



Central Park Zoo: Connecting People to Wild Nature

by Karen Tingley, Curator of Education

“My class and I had a great time at the zoo. The kids learned a lot from their day of exploring and connecting to nature.” – MS 51, Brooklyn.

“Your programs are well-rounded. They keep the children’s attention while accessing multiple intelligences such as movement, mathematical and linguistic.” The Brick Church School, Manhattan.

“Your performances inspired our students to explore their natural world in follow up projects and activities. Some students incorporated their new knowledge into science fair projects which were very successfully completed.” Grand Avenue School, Long Island.

These comments make what we do in the Central Park Zoo Education Department all worth the effort. The countless hours planning curriculum, driving to central Long Island, learning how to work with our newest animals, such as a chinstrap penguin named Champ, or training a new crew of zoo volunteers are rewarding because we believe that our organization’s mission is essential to the integrity of life on Earth.

The Central Park Zoo is part of the Wildlife Conservation Society (WCS), which also operates the Bronx Zoo, New York Aquarium, Prospect Park Zoo and Queens Zoo. WCS saves wildlife and wild places worldwide through science, global conservation, education and the management of the world’s largest system of urban wildlife parks. Together, these activities create positive attitudes towards nature and help people imagine wildlife and humans living in harmony.

With the support of the science and conservation aspects of WCS, the Education Department is in a unique position to advance its mission by teaching, inspiring and cultivating an informed community of conservation stewards. Our programs are grounded in a robust science and outcomes-based framework for conservation education. The goals for program development and advancement are:

- Making nature relevant in the lives of children, families and adults.
- Developing ecological literacy among all audiences.
- Providing specific pathways to conservation, through career development, college readiness and citizen science.

The Central Park Zoo is doing its part to meet all of the elements of these goals through programs designed to meet the needs of specific audiences. With over 1 million visitors each year, we have many different audiences—tourists, school groups, families and thousands of people we reach through our outreach program. There are four major programs that we operate to meet our goals: Zoo School classes for schools and groups, Wildlife Theater outreach program, Youth and Family programs and our Zoo Guide volunteer program.

Zoo School programs are designed for schools, camps and other groups. Using interactive props, live animals, exhibit visits and hands-on activities, one of our four full-time instructors teach lessons that directly relate to wildlife conservation while enforcing science, literacy and math skills. In our newest program, Sea Duck Scientists, middle school students meet a WCS Research Scientist to learn about our sea duck breeding and conservation programs by touring the sea duck aviary, feeding the birds, conducting a census and engaging in lab work to learn more about sea duck adaptations.



The Wildlife Theater program offers auditorium and classroom based educational performances to schools, libraries, hospitals, day care centers and parks in the tri-state area. In 2010, over 38,000 children enjoyed our shows performed by 2 full time educators and part-time actors. Each 45-minute program includes

an interactive performance filled with singing, dancing and puppets. These hands-on and theatrical life science programs seek to establish a sense of wonder and an understanding of conservation concepts, while developing vocabulary and knowledge of story lines, which are important pre-reading

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EEAC NEWS.....

Steering Committee Meetings

EEAC Steering Committee members meet on the third Wednesday of every other month (except August). Upcoming EEAC Steering Committee meetings are March 16 and May 18, 2011.

Steering Committee meetings are held at New York University (NYU) and at sites throughout New York City. When we are at NYU, meetings are held in the fifth floor conference room, Pless Building, 32 Washington Square Park East and Washington Place. Meetings are also held at facilities associated with EEAC members. Please visit the EEAC website at www.eeac-nyc.org for meeting location or contact an EEAC Steering Committee member. All steering committee meetings are open to anyone interested in learning about environmental education in New York City and sharing information about special programs and projects.

Newsletter Deadlines

If you would like to submit an article for the newsletter, please email it as a Microsoft Word attachment to lmiller296@aol.com. The newsletter deadlines are the first Monday in April, July, October and January. We would love your ideas!

Newsletter Committee & Contributors

Meg Domroese
Kim Estes-Fradis
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Joy Garland
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Betsy Ukeritis



The Environmental Education Advisory Council (EEAC) would like to acknowledge the support of the New York City Department of Environmental Protection (DEP) for helping to produce the EEAC newsletter. Visit the DEP website at www.nyc.gov/dep, email educationoffice@dep.nyc.gov or call (718) 595-3506 for information about DEP's education resources for students and teachers.

