

SWEEP

Get all the Dirt



"Nothing Under the Rug"

NEWSLETTER OF THE VERMONT STATE-WIDE ENVIRONMENTAL EDUCATION PROGRAMS • WINTER 2007

Glen Falls Valley Quest

Peg L. Goldman

At the 2006 Wellborn Ecology Conference at the Hulbert Outdoor Center in Fairlee, Vermont, five of us joined Steve Glazer of Vital Communities in a "quest" written by local fifth graders.

Park at the boat launch
Be sure you're all set,
Step o'er the "road-fence"
And turn to the left.

So began our interesting hike to beautiful Glen Falls. The poetic clues led us through a picturesque landscape with entrancing waterfalls. In the midst of our travels, one participant, a classroom teacher who incorporates fern studies in her outdoor classes, taught us how to identify an interrupted fern and a polypody fern.

As we hiked we gained elevation and were encouraged by more quest clues:

You'll see a white rock
But please do not stop.
If you keep on the trail,
We're sure you'll not fail...

Keep on the path
You'll see a waterfall
But it's just the lower one
And not tall at all.

Each stopping place presented a teachable moment and the possibilities seemed infinite: geology, soil science, botany, zoology, aesthetics, ornithology, bryology.

Vital Communities initiated the Valley Quest program to foster a sense of place. The Quest Treasure Hunts certainly help



meet "Understanding Place", Vital Result 4.6 of the VT Framework of Standards, which states: "Students demonstrate understanding of the relationship between their local environment and community heritage and how each shapes their lives." Quests adopt a place in the community and utilize it as a site for learning. In the field, students learn how to observe details and take time to discover the characters and story of their unique place. Back in the classroom, these details become the basis for integrating diverse academic disciplines: language arts, mathematics, science, social studies and technology.

Quests are a good way to strengthen relationships between students and the community. Choosing a public place, e.g. historical/cultural venue or nature preserve, and publishing and distributing the Quest shares the students' learning with the broader community, helping it ripple out beyond the school. Reaching out to community resources does the same and may build intergenerational relationships.

On Thursday, November 9, we experienced a Quest firsthand; each of us took away something special on that sunny morning. We thank Steve for sharing his knowledge with us — one more ripple effect.

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Vermont Statewide Environmental Education Programs (SWEEP) is a coalition of individuals and organizations promoting environmental education in Vermont since 1975. SWEEP's purpose is to foster environmental appreciation and understanding to enable people to make responsible decisions affecting the environment. For membership information, see p. 11.

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"SWEEP: Get all the Dirt" is produced twice a year. We welcome your contributions. Contact editor Barry King at <kinglet@together.net>

Letter from the Chair



serving the SWEEP cake at NAAEE conference in St. Paul

Dear SWEEP Members and Friends,

Over the past year the SWEEP board has been exploring how to better serve SWEEP members and take all of our work deeper. In 2006 both general membership meetings focused on these themes; specifically "unexpected partnerships" and member benefits. Your feedback has been extremely valuable as we plan into the future and you will notice that we have incorporated your suggestions into the biannual meetings. We look forward to seeing you in the spring at Green Mountain Audubon Center where we will learn about a member organization's programs and get a little professional development ourselves! Keep sending us your comments, thoughts, and ideas and don't forget to sign up for the SWEEP list serve at VermontSWEEP-subscribe@yahoogroups.com

SWEEP was out and about in 2006 – we made our way to St. Paul for the North American Association for Environmental Education, to Rhode Island for the New England Environmental Education Association annual conference, and a host of local institutes and workshops. Thanks to everyone for helping get the word out about the great work happening here in Vermont. Through this outreach, you have continued to nurture old partnerships and foster new ones. In the end, that makes all of our work stronger.

Happy New Year! We wish you all a joyous and peaceful 2007.

Jen Cirillo
SWEEP Board Chair



NEEEA News

The New England Environmental Education Alliance is an umbrella organization of each state's environmental educators. Vermont has two representatives on the NEEEA Board, Nancy Notterman and Lisa Purcell. Here is Nancy's update:

One of the highlights of the 40th NEEEA Conference in Rhode Island last September was Dayna Ayers Baumeister, PhD, who spoke about Biomimicry, an outside-the-box topic for environmental educators. Her Biomimicry Guild (<http://www.biomimicry.net/guildDescr.html>) puts biologists at the design table. She described the connections the Guild makes between nature and the worlds of engineering, architecture and business to create products, processes, and policies in sync with our natural world. She walks these engineering types through the woods, as she did with us in her workshop, inspiring the realization that nature

has most of the answers! Even for us, it was an eye-opener.

