardens to discover some herbs unique to each garden and some common to all three.

Cost: no fee; donations welcome

EVENING ADVENTURE Friday, August 24 7:30 PM-9:00 PM • Ages 8+

See July 24 for description.

Reservations and advance payment required for all programs unless otherwise stated. Natural Adventures will be cancelled by noon the day prior if minimum enrollment is not met.

HUBBARD BROOK SERIES

FREE LECTURE SERIES

7:00 PM Adults

No charge to attend and no reservations needed

July 11 • WINTER CLIMATE CHANGE AND THE NORTHERN FOREST

Join Peter Groffman of the Institute for Ecosystem Studies, Millbrook, NY, to learn about evidence that climate is changing in the winter. We'll summarize studies on the effects these changes will have on soil freezing, tree roots, and forest productivity in the forests at Hubbard Brook Experimental Forest. Founded in 1983 by the eminent ecologist Dr. Gene E. Likens, the Institute of Ecosystem Studies is a world-renowned leader in applying the ecosystem approach to some of society's most pressing problems, from the quantity and quality of freshwater resources to the health of our forests.

July 18 ◆ DISCOVER NEW ENGLAND'S MULTIPLE THREATS TO FOREST SONGBIRDS

Nicholas Rodenhouse of Wellesley College will demonstrate New England is changing almost as rapidly as the weather. Birds returning from a warm tropical home are likely to encounter forest fragmentation, habitat loss, climate change, invasive plant species, acid rain, dying beech and hemlock trees, and mercury pollution. What is a bird to do, and what can we do to help the birds?

July 25 ◆ DO MOOSE NOTICE OUR CHANGING CLIMATE?

Join Lynn Christenson of the Institute for Ecosystem Studies to discuss how higher temperatures, less snow, and more insects are all likely to be part of our future in New Hampshire. She will review the ecology of moose and how they might respond to these changes.

SATURDAYS WITH A SCIENTIST

SOLVING THE UNSOLVABLE-CLOSING THE GAPS IN THE WATER BUDGET OF MIRROR LAKE

July 14 ◆ 1:00 PM-4:00 PM ◆ Adults

Join Don Buso of the Institute for Ecosystem Studies to learn about Mirror Lake. This lake is one of the most intensively studied lakes in the world, right in our midst. We will walk around the lake (wear walking shoes), look at its natural physical features as well as the instruments used to study the water (flumes, wells, etc.). We'll discuss how we derived a water budget for Mirror Lake and what we have learned about the lake as an ecosystem as a result. Minimum enrollment 5; maximum 15.

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

PEOPLE AND FOREST HISTORY July 28 ◆ 9:00 AM-12 NOON ◆ Adults

Walk through the Hubbard Brook Forest with Charlie Cogbill, an independent scientist, and look for clues of its past disturbances. Charlie is one of the best forest historians. Explore the sites of old logging camps, find old logging trails, and see how they changed the structure of the current forest. Minimum enrollment 5; maximum 15.

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

SPECIAL EVENTS

KIRKWOOD GARDENS DAY

Saturday, June 9 9:00 AM - 1:00 PM

Plant and garden-related products for sale, garden treasures sale, silent auction of plants, lunch available. Sponsored by the Belknap Landscape Company, Inc.

ANIMAL ENRICHMENT DAY: COME PLAY THE ANIMAL WAY

Tuesday, July 19 9:30 AM - 4:30 PM

Ever wonder what a paper towel tube, cinnamon, and a skunk have in common? Find out at the Squam Lakes Natural Science Center's Animal Enrichment Day! Come join staff and volunteers for a funfilled day focusing on animal enrichment. Enrichment provides stimulating activities for captive wildlife to keep them engaged in their surroundings and allow them to lead the best lives possible in captivity. Live animal presentations and demonstrations will be held throughout the day. No reservations are needed.

Cost: free/member; \$13/adults, \$9/youth, age 2 and under free/non-member

THE GREAT WOODPECKER QUEST SUMMER GALA AND ANNUAL MEETING

Saturday, July 28

The Great Woodpecker Quest - Will your team raise the most money in contributions to support the education programs and win an Old Town Canoe (courtesy of Squam Boat Livery)?

