



# eeac

## NEWSLETTER

Winter/Spring 1988

EEAC's new Chairman, SAM HOLMES, has worked for the Fernandino Beach (Fla.) News-Leader, The Inland Waterway Guide, The Wilmington (N.C.) Star-News, United Press and Magnum Photos, an international photographers' cooperative. He has also been in business for himself as a free-lance photographic and editorial researcher, working on trade books and textbooks, and on exhibits for several worlds fairs, the Smithsonian Institution and others. In 1967 he began working on a series of activity books for the National Park Service called Adventures in Environment, and in 1973 segued into Park Service program development. He helped to open Gateway National Recreation Area in 1974 as a School Programs Coordinator, and ended his work there with the confusing title of Chief of Interpretation, Recreation and Cooperative Activities. His projects there included helping to establish the Gateway Environmental Study Center, Ecology Village and the City Gardeners' Harvest Fair.

Chairman's Message:

WHAT WE CAN DO THAT'S USEFUL

By Sam Holmes

The world keeps coming in from 360 degrees, asking, "What are you doing for me right now?" The entreaties slip through the mail slot - Common Cause, Covenant House, The Wilderness Society. A fund-raising letter from the Union of Concerned Scientists begins, flatteringly but awesomely, "You will decide the future of our world."

The world's need for help is announced also on the front page of The New York Times. After reading this morning's paper, I made up a quick list of what seem to be our most urgent problems. There were 16 of them, ranging from ozone depletion to AIDS to the need for inter-racial peace in New York City.

Then there's the direct experience of the need for help. Yesterday, at 34th St. and 6th Ave. in the subway station where the PATH line ends, about 15 homeless people were in residence, huddled on cold cement, in half light, between puddles of dripwater. On a flattened cardboard box, covered with a dirty cloth, a human being slept beside his or her wheelchair.

Why am I writing to you about these things? I am guessing that you, like me and most people, would like to respond to some of the world's urgent needs by doing something you could believe is useful. Perhaps, like me, you become confused because it is so hard to prioritize the problems, so hard to really know enough about them, and so hard to figure out how to be really effective in helping to solve them.

(Continued on page 8)

SAVE THIS DATE



SATURDAY, APRIL 30

"POLITICAL ACTION & THE ENVIRONMENT" AT THE NY ACADEMY OF SCIENCES

**ENVIRONMENTAL EDUCATION ADVISORY COUNCIL**

A voluntary organization in support of Environmental Education for New York

## LEGISLATIVE COMMITTEE UPDATE

On December 11, Lys McLaughlin, Nancy Wolf, and Mike Zamm met with Barry Jamason of the NYS Education Department (NYSED) to examine final drafts of several of the State's syllabus booklets that have been infused with environmental concepts by the EEAC organized "Talent Bank". We looked at ten of the 26 syllabus booklets which our "syllabus infusers" have worked on.

In general, we are pleased. Many of the concepts suggested for inclusion have been accepted by the NYSED subject area bureaus. This is particularly true in the social studies syllabi, especially the grades 7-8 and 9-10 booklets. There is a more moderate infusion in the Social Studies 11 and 12 syllabi. There is a reasonably solid inclusion of concepts in the various language arts syllabi, e.g. Latin for Communication and Modern Language for Communication, as there is in Art, K-6, although we are going to push for still more in art. In the all important science category, the ecology section of the General Biology Syllabus has been mandated. The other science syllabi aren't completed yet, but Barry Jamason said that the infusion of environmental concepts into these booklets (unified science, physics, elementary science - level 2, etc.) is at least as comprehensive as in the social studies booklets mentioned. We will be looking at all these in the next few months and will give a complete report on each of the specific syllabi when appropriate. About half of the 26 booklets will be made available in Spring 1988.

In addition, there will be a fairly constant flow of syllabi to be infused, e.g. Participation in Government (12) and Design and Drawing for Production are currently being worked on.

The next phase of this effort will be to push for an appropriate reflection of environmental content on statewide examinations and in textbooks, and most importantly, in teacher training efforts. We will be reporting on these efforts in the future. Any of you who would like to join the legislative committee to help with these and other projects, please call Mike Zamm at (212) 566-0990. Thanks.

- By MIKE ZAMM

## ENVIRONMENTAL EDUCATION ADVISORY COUNCIL



c/o Prospect Park Environmental Center  
The Tennis House  
Prospect Park  
Brooklyn, N.Y. 11215

This newsletter is a publication of the Environmental Education Advisory Council (EEAC), a city-wide voluntary organization of educators, classroom teachers, administrators and other professionals in active support of environmental education. This newsletter is published quarterly and available free upon request.

### EEAC OFFICERS

Sam Holmes, Chairperson (718) 788-8500  
John W. Kominski, Vice Chairperson  
Millard Clements, Secretary  
Saundra Jones, Membership Secretary  
Bernard Kirschenbaum, Treasurer

### STEERING COMMITTEE

Elaine Alberts, Alley Pond Environmental Center  
Rose Blaustein, Fireboat House Environmental Center  
Millard Clements, New York University  
Ruth Eilenberg, Gateway Environmental Study Center  
Kim Estes, Alley Pond Environmental Center  
Dr. Eugene Ezersky  
Carol Franken, Academy of Environmental Sciences  
Carol Garfinkel, NYC Dept. of Parks and Recreation  
Roger Hart, CUNY Graduate Center  
Peter Hearn, Inwood-Heights Parks Alliance  
Sam Holmes  
Saundra Jones, P.S. 136M  
Marcia Kaplan-Mann, Environmental Quest/UFT  
Bernard Kirschenbaum  
John W. Kominski, NYC Board of Education  
Kenneth Kowald, Consolidated Edison  
Mike Mann, Brooklyn Clearwater/Environmental Quest  
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John C. Muir, Prospect Park Environmental Center  
William Nieter, St. John's University  
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John Padalino, Pocono Environmental Education Center  
Ray Pfortner, Peter Arnold, Inc.  
Patti Reilly, Gateway National Recreation Area  
Helen Ross Russell  
Eneas Sloman, Elementary School Science Association  
Joseph Varon, Leonardo DaVinci I.S.  
Nancy A. Wolf, Environmental Action Coalition  
Herb Yellin, American Cetacean Society  
Mike Zamm, Council on the Environment of NYC

Kim Estes, Newsletter Editor  
Carol Nehr & Robert Ortner, Assistant Editors

Please send material (articles, drawings, letters, program information, etc.) for inclusion in the EEAC Newsletter to: Kim Estes, Editor, Alley Pond Environmental Center, 228-06 Northern Boulevard, Douglaston, NY 11363 or call (718) 229-4000.

## POLITICAL ACTION AND THE ENVIRONMENT

Political Action and the Environment is the theme of the EEAC Membership meeting to be held in observance of National Science and Technology Week, from 9:30am until 1pm, on Saturday, Apr.30. It will be held at 2 East 63rd St. in Manhattan, home of the New York Academy of Sciences, which is the New York City sponsor of the special week.

Political leaders will report on prospects for legislation at the city, state, and national levels affecting the environment, education, and scientific research, and an EEAC forum will lead discussion of what other legislation and action may be needed. Program arrangements are being made by Nancy Wolf and Mike Zamm of the EEAC Legislative Committee.

Come with your good ideas and a bag lunch; beverages will be provided. Because the meeting room is limited to 100, RSVP to Program Chairman, EEAC, c/o Prospect Park Environmental Center, The Tennis House, Prospect Park, Brooklyn, NY 11215.

While at the Academy, you'll have a chance to see "The Art of Science", an exhibit of art work by high school students based on a nationwide competition. After the membership meeting, you are invited by the New York Academy, the Explorers Club, and the American Museum of Natural History to hike or ride to the Museum where, at 2PM, there will be a series of afternoon presentations on exploration of the marine environment. The presentation series will be free, but you will be expected to pay the discretionary entrance fee to the Museum.