Aside from many workshops on this topic, members of the NEEEA board provided a session: "Breathing Life into the Death of Environmentalism" connecting to last year's conference theme. A board committee, "Keeping the Conference Alive," looks at new ways to connect to the education world, and more importantly, how to connect and partner with organizations and companies that share just a part of our vision and are not normally in our vision, as well as getting key notes onto the radio waves before conferences. A summary of this and related information will be on the NEEEA web site www.neeea.org and list serve NEEEA@yahoogroups.com.

NEEEA has many things in the works, including a NEEEA staff person to assist states, plans for next fall's NEEEA Conference in Maine (Sept 14 -16,) putting the New

continued on next pg.

Laurie David and An Inconvenient Truth



Nancy Nottermann

Laurie David, a producer of Al Gore's *An Inconvenient Truth*, spoke to a standing-room-only audience in Burlington a few weeks after having an op-ed piece in the *Washington Post* (<http://www.washingtonpost.com/wpdyn/content/article/2006/11/24/AR2006112400789.html>). In both, she passionately addressed Global Warming and what individuals can do. She announced that Ben and Jerry's will help distribute *An Inconvenient Truth* to every high school in Vermont. (SWEEP and NEEEA have offered to help distribute the free copies to schools and nature centers. No final word on that.) David has a book out as a companion to the movie. There may be some curriculum developed around the movie and made available to Vermont teachers, as well. We will post it on our web site.

Her web site, www.stopglobalwarming.org offers many simple things you can do in your daily life — what you eat, what you drive, how you build your home — that can have an effect on your immediate surroundings and on places as far away as Antarctica.

What You Can Do RIGHT NOW to Reduce Global Warming

(from Laurie David's web site: www.stopglobalwarming.org)

- **Use Compact Fluorescent Bulbs:** Replace 3 frequently used light bulbs with compact fluorescent bulbs. Save 300 lbs. of carbon dioxide and \$60 per year.
- **Inflate Your Tires:** Keep the tires on your car adequately inflated. Check them monthly. Save 250 lbs. of carbon dioxide and \$840 per year.
- **Change Your Air Filter:** Check your car's air filter monthly. Save 800 lbs. of carbon dioxide and \$130 per year.
- **Fill the Dishwasher:** Only run your dishwasher when it's full. Save 100 lbs. of carbon dioxide and \$40 per year.
- **Check Your Water Heater:** Keep your water heater thermostat no higher than 120°F. Save 550 lbs. of carbon dioxide and \$30 per year.
- **Take Shorter Showers:** Showers account for 2/3 of all water heating costs. Save 350 lbs. of carbon dioxide and \$99 per year.
- **Install a Low-Flow Showerhead:** Using less water in the shower means less energy to heat the water. Save 350 lbs. of carbon dioxide and \$150.
- **Buy Products Locally:** Buy locally and reduce the amount of energy required to ship your products to your store.
- **Buy Energy Certificates:** Help spur the renewable energy market and cut global warming pollution by buying wind certificates and green tags.
- **Buy Minimally Packaged Goods:** Less packaging could reduce your garbage by about 10%. Save 1,200 pounds of carbon dioxide and \$1,000 per year.
- **Unplug Un-Used Electronics:** Even when electronic devices are turned off, they use energy. Save over 1,000 lbs of carbon dioxide and \$256 per year.

NEEEA News - continued from p.2

England Journal of EE on the web site (Want to contribute anything?), and work on The Richard Haley Scholarship Fund. This fund was generously started at the silent auction in RI in memory of Richard, whose bio is on the NEEA web site. A committee is researching how best to put this money to work in a yearly award. In addition, the board will hold a two-day meeting in February to continue work on the priorities developed in '06, which include marketing. NEEEA sponsored a well-attended administrators' retreat in November, "Leadership and System Change". Next year's retreat will be overnight and for state boards and interested others.

NAAEE News

While SWEEP is one of the smallest state affiliates of NAAEE (North American Association for Environmental Education), it continues to be represented at annual conferences. This year was no exception. Megan Camp, Jen Cirillo, Angela McGregor, Delia Clark, and Tom Hudspeth participated in the 2006 conference in St. Paul, MN, October 10-14. They made several individual presentations under the Sustainability track, and Jen and Tom participated in a symposium on "Learning Communities for Sustainability: Case Studies in the U.S."

The 2007 NAAEE Conference will be in Virginia Beach, VA, NOVEMBER 14-17, with abstracts for presentations accepted until JANUARY 31: <http://www.naaee.org/conference/2007-call-for-presentations>



Sneezes and Trees(es)

By Barry King

Winter is the cold and flu season. Shoppers stock up on vitamins, cold remedies and facial tissues. Few of us realize that the tissue we buy (and other disposable paper products such as paper towels, toilet paper and napkins) has a major impact on forests around the country. In some cases, the best option is not to use these products at all – substitute cloth napkins for paper and use a sponge or dishtowel rather than a paper towel. Handkerchiefs have problems and no one advocates an alternative for toilet paper, so we all have to buy some paper products, no matter how environmentally conscientious we are. But we have choices to make when we do so. We can buy products made from virgin paper or from recycled paper. There are other considerations as well.