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This newsletter is a publication of the Environmental Education Advisory Council (EEAC), a voluntary organization of educators, classroom teachers, administrators and other professionals in active support of quality environmental education.

EEAC Officers

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John Pritchard, Treasurer
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GET CONNECTED!

If you are a member of EEAC and want to be part of information sharing and on-line discussion on the EEAC listserv, contact:

cfranken@nyc.rr.com

CHAIR'S MESSAGE

Welcome! And I hope this finds us all unburied from snow and keeping warm. I would first like to thank everyone for putting their trust in me to lead this organization for the next two years. I appreciate the support, but need to ask everyone to take a more active role in EEAC. This is a time for members to become active: we need help on the newsletter (someone to take over the Activity Section and the EE Resources Section) and online (We'd like to start a Facebook page but need a person to do regular updates and postings.)

There will be some transitions this year, but the Program Committee already has a slate of fantastic hybrid meetings, including one at the BioBus in March. The committee is already busy working on organizing the Annual Meeting for November 2011 (There's talk of a panel on urban farming!).

Right now, to begin one transition, we are working out a suitable fix to listserv problems. Within a few weeks, EEAC should have a new listserv. Treebranch, our listserv host, has been fabulous with their support of EEAC by maintaining the listserv, but it's time to move on. We are exploring Yahoo!Groups and Google Groups.

Please don't hesitate to step up and help EEAC out by contacting me at baukerit@gw.dec.state.ny.us or 718-482-6404. I hope you have an enjoyable winter and look forward to seeing you all at the upcoming EEAC meetings! The next one will take place on March 16th @ 5pm at that BioBus in Washington Square Park.

Sincerely,

Betsy Ukeritis
EEAC Chair

MAKE EARTH DAY EVERYDAY

by Michelle Fufaro Beach

When we make our New Year's resolutions they are often the same year after year: eat better and healthier foods, lose weight, exercise more, and improve overall productivity. This year, we should also add "becoming better stewards for the environment" to our list of resolutions. Below are just a few bad habits many Americans have and resolutions we can all make for greener lifestyles and a healthier planet.

BAD HABIT: We Americans tend to dispose of a lot of trash every day. But did you know that during the holidays we throw out an additional 25 million tons of trash? Most of this waste is a result of gift wrapping.

RESOLUTION: Make a difference by packaging gifts in reusable gift bags or available household materials such as newspapers or other fun, reusable paper.

BAD HABIT: A glass of wine is always nice, especially in colder temperatures. But wine production and distribution across the globe emits about the same level of greenhouse gases as a million passenger vehicles annually!

RESOLUTION: When purchasing wine, think big! Larger bottles have a lower carbon impact per ounce.

BAD HABIT: We are in the midst of flu and cold season, which means we will go through a lot of tissues. In fact, each year the average American uses up to 50 pounds of tissues and tissue-type paper.

RESOLUTION: Look closely when choosing your paper products. We can all save trees by purchasing products that were made with a high percentage of "post-consumer waste," or PCW content. Most companies list their PCW on the package.

BAD HABIT: Sweet fact! On average, Americans consume close to their full body weight in high fructose corn syrup (HFCS) and refined sugar every year.

RESOLUTION: Packages tell a lot. Read labels closely and try to stay away from foods containing high levels of HFCS and refined sugar, which are found in most highly processed foods. Plus, avoiding HFCS is a healthier choice! Resolve to be an Earth steward by making some better lifestyle choices.



BOOK BUZZ

Sleigh Bells in Springtime: Frogs Calling

by Jessica R. Kratz

Jessica Kratz, Director of the Staten Island Greenbelt Nature Center, has written a sweet, charming little children's book about frogs. Using rhyme, it tells the story of a child who likens the sounds of spring peepers calling from a vernal pond, to the sleigh bells heard at the Christmas holidays that she loves. Along the way, she shows how hiking in the woods exposes her to the wonder of the lovely sound. That leads father and daughter to research frogs in the public library and to the internet for more information. The child listens to CDs of the various frog calls so she can identify the various species by their sound. She participates in a citizen science project by collecting, entering and sharing data about the frogs for research purposes.

Handsomely illustrated by Stephen Adams, the 40-page, soft-covered book also has several photographs of different frogs incorporated into the colorful drawings. Along with the girl in the book, the reader learns about frogs, their habits and habitats.