## EEAC MEMBERSHIP MEETING

### POLITICAL ACTION & THE ENVIRONMENT

SATURDAY, APRIL 30, 1988

9:30 am - 1:00 pm

at

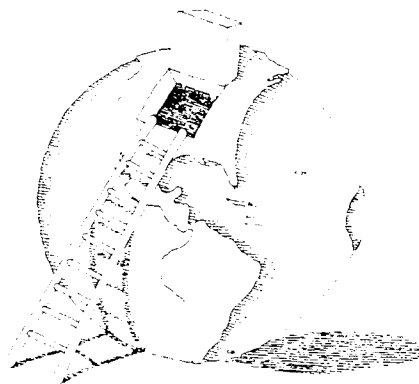
THE NEW YORK ACADEMY OF SCIENCES

(See above article for details)



## EEAC WILL HONOR SCIENCE FAIR PARTICIPANT

The EEAC Steering Committee has passed a motion to offer an environmental award to be presented to a student participating in The 50th School Science Fair this year. The annual Science Fair is presented by The American Institute of Science and Technology of the City of New York in association with the Division of Curriculum and Instruction of the New York City Board of Education. The sponsors include: The New York Academy of Sciences, New York Telephone, and the NYS Department of Agriculture and Markets. Students in grades 7-12 in any public, private or parochial school in New York City may enter the Science Fair. Students wishing to enter may get further information and applications from their school's Science Department Chairperson.



Five borough-wide fairs will be held on March 18-19: Michelangelo IS 144, Bronx; South Shore HS, Brooklyn; Washington Irving HS, Manhattan; John Bowne HS, Queens; New Dorp HS, Staten Island. The public is encouraged to visit the exhibits on the afternoon of Saturday, March 18th. Borough winners will participate in the Citywide Science Fair at New York Telephone (1095 Avenue of the American, 23rd floor, Manhattan) during April 11-13. Projects will be on display Tues. (4/12) from 9am-4pm and Wed. (4/13) from 9am-3:30pm. The awards ceremony is scheduled for Wednesday evening, 7pm-8:30pm.

EEAC will select a student science project that focuses attention and research on an important environmental problem or issue. A panel of EEAC judges will make the selection at the Citywide Fair on Monday, Apr.11th between 6:30pm and 9:30pm.

# EEAC NEWS...

THE ENVIRONMENTAL EDUCATION ADVISORY COUNCIL  
AND  
THE NEW YORK BOTANICAL GARDEN

invite you to

"THE REWARDS OF SCHOOL GARDENING"  
Saturday, February 27, 1988

10:00 am - 4:00 pm

The Botanical Garden, The Bronx



Photo by Allen Rokach, New York Botanical Gardens

## LEARN ALL ABOUT:

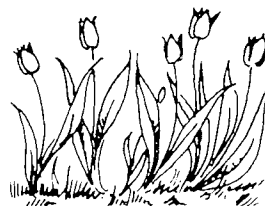
- CLASSROOM GARDENING  
including Grow-Box  
and Hydroponics  
techniques
- SCHOOLYARD GARDENING  
Flowers and early  
spring vegetables
- RELATING  
GARDENING TO  
math, reading &  
social studies
- FREE OR LOW COST  
SOURCES OF GARDEN  
HELP seeds, tools,  
teaching materials
- CONTAINER GARDENING  
with "homemade" soil
- GARDENING  
to learn nutrition
- GARDENING to  
learn plant science  
& scientific method
- SCHOOL USE  
of community gardens

## SCHOOL GREENING PROJECTS, TOO!

- ADOPT-A-PARK  
programs
- URBAN FORESTRY  
projects
- ARBOR DAY &  
STREET TREE  
Projects
- PLANTING TO FEED  
WILDLIFE

## SPECIAL

Join us for a  
free tour  
of the glorious  
ENID A. HAUPT CONSERVATORY  
Featuring early spring flowers  
and ten other exhibits



Reservations are limited to only 100 participants and are REQUIRED by February 20th.

For reservations and transit instructions, call JACQUELINE JACK or SAM HOLMES at (718) 788-8549 or DEBRA LERER at (212) 220-8790.

Meet at the Garden's SNUFF MILL CAFE. Beverages will be provided but bring your own lunch or purchase it there. Parking is free to those who register by February 20th.

This program is presented with the cooperation of: The Brooklyn Botanic Garden, Cornell University Cooperative Extension, Council on the Environment of NYC, Environmental Action Coalition, Green Guerillas, Operation Green Thumb of the NYC Dept. of General Services, NYC Dept. of Parks and Recreation, NYC Street Tree Consortium, NYS Dept. of Environmental Conservation, NYS Office of Parks, Recreation and Historic Preservation, The Nutrition Education Resources Project (Teachers College, Columbia University), and Queens Botanical Garden.

"Neither rain, nor sleet, nor snow shall stay these educators from their appointed program, unless, of course, there's a blizzard."

## EEAC STEERING COMMITTEE MEETINGS

You are invited to attend our meetings, held at the following locations, from 4-6pm.

- March 16 - Con Edison  
4 Irving Place  
Press Room - 1648-S
- April 20 - Brooklyn Historical Society  
128 Pierpont Street  
Ladies Parlor
- May 18 - NYS Office of Parks,  
Recreation and Historic  
Preservation  
1700 Broadway  
11th floor - Conference Room



## TAKE A MOMENT.....

"I took a class at Rocky Mountain National Park in Colorado several years ago and the instructor told us to walk around 'til we found an area that was ours, then sit down and write about it.

Well, we had the entire Continental Divide to consider and the class really scattered. I walked 'til some small purple tundra flowers and an arrangement of rocks with moss on their undersides called me to join them. Immediately I was taken into a reverie and suddenly my entire past made sense, the direction in which I was heading seemed perfect for who I was, and if I squinted just right, I could almost see into the future."

Ref: Bellinger, Cindy. "The Nature of Power Places", Women Outdoors Magazine, (MA), Vol 7, No. 2 (Fall 1986) p4,5

How many times, as educators, do we allow ourselves enough time, space and indulgence for such an experience? Whether in Colorado or the parks of New York City, we should set aside time to periodically review our past, the direction we're heading in, and look into the future. Perhaps as Spring begins on March 20, we can begin a new season of growth within ourselves.

Carol Nehr

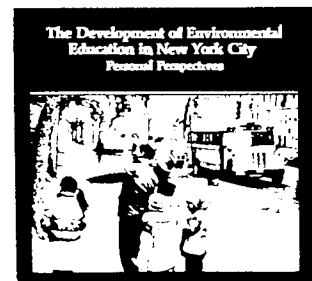
## ESSAYS DEPICT HISTORY OF ENVIRONMENTAL EDUCATION

School camping, school gardening, recycling and the training of students as community leaders are among the dozens of subjects discussed in "The Development of Environmental Education in New York City: Personal Perspectives", a new publication of the Environmental Education Advisory Council.

The seven personal essays in the 32-page publication amount to an informal history of environmental education in New York City. The authors make no claim to being exhaustive, but highlight and comment on important environmental education developments, particularly those of the 1960's and 1970's.

Copies are being mailed to EEAC members, and are available free at the Prospect Park Environmental Center to teachers, libraries, and environmental groups. The EEAC will also mail out copies on receipt of \$3 per book to cover the cost of handling and mailing. Checks should be made out to the:

Environmental Education Advisory Council  
c/o Prospect Park Environmental Center  
The Tennis House  
Prospect Park  
Brooklyn, NY 11215



Authors of the essays are Dr. Eugene M. Ezersky, Michael Zamm, Nancy Wolf, Ruth Eilenberg, Kenneth Kowald, Michael G. Mann, Marcia Kaplan-Mann, John Kominski and Dr. Millard Clements.

Subjects range from the school gardening programs of the early 1900's to the relationship between environmental education and education for world peace. Included are descriptions of the growth of educational camping since the 1960's, the development of public awareness of air pollution, and the roles played by environmental centers and programs such as Training Student Organizers, which has helped to stimulate allocation of more than \$4 million for community improvement projects, innovative environmental Scouting programs, and Urban Forestry Education.

We introduce you to our new EEAC Steering Committee members.

## CAROL GARFINKEL

As the new Education Coordinator for the Urban Park Rangers, CAROL GARFINKEL is responsible for program development and evaluation and coordinates publicity. She has been with the Parks Department since October 1986. She spent her first year with the Natural Resources Group, developing exhibits, writing and editing and coordinating the Urban Natural Resources Symposium held in May, 1987. CAROL has experience teaching science in both schools and nature centers and has worked in ornithology at Philadelphia's Academy of Natural Sciences. She has a Bachelor's degree in Biology from Cornell University and a Master's in education from Temple University.