The Natural Resources Defense Council (NRDC) has produced a handy consumers' guide that allows us to be knowledgeable when we shop for home tissue products. You can read the guide and/or download a wallet card at www.nrdc.org/land/forests/gtissue.asp. The guide lists common products with information on the percent of recycled material, the percent of post-consumer content and the bleaching process. For simplicity, little green leaves indicate which products get good marks for all three and "AVOID" is beside those that get failing marks.

In order to see what was available locally, I took a trip to four markets in the Middlebury area; the Middlebury Natural Foods Coop, a small independent grocery store, and two su-

permarkets. In each store, it was possible to buy "Green Leaf" products but in all but the Co-op, it was much harder to find them than the ones the guide labels "AVOID". Many of the "AVOID" products are made by Kimberly-Clark, which makes Scott, Cottonelle, Kleenex and Viva. Most other popular and house brands are also labeled "AVOID". However, you can buy "green" without having to go to a natural foods store. The Marcal brand rates a green leaf and was available at the three traditional stores I checked although not in each category line. Some Seventh Generation products are available at Shaws and Hannafords. Hannafords also carries a Green Forest brand not included in NRDC's card (it is on their expanded list) and it rates a green leaf.

For more information and to better understand NRDC's ranking system, go from the guide's webpage to those that give the complete listing and to the pages that include the criteria and methodology. They contain information on forestry practices, endangered forest protection and mercury avoidance, in addition to the areas previously cited. The criteria are defined on another page.

Although it may be hard to wean ourselves and others from Kleenex, Charmin, or Bounty, this is one area where a little bit of education may make a big difference. If you can help people realize how easy it is to switch from a product that requires virgin fiber to one that doesn't, from one that uses a bleaching process that produces toxic chemicals to one that doesn't, they can feel good about their choices and the fact that they are truly making a difference.

"A Shopper's Guide to Home Tissue Products" from NRDC is available at www.nrdc.org/land/forests/gtissue.asp. To get multiple copies for your organization, contact Elizabeth Beall at ebeall@nrdc.org. Please let her know your organization's name and address.

A Watershed for Every Classroom... in a basin nutshell!

Amy Picotte

What do the Lake Champlain Basin Program, National Wildlife Federation, Shelburne Farms, Project WET, the UVM Watershed Alliance, ECHO and Amy Demarest all have in common? That's right, they are SWEEP members but they are also partners in the Champlain Basin Education Initiative (CBEI). The CBEI group is offering a new professional development opportunity for teachers, A Watershed For Every Classroom.

Modeled after the place-based program, A Forest for Every Classroom, this new environmental teacher program focuses on the Lake Champlain watershed. A Watershed for Every Classroom uses the Champlain basin as the integrating theme to teach math, science, history, art, geology, language arts, etc. The 11-day professional development opportunity will be offered over a year, starting in the spring of 2007, and uses Understanding by Design as a curriculum framework to articulate what students will know, do and understand.



To learn more about A Watershed for Every Classroom, contact Liz Soper at soper@nwf.org or Colleen Hickey at 1-800-468-5227.

Spotlight on a Vermont Teacher

The SWEEP Board would like to highlight **Sheila Tymon, of People's Academy in Morrisville, VT.** For more than a decade, Sheila has been guiding her high school students through meaningful and stimulating environmental course work as well as fielding at least one Envirothon Team every year. Her courses include AP Environmental Science every other year, Chemistry which she relates to environmental issues, a regular Environmental Science course and last year developed a new course, Vermont Natural Resources. The Natural Resources course is totally based on the Natural Resources standard (7.16), which she helped to review and edit during the most recent revision process.

Getting out into the real world to study and analyze, and having many professionals come into her classes, Tymon provides a wealth of information and resources for her students.

In addition, her students have spearheaded trash analysis at the school, led the move to eliminate all plastics from the cafeteria after studying the issue, and produced an environmental play for the school around consumption. The school has nature trails and Sheila's students have created interpretive information cards for the trails. She asks the right questions of her students and gets rich answers. Because of her outstanding ability to energize her students, intertwine environmental issues in all that she teaches, and maintain high expectations of her students in the field of Environmental Education, VT SWEEP wishes to recognize and acknowledge Sheila's efforts. She truly walks the walk and we thank her for her good work.