The book is suitable for ages 3 to 12 and may inspire a youngster to observe not only by looking, but by careful listening, then be enriched by research follow-up and encouraged by a helpful parent or other adult.

Reviewed by Lenore Miller

Copies of the book cost \$15, including shipping, and are available by contacting the author, Jessica Kratz, at springpeepers10@gmail.com. Jessica will sign it for whomever you designate.

The Audubon Camp in Maine

The Audubon Camp in Maine, on spruce-covered Hog Island, is back in business! They are offering 6 residential sessions this summer, including **Sharing Nature: An Educator's Week**, in July. The food is fabulous, as are the views, the serenity, the networking, the staff and the quality of the programs. Go to <http://hogisland.audubon.org> for more information, photos, etc.

Celebrate the 75th anniversary of America's oldest operating adult environmental education center!

EE NEWS

New York State Environmental Literacy Committee Update

Time For Broader Outreach: the Outreach Subcommittee is working to reach non-traditional organizations to bring them into the Environmental Literacy push, including health care organizations, youth organizations, professional education organizations outside of science (Social Studies, English Council, etc), teacher unions, the state Parent Teacher Association and universities.

Writing the Draft Plan: The Education Subcommittee is writing the draft NYS Environmental Literacy Plan and hopes to present it at the New York State Outdoor Education Association conference in October 2011.

Reaching out to the Politicians: the Legislative Subcommittee is reaching out to Governor Cuomo, members of the NYS legislative education and conservation committees and to the State Education Department.

EE RESOURCES

EELinked communities from NAAEE

The North American Association for Environmental Education (NAAEE) has set up a new network of communities to offer resources and help in environmental education. The new EELinked (<http://eelinked.naaee.net/>) has communities for State Environmental Literacy Plan planning, international environmental education and one for job seekers. There even is a Spanish-speaking community. You don't need to join to view and download the resources posted at these communities.

National Environmental Education Week 2011: Ocean Connections.

EE Week 2011: April 10-16, 2011

The ocean covers nearly three quarters of our planet's surface, provides 70 percent of the oxygen in the atmosphere and is the habitat for about 20 percent of the known species on Earth. More than half of all Americans live within 50 miles of a coast, but whether near or far, our lives are inextricably linked to the ocean. As part of this year's Ocean Connections theme, EE Week will provide special resources, lesson plans and opportunities for educator professional development and student learning about the Gulf oil spill.

http://www.eeweek.org/ocean_connections

New Forest Web Resources from US Forest Service

Discover the Forest - <http://www.discovertheforest.org/> - for parents and kids to learn where to go to explore forests- real ones and online.

Finding My Forest - <http://www.findingmyforest.org/> - to help teachers bring local and national forests into their curricula.

UNITED NATIONS LAUNCHES INTERNATIONAL YEAR OF FORESTS IN 2011

by Joy Garland

As urban dwellers, we may not be aware of the importance of forests and how we all are affected by their presence as well as their loss. Each year, the United Nations highlights a theme to focus the world's attention on a major issue and this year, 2011, has been declared International Year of Forests,

What benefits do we, as New Yorkers, derive from trees – such as the honey locusts that line 20th Street where I live, or the native trees of Stuyvesant Cove Park that provide food and habitat for wildlife, or the trees in your neighborhood?

The leaves of these trees take in the carbon dioxide that we breathe out and other carbon emissions from fossil-fueled vehicles and industry, and through the process of photosynthesis, they make food for themselves and release oxygen for us and all living creatures. Trees also absorb water through their extensive root systems, which help to prevent mudslides and riverbank erosion. The more water that street trees can absorb, the less rainwater goes into the storm drains reducing sewer overflow. Trees enhance property values with their beauty, especially in autumn when the chill produces a multicolored landscape, reason enough to celebrate them in poetry and song.

In developing countries like Kenya in Africa, many acres of forest have been lost at an exceptionally fast rate as a result of logging and charcoal burning. Workers of the Greenbelt Movement, formed by Nobel Prize winner Wangari Maathai, joined local people and students to plant thousands of seedlings, replacing the lost trees of the Eburro forest, a major catchment area of Kenya.

In India, tribal women in the northern Uttar Pradesh State joined together by holding hands around the trees of their forest to prevent men from cutting the trees down to build a dwelling for the local Maharajah.

