



Testing Waters Across the Globe

by Michelle Fufaro

I'll never forget November 2008. Not only was it the culmination of an exciting and historical election year, but it was my time for a remarkable and unforgettable experience. I traveled to Dhaka, Bangladesh to work with teachers and students on a special project called Four Rivers, One World. This project was developed by International Education and Research Network (iEARN), a global non-profit educational resource started in 1988 that now involves about 20,000 schools and youth-based organizations in more than 115 countries. iEARN's mission is to "empower teachers and young people to work together online using the Internet and other new communications technologies." The iEARN network enables hundreds of thousands of students and teachers to collaborate via the Internet world-wide every day. Four Rivers, One World (FROW) is just one of the many projects and programs provided by iEARN.

FROW is a project that was designed for teachers and students to study four rivers in four different countries in partnership with the Stevens Institute of Technology in New Jersey and Water-Keeper Alliance in NYC. The four rivers are the Mula River in Pune, India, the Bhagmati River in Kathmandu, Nepal, the Buriganga River in Dhaka, Bangladesh and the Hudson River in New York City, NY. The project encourages and teaches students and teachers how to become active and responsible citizens by means of international collaboration in each of the four countries. Through support from the US Department of State, Bureau of Education and Cultural Affairs, groups of participating teachers from the four countries participated in expeditions on the rivers where they performed water quality



tests, community and service learning projects and professional development workshops. FROW is also an exchange program for teachers in those countries. In February 2008, teachers from Nepal, India and Bangladesh traveled to New York City to participate in the YouthCAN conference at The American Museum of Natural History. This past fall, two to three US teachers were selected to travel to one of the participating Asian countries to learn about their education system, water testing techniques and projects taking place in their classrooms.

I was selected to travel to Bangladesh with another teacher, Kim Baker, Coordinator of Urban Ecology at The Center for the Urban Environment. This was the first visit to Bangladesh for both of us so we were glad to be traveling together. Our hosts were a group of remarkable teachers from Dhaka, which is the capital city. Mr. Rajib Lochan Das, the coordinator for iEARN and also a teacher of Mathematics at the Agrani School, was our main contact. He organized an experience that was both fulfilling and enriching for us. Mr. Habib Bahar Galundaz and Mr. Proshanta Sarker were also wonderful hosts during our week there.

We began the ten-day stint with a three-day FROW conference which included a group of about 20 teachers who teach different subjects areas and levels. Rajib designed the conference to inspire teachers who are not already involved in iEARN Bangladesh to become involved in the network and the FROW project. The attending teachers were from various schools in



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EEAC NEWS.....

Steering Committee Meetings

EEAC Steering Committee members meet on the third Wednesday of every month (except August). Upcoming EEAC Steering Committee meetings are Feb. 18, March 18, April 15, and May 13.

Steering Committee meetings are usually held at New York University, Pless Building, 32 Washington Square Park East and Washington Place in the 5th floor Conference Room. 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.

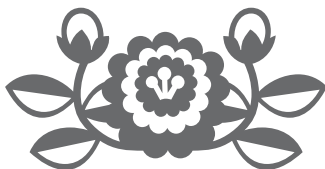
Meetings are also occasionally held at New York City sites associated with our members. Please be sure to contact an EEAC Steering Committee member or visit the EEAC website at www.eeac-nyc.org to confirm meeting location and schedule.

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
Michelle Fufaro
Joy Garland
Jane Jackson
Regina McCarthy
Lenore Miller, Newsletter Editor
Betsy Ukeritis
Jill Weiss



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.

ENVIRONMENTAL EDUCATION ADVISORY COUNCIL

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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.

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*Affiliations for identification purposes only.

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

Message from the EEAC Chair

February 2009

Welcome to our first EEAC newsletter available both electronically and in print form! Thanks for your overwhelming support of this initiative. This is a big step for us and we will be working over the next years to make the format easier to access and read.