Annual Meeting - Members come together to elect trustees and officers

Introduction of Keynote Speaker - by George Butler

Keynote Speaker John W. Fitzpatrick, PhD - World-renowned omithologist and head of the Cornell University Laboratory of Ornithology

Dinner - by Great Events Catering of the Common Man Restaurant family

Silent Auction - of Ivory-billed Woodpeckers, a painting by volunteer John Ouinn

Drawing - for Scotland trip with Executive Director lain MacLeod **Prizes** - awarded for The Great Woodpecker Quest

TEACHER OPEN HOUSE

Friday, August 3 9:30 AM - 4:30 PM

New Hampshire Teachers – bring your school ID, paycheck stub, or proof as a home school teacher and receive one free trail admission and a 10% discount in the Howling Coyote gift shop! Reserve your spot for a special guided tour of the Gephart Exhibit Trail at 1:30 PM

For school program listings visit our website at www.nhnature.org



SCIENCE CENTER NATURE TOURS

NEW MEXICO – LAND OF ENCHANTMENT NOVEMBER 5 - 15, 2007

Join Executive Director Iain MacLeod for a spectacular trip to the great Southwest featuring visits to Bosque del Apache, Bitter Lakes, and Las Vegas National Wildlife Refuges. Highlights will include breath-taking flights of sandhill cranes and snow geese, countless other waterfowl, raptors galore, and multiple sightings of roadrunners and coyotes. We'll visit Bandolier National Monument with its ancient cliff dwellings, The Living Desert Zoo and Gardens State Park (AZA-accredited), and the spectacular caverns of Carlsbad. The last leg of the trip will be to Santa Fe to visit the National Forest and explore the town. Group size limited to ten. Cost includes all accommodations, leader fees, van transportation beginning and ending at Albuquerque airport, and admission fees. (Cost of meals NOT included). Contact Iain by phone: 603-968-7194 x 23 or e-mail: iain.macleod@nhnature.org for a full trip itinerary or to book your place on the trip.

Cost: \$1,600/member; \$1,700/non-member

WILDLIFE OF SCOTLAND - HEBRIDES AND HIGHLANDS JUNE 2008

Executive Director Iain MacLeod will lead this trip to his homeland in search of birds and beasties. Highlights will include nesting red-throated loons, cornerakes, and shorebirds (plovers and sandpipers) breeding in the greatest densities found anywhere in Europe. You'll enjoy spectacular wild flowers on the shell-sand farmland known as the Machair. We'll look for golden and white-tailed eagles over the ragged mountain peaks, watch seals in the sea lochs, and search for otters in the late evening twilight (the "simmer dim"). In the Highlands we'll visit Loch Ness for monsters and view ospreys at the famous Loch Garten Reserve. Another highlight is the sight, sound and smell of tens of thousands of breeding kittiwakes, guillemots, razorbills, and puffins at the Fowlsheugh cliffs. The trip will wrap-up in historic Edinburgh with its famous castle, royal mile, and beautiful gardens. This will be a trip to remember! Accommodations will be in comfortable historic country house hotels with exquisite local cuisine. Group size limited to ten. Cost will include all accommodations, round-trip airfare from Boston to Glasgow, van transportation, admission fees, and all meals. Detailed itinerary and cost available in fall 2007.

Win A Trip to Scotland!

Take a chance and you could win one space in June 2008 on the Wildlife of Scotland – Hebrides and Highlands trip! A maximum of 100 raffle tickets will be sold at \$100 each. There will be TWO winners – you and the educational programs at the Squam Lakes Natural Science Center.

To enter, fill out a separate entry form for each ticket purchased.

Return with payment for \$100 to:

Squam Lakes Natural Science Center PO Box 173, Holderness, NH 03245 603-968-7194 www.nhnature.org

Name
Mailing address
Phone
Email address
Payment method:CheckCredit CardCash
Please make checks payable to: Squam Lakes Natural Science Center.
Charge my credit card: Visa MC AMEX Discover
Card #Expires
Cardholder Name
Signature

The trip has an approximate value of \$5,000. A minimum of 50 raffle tickets must be sold for the raffle to take place. If fewer than 50 tickets are sold, participants will be reimbursed. The drawing will be held at the Annual Meeting - Summer Gala on Saturday, July 28, 2007. The winner need not be present to win. All participants must be 18 years of age or older and provide all information requested. No purchase required to enter.