In Brazil, large tracts of the Amazon rain forest have been clear-cut and turned into farms. Because the soil there is not suitable for farming, its ability to sustain growth is quickly depleted and crops fail. In addition, the loss of the tree cover in Brazil contributes to global climate change. Deforestation threatens indigenous people, their cultures and livelihood, and threatens the extinction of numerous plants and animals, yet to be discovered, some of which may be sources of new medicines.

In Peru, a non-governmental organization known as Yachay Wasi (based in Cuzco and New York City), is a partner to the UN Development Program's Billion Trees Campaign. In January and February 2009, indigenous descendants of the Incas planted 6,000 native trees during the rainy season. In January 2010, an additional 6,350 native tree saplings were planted at a cost of \$1 each. This effort to restore an ecosystem continues in 2011, providing jobs in impoverished communities, a key component of the UN's Millennium Development Goals in overcoming poverty.

Our own Mayor Michael Bloomberg produced PlaNYC in 2007, outlining a program to make New York City an example of sustainable development, setting a goal of planting One Million Trees. In November 2010, the Mayor was elected Chair at the C 40 Climate Leadership Summit in Hong Kong for the next two years. In his acceptance speech, the Mayor challenged the heads of 40 large cities to lead the world in addressing climate change and building a sustainable future.

Groups like Trees New York, the New York City Parks Department and the New York Restoration Project invite volunteers and donors to help support our urban forests. Trees New York trains and licenses Citizen Pruners to care for street trees by offering a course and hands-on learning (212-227-1887). Citizens can notify their local community board if they notice missing, damaged or diseased trees. Individuals and store owners can help trees survive in hot summers by watering them, providing fencing to discourage dogs from relieving themselves in the tree pit and to prevent bikes from being secured to trees thus causing injury to the bark.

Trees also cool off streets, contributing further to a thriving environment by lessening the need for air conditioning and fans in spring and summer months. This is an aid to the economy, as well. According to Million Trees NYC, "Our street trees provide \$27 million a year in energy savings." Their studies suggest: "Trees provide \$5.60 in benefits for every dollar spent on tree planting and care."

Volunteer opportunities are available to all New Yorkers. On the web site, www.milliontreesnyc.org, one can request a street tree, add to the collective tree count after planting a tree of his or her own purchase, volunteer to aid in the planting and upkeep of trees and make tax-deductible donations. Training and educational workshops, events, outings and free tree giveaways also encourage planting. So far the program is on track, with 315,979 trees planted. Let's do our part to give back to trees what they have given to us in 2011, Year of Forests.

OIL SPILL CLEAN-UP SIMULATION

By Lenore Miller

Since an oil-drilling platform exploded and sank last year, resulting in a massive, disastrous oil spill in the Gulf of Mexico, scientists have been trying to decide the best way to clean up this important body of water.

Children can test a variety of materials and decide for themselves which method/material soaks up the most oil in their small body of water.

Materials:

- aluminum pie pans or shallow plastic bowls
- nylon net
- pieces of sponge
- vegetable cooking oil
- cardboard or newspaper
- 2 droppers or spoons
- cotton or other string
- cotton balls
- pieces of paper towel
- dish detergent

Divide the class into working groups. Give each group a few shallow containers, an empty plastic milk container filled with clean water, a half cup of oil, a dropper, a pill container with small amount of detergent and various materials (keep the size of the material uniform) for cleaning up the oil. You can add to the list above if you wish. Discussion: Talk about the devastating oil spill in the Gulf of Mexico last year and its effect on the wildlife—fish, shellfish, other marine life, birds, plants, etc. If you have a feather or a rock, dip it into some oil to show how it clings to and coats the feather (or rock) so students can see how birds (and land) are affected. You can locate photographs that show birds covered with oil, unable to fly.

Activity: Have each group pour some water into the shallow bowl or pie pan. This will be their “ocean”. Using a spoon or dropper, place 15-20 drops of oil on the water. Does the oil float or sink?

Try the various materials—sponges, cotton balls, toweling, etc.—one at a time and observe how long it takes each material to soak up the spill. Record the time for each one. Also have groups observe and record the amount of oil soaked up...a little, some, all? It may be necessary to discard the water/oil samples in between each trial; keep empty buckets handy for this purpose.

Each group should then rank the materials according to how well they worked.

For the final trial, place a drop of detergent on the oil and have the class observe and record how the detergent changes the oil slick. Where did the oil move?