## ROGER HART

ROGER HART is the Director of the Children's Environments Research Group and Center for Human Environments of the Graduate School in University Center of the City University of New York. He is an Associate Professor in Environmental and Developmental Psychology at the Graduate Center. He has a Ph.D. in Geography from Clark University. His dissertation was published as the book, Children's Experience of Place in 1979. He founded and edits the journal "Children's Environments Quarterly." His work has focused upon theory and research concerning childrens' relationship with physical environments; environmental learning; play planning and design; childrens' participation in environmental change and community development; risk-taking and safety in the built environment.



PHOTO: © RAY PFORTNER, PETER ARNOLD, INC.

## MARCIA KAPLAN-MANN

"A native New Yorker, I earned my BA and MS at Hunter College and 20 years ago joined the ranks of New York City elementary school teachers. I am a United Federation of Teachers activist, an elected member to the NYS United Teachers and American Federation of Teachers Conventions. Environmentally, I am Secretary of Environmental Quest, Vice-President of Brooklyn Friends of Clearwater, member of: Educators for Gateway, Alley Pond Environmental Center Outdooring, National Science Teachers Association, founding member of Friends of Pocono Environmental Education Center, and other groups. I have presented workshops for SCONYC, ESSA, PEEC, and the Association of Interpretive Naturalists. I spent a sabbatical year with John Muir at the Prospect Park Environmental Center, am Associate Advisor of co-ed Outdooring Explorer Post 8, sponsored by PPEC. I am happily married to the PPEC Volunteer of the Year, Michael G. Mann, who I met at a Gateway workshop."

## NORTH RIVER SEWAGE TREATMENT PLANT

In September about 30 EEAC members and friends received a behind-the-scenes tour of the North River Sewage Treatment Plant - one of the newest of New York City's 14 water pollution control plants (WPCP). The plant, now in the final stages of construction, will treat about 150 million gallons per day of sewage from the west side of Manhattan - sewage that until now flowed directly into the Hudson.

The city has invested about 1 billion dollars to design and construct the plant which covers about 30 acres and sits on huge pilings sunk into the bed of the Hudson. When fully operational the plant is expected to greatly improve the water quality in the lower Hudson and to contribute to the overall health of all of New York's coastal waters.

Special thanks to Commissioners Harvey Schultz and Martha Holstein of DEP and to the entire staff of North River for their hospitality.

WILLIAM NIETER

## THE NEW YORK ACADEMY OF SCIENCES: A RICH RESOURCE FOR EDUCATION -by Sam Holmes

For environmental educators, some of the city's greatest bargains are available at the New York Academy of Sciences, where Talbert Spence, a long-time member of EEAC, was appointed Director of Educational Programs in November.

Spence, who headed environmental education at Wave Hill for 10 years, shook out the Academy's educational cornucopia for me at his new office in the old Woolworth Mansion at 2 East 63rd Street.

There's the Scientists in School Program, which makes more than 500 scientists, in fields ranging from aerospace to robotics to waste water treatment, available to speak to school classes, with no charge. There's the Science Research Training Program, which finds laboratory research internships for talented high school science students throughout New York State; and there's the Junior Academy of the New York Academy of Sciences, a remarkable student-run organization with more than 1,000 members, which for a \$5 membership fee, offers two or three lectures a month by leading scientists, field trips, a summer opportunity directory, social events, and more.

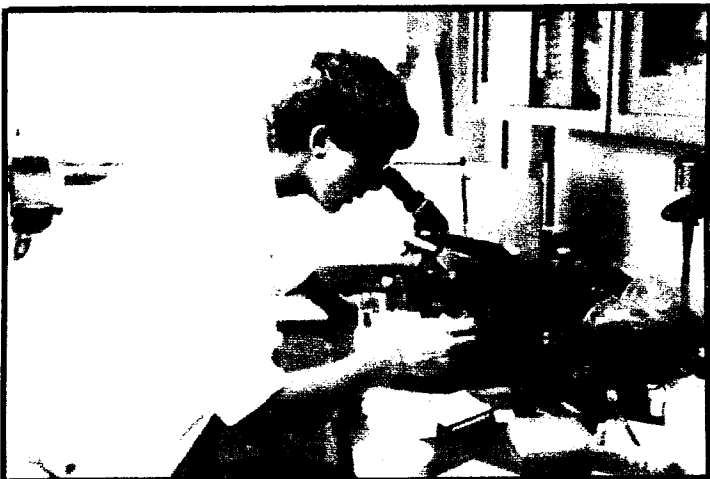


PHOTO: COURTESY OF THE NEW YORK ACADEMY OF SCIENCES

Besides these regularly scheduled programs, Talbert's office produces New York City's participation in National Science and Technology Week, which this year will be April 24-30.

Talbert introduced me to Ms. Beatrice Klier, who, after 23 years as an earth sciences teacher in the New York City schools, now serves as an enthusiastic matchmaker for the Academy's Education Department. She matches school needs with available scientists for the Scientists in Schools, and enjoys the challenge of solving hard-to-fill requests.

The program is available to grades 4-12, with speakers who talk for about an hour to single classes (for optimum interaction with students) rather than to auditorium groups. After deciding what scientific disciplines they want to hear about, elementary school teachers should apply for speakers through their District Science Coordinators. High schools may apply directly to Mrs. Klier (212) 838-0230. She "budgets" five speakers per school district, but tries to stretch that to meet the needs of special programs.

Mrs. Klier's matchmaking skill is also applied to the Science Research Training Program, which places talented 11th and 12th grade science students as interns in laboratories researching such varied subjects as bio-medicine, bioengineering, vision and metallurgy. There's a winter program for about 30 students, mostly from outlying counties and private schools, and a summer program which finds about 100 internships, many of whom are from the NYC public schools. If you know a student who is particularly talented in science, consider suggesting that he or she apply. Applications for summer internships will be available through high school principals and will be due in May.

On top of her matchmaking jobs, Mrs. Klier organizes special science-related tours during National Science and Technology Week. Last year's menu of 32 tours included trips to the National Weather Service, the Robotics Laboratory at NYU, the Visual Research Laboratory at Brooklyn College, and Proctor and Gamble (to learn about soap detergent chemistry).

Talbert also introduced me to Rekha Kurikoti, who is Administrator for the Junior Academy of the New York Academy of Sciences, which is open to members from the 9th to the 12th grades. Most of its 1,000 plus members are from the metropolitan area, but several are from as far away as Canada and Mexico.

(Continued on page 9)

## WHAT WE CAN DO THAT'S USEFUL (Cont'd.)

Here I come back to an item on my morning list of 16 problems - "Educational failures and school dropouts." It would not be right to ignore the other problems, of course, but this seems like a good problem on which to focus my energy. Here is where, as a member of EEAC, I would like to join with you to try to do some useful things.

Why do I choose environmental education? It is because environmental education gives children real experiences that bring life to the abstractions about experiences that are contained in their textbooks. I have seen for myself that environmental education can be lively, interesting, engrossing, and I believe it can plant the seeds of personal involvement that make children want to learn. Environmental education can help, in the long run, to prevent "Educational failures and school dropouts."

In the past, I have thought of EEAC as an organization for congeniality, information exchange and cross-fertilization of ideas. These are good and sufficient purposes in themselves, but now, coming closer to EEAC, I see that it has accomplished quite a lot more than that. A few examples: it has succeeded in infusing environmental education concepts into the curriculum plans of the New York State Department of Education; it is working to see that environmental education in New York City gets an appropriate share of funding from the state's Environmental Quality Bond Act (particularly by way of the preservation of environmental education sites); and EEAC may join the National Alliance for Environmental Education in an effort to set up university/community/school centers which, among other things, will provide student interns to environmental projects.

As members of EEAC, we may be able to enhance each other's effectiveness in working for legislation which will bring funds to meet environmental needs and finance environmental education. With the encouragement of the Steering Committee, I have just written a letter to six members of the state legislature and Governor Cuomo, urging passage of the Museum Education Services Aid Bill, which would provide funds (something between \$2,400,000 to \$6,000,000) to reimburse non-profit museums, historical societies, nature education centers, zoos, botanic gardens, arboretums and aquariums for classes they conduct for school children. I still have a few questions about the bill, but I have no doubt that the method of environmental education is very useful most of the time. The bill is worth a try.

A copy of my letter is reprinted on page 12. Please read it, and whether or not you agree with me, please write a letter of your own to your assemblyperson and senator, with a copy to the governor.

Logan Pearsal Smith wrote, "My best friend may ask me to lay down my life for him, but he should not ask me to wrap and mail a package." Letters are easier than packages, but they're still not easy. Go ahead and write them anyway, including your personal observations about environmental education. I'm told that a relatively small number of letters can have a large effect. If you want a copy of the bill or legislators' addresses, call me at (718) 788-8500.