EARTH TRAVELS

A POTTERY TOUR OF TAIWAN AND CHINA July 9

Bob Roy, a potter of 25 years from Goffstown, NH, along with his wife Lorry, traveled for a month through Taiwan and China. Join us to see the famous landmarks and ancient pottery sites they visited.

WHERE IN THE WORLD IS BELIZE? July 16

This tiny Caribbean gem has the second largest barrier reef in the world, myriad tropical fish, Mayan ruins, rainforests, jaguars, and rushing rivers. Join Naturalist Margaret Gillespie in exploring the diverse treasures of Belize by kayak, foot, and horseback!

7:00 PM ◆ Free Lecture Series ◆ Adults
No charge to attend and no reservations needed

ANIMAL CARE DOWN UNDER

July 23

Animal Care Assistant Rachel Cilley spent six months in 2005 studying and traveling in New Zealand and Australia. Hear about her experiences volunteering at the Southern Encounter Aquarium in Christchurch and working on a small sheep farm outside of Auckland.

HIGHLIGHTS OF KENYA!

July 30

Join Gretchen and Barry Draper to learn about their nine-day safari as they traveled north from Nairobi to Mount Kenya to the Samburu National Game Reserve. They then went southwest to Lake Nakuru (flamingos and rhinos) and on to the Masai Mara, Kenya's corner of the great savannah with lions, zebras, elephants, and all manner of gazelles. The Drapers also spent several days in Nairobi, so they have a flavor of the city and all its color and challenges.

Sponsored by Plymouth Travel ◆ www.plymouth-travel.com ◆ 603-536-2403



OPENING A WINDOW TO THE NATURAL WORLD

PENSION PROTECTION ACT OF 2006

Between now and December 31, 2007, Squam Lakes Natural Science Center supporters age 70½ and older may take advantage of a special giving opportunity allowed under the Pension Protection Act of 2006, which includes a limited-time provision for tax-free distributions without undesirable tax effects from traditional and Roth Individual Retirement Accounts (IRA) to qualified charitable organizations, such as the Squam Lakes Natural Science Center.

Please consider taking advantage of this new law and make a contribution to the Squam Lakes Natural Science Center today. As always, we recommend you consult your tax professional or financial planner to determine what is best for you. The Squam Lakes Natural Science Center is a 501(c) (3) non-profit organization and our tax id number is 02-0271824.

COYOTES continued from page 1

habitat, coyote home ranges are approximately five to twenty-five square miles. What's on the menu? Coyotes prey on everything from mice and squirrels to snowshoe hare, wild turkeys, and even deer. Preying upon deer generally requires the family to work together, with the coyotes' chances increasing in the case of injured deer or with deer having winter challenges. Carrion is a staple, particularly in winter, and coyotes also eat insects and wild fruits like grapes and apples.

What does coyote howling mean? These quavering, warbling howls and yips help coyotes defend their territory, announce their location and strengthen social bonds. Scientists even think coyotes may also howl for fun! Young coyotes join in howling when they are two months old.

Should we be afraid of coyotes? It is always wise to be cautious with any wild animal so all we can do to keep coyotes in their natural environment is a benefit to both parties. Containing garbage properly, feeding pets indoors, bringing cats and small farm animals inside at night, using electric fences or guard animals to protect livestock are all helpful precautions. Coyotes are very curious creatures and seeing one is not cause for alarm — perhaps they are just checking the hayfield for mice after the crop is cut. In the wider picture, predators are essential to keeping the natural world in balance.

If you are fascinated by your own sighting of a coyote or hear coyotes in the neighborhood, keep your curiosity alive! On your next trip to the Science Center, visit our new hands-on display about coyotes at the Mead Discovery Place in the Trailhead Gallery. See the world from a coyote's perspective!