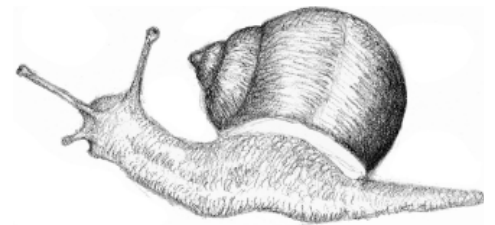


Illustration by Susan Sawyer of the Four Winds Nature Institute. See article on p.7.

News from the North Branch Nature Center

Chip Darmstadt, Executive Director

After an amicable separation from VINS early this summer, the North Branch Nature Center (NBNC) in Montpelier took steps towards incorporating as a new nonprofit organization. With the help of many great volunteers, we've enjoyed a nearly seamless transition.



By September 1, the new nonprofit was ready to assume responsibility for the management of the NBNC, which continues to be under VINS ownership.

With our very small staff and a dedicated board of directors, the nature center started offering programs to the public and planning for the future. Having on board an AmeriCorps member, former elementary school teacher Sandal Cate, has been a huge help in staying visible and active in the community.

A Community visioning forum in November provided a major infusion of new energy and ideas for the NBNC. Over 70 people

from a dozen different towns participated, sharing their thoughts regarding the future of the center and its role in the community. Visions ranged from "keep it small and intimate" to "become a premier center for environmental education!" While

many people stressed the importance of environmental education for our children, just as many commented on the desire for more programming for adult learners.

Of course, fundraising is a paramount concern; the response to our first "charter member" appeal has been extremely encouraging. With the continued support of the community, I'm confident that the North Branch Nature Center will thrive as a local community resource. As our visioning forum facilitator, Paul Markowitz, said to me after our event, "We have a future!"

To keep current on what's happening at the center, visit our new website at www.NorthBranchNatureCenter.org. You can also sign up to receive our e-newsletter, which is distributed monthly.

Audubon Vermont's Forest Bird Initiative Takes Flight

Bridget Butler

The first year of Audubon Vermont's new Forest Bird Initiative has focused on reaching landowners and forestry professionals to raise awareness of bird-friendly management practices for forested habitats. Audubon's second year of the initiative takes flight this winter with new programs for school children and families.

Starting in January, Audubon Vermont will be bringing its new outreach program, "Friends of Forest Birds" to Moretown Elementary School and the JJ Flynn and CP Smith Elementary Schools in Burlington. "We are thrilled to be taking Friends of Forest Birds to one of the communities we've been working with on managing forest lands for Vermont's breeding birds," says Conservation Education Coordinator Bridget Butler. "Our success with the landowner workshops in the Mad River Valley last summer has given Audubon a wonderful opportunity to continue to work within the community. Connecting the children in Moretown with the forested landscapes in their own backyards through birds is a wonderful way to show the kids how important their state is to breeding birds globally."

The new program includes a monthly classroom visit, an extensive classroom re-

source kit, a schoolyard bird feeding station and seed, field excursions to local landowners' properties and a culminating Forest Bird Celebration for the school and the community. As funding becomes available, Audubon plans to continue to offer this program to other schools across the state.

Another effort to reach out to the public about the global importance of Vermont's forests for breeding birds will involve Audubon's grassroots chapter network. Audubon recently received funding to create "Forest Bird Quests" across the state. In the spring, Audubon will work with its chapters to create Quests on forested lands that are open and accessible to the public. Vital Communities' Steven Glazer will lead a workshop at the Green Mountain Audubon Center for chapter leaders to learn how to write a Quest, creating a self-guided educational activity for people in their region. The goal is to create a Forest Bird Quest passport-type booklet to encourage people to complete all the Audubon Quests in the state. Those who send in their completed passport will receive a certificate of achievement and a special gift for learning about Vermont's forest birds.



Cultural and Biological Exchange - Summer 2006

Last summer, Green Across the Pacific hosted 12 high school students and four teachers from Guangzhou, China to study Environmental Leadership for three weeks with American students. Franklin Holme, a sophomore at Mill River Union High School in Clarendon, was one of the American students involved. Here are a few excerpts from his reflection about the experience:

"Most people could expect to get involved with Green Across the Pacific due to their interest in travel, environmental science, and biology. But the cultural part of the exchange grows (and grows). Many fears and stereotypes seem foolish after the first day...but it is amazing how they do indeed possess the minds of many Americans.

"This is of course not to say that the scientific aspect is at all lacking. During the course of the program we learned some intensive concepts mostly through actual hands-on work or by talking to experts in whatever field we were concerned with on any particular day.

"What most amazes me about the places we went is that I, a native Vermonter, had never seen them. We made trips to factories, workshops, forests, compost heaps, shops, lakes, museums, proposed wind farms, orchards, government buildings, farms, and mountains. Each was someplace fascinating that I only vaguely knew existed.