If EEAC is to continue to be really useful to education, we will need three things: your best ideas, your energy, and, amongst us, rough (not perfect) consensus. Do we need a citywide conference on school camping or some other EE area? Are there kinds of programs we can encourage by making awards? Are there certain kinds of studies we should undertake or try to stimulate? What are your thoughts for programs? Thoughts for the newsletter? What should we be doing about membership?

During my term as Chairman, I will do the best I can to coordinate EEAC for you. Feed me your thoughts and your criticism. I have been told that newly retired people who volunteer, tend to burn out rather quickly. Well, I have not really retired; I have work of my own to do; but if I do seem to burn out, I'm trusting you to light me up again.



## SPOTLIGHTS SPOTLIGHTS SPOTLIGHTS

In January Channel 13 broadcast three exceptional programs highlighting the problems and potentials of solid waste. NANCY WOLF, former chairperson of EEAC and Executive Dir. of the Environmental Action Coalition shared the 'METROLINE' panel with Brendan Sexton, NYC Commissioner of Sanitation, David Muchnick of R2B2, and Allen Hershkowitz, a private waste consultant. The discussion centered on NYC policies for the future - namely the tradeoffs between centralized resource recovery facilities and recycling efforts particularly the idea of buy-back centers in each borough. Nancy focused on the large number of ways that the citizenry of this city could become involved with solid waste recycling efforts. As a start EAC is prepared to help organize large apartment buildings and complexes (100+ units) into residential recycling projects. Call EAC at (212) 677-1601 for details.

(SPOTLIGHTS Continued on page 22)

### THE NEW YORK ACADEMY OF SCIENCES

(Continued from page 7)

The remarkable thing about the Junior Academy is that it is truly student-run, and run well. The students themselves contact the scientists who lecture, and who have included Nobel Prize winners. They produce the posters that advertise the lectures and the monthly newsletter.

Another ambitious project of the Junior Academy has been its summer opportunities guide book, also produced by students. The last edition had 32 pages and listed 44 institutions offering science-related summer work. Among these were Shavers Creek Environmental Center of University Park, Pennsylvania, but no NYC environmental centers were listed. The Junior Academy is doing another summer opportunities guide this year, and there may be opportunities for EEAC institutional members to offer internships for talented NY high school students. If you want to follow up on this, contact Talbert at the New York Academy of Sciences, 2 E. 63 St., New York, NY 10021 (212) 838-0230 by the end of February. This is just one of a number of ways I think our organization can work productively with the New York Academy of Sciences.

### PHOTOGRAPHY IN WINTER - By BERNARD SAPER

For most people photography is a warm weather activity. The advent of cold weather need not signal the end of photographic opportunities. Snow, ice and winter fog provide marvelous subjects for the alert photographer. A few simple precautions can make winter photography a joy.

#### CLOTHING:

The main problem in photographing outdoors in winter is to remain warm and dry. It is best to dress in layers which can be removed or added as conditions change during the day. Dual layer thermal underwear, particularly those made of polypropylene, wick moisture away from the skin while maintaining comfortable body temperature.

Most of the heat lost from the body is by way of the head and hands. Warm gloves and a cap are therefore necessary. However, heavy gloves and a camera are not a workable combination. For this reason, glove liners, such as silk or polypropylene, should be worn. Remove the gloves while operating the camera; the glove liners will retain enough warmth to keep your hands comfortable and prevent your skin from sticking to the cold metal surface of the camera.

#### WEATHER:

There is no reason to leave your camera indoors when it rains or snows. Lighting is often at its best when the weather is foul. A simple method of weather proofing a camera is to place it in a transparent plastic bag. Fold the open end of the bag and fasten it with a rubber band. Provide an opening for the lens by cutting a hole the diameter of the lens shade. Place the shade partway through the hole and tape it in place. Cut another hole next to the view finder and tape around the edges. To keep water from the lens surface, use an optical flat of a skylight filter.

The camera controls can be manipulated conveniently if the plastic bag is loose enough. Similarly protected, a flash unit can also be used.

#### COLD WEATHER PROBLEMS:

Batteries lose much of their capacity in extreme cold. It is best to begin each session with cells that are fresh, and to keep them as warm as possible. Keep a spare set of cells in a warm pocket.

## SUPPLYING WATER TO A THIRSTY POPULACE

BY LENORE MILLER

When tribes of early people joined together to form larger groups and settled in a place to carry out farming, trade and commerce, one necessity above all others had to be met - a source of clean water. Whether it was a stream or river, underground well or spring, water was a deciding factor in determining where a group of people could settle and live.

As groups became larger and civilizations more advanced, at the heart of any attempt to create a city was the need to obtain a reliable, secure means of transporting water from its source to the people who needed and used it, sometimes miles from where it began.

The Romans constructed their famous aqueducts, a system of troughs and pipes to carry water down from the mountains to the city. The downward pull of gravity allowed the precious liquid to flow through these channels to city baths and storage tanks. Without these marvels of engineering, there would have been no Rome.

Archaeologists have uncovered early water tunnels, burrowed into hillsides, sometimes cut through solid rock with hand tools, dating from several centuries before the Romans. Located throughout the Middle East, these early centers of civilization had to secure their water supply, source and conduits, from attacks and siege. Often, they were hidden deep in the earth.

In more recent times, as our city grew from a small collection of homes into a bustling urban center, water-borne diseases and uncontrollable fires demanded the construction of a better water supply if the city was to grow. In 1842, New York opened its first reservoir and pipe system to provide clean water to its population.

Into the 20th century, government leaders had the foresight to set aside more than a million acres in upstate New York to act as the watershed for New York City. A watershed is an area that is forested, undeveloped and protected so that rain water can collect in streams, lakes and reservoirs for future use. Two tunnels that connect this Catskill watershed with the city have been in continuous use since their completion in 1917 and 1937. Known as Tunnels #1 and #2, they have never been cleaned or

inspected, since they cannot be closed down without seriously curtailing the daily supply demanded by the populace, which now consumes about 1½ billion gallons every day! Like the Roman aqueducts, 97% of this water supply is delivered via the trouble-free force of gravity.

To meet the predicted demands of New York City in the 21st Century, the Department of Environmental Protection's Bureau of Water Supply began construction on a Third Water Tunnel in the 1970's. When the second stage of this very expensive undertaking is completed sometime in the 1990's, and the new tunnel is put into operation, the DEP will be able to shut down first Tunnel #1, then #2, so that they may be drained one at a time, then inspected and repaired as needed and put back into use.

Recently, this writer accompanied other members of EEAC on a tour of the tunnel now under construction. At its entry point on Roosevelt Island in the East River, the group was given a thorough orientation by two experts, Paul Wadeson, Senior Project Coordinator and Diane Dennis, Geologist and Field Engineer at the site. We then donned steel-tipped boots, raincoats and hardhats for the underground journey. We were also provided with ear-plugs to be used as needed.

With much anticipation, we crossed the muddy, rain-soaked construction site, the few feet from the engineers' trailer to the entrance of the vertical shaft. We entered the "cage", a large elevator that was to be our link with the surface and all the levels of the site.

As the elevator began its descent into the darkness, our guide, Ms. Dennis thoughtfully put on a flashlight that she wore suspended around her neck. Our first stop was 150 feet below the surface, where we entered the brightly-lit, 2-level cavernous chamber where the valve controls will be located. This was our first look at what tons of dynamite had blasted out of the bedrock. We looked down on workers hauling heavy materials on train tracks designed to make transport easier. When completed, this area will house the computerized controls that will operate the giant valves.

(Continued from previous page)

Stepping carefully over and around construction materials, we returned to the cage for our descent to the next level, 350 feet below the surface. This area is the manifold, connected to the chamber we just left by a series of vertical tunnels. It is there that water will be transferred from the tunnels to the shaft and thence to the risers where they will connect with water mains closer to the surface for distribution.