Special thanks in this first issue of 2009 to Barry Weinbrom (Vice Chair and Programs) and the Program Committee for creating this draft line-up of programs for the year. Here are some samples:

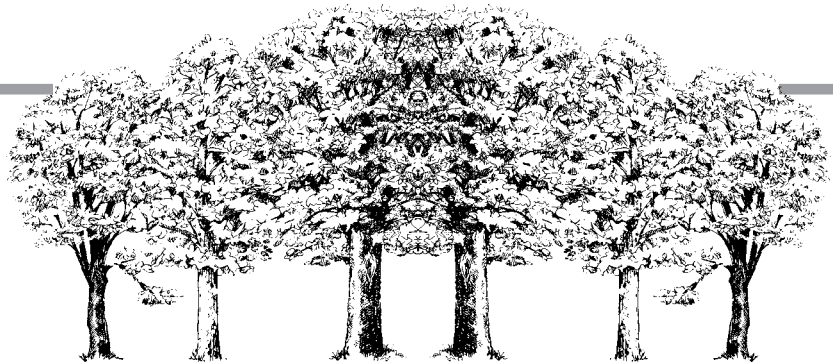
We're had an exciting tour and visit to the Intrepid Sea Air and Space Museum in January. We are hoping to visit the General Theological Seminary to learn more about their geothermal heating and cooling system in March. In April, we'll watch a film to celebrate Environmental Education and Earth Weeks. We are hoping to hold an advocacy panel in May and will, of course, offer Alan Ascher's Horseshoe Crab Walk on Thurs., May 21 at Plum Beach from 4-6 PM. Lastly, we may even have a program at Governors Island that includes a bike ride!

Please join us at our programs and meetings. It's a great way to stay connected with changes and trends in our sector as well as meet people, like you, who advocate for environmental education. Keep an eye out for a programming survey in the coming weeks. Your feedback is very important to us and will help keep EEAC a relevant resource for its membership.

I look forward to working with you in our programming, communications and networking efforts in 2009!

Best, Jill Weiss

ARBOR DAY 2009



It's not too soon to think about participation in Arbor Day 2009!

The official New York State Arbor Day is the last Friday in April. Unless religious holidays are in effect, it is expected that New York City schools will honor April 24th as the 2009 Arbor Day.

FREE TREES!

Free trees will be available to schools from the Nursery at John Bowne High School. Brochures with order forms will be prepared early in March and will be sent electronically or by regular mail.

PLAN NOW

Start investigating sites and make preparations so your school can have one or more trees in 2009. Enlist your students and the custodian in the process.

CONTACT:

Nancy A. Wolf, Director of the Arbor Day Project
(718) 834-4589
Jlnwolfinc@aol.com

City Kids Catch Fish in the Hudson

Bill Fink

For close to twenty years, Battery Park City Parks Conservancy has offered one of New York City's most unique marine education and fishing programs to teachers and their students, free of charge.

A typical class visit starts with an informative discussion of the Hudson River, including its history, ecology, environmental concerns, pollution and more. We explain why we adhere to a catch-and-release policy and then demonstrate how to use a rod and reel safely and correctly.

The class is then divided into small groups and under the guidance of a Master Angler, they walk to the nearby seawall and begin fishing. Within minutes, cries of "Fish On!" can be heard as the ecstatic kids carefully place their fish in a large, aerated holding tank.

The tank soon becomes home to mussels, barnacles, jellyfish and crabs, plus a wide assortment of fish. Visitors in the area, as well as the kids and teachers, are amazed at the amount of marine life that resides in the Hudson River.

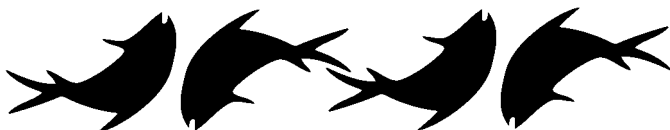
After a break for lunch, we review the catch of the day and discuss ways that the kids can become stewards of our rivers and oceans. Finally, each teacher is presented with a useful packet of related information and the kids help us return everything in the tank to the river.

Our program continues to attract new schools and organizations. At the same time, we remain a favorite destination for a sizeable number of schools that have been participating in the program for many years.

The majority of the students we encounter know very little about our Hudson River, its history, ecology, or cycles of pollution and recovery, and few students have ever experienced the thrill of catching and releasing a fish. We strictly adhere to a catch-and-release policy that insures a viable fishery in the future.