"The enthusiasm shown by the experts [at each site] and the other students in the program was inspiring; a refreshing change from the environment of mediocrity and basic standards in my school. The people, the enthusiasm, and the new look at my own state are things not readily forgotten."

Four Winds' Community-based Natural Science Programs

Lisa Purcell

Four Winds Nature Institute was formed last June with a clear focus: community-based natural science education and research. Six months later, more than 1,000 adult volunteers bring our lessons to children in 90 schools in VT, NH and MA. As part of Four Winds' Nature Program, 12,000 school kids

are learning to look at the familiar through a new lens, and, while exploring their schoolyard, they're gaining an understanding and an appreciation of the natural world.

This past fall Four Winds staff and volunteers gathered in meetings around the state to share program ideas, talk about the organization's goals and vision, and discuss how best to support student learning and integrate our programs into the school curriculum. By looking at each month's lesson through a standards-based lens, Four Winds volunteers help children recognize "patterns of similarities," think about "structure and function" when examining the characteristics of organisms, or understand the complexity of "ecosystems" as they explore a nearby field. In addition, Four Winds educators introduce volunteers to Vermont's Grade Expectations



Back: Deb Parrella, Karen Murphy, Kris Kristensen, Chris Runcie, Susan Sawyer, Lisa Purcell; seated: Elizabeth Cooper and Rob Anderegg.

so they can create a lesson plan that is developmentally appropriate for their students. For example, when studying leaves, kindergartners look at leaf shapes while sixth graders examine leaves' physical structure and learn about photosynthesis.

We asked volunteers, "What does community-based natural science mean to you?"

and the answers were thought-provoking, creative, and fun:

It's children in the woods behind the school recognizing individual trees and rocks just like they do their next-door neighbors.

It's volunteers and kids, businesses and service organizations working together to identify and address local environmental issues.

It's taking the time to get outdoors to learn.

We discussed the importance of going outside as part of each lesson. Though it can be difficult to find time in the school day for outdoor learning, Vermont's Framework of Standards recommends "frequent interactions with the natural world" as a best practice in science education. We embrace this idea whole-heartedly and are working enthusiastically to make these interactions part of every student's learning.

VEI Offers Climate Change Course

Vermont Earth Institute (VEI) has a new reading and discussion course on climate change called Global Warming: Changing CO₂course. The course covers the science, politics, personal values and habits related to climate change, and explores our individual and collective will and ability to respond to it. As with all VEI courses, there are plenty of inspirational readings – stories of actions that are being taken individually and collectively.

The course or study circle is for a group of 8-12 people and has 4 sessions. Groups generally meet weekly for 1 or more hours. VEI volunteers are available to facilitate the first session. Course participants take turns

facilitating the other sessions. The course is free; the course book is \$15.

We invite SWEEP members to offer this course as part of your adult programming. We also encourage you to get together with friends, neighbors, or other groups in your community to build momentum for addressing this very important issue.

VEI also has 7- or 8-session courses on: Voluntary Simplicity, Choices for Sustainable Living, Discovering a Sense of Place, Globalization and Its Critics, Deep Ecology and Healthy Children–Healthy Planet. There have been 360 course groups in 60 communities in Vermont and the Upper Valley.

To find out more about the Four Winds Nature Institute, visit: <http://www.fourwindsinstitute.org>. or call 802-483-2917.

For more information on the Climate Change or other courses, contact VEI at 802-333-3664 or vei@valley.net or see www.vtearthinstitute.org/programs.html

Teaching Conservation Biology in a Rare Habitat

Rachel Ruppel, VINS Manchester AmeriCorps member and Educator



Conservation biologists at the Vermont Institute of Natural Science (VINS) have been leaders in Bicknell's Thrush research since 1992. A habitat specialist, the Bicknell's Thrush (*Catharus bicknelli*) lives only in mountain forests,

summering in the northeastern United States and wintering on the Caribbean island of Hispaniola. Their small population, limited range and numerous threats to health and habitat make the Bicknell's Thrush extremely susceptible to population declines; it is listed as a Species of Special Concern in Vermont. VINS biologists have studied many aspects of its plight, including "mating systems, mercury levels, and ski area and wind turbine impacts, population monitoring and ecology" as well as climate change (from the Mountain Ecosystem Studies page on the VINS website.)

The educators at VINS Manchester drew on the biologists' expertise to develop an education program on the natural history and ecology of the Bicknell's Thrush and the anthropogenic threats to its survival. An important feature of this program was its presentation within the thrush's actual breeding habitat, the montane spruce-fir community on the summit of Mt. Equinox. Thirty-two home-schooled children and 15 parents explored

the summer habitat of the thrush while learning about its diet, mating and nesting rituals, migration routes, and specialized habitats. Being in the birds' habitat drove home the idea of natural habitat scarcity. Acid precipitation and bioaccumulation of mercury through the food chain came to life as a set of complex but understandable processes through games and demonstrations. At the close of the program, the children brainstormed ways they might help the Bicknell's Thrush's survival, such as turning off lights to reduce energy use so that fewer pollutants enter the air from power generation.