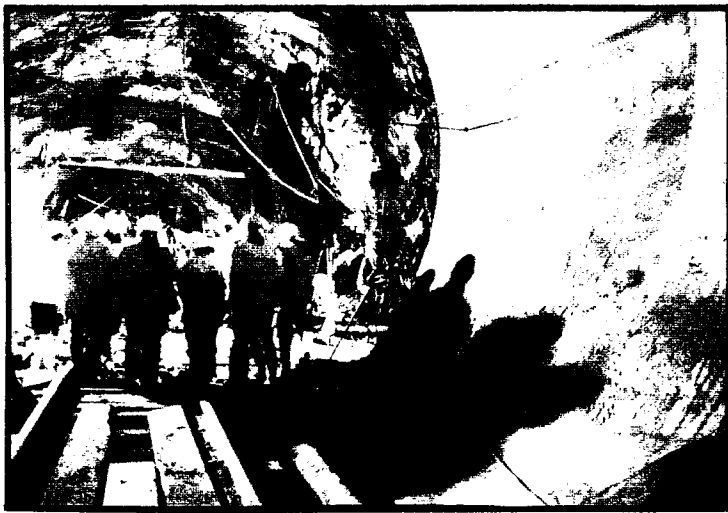


PHOTO: © RAY PFORTNER, PETER ARNOLD, INC.

Air from above was continuously moving through the levels, providing air for breathing and carrying away exhausts from machines. This movement of air operates naturally so there is no change of air pressure, nor any need to pump fresh air into the system during construction. Since it was raining heavily that day, we were rained on by surface water as well as the natural seepage of ground water into the tunnel. Tests have determined that this seepage has the same percentage of salt as ocean water. Pumps to empty any accumulation of this water are operated constantly.

Once more, we descended via the cage, this time to the deepest level, 800 feet below the earth's surface. We were now as deep as the tunnel will go, almost as far under New York as the Empire State Building is above it!

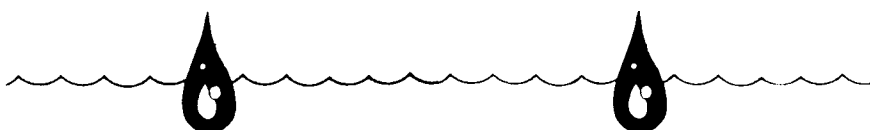
When we entered this massive 20-foot diameter tunnel, it was truly an awesome sight. Railroad tracks run the length of it, and continue directly into the elevator so that heavy materials can be wheeled right onto it for delivery to and from the surface. Now ear plugs were put in place, since the "sand hogs" were using very noisy machinery. The bedrock, consisting of Manhattan schist and gneiss, was exposed and visible. But this will not be visible for long, since the section we were in is in the process of being enclosed in its circular surrounding of concrete.

The concrete was being poured in a similar way as a house foundation. It is poured down shafts that run alongside the cage. A circular form is put in place and the concrete is poured between the form and the bedrock wall, lining it. The concrete is allowed to settle and harden. Then, the form is removed and moved to the next position as the work proceeds. The hardened concrete must be wet down so that it "cures" slowly, and dries without cracking.

All of this work, accomplished with state-of-the-art technology plus human labor, is very expensive, costing about \$5 billion. Many highly specialized workers are employed, performing hazardous work; their safety is of paramount concern. Since this mammoth tunnel is being built to last indefinitely, every step must be carefully controlled and checked. These matters were explained to our group and our questions were patiently answered by our two knowledgeable guides.

After an hour underground, we re-entered the cage for the last time for our ascent to the surface of Roosevelt Island, a lot wiser, a bit humbled and much in awe of this magnificent engineering feat that will ensure our water supply for the centuries to come.

-by Lenore Miller



February 12, 1988

The Honorable Mel Miller  
Speaker of The Assembly  
New York State Legislature  
270 Broadway  
New York, NY 10007

Dear Speaker Miller,

I am writing to you on behalf of the Environmental Education Advisory Council, an organization of 200 members, including representatives of New York universities, nature centers and environmental organizations. By unanimous vote, our steering committee urges you to consider carefully and to support the Museum Educational Services Aid Bill (4328-C) which, for a relatively small amount of money, can leverage a large amount of private energy to help meet our urgent educational needs.

You are faced with a rip tide of critical problems, I know, but I think you will agree that none are more important than renewing the vitality of public education, improving reading scores and cultural literacy, and keeping children from dropping out of school.

What is the one essential quality of the kind of education that really works? It is the planting of the seeds of personal interest in the child, so that the child is excited about learning and is hungry to know more and more. To get these seeds planted takes good teachers, well planned curricula, good textbooks and, we emphasize, real experiences in and out of the classroom which bring life to the abstractions about experience which are contained in textbooks.

The kinds of experiences I am talking about include exploring the rare natural habitats in New York City and seeing their wildlife; seining for fish at our beaches and bringing them back to classroom aquariums; discovering the past at old farm houses, forts, and 19th century sailing ships that have been preserved within the city.

Experienced teachers know that a range of real explorations like these can motivate children's reading, motivate concern for the environment, motivate projects in science, art, and neighborhood improvement.

What makes these kinds of explorations possible? In large part it is our non-profit organizations - the museums, the historical societies, nature education centers, zoos, botanic gardens, arboretums and aquariums.

The education departments of these institutions work hard not only to provide real experiences that will stimulate the imaginations of children, but to prepare activity materials and conduct teacher workshops to insure that the experiences are relevant to the school curriculum. Field trips are not frills or larks; they are the spark plugs in the educational motor.

Unfortunately, though, there is a greater demand for services than these institutions can provide. They are under-funded and understaffed in many instances, and often their funding is heavily dependent on appeals for grants and private donations, so that their finances from year to year are precarious.

To help solve these problems, the Museum Educational Services Aid Bill will provide funds to assist these institutions, based on the actual amount of instructional service they provide to the schools. The funds which any one institution could earn under the bill are limited, but they could go a long way toward providing stability to the programs and increasing services to the schools.

The bill has been honed and refined three times by the Assembly's Committee on Ways and Means. I am hopeful that the language of the bill may be broadened to specify environmental centers, which are doing an excellent job of teaching local stewardship to school groups. That part aside, the bill is important. It is urgently needed now.

Please let us know your thoughts and position in regard to this bill. We would like to know what you think its prospects are for passage in this session, and if there is anything we can do to help get passed, please let us know that too.

Sincerely,

Sam Holmes, Chairman  
Environmental Education Advisory Council

# NEWS FROM:

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## ALLEY POND ENVIRONMENTAL CENTER



Alley Pond Environmental Center encourages you, your family, and friends to participate in the lectures, workshops, nature tours, field trips, and special events planned this Spring. Some of the programs being offered are:

March 5, 6:30pm Exhibit Reception "Changing Scenes"  
March 18, 7:30pm Astronomy (third Friday of every month)  
March 26, 10:30 am Greenhouse Photography (field trip)  
April 2, 1:30 pm Nature in the Old Testament (interpretive nature walk)  
April 6, 7:30 pm Travelogue: Kenya  
April 16, 7:30am Early Morning Birdwalk  
April 17, noon Ticks, Mosquitos, and Other Insects of Concern (talk and walk)  
April 30, 10am Dogwoods in Bloom (photography workshop)  
Saturdays in May, 10am Tai Chi in the Woodlands  
May 5, 7:30pm L.I. Motor Pkwy slide show and discussion  
May 7, 11am Hike the L.I. Motor Pkwy  
May 7, 2pm Lecture: The Matinecock Indians  
May 21 Sandcastle Building (field trip)  
May 21, 10am Sandcastle Building and Beach Processes, Jones Beach (with William Nieter)  
June 11, 7am Whale Watch, Montauk, LI

COFFEEHOUSE CONCERTS are also scheduled with performances by the NY STREET THEATER CARAVAN (March 17), DAVID ROTH (April 14), YUEH LUNG SHADOW THEATER (April 29), A TOUCH OF JAPAN (May 6), and PAUL ZALOOM (June 10). A full calendar of events may be obtained FREE by calling APEC at (718) 229-4000 Tues-Sun.



## THE AMERICAN INSTITUTE OF SCIENCE AND TECHNOLOGY

The 1988 50th NYC School Science Fair will begin on Friday, March 18 & Saturday, March 19 when the first round of Fairs begins. Students in all public, private, and parochial schools in NYC are eligible to participate. Borough Fairs will be held at: Michelangelo I.S. 144 (Bronx), South Shore H.S. (Bklyn), Washington Irving H.S. (Manhattan), John Bowne H.S. (Queens), New Dorp H.S. (Staten Island). The Fairs will be open to the public on Sat. March 19 from 12:30-3:30PM (1:30-4PM in Queens). Designated Borough Finalists will participate in the Citywide School Science Fair on Monday, April 11 - Wednesday, April 13. This Fair can be viewed by school groups on Tuesday, April 12 and Wednesday, April 13. Every 15 students who attend must be accompanied by an adult. Register by contacting the Institute at (212) 838-0230 ext. 230.