NATURALIST'S CORNER continued from page 3

up as it's climbing or getting ready to excavate a hole into a tree trunk. Pecking with their strong bill allows a woodpecker to chip away at loose tree bark or chisel into the wood to locate a tasty insect snack.

One question that seems to plague all of us after several minutes of watching a woodpecker "drill" into a tree is "why don't they get a headache?" These birds have a variety of adaptations that allow them to survive when we would be reaching for aspirin. A relatively thick skull, with moderately spongy bone, and a small amount of cerebrospinal fluid helps to prevent shock waves from being transmitted to other parts of the woodpecker's head. Head and neck muscles are contracted just before impact helping to minimize the shock to the rest of the bird's body.

The woodpecker's amazing ability to chip away at wood is matched by a versatile tongue. Its bristly-tipped tongue can be extended far beyond the tip of the bill, and on some species, wraps around inside to the base of the skull, then over the top and is anchored near the right eye socket. This length, along with salivary glands which secrete a very sticky fluid, makes the tongue perfectly adapted to catching a variety of insects.

Like many home owners, I spend a lot of time trying to entice wildlife to live in or visit my yard on a regular basis, but how do you encourage woodpeckers to stick around during the summer when food is plentiful? Although some continue to tempt them with suet and sunflower seeds, I've tried something different. At this time of year woodpeckers are raising their young in nesting cavities excavated into the trunks of snags (dead or dying trees). Aside from having softer wood in which to create these nesting cavities, snags also may have insects hiding underneath the bark or within the wood itself. I hope to attract woodpeckers to my yard with several 12 to 15-foot pine stumps that are all that remains of the trees that were shading my vegetable garden. After one season the carpenter ants moved in and I am waiting for the woodpeckers to discover them. I've also decided to leave a 20foot aspen trunk that snapped off in a windstorm last fall at the woody end of the yard as a potential nesting site for the downy and hairy woodpeckers in the area. Who knows what new life may spring forth this summer from that woody skeleton?

Renew your membership online at www.nhnature.org

Naturalist's Legacy Society

If you have already named the Squam Lakes Natural Science Center in your will or trust, please let us know so that we can thank you and welcome you into the Naturalist's Legacy Society. The Naturalist's Legacy Society was established in 2006 to celebrate the Science Center's fortieth anniversary and to recognize and honor those who have made gifts which will help to continue its work into the future.

TRAIL'S END

MEN GO AND COME, BUT EARTH ABIDES

I have written several "Trails End" articles over the past three years addressing the mission of the Science Center and why I feel it is so important. Since July is the end of the trail for me as Chairperson, I feel inspired to do it one last time. My inspiration this time around is that I just completed re-reading a novel that I first read back in 1970 – the year of the first Earth Day and the year that the federal Environmental Protection Agency (my former employer) was created by President Nixon. The book is *Earth Abides* by George R. Stewart. It is a science fiction story first published in 1949. I re-read it to see if it still held up in the context of today's growing awareness and concern over global climate change.

The story line is that the human species is suddenly, nearly totally, exterminated by a new virus leaving only a few scattered survivors who, for whatever reason, had immunity to the virus. The lead character, a young geologist, travels about the country observing, through a scientist's eye, how the natural world, and the man-made world, and the scattered survivors respond to the sudden eradication of human civilization. He eventually connects with a small group of survivors to re-establish a human community. The tale leaves unanswered what the re-evolving civilization will be like.

The main message, however (another inconvenient truth), is that the natural world is totally indifferent to the survival of the human species.

As we now see the emergence of global climate change and its potential impact on the human condition as a legitimate concern, this message is ever more compelling. The natural world will adjust in its own way to seek a new dynamic equilibrium in response to man's impact. The question becomes: how will man adapt to this changing world, upon which he is totally dependent, and what are the implications for the human condition on a global scale?

This brings me back home to the Science Center and just how important its programs, and others like it, are. How critical it is to understand and to care about the interrelationship between human activities and the natural world, which is itself in a state of dynamic equilibrium. Our hope is that, in our small way, we create both an understanding of, and a passion for, the natural world so that our children, our children's children, and we might be better stewards of this world.