This is VINS Manchester's second year of home-school programs, with fall, winter, and spring series consisting of six programs each. The overall purpose of this program is to provide quality science education outdoors, inspiring participants in the active care of their environment. Ranging in age from four to fourteen, students are taught in both large, multi-age groups and in smaller, age-specific groups. The home-school program has grown from five families in the fall of 2005 to more than fifteen families in '06, requiring VINS to offer both a morning and afternoon session. Topics in the fall series are winter weeds, the Leonid meteor shower, winter survival, chickadees and turkeys.

Plans are underway for the winter and spring series in Manchester and at the VINS Nature Center in Quechee expanding home-school opportunities and other science-based education for all ages, pre-K through adult.

Developing a Citizenry of Ecological Stewards

Karen Keane, VINS Director of Development

The Board of Trustees for the Vermont Institute of Natural Science (VINS) has approved a plan to restructure and expand its educational offerings to bring the VINS conservation message to a broad constituency with the goal of developing a citizenry of ecological stewards.

VINS is fine-tuning an assortment of successful programs developed over 30 years to achieve these goals. To grow this ecological stewardship, VINS will use life-long learning, current science and multiple methodologies as the foundation. What makes VINS unique is the ability to draw upon the current sci-

ence from its team of conservation biologists for content, leadership and knowledge.

The formal education process offers the VINS classroom-based programs that meet educational standards developed at the state and national levels. These programs will take place in schools, at the VINS Nature Center (Quechee), and in communities throughout the region. Small Wonders, ELF, and Environmental Citizenship make up the formal education programs for pre-K through 12. These modules will be available through schools and home-school settings. Upgrading the teaching kits and more

expansive use of the VINS Nature Center highlight the changes in this area. VINS will also increase its reach by expanding teacher professional development, giving teachers proven tools and content so they can provide stronger programs to their students and communities.

Informal education programs will take place outside of a formally organized school setting at the VINS Nature Center and in communities throughout the region. In this program cluster, VINS will build on existing proven-successful programs, standardizing content, using new and varied methodologies and technologies, and develop programs that take full advantage of the VINS Nature Cen-

ter and its new education classroom space.

Now that the Board has approved the sweeping reform plan, the VINS staff is actively developing and pilot-testing program modules, creating evaluation tools to guide ongoing program development and developing and revamping the teaching materials and tools to support this work. Summer camps will be the first major program introduced and will premier June 2007.

According to Last Child in the Woods author, Richard Louv, "Healing the broken bond between our young and nature is in our self-interest, not only because aesthetics or justice demand it, but because our mental, physical, and spiritual health depend upon it."

For more information about these education projects at VINS, contact Teresa Mitchell, Director of Education. tmitchell@vinsweb.org

News from Shelburne Farms

Shelburne Farms was awarded a 2006 National Conservation Achievement Award from the National Wildlife Federation in November for the Farm's unique and engaging education programs.

- Shelburne Farms recently hired Phoebe Garfinkel for a new position, Food Systems Coordinator. Phoebe is charged with further integrating, streamlining, and developing the Farm's systems for offering delicious, local, sustainably produced food for guests.

- In September, Shelburne Farms hosted Bill McKibben's "Walk Toward a Clean Energy Future" to focus public attention on the urgency of global warming and to spark political action. Hundreds of walkers on the five-day, 49-mile trek that began in Ripton, stopped overnight at the Farm before marching to a Burlington rally, where they asked Vermont politicians to sign a pledge for action. That pledge champions an 85% reduction in carbon emissions by 2050, the rapid phase-in of cars that achieve 40 mpg, and a national commitment to meeting 20% of our energy needs through renewables by 2020.

- Shelburne Farms is sharing its "Forest to Furniture" story with visitors to ECHO Lake Aquarium and Science Center in Burlington. Farm staff collaborated with Ted and Sarah Montgomery, a local architect and designer respectively, to create a tree for ECHO's new exhibit, "Treehouses." Made entirely from wood harvested in and around Shelburne Farms, the tree invites young children and their parents to transform wood from tree to product.



Shelburne Farms' "Forest to Furniture" tree at the ECHO Lake Aquarium and Science Center.



BEEC turns 15!

The Bonnyvale Environmental Education Center of Brattleboro, VT celebrated its 15th anniversary with a summertime membership party. Much fun was had by all with potluck delights, birthday cake, trail walks, story-telling with Davis Bates, and dancing!