## BRONX RIVER RESTORATION PROJECT, INC.

The recently published booklet, "A Walker's Guide to the Bronx River Parkway Restoration", will guide walkers from the Kensico Dam Plaza in Valhalla (Westchester) to Soundview Park, offering tidbits of history along the way. For a copy of the Guide write to: Westchester County Dept. of Parks, Recreation and Conservation, 618 Michaelian Office Building, White Plains, N.Y. 10601.

## BROOKLYN CHILDREN'S MUSEUM



The Brooklyn Children's Museum offers a wide variety of programs from puppet shows to African dancers; from "March into Summer" festivals to magical happenings. Appealing to environmental interests they offer The Secret Life of Plants, a program discussing the known and unknown uses of plants and herbs. The dates and times for this program are:

Sat. March 12 (noon)	Sat. April 9 (3:30PM)
Sun. March 13 (noon)	Sun. April 10 (noon)
Fri. March 18 (3 PM)	Mon. April 18 (3 PM)
Mon. March 21 (3 PM)	Fri. April 22 (3 PM)

There is also a greenhouse which is the center of activity for many school programs. Call the museum at 735-4432 for a full calendar of events and more information.

## CITY VOLUNTEER CORPS



Established in 1984, the City Volunteer Corps (CVC) recruits, trains, and fields 1000 New Yorkers, aged 17-20, each year to provide full and part-time community service. Working in teams City Volunteers provide a broad range of needed services to City agencies and not-for-profit organizations. They tutor elementary school children, rehabilitate abandoned housing for the homeless, teach daily living skills, care for the homebound, build nature trails, and turn City-owned vacant lots into playgrounds and community gardens. Sponsoring agencies provide the training, supervision and supplies for CVC projects. For more information about the CVC, call (212) 475-6444.

## CLAY PIT PONDS STATE PARK PRESERVE



Clay Pit Ponds State Park Preserve is one of three State Parks in NYC. This 250 acre nature preserve is located in the Charleston section of Staten Island. A variety of recreational and educational programs for all ages are scheduled throughout the year. These include nature walks, programs for parents and children, evenings of music, storytelling, astronomy, and sessions in topics from beekeeping to nature photography. All programs are free of charge. Some require advance registration. For more information or to be placed on their mailing list, please call (718) 967-1967.

## COALITION FOR THE BIGHT

The Coalition is a public/private partnership to stimulate a regional constituency to develop consensus on a management plan for the use and the restoration of the Bight. Their newsletter "Watch on the Waterfront" recently featured an overview of the National Estuaries Program, the symposium "Action Agenda for the Bi-State Bight", Governor Kean's proposal for a NJ Coastal Commission and NY's Coastal Resources and Waterfront Revitalization Program. Guest columnist, Hon. Gail Shaffer, NYS Secretary of State, discussed the future of the coast. For information write or call: Coalition for the Bight, 101 East 15th St., NY 10003 (212)460-9250.

## CON EDISON

In response to the needs of the academic community and to foster a network of resource groups, Con Ed and the Bronx Community School District Science Coordinators co-sponsored a "Bronx Science Resources Awareness Conference." This historic event brought together district Superintendents, science and curriculum Coordinators to hear about the programs available to teachers from resource organizations in the borough. Organizations ranging from Bronx River Restoration to Wave Hill learned about new science curriculums and exchanged information. A "Bronx Science Resource Guide" will soon be available. Call Jeffrey Katz (212) 960-4597 for information,

## COUNCIL ON THE ENVIRONMENT OF NEW YORK CITY



The Open Space Greening Program of the Council on the Environment of NYC provides material and technical assistance to community sponsored open space projects in the five boroughs. Plant-A-Lot sets as its goal the creation of two or three new community gardens each year. Green Bank is a 50/50 matching fund available to community groups enhancing existing parks and gardens. Grow Truck provides tool loans and technical assistance to greening projects. It also transports and distributes materials for community groups. The Tree Label Service custom engraves labels for trees and other plants for block associations, school, historic sites, parks, arboreta, etc. School Greening provides two public schools each year with design, planting, and maintenance instruction to assist students with school ground beautification projects. A reference library has also be established by the program. If you are interested in the Open Space Greening program call CENYC at (212) 566-0990.

## COUNCILMAN SHELDON LEFFLER

On Dec. 9, 1987 Councilman Leffler (16th District) introduced the Leffler-Messinger-Goldin bill on WNYC-AM. Here are some excerpts: "The bill would set annual recycling requirements...and insure participation in expanded, city-wide recycling programs. We designed the bill to reduce the amount of solid waste disposed of at the Fresh Kills landfill, which will run out of space in about ten years. It will also help to minimize the use of resource recovery plants and incinerators throughout the City...The bill will enable the Sanitation Dept. to reach required recycling levels through source separation, the use of drop-centers, material processing facilities, composting systems, or any feasible alternative method. It would also require commercial carters to recycle the waste they collect unless businesses themselves source separate and recycle...Different recycling techniques would be tailored to meet the needs of different neighborhoods, and to make the program economical...The recycling requirements in this bill could be achieved initially through City-wide recycling of newspaper, non-deposit bottles and cans, and yard waste." For more info. about the bill contact Corey Bearak at (718) 465-8202.

## CRYSTAL RUN ENVIRONMENTAL EDUCATION CENTER

Year-round academic and enrichment programs are offered to school groups, parents and children. Maple sugaring, garden cycles, pond study, ecological eating, trust walks, beeswax modelling, sculpture workshops, birdhouse building, and woodlot management are only some of the programs. Special services to accomodate courses of your own design, transportation, and visits to your site can also be arranged. Take note of these special events:

April 19 - "Living the Good Life in Rockland" A day of workshops concerned with health, safety, and environmental quality in our homes and community. Call (914) 638-5500.

June 9 - August 15 - "Farm and Forest Day Camp" A program for children ages 6-11. There are three consecutive sessions. An Open House will be held on Sat. March 1, 1PM-3PM. For more information call (914) 425-3663.

## ENVIRONMENTAL ACTION COALITION



Free Teacher-Training workshops will be held again this year in celebration of Arbor Day. At Plant a Tree for Arbor Day participants can attend free workshops, learn to plant trees, discover ways to teach about trees in the urban environment, receive free educational materials coordinated with curriculum and join in citywide planting of trees. Workshops are open to all teachers; curriculum materials are written for middle grade levels. Dates and sites are as follows:

Tues. March 1 - New York Botanical Garden, Rm 102 Watson Bldg.  
Wed. March 2 - Prospect Park Environmental Center, Picnic House  
Thur. March 3 - Queens Botanical Garden, Auditorium  
Tues. March 8 - High Rock Conservation Center, Stone House Library  
Wed. March 9 - Gateway Environmental Study Center, Floyd Bennet Field, Bldg. 272  
Thur. March 10 - Environmental Action Coalition, 625 Broadway, 2nd floor

For information, contact EAC at (212) 677-1601

## ENVIRONMENTAL QUEST, INC.



Mark the following events on your calendar!

March 26-27 - Work weekend on the Clearwater Sloop in Saugherties, N.Y.  
April 8-10 - Explorer Post 8, Camp-Out at Pouch Camp, Staten Island  
April 23 - C.O.P.E. Course at Ten Mile River  
May 15 - Explorer Olympics at Kingsborough College  
June 17-19 - Clearwater Revival

For information contact Mike Mann at (718) 941-9835

## GATEWAY ENVIRONMENTAL STUDIES CENTER



Gateway Environmental Study Center's Spring Series is underway. All workshops have a \$5.00 materials fee per session. Call (718) 252-7307 for registration and details. Plan to join them for:

March 2 - Breaking Ground For A School Garden  
March 9 - Plant A Tree for Arbor Day  
March 23 and 30 - Project Learning Tree (2 sessions)  
April 16 - Springboard to the Arts

## HOYT FARM PARK PRESERVE

A Land Management and Restoration Conference will be held at Hoyt Farm on Friday, March 18 from 8:30am-5:00pm. Morning registration and refreshments will be followed by discussions on:

Ecological Change and Management of Natural Areas/Prescribed Burning Techniques  
and Tools/Selecting Plants for Wildland Restoration Projects/Urban Natural Area  
Management/Herbicide Use and Application/Connecticut's Controlled Fire Mgmt. Program

The registration fee is \$45.00 (hot lunch included). Make check payable to Friends of Hoyt Farm. Seats are limited; send your name, affiliation, address, phone number, and payment immediately to: Hoyt Farm Park Preserve, P.O.Box 220, Commack, NY 11725.