A total of 1088 fish were caught and released in 2008. They were the following species (listed in order from greatest quantity caught): cunner, porgy, sea bass, striped bass, blackfish, bluefish, sculpin, oyster toadfish, tommy cod, flounder, sea robin, white perch.

If you would like to arrange a class trip, or learn more about the program, please call Craig Hudon at 212.267.9700 for more details.



Book Buzz March 2009

Regina McCarthy

One of the initiatives of PlaNYC 2010 is Million Trees NYC. This public-private partnership of City Parks and NY Restoration Project plans to plant a million trees throughout the city in the next decade.

There are many resources out there to assist the teacher and informal educator. Nancy Wolf, whom I've nick-named Nancy of the Trees, has revised her earlier tree curriculum with some assistance from other experts in the field. It can be found on line at:

http://www.milliontreesnyc.org/html/resources/Make_Every_Day_an_Arbor_Day.pdf

A just published book from Brooklyn Botanic Garden is *The Tree Book: For Kids and Their Grown-ups*, written and illustrated by Gina Ingoglia. It is a comprehensive book that is accurate and well-formatted. My one criticism is that it is a bit too verbose for younger readers. It would do very well as a teaching resource. It covers all the bases in tree concepts: structure, shape, changing color, bark, trees in winter, flowers and fruit. This first part of the book is followed by individual descriptions of 30 trees. These include illustrations of both flower and fruit (seeds). Also included in each description is the country of origin and how these trees are used, relative height of tree and sometimes the habitat where they are found. The only tree that was included that is not found in NYC, that I know of, is the Giant Sequoia.

Speaking of NYC trees another excellent resource is *New York City Trees: A Field Guide for the Metropolitan Area* by Edward Sibley Barnard. He not only provides photos and locations of various trees, he also gives several tree walk guides. It's a book I often carry in my backpack in the field.

Although reviewed before, I cannot pass up the opportunity to sing praises for my favorite tree book, *Sky Tree: Seeing Science through Art*, by John Locker. Like all of Locker's books, the illustrations are breath-taking and this one comes with a teaching guide in the back.

Track Stories

Created by NYSDEC Education Staff

Key concepts: Habitats, ecosystems, and niches

Key words: tracks

Duration: 30-45 min.

Objectives

Students will:

- Learn how to identify common animal tracks
- Examine track sheets and create stories based on pictures presented
- Create personal track sheets and tell the story it shows

Method

Students examine provided track sheet and tell the story. Students create their own track sheet and tell their own story.

Materials

Provided track guide, provided track sheet, paper and drawing materials for each student

Background

Looking for evidence of wildlife is one method of determining what animal species live in a certain area. Signs of wildlife—such as burrows, nests, droppings, or food litter—can be seen and identified, but some of the easiest signs to interpret are animal tracks. Habitat requirements of certain species can be determined by finding their tracks in certain areas and not finding them in others. Once animal tracks have been observed or preserved, the animal that made them can be identified. (For more information on track casting, see “Tracks!” in the Project WILD Activity Guide on page 30).

Preparation

1. Draw out a scene using the tracks of common wildlife and other inhabitants (be sure to include humans, cars, dogs, cats, birds, and mammals) on a white sheet or pillow case. (Acorn Naturalist and NatureWatch both sell track stamp sets and you can use these to create the tracks on your track sheet.)
2. If using pillow cases, have two or three prepared so students can share and work in groups.
3. Have enough track guides for each group of students.

Procedure

1. Hand out track sheets and review with students what the tracks of different animals look like. Ask students if they can identify any tracks before they are told which animal they are from.
2. Spread track sheet out on floor and have students gather around it.
3. Ask students to identify the tracks on the sheet and describe the events depicted on the sheet.
4. Hand out blank sheets of paper and drawing materials and have students create their own track sheet.
5. Students can present their track sheets and stories to class and/or include their track story on the back side of their track sheet.

Call for Activities!!

The newsletter is in need of one-page activities! If you (or your organization) would like to submit one to appear in the newsletter, please email them to Betsy Ukeritis. baukerit@gw.dec.state.ny.us She will work with you to make sure proper credit is received and she can help edit for length.