Science Networking Meetings for K-12 Teachers

SITE	DATE	LOCATION
Lyndonville	January 9, 2007.....	Lyndon State College
Montpelier	February 8, 2007.....	Capitol Plaza, Montpelier
Colchester	February 15, 2007.....	Hampton Inn, Colchester
Dummerston	January 18, 2007.....	The Learning Collaborative, Dummerston
Rutland	February 1, 2007.....	Holiday Inn, Rutland
Manchester	February 7, 2007.....	Inn at Willow Pond

All meetings are 8:30 am – 3:00 pm; please bring your own lunch. Questions? Contact Rose at (802) 828-3114 or gail.hall@state.vt.us

Science Network Meetings will begin January 9, 2007 and continue in the six regions of the state until February 15th. The focus of these meetings for K-12 Vermont teachers of science will be Science Assessment, Questioning to support assessment and Unwrapping the Science GE's to identify basic content for instruction. NECAP Science information will also be provided. ON-LINE REGISTRATION REQUIRED at http://education.vermont.gov/new/html/pgm_curriculum/science.html and follow the link to the On-Line Registration Form.

Resources & Opportunities

ONLINE EETAP COURSES:
Applied EE Program Evaluation
 FEBRUARY 19 - MAY 4, 2007
 11-week course to assist environmental educators and natural resource professionals in evaluating their education programs.

Fundamentals of EE
 FEBRUARY 5 - APRIL 20, 2008
 10-week course about the fundamentals of environmental education provides educators with the knowledge and skills necessary to incorporate quality environmental education into their instruction.

Both courses offered through U. of Wisconsin-Stevens Point, in-state tuition rate applies to all participants. Three undergraduate or graduate credits available. Courses also offered as a non-credit workshops. *Contact: Angela Lemar Angela.Lemar@uwsp.edu for a registration form or visit the course Web site. <http://www.uwsp.edu/natres/rwilke/eetap/>*

Do You Design and Implement Citizen Science Projects?
 The Cornell Laboratory of Ornithology is undertaking a NSF-funded project to build community support and needs your help. If you coordinate a North American citizen science project of any size or discipline, please take 15-20

minutes to complete this survey: <http://www.surveymonkey.com/s.asp?u=282972629584>. *Questions? Email Jennifer Shirk, JLS223@cornell.edu*

Call for Proposals!
The Great Turning Conference
 Deadline: FEBRUARY 14.
 "The Great Turning: Education, Leadership & Activism for a Life Sustaining Civilization," sponsored by Audubon Expedition Institute October 17-20, Moultonboro, NH. The conference will focus on the strategies of environmental activism and environmental education. Its purpose is to pose critical questions about the challenges and opportunities faced while working toward a life-sustaining civilization, and the different responses to them. *Contact: GreatTurning@lesley.edu http://lesley.edu/gsass/audubon/conference_great_turning.html*

New Search Tool
 Check out this search tool from the Society for Conservation Biology (SCB), for conservation practitioners, students, and researchers: <http://www.conbio.org/WorkingGroups/SSWG/catalog/sswg.cfm>. Learn more about the Social Science Working Group - a global community of conservation scientists and prac-

tioners within SCB: <http://www.conbio.org/WorkingGroups/SSWG/Index.cfm/>

Plant for the Planet: Billion Tree Campaign
 The United Nations Environment Programme (UNEP) is launching a major worldwide tree planting campaign. This "Plant for the Planet" campaign, will encourage people, communities, business and industry, civil society organizations and governments to enter tree planting pledges on this website with the objective of planting at least one billion trees worldwide during 2007. <http://www.unep.org/billiontreecampaign>

Downloadable Movie on Global Warming Climate. A Crisis Averted looks back from 2056 and recounts how ordinary citizens in 2006 — realizing that global warming was a scientific fact and not a climatic theory — take action to demand clean energy and other planet-friendly options. The movie describes how a movement called RenewUS effected real change with an action plan on global warming. *To download the movie to show others, send your request to renewus@greenerworldmedia.com, explaining how you plan to use it. http://www.renewus.org/the_movie.html*

Planet Plant Botanic Gardens Conservation International's new web site for kids ages 9-12. Online and offline art, science, outdoor, and botanic garden activities about the importance of plants and the need for conservation. Every month features a new plant with a great conservation story. <http://www.planetplant.org>



New "Promise of Place" Web Site (www.promiseofplace.org), offers support for place-based educators with success stories, ongoing research into the impact of place-based education on student achievement, resources, and forums for a growing community of practitioners to share, inform, and inspire each other. The web site is a collaborative project of the Center for Place-based Learning and Community Engagement, a partnership of Shelburne Farms, the Conservation Study Institute of the National Park Service, and Marsh-Billings-Rockefeller National Historical Park.