## THE INSTITUTE FOR EARTH EDUCATION

The Institute for Earth Education is an international, non-profit educational organization committed to fostering earth education programs in school and outdoor settings. Earth Education is the process of helping people live more harmoniously and joyously with the natural world. The Institute designs and disseminates model education programs and provides training and support for educational leaders. STARFLOWER CONSULTING (an affiliate of the Institute) and the Queens College Center for Environmental Teaching and Research will cosponsor an Earth Education Workshop to be held at the Queens college Center, Lloyd Harbor, L.I. on April 16. The workshop will introduce teachers and outdoor leaders to the principles of Earth Education and to the exciting classroom based program, "Earth Care-Takers". The registration fee for the workshop will be \$25 with graduate and undergraduate credit available through Aurora University. For info.on this and other programs contact: Starflower Consulting, 79 Martin Court, Jericho, N.Y. 11753.

## LEHMAN COLLEGE

The Lehman College Program in Women's Studies presents the Sixth Annual Women's Scholarship Conference, Women and the Environment: Old Problems, New Solutions, on March 26 from 9am-5pm at Lehman College's Carmen Hall. Workshops include:

Environmental Impact on Family Life/Women and Housing/Women in the Global  
Workplace/Nutrition and Ecology/Environmental Barriers Limiting Lives of  
the Elderly

For more information call Prof. Arline Bronzoft at (212) 960-8347 or Prof. Pat Thompson at (212) 960-8173.



## NEW JERSEY SCHOOL OF CONSERVATION

The N.J. School of Conservation (at Montclair State College in Branchville, N.J.) offers resident school programs in environmental studies. Programs for two and a half, four, and five days are available. Weekend programs are available as well. Special events include:

Project Wild and CLASS Project Workshop - March 18-20  
Field Studies in Social Studies and Outdoor Pursuits - April 29-May 1.

For information: N.J. School of Conservation, Montclair State College, RD #2, Box 272, Branchville, N.J. 07826 or call (201) 948-4646.



## NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION

The Natural Resources Group of the NYC Dept. of Parks and Recreation has the following booklets and park guides available free of charge.

"The Country in the City" - New York's natural parklands

"Up With Trees" - A children's guide to trees

Guides to: Marine, Pelham Bay, Van Cortlandt, Kissena, and Cunningham Parks

Write to: NYC Dept of Parks, Natural Resources Group-Rm.4, The Arsenal, Central Park, New York, N.Y. 10021 or phone (212) 360-8119

## NEW YORK GREEN PARTY AND NEW YORK UNIVERSITY



Ecologues, a joint project of the New York Green Party and the NYU Environmental Conservation Education Program, has set their spring schedule of diverse and stimulating speakers. Join them for:

POLITICS AND THE ENVIRONMENT IN CENTRAL AMERICA - Wed. March 2, 7:30PM; Josh Carliner, speaker

ECOLOGICAL RESTORATION AND SUSTAINABLE WEALTH: A POSITIVE STRATEGY ON THE POLITICS OF PLACE - Thu. April 7, 7:30PM; Paul Mankiewicz, speaker

MINIMATA DISEASE: A JAPANESE ENVIRONMENTAL PROBLEM - Mon. May 2, 7:30PM, Millard Clements, speaker

Info: Contact the Environmental Conservation Education Program at (212) 998-5637.

## NEW YORK STATE MARINE EDUCATION ASSOCIATION



Everyone is invited to attend these upcoming programs:

March 18, 7:00PM - "Innovative Marine Environment Workshops at the Elementary School Level" Location: The Fireboat House Environmental Center, New York, N.Y.

April 14, 7:00 PM - "Aquaculture in the Shellfish Industry". The guest speaker will be Steve Malinowski of the Clam Farm. Location: The New York Aquarium, Coney Island, Brooklyn, N.Y. For directions call (718) 266-8624.

May 15 - NYSMEA and the Science Museum of Long Island will hold a Seafood Cook-fest at the Science Museum of L.I. Feast on exotic seafood specimens you will prepare yourself! For cost and details contact John Loret at (516) 627-9400.

June 3,4,5 - NYSMEA's Annual Conference "Marine Magic" will take place at Southampton College. For registration information contact Eileen and John Evans at (718) 833-2323. Those interested in making a presentation please call Ellie Fries or Meryl Kafka at (718) 266-8624.

PLEASE NOTE: NYSMEA's January 8th Conference at Kingsboro Community College has been postponed.



## POCONO ENVIRONMENTAL EDUCATION CENTER

PEEC is offering a very exciting program of special events for the spring season.

March 25-27 - The Write Stuff: Children and Nature (presented by the American Nature Study Society) \$87.

April 22-24 - Outdoor Leadership and Human Relations Skills \$93.

April 29-May 1 - Voyage of the Mimi Workshop \$150.

April 29-May 1 - Magic of Spring (with John Serrao) \$93.

May 6-8 - Warbler Weekend \$67

May 13-15 - Watching Bird Behavior (with Donald and Lillian Stokes) \$99.

May 27-30 - Memorial Day Family Weekend \$95 per person.

For information, write to PEEC, RD 1, Box 268, Dingman's Ferry, PA 18328.



## PROSPECT PARK ENVIRONMENTAL CENTER

PPEC, besides its fine programming for pre-schoolers and school groups, is known for its varied and interesting adult programs. A sampler:

- March 2 - Arbor Day Plant-A-Tree Workshop
- March 5 - Rock of Ages: The Geology of Greenwood (with Sidney Horenstein)
- March 19 - Litchfield's Villa Tour (with David Hirsch)
- April 2 - Loew's Kings Theater: Flatbush Movie Theaters (with Charles Sinclair)
- April 23 - Olmstead's Prospect Park (with Dr. Albert Fein)
- May 21 - Historic Williamsburg (With M. Gelfand)

A Mini-course is also offered on these dates entitled "Brooklyn Under Our Feet"

- March 6 - Brooklyn's Buried Past (with Sherene Bauer)
- March 13 - Brooklyn's Buried Waterfront (with CeCe Karkarian)
- March 20 - Brooklyn's Village and Country (with Fred Winter)
- March 27 - Weeksville, Restoration Clues from Archaeology (with Joan Maynard)

DETAILS: PPEC, The Picnic House, Prospect Park, Brooklyn, N.Y. 11215 or (718) 788-8500.

## QUEENS BOTANICAL GARDEN



Queens Botanical Garden is accepting applications for its Senior Garden, available to individuals 65 years of age and older. Garden plots are approximately 6'x12'. All tools, seeds, and materials are provided with individuals responsible for doing their own gardening (with the help and advice of Garden staff). They must also provide their own transportation to the site. Senior Garden members meet 3 days a week during the growing season (March through October) from 9am-noon on Monday, Wednesdays, and Fridays. For further information contact Edith Marien at (718) 886-3800 ext. 15.

## QUEENS COLLEGE CENTER FOR ENVIRONMENTAL TEACHING AND RESEARCH



The Queens College Center offers an exciting opportunity to bring the outdoors into the classroom. The Center has a collection of live hawks and owls that can be brought into the school for an assembly program or a classroom presentation by one of the Center's trained and knowledgeable staff. For information about the Birds of Prey program or the Center's residential environmental education programs, call Peter Schmidt at (718) 520-7240 or (516) 421-3526.

## RUSK INSTITUTE OF REHABILITATION MEDICINE, AT NYU MEDICAL CENTER

For 28 years, the Institute has maintained the Enid A. Haupt Glass Garden, where, under the auspices of the Occupational Therapy Dept., skilled horticultural therapists conduct programs for patients who have suffered disabilities from illness or injury. Patients propagate their own plants, arrange displays, and learn basic horticultural skills and techniques. The wheelchair-accessible greenhouse also serves as a retreat for patients and their families, providing a natural and soothing environment of plants, water and tropical birds. Since many patients' course of therapy lasts for weeks or months, the advantage of this refuge is enormous. To help, please consider making a contribution. Your participation is urgently needed and greatly appreciated. Visit, and observe for yourself the value of the Glass Garden and the Horticultural Therapy Program. For information, contact Nancy Chambers, 400 E. 34 St., NYC 10016 (212) 340-6058.