Student Highlight

Ravi Seujattan

Senior at High School for Environmental Studies

Ravi Seujattan is a student who has a great understanding of what it means to take action in our community and environment. He is a senior at the High School for Environmental Studies (HSES) and knows that what he's learned so far in school will be key to his success as he makes his way through college and eventually finds a career. Ravi has made the most of his high school experience by getting involved in his school community as well as the New York City community.

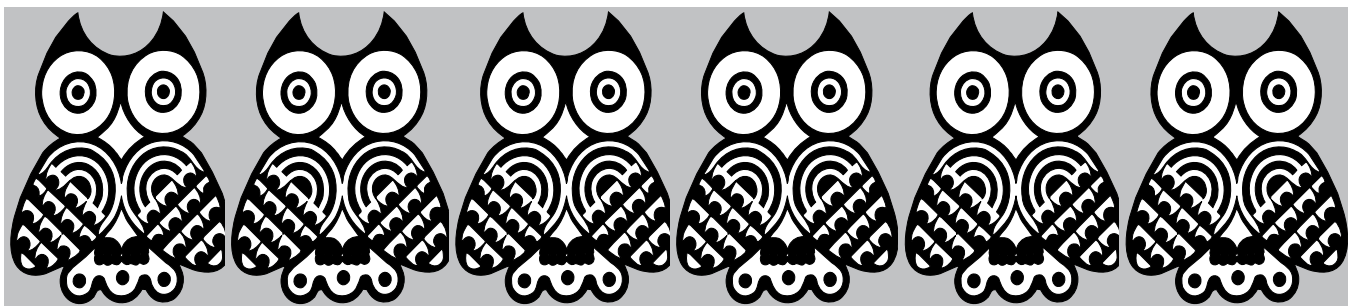
Ravi has lived in Richmond Hill, Queens for most of his life where he says, growing up, he knew little, if anything, about the wonders of the New York City environment. Ravi says that he never really paid much attention to where he lived and what its components were. Looking at his options for high school when he was in the 8th grade, he learned about HSES and was immediately interested in going to a school that places a heavy focus on our environment. He chose to attend HSES and says he's glad he made that decision. Each year has led to growth and discovery; Ravi knows he developing into an environmentally and socially conscious citizen. In fact, two specific courses had a strong impact on him. A 9th grade course called "Introduction to the Urban Environment" taught by Mike Zamm from Council on the Environment, was Ravi's first go at learning about New York City's natural and built environment. The second was an 11th grade course called "The Global Environment." This is a college-accredited course taught by an instructor from SUNY College of Environmental Science and Forestry. This class sparked thoughts about how our resources are used in both positive and negative ways and how our human actions affect everyone's lives. It was to provide his inspiration to pursue a career in International Business and Foreign Affairs.

Aside from his academic success, Ravi is also a very active teenager in both his school and residential community. At HSES, he is one of 5 students selected by Mike Zamm to go to other NYC schools and teach them about recycling and the successful program that is in use at HSES. He is also a notable intern at YouthBridge NY – a part of Jewish Council of NY and founded by Deputy Mayor Dennis M. Walcott – where he worked with CEOs and political leaders, including Mayor Mike Bloomberg.

In addition to all of the above, Ravi is proud of a number of other accomplishments. Throughout his high school career, he has earned a number of awards, including the Paul Greenman Humanitarian Award, Robert A. Van Wyck Science Award, and the Giving Back to Briarwood Award. This last one is a result of Ravi's efforts to organize a committee of Briarwood residents, who raised more than \$5,000 for victims of the 2004 Tsunami. He also organized a group to clean up the Briarwood community and plant trees throughout the neighborhood.

Ravi is extremely knowledgeable and confident for a person of his age and has set clear goals for himself. I wish him the best of luck in his future endeavors.