ABCs of Ecology®: An Educator's Guide to Learning Outside Ferry Beach Ecology School shares its innovative outdoor teaching techniques with the publication of this 230-page book is for anyone committed to teaching children about the world in which they live. Geared primarily for upper elementary and middle school aged students, this curriculum guide includes hands-on activities organized into lessons for use as a single class period or combined to form a broader ecology unit. Visit <http://www.fbes.org/Store.html> Single copies - \$24.95. For educational organizations: five or more copies for \$20.00 each.



Themes, anyone? Each summer issue of the SWEEP newsletter has a theme while the winter issue does not. *If you have an idea for a good theme for next summer's edition, please contact Barry King at kinglet@together.net*

GREEN TEACHER seeks Translators With a burgeoning Hispanic school population in the United States and thousands of French-language schools in Canada, there is a real need for more educational materials for North America's other two languages. Unfortunately, there are no magazines similar to Green Teacher that are published in French or Spanish, nor are we in a position to publish ones of our own.

With the assistance of our multilingual readership and many volunteers from around the world, we're hoping to make a small dent in this language barrier. At the beginning of 2006, we added two new sections to our website, *Green Teacher en español* and *Green Teacher en français* where visitors (for free) can download a selection of Green Teacher articles and learning activities that have been translated into Spanish and

French. We hope that over time our collection will grow to become a well-used and useful resource, not only for North American educators, but also for educators in Spanish and French-speaking countries around the world.

We continue to seek the assistance of volunteer translators who can write fluently in French or Spanish, and who would like to translate a favorite article from Green Teacher. If SWEEP members can share this notice with their bilingual friends who might be interested, we would be most appreciative. All volunteer translators will have as much time as they need to complete the translation. The work of all volunteers will be credited in the body of the articles that they have worked on. *If you are interested, contact Tim at tim@greenteacher.com or call (888) 804-1486. (Tim Grant is the Co-editor of Green Teacher magazine and lives in Toronto.)*



Get Swept Away!

Vermont StateWide Environmental Education Programs (Vermont SWEEP) is a coalition of individuals & organizations promoting environmental education in Vermont

Name: _____

Address: _____

Town/State/Zip: _____

Email: _____

Organization: \$40 Individual: \$15

Please make check payable to SWEEP and mail to: SWEEP, 9 Bailey Avenue, Montpelier, VT 05602. Thanks!

MEMBERSHIP BENEFITS:

- Twice-annual membership meetings; periodic development workshops & conferences
- Representation to the six-state New England Environmental Education Alliance (NEEEA)
- Inclusion in SWEEP's directory, which lists members' environmental education services and is distributed to VT teachers and educators.
- SWEEP's newsletter

Calendar

JANUARY & FEBRUARY

Science Networking Meetings (*see article, p.10.*)

MARCH 15-17 **4th Promise of Place Conference**
Lake Morey Inn, Fairlee, VT. Join colleagues from throughout the Northeast and beyond in an inspiring conference that celebrates the power of place-based education. Visit <http://promiseofplace.org> for brochure and registration form.

MARCH 29 - APRIL 1 **National Science Teachers Association National Conference**
St. Louis, Missouri. "Science: A River of Connections." Registration: http://www.nsta.org/conferencedetail&Meeting_Code=2007STL

APRIL 15-22 **National Environmental Education & Training Foundation's annual National Environmental Education Week.** Let's increase the educational impact of Earth Day by creating a full week of educational preparation, learning, and activities in classrooms and non-formal venues. **New for 2007 - Richard C. Bartlett Award for Environmental Education and online Nature Bee.** For details and to sign up: <http://www.eeweek.org> or Karen Schultz at eeweek@neetf.org

APRIL 19 **SWEEP MEMBERSHIP MEETING**, Thursday 4:30-7:30 PM, Green Mountain Audubon Center, Huntington, VT. In addition to our business meeting and roundtable, we will get a look at Audubon Vermont's exciting Forest Bird Initiative and learn how our northern forests are essential to Vermont's breeding birds and how lands can be managed to enhance forest bird populations.

SWEEP People

In early September, **Lidie Whittier Robbins** left her post as Education Director of the Northern Forest Center and moved with her family to Maine. She can be reached at lidiew@hotmail.com. **Teresa Mitchell** is the new Director of Education Programs at VINS. She has extensive experience in professional educator development, student and program assessment, curriculum development, program implementation for interdisciplinary teams and classroom teaching. Teresa has an MS in Environmental Education from Antioch, a BEd in Secondary Education from U. Alaska and a BA in History at Portland State University.



Vermont SWEEP

Statewide Environmental Education Programs

9 Bailey Avenue
Montpelier, VT 05602

Save the Date! **APRIL 19, 2007**
NEXT SWEEP MEETING
Green Mtn. Audubon Ctr., Huntington