For cleanup, have the groups dump their water/oil in a bucket, and the used oil-soaked materials in a plastic bag. Before dumping the water into a sink, mix some detergent in the bucket to break up the oil.

Sharing Data and Observations: Post and discuss the results of the various trials to determine which material worked best to soak up the spill. Is there agreement across the groups? Talk about what happened when the detergent was dropped on the oil slick. Compare that action to the use of chemical dispersants. How might the chemicals affect the wildlife? What about the microscopic living things in this important living body of water? Do we know the effects of the oil and/or the chemical dispersants?

Other lines of discussion: Still vs. moving, wave-tossed waters (blow on it to make waves). What other materials might work to soak up or contain a spill? Would human and pet hair enclosed in pantyhose be an effective floating boom? (not useful). How can we prevent oil spills? Who should be responsible for cleaning up the water and beaches after an oil spill?

Continued from page 1

skills. Our classroom program, Petunia Penguin Goes to School, uses “poetry in motion” to establish the connection between actions and the written word, games, movement and a firsthand encounter with a giant five-foot “Gentoo penguin” character to learn about penguin survival in harsh polar habitats.



The Zoo’s Youth and Family Programs target audiences with children ages 2-15 to participate in a variety of engaging workshops that offer a unique zoo experience for the guests. In the Junior Keeper Polar Bears class, kids understand what it takes to be a polar bear keeper by learning how to weigh our animals, create enrichment for the polar bears (think over-sized dog toys filled with fish, kibble, and peanut butter) and take a behind-the-scenes tour of our kitchen where we prepare the polar bear food. The kids also get to meet a keeper and find out what it’s like to care for Gus and Ida, our resident polar bears. During the summer, we offer a wildly popular series of week-long Zoo Camp programs where kids spend a week exploring the natural wonders of the zoo. This year we’ve expanded the camp by starting a new Teen Intern program

– a 3-week intensive camp where kids ages 12-15 will have the opportunity to try out a variety of zoo careers from exhibit designers (they’re building a frog exhibit!), handle some animals (they’ll be showing off our rabbit, Harley, to kids in the Children’s Zoo), and of course being a zoo keeper (Othello the Cow’s home needs a lot of scooping in the morning!).



The Zoo Guides interact with the public in an interpretive style that utilizes inquiry methods and theater techniques. Guides currently conduct roaming exhibit interpretation, live animal encounters in the Acorn Theater and conduct tours for schools and private groups. In the past year, our guides have clocked in over 13,000 hours of interpretation in the zoo. Our Zoo Guides work tirelessly to ensure that visitors have a pleasant experience at the Zoo, learning about conservation actions that they can take to help wildlife so they can have an increased connection to nature,

Through all of these programs, we work to establish the type of environmental education that is crucial to the health and well-being of our planet. We are certainly aware of areas where we need to expand our reach and we’re working on possible projects to do just that. We hope that through upcoming citizen science projects and stronger collaborations with local universities, we can make “conservation” a more accessible concept for New Yorkers. It is an exciting time to be in this field and we look forward to contributing to the NYC environmental education efforts that our fellow organizations have been engaged in for some time.

For more information about our programs, check out our website www.centralparkzoo.com, email cpzregistration@wcs.org, or call 212.439.6540.

The New York City Department of Environmental Protection (DEP) is pleased to announce the twenty-fifth annual New York City Water Resources Art and Poetry Contest for K-12 grade New York City students. Students are encouraged to create art and poetry that reflect an appreciation for New York City’s water supply, our wastewater treatment system and the importance of water conservation. Submissions will be accepted online from March 1 – March 31. For contest guidelines, entry forms and to submit entries online, [click here](#).



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Jay Holmes, Treasurer, EEAC, American Museum of Natural History, 79th Street and Central Park West, New York, NY 10024

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Please check the appropriate calendar year membership category:

☐ \$ 20 Regular ☐ \$ 50 Sustaining Organization

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Please make checks payable to EEAC.

Thank you!

EEAC is a 501-(c)3 organization.

I would like to become involved in a committee.

Please provide me with information about the following committees:

☐ Communications ☐ Programs ☐ Membership

☐ TEEP (Teacher Environmental Education Preparation)



ENVIRONMENTAL EDUCATION ADVISORY COUNCIL

c/o Teresa Ippolito

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