With that said, I want to thank the Board of Trustees and the Science Center staff for all the support they have shown me over the past three years. It's been a great hike.

Trail's End is written by Bob Snelling, Chair, SLNSC Board of Trustees. You may contact Bob at 603-968-9809 or snellg@adelphia.net.

NEWSBRIEFS continued from page 4

plants to sell. Kirkwood Gardens Day income helps support the gardens. If you have a donation, please contact Brenda Erler at 603-968-7194 x 43 or brenda.erler@nhnature.org.

- Join us on Saturday, July 28 for our Gala celebration and Annual Meeting. We are pleased to announce John W. Fitzpatrick, Ph.D. will be the Keynote Speaker at the event. John Fitzpatrick is a world-renowned ornithologist and head of the Cornell University Laboratory of Ornithology. Dr. Fitzpatrick will share the story of the ongoing search for the Ivorybilled Woodpecker, which has been making front page news since its 2005 rediscovery. George Butler, producer of a new film about the search for the Ivory-billed Woodpecker, called The Lord God Bird, will introduce Dr. Fitzpatrick. The day's activities will start with The Great Woodpecker Quest, a scavenger hunt and fun, family activity that will pit teams against each other in an exciting contest to uncover answers and to raise the most money in pledges. Squam Boat Livery has generously donated an Old Town Canoe as the grand prize for the team raising the most money in pledges. The top three teams with the fastest time and most completed quests will be awarded prizes. The Annual
- Meeting of members to elect trustees and officers will follow, and then the Keynote Address. Topping off the evening, there will be a silent auction of a painting of Ivory-billed Woodpeckers by volunteer John Quinn, a drawing for the winner of a trip to Scotland with Executive Director lain MacLeod, and a fabulous catered meal by Great Events Catering of the Common Man Restaurant family. Invitations will be mailed in June.
- The Squam Lakes Artisans and the Kirkwood Café return this year to the historic Holderness Inn adjacent to Kirkwood Gardens. The Squam Lakes Artisans, a cooperative of juried artists from central New Hampshire specializing in unique and locally crafted gifts, is open daily from Friday, May 25 through Monday, September 17. From September 17 through October 8, the Artisans will open from Friday through Monday only. Store hours are 10:00 AM to 5:00 PM. The Kirkwood Café, owned and operated by Earle Jenkins for the convenience and benefit of the Science Center and its visitors, continues to serve top quality, gourmet snacks, sandwiches and beverages on the porch or terrace overlooking the gardens. The Café is open weekends starting Saturday, May 26 through June 24 and then daily from July 1 through September 2 from 11:00 AM to 3:00 PM.

COYOTE QUIZ

- Which three senses do coyotes rely on most? smell, taste, sight, hearing, touch
- 2. True or False? Coyotes, wolves, domestic dogs and foxes are members of the Canidae (dog) family.
- 3. Coyotes eat . . .

A. meat

B. insects

C. fruit

D. all of these

- 4. True or False? It is a good idea to feed coyotes.
- Coyotes function as _____ in the natural world.

Answers:

I. smell, sight and hearing

Z. True 3. D 4. False 5. predators

The Howling Coyote Gift Shop

The new **Green Bag** is available for **\$2.00**, and can be used over and over again for groceries, or as a tote bag. At the grocery store, your **Green Bag** replaces four plastic bags each time it is used, saving valuable resources and landfill space. So "Go Green" this year and impress your friends with your Squam Lakes Natural Science Center **Green Bag!**

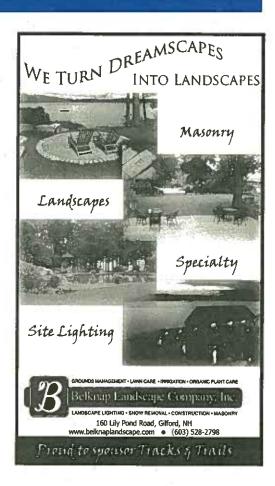


Now online at www.nhnature.org



Saturday, September 29

Celebrate autumn with us and learn about the seasonal changes taking place in the natural world. This enjoyable family festival includes live animal presentations, activities for children and lunch available for purchase.



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