Michelle Fufaro



EE Resources

Compiled by Betsy Ukeritis

New NSTA Book Teaches the Science of Climate Change

Climate Change From Pole to Pole: Biology Investigations offers case studies and background information on how to teach the science of climate change. The book has six activities that build on four chapters of content and provide real-life scientific problems with guiding questions, data, reading assignments, and independent research

Websites

Green Living

<http://www.dec.ny.gov/public/337.html>

NYS Dept. of Environmental Conservation's new "Green Living" section with ideas, tips and resources for making environmentally responsible choices in your daily life. Also linked on this page is a "Myth Buster Archive" of common practices, like "I don't have time to drive slower, does it really save gas?"

Green Schools

<http://www.dec.ny.gov/education/41746.html>

NYS Dept. of Environmental Conservation's clearinghouse of information to help improve the "greenness" of schools by offering information on recycling, reducing waste, saving energy, conserving resources, preventing runoff pollution and working to eliminate toxic materials.

Healthy School Environments

<http://www.epa.gov/schools/>

US Environmental Protection Agency's gateway to on-line resources to help facility managers, school administrators, architects, design engineers, school nurses, parents, teachers and staff address environmental health issues in schools.

GreenHomeNYC

<http://greenhomenyc.org/>

GreenHomeNYC aims to be a hub of resources for small building owners, to promote the understanding of green building issues, and to connect building owners with local green building service and materials providers.

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Bangladesh, mostly in the Dhaka area. Early in the conference, speakers provided background information and history relevant to the conference. An excellent presentation was given by the Joint Secretary, Ministry of Education of The People's Republic of Bangladesh on the structure of the education system of Bangladesh. We also learned essential environmental information about the area including current issues and concerns, restoration proposals and projects and the indigenous people who still live in areas all over the country.

The second day, we hit the field to collect our water samples from the Buriganga River. We loaded into a couple of vans and drove across Dhaka, through thickets of very slow moving traffic.... a mishmash of cars, buses and rickshaws. We finally made our way to an area along the Buriganga, a hub where gondola-style boats were available to take us down the river at a low cost. The embankment area was also filled with children splashing in the cool water, women washing clothes and men fishing with homemade nets. All 20 of us boarded a boat and got ready to make our journey. The engine started with a loud roar and off we went. It was amazing to see the city from this river view. We passed boats of all sizes, small groups of children playing on the shore and beautiful palms swaying in the breeze. It was so exciting. Occasionally, we slowed down to take a sample of the river water. We didn't use any special equipment for this, simply our gloved hands and plastic water bottles. From what I observed, there didn't seem to be much life in the Buriganga with the exception of one species of aquatic plant that appeared to be thriving.

The following day we tested our water samples. We broke up into groups of five teachers and set to work with our LaMotte sample kits. Luckily, most of the teachers spoke English, so when Kim and I were working with our group, we didn't struggle too much with the language barrier. We tested our samples for nitrogen, phosphate, pH, dissolved oxygen and turbidity. For most, it was the first time they had ever performed water quality tests. Teachers in Bangladesh are required to follow a very strict curriculum and are limited on how creative or hands-on their lessons can be. It was an experience they never had before. All teachers were eager to find out how unhealthy the river was. Much to our surprise, our results revealed that the water is "not that bad". Many of the teachers wanted to get more samples and continue testing the water. After we discussed our results, Rajib showed the teachers how to use iEARN in the classrooms.

The rest of our time in Bangladesh was spent learning about the culture, the history and the progress this country has made. We visited many schools both within Dhaka and outside the city. We were able to visit institutions such as the Teacher's Training College and the prestigious Bangladesh Council for Scientific and Industrial Research. This experience was one that I will hold near to my heart. Not only did I get to experience a country I knew nothing about, but I made friends and now feel as though I have a connection to them that will never be broken.



MEMBERSHIP APPLICATION 2009

New Member Renewal

Name: _____

Address: _____

Apt. _____ Zip Code _____-____-

If Sustaining Organization, Name of Contact Person

Business Phone () _____

Home Phone () _____

Affiliation (for categories other than Sustaining Organization): _____

Title/Position: _____

Address (for categories other than Sustaining Organization):

E-mail address: _____

Mail completed form and check to:

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

Date: _____

Please check the appropriate calendar year membership category:

- \$ 20 Regular \$ 50 Sustaining Organization
- \$200 Individual Life Membership

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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