## SCIENCE COUNCIL OF NEW YORK CITY

"Science in an Excited State" will be presented on March 12 from 8am-4:30pm at Long Island University, Brooklyn Center. Workshops for all levels of educators will be offered along with commercial and non-commercial exhibitors. For information contact: Richard Plass, Coordinator at (212) 673-9030.

## STATEN ISLAND FRIENDS OF CLEARWATER



Staten Island Friends of Clearwater and the sloop CLEARWATER will sponsor a free Water-front Festival on Saturday, May 14 at the Snug Harbor Cultural Center, 914 Richmond Terrace, S.I. The Festival will offer entertainment, puppet shows, craft exhibits, environmental displays, etc. Call (718) 987-8361 for additional information.

## TRANSPORTATION ALTERNATIVES



Transportation Alternatives was founded in 1972 by bicycle-riding New Yorkers. Members include a cross-section of bike commuters, recreational riders, messengers, touring cyclists, and supporters of clean air. The group works for acknowledgement of the bicycle rider's right of way and safer road surfaces. They have achieved bike lanes in Central and Prospect Parks (and extended hours of closing to cars), repair of Shore Pkwy. bike path and more. They are working on a city-wide bike map, an educational campaign and continuous access to all City bridges. For information about membership or to receive a brochure, call Transportation Alternatives at (212) 866-7489.

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



The US Environmental Protection Agency wishes to extend an invitation to Jr. and High Schools in NYS to join in the first year of its environmental essay contest. This contest is open to all students, grades 7-12. Each student must write an essay of up to 500 words (2-3 pgs typed, double-spaced) consistent with the theme "Recycling/ How Can You Help?" Essay covers must include student's name, grade, school, school address, and teacher's name. Entries must be received by MARCH 14. Only one essay per grade from each school should be submitted and sent to the U.S. Environmental Protection Agency/ Office of External Programs, 26 Federal Plaza Rm. 907, New York, N.Y. 10278. An entry form may be obtained from Isabel Funcia at this office.

## WAVE HILL PUBLIC GARDEN

A Maple Sugar Festival will be held on Saturday, March 5 at 4:00PM. Discover how the colonists tapped sugar maples and boiled the sap over an outdoor fire as Wave Hill becomes the setting for an old fashioned sugar camp circa 1850. Taste the results! Also, see a Native American encampment. Maple products and refreshments will be on sale. Admission is free with weekend admission (\$2 adults, \$1 seniors, students and children under 14 are free). Wave Hill is located at West 249 Street and Independence Ave. in the Riverdale section of the Bronx. For more information call 549-2055.



## WATSON SUMMER ECOLOGY WORKSHOPS AND THE SIERRA CLUB

Join WATSON and the SIERRA CLUB for a great family outdoor experience. The west coast Environmental Workshop will be held on Saturday, July 16 - 23, 1988 at Clair Tappan Lodge in the Sierra at Norden, CA. The east coast Workshop will be held on Saturday, July 30 - August 6, 1988 at Watson Homestead, Painted Post (in the Finger Lakes region), N.Y. For further information contact Pat Suiter, 4714 67th Ave., Miami, Florida 33155 or call (305) 666-2906.

## EMPLOYMENT/VOLUNTEER OPPORTUNITIES

### NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION



The Natural Resources Group seeks a creative, energetic and well-spoken individual to be stationed at Pelham Bay Park Environmental Center for six months. This person will evaluate the environmental education programs and nature center exhibit effectiveness, act as a liason with the NYC Board of Education in setting up cooperative programs, develop lesson plans and curriculum materials. This person will also monitor the trail system and make recommendations for its maintenance. Graduate student interns are encouraged to apply.

Two naturalist positions are also available in Riverdale Park in the Bronx and Forest Park in Queens. Each resident naturalist will be responsible for the preparation of interpretive brochures, field inventory, contributing to a park-wide management plan and assisting in the development of environmental education programs. Send your resume to: Nancy Barthold, Natural Resources Group, Dept. of Parks, The Arsenal, Room 4, Central Park, N.Y. 10021

Urban Park Ranger positions are also available for the summer 1988 season. Contact Kim McNeal, Urban Park Rangers, Dept. of Parks, 1234 5th Avenue, Room 205, New York, N.Y. 10029.

For a complete updated list of all Parks Department job opportunities, including qualifications and responsibilities, contact: Recruitment Division, Parks Dept., The Arsenal, Room 210, Central Park, New York, NY 10021. NYC residency is required for most positions.

### CENTRAL PARK CONSERVANCY



Learning and Involvement for Volunteers in the Environment (L.I.V.E.) seeks a part-time assistant to help organize volunteers for You Gotta Have Park and other special events.

A position of Assistant Supervisor for adult and school groups is also available, starting in mid-March and continuing through mid-December. Please send a resume to: L.I.V.E. Program, Central Park Conservancy, 830 Fifth Ave., New York, 10021.

### INTREPID SEA-AIR-SPACE MUSEUM

The Museum is seeking a qualified person for an entry level museum education position as Reservations Coordinator/Administrative Assistant. Responsibilities include: Coordination of all aspects of reservations, supervising H.S. Junior Intern Assistants, working with Education Dept. staff on school and public programs, administering to organization of education office, organize mailing lists and publicize programs, and assisting in computer oriented accounting system. Salary is \$16,000 plus competitive benefits. Send resume to: Ron Weinstein, Dir. of Education, Intrepid Sea-Air-Space Museum, Pier 86, West 46th Street and 12th Avenue, New York, N.Y. 10036

## SPOTLIGHTS

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On Thursday, April 21st, JOHN KOMINSKI will be honored by the Alley Pond Environmental Center for his outstanding contributions to environmental education. The dinner will be held on the campus of the US Merchant Marine Academy in Kings Point. For reservations and additional information contact APEC at (718) 229-4000. The keynote speaker will be Peter A.A. Berle, Pres. of the National Audubon Society.

John has been involved in the appreciation and study of the natural environment since his childhood days in Brooklyn. He explored the shoreline, beaches, vacant lots and waters of Jamaica Bay and the Atlantic surf. John credits the Boy Scouts with the formalization of his outdoor interests. Several years of experience as a summer naturalist, waterfront instructor and outdoor specialist at the Ten Mile River Scout Camps convinced him to become an earth science teacher. Upon his graduation from the City College of NY, where he majored in education and geology and later earned a masters degree in environmental studies, John moved to Queens and began his teaching career at JHS 67 in Little Neck. He organized the Urban Ecology Club for his students and focused attention on the abused woodlands and salt marshes of Alley Pond Park and Udalls Cove.

In 1973 John became the Science Coordinator and Planetarium Director for CSD 26 and in 1976, after taking a leave from the Bd. of Ed. became the first Executive Director of the Alley Pond Environmental Center. John returned to the Bd. of Ed. in 1979 to serve as Ass't. Director of Science and Executive Assistant to Charlotte Frank. Presently, his responsibilities include curriculum and staff development through the Science Technical Assistance Centers located in Bayside and Bergen Beach, and supervision of the science, school camping and environmental educational programs offered by the Gateway Environmental Study Center and programs aboard the Intrepid Sea-Air-Space museum.

## SPOTLIGHTS

## SPOTLIGHTS

"When naturalist John Muir visited New York City in 1868 he longed for a natural, unspoiled environment... 'In these terrible canyons of New York, I am a pitiful, unrelated atom that loses itself at once,' he wrote. More than a century later, another man named JOHN MUIR has challenged his distant relative's antipathy for city environments, and devoted himself to teaching urbanites to stop resisting cities and start enjoying them."

EEAC's former Chairman and Prospect Park Environmental Center's founder and Executive Director JOHN MUIR, was the subject of a full-page profile in New York Newsday on January 4, 1988. The statement above is from that article, called "The Urban Environment - The Street Naturalist."

"I'm observing and learning from Brooklyn all the time. It continues to be full of such wonders. I'm a happy man. I walk to work and it's work I love."

Explore these "terrible canyons" - the subways, tunnels, graveyards, waterways, parks and neighborhoods with PPEC this Spring. See "NEWS FROM..." page 19, in this newsletter. Congratulations JOHN.



BOB ORTNER, of the Council on the Environment of NYC (formerly of Queens College Center at Caumsett State Park) and CAROL NEHR, of the Alley Pond Environmental Center, are pleased to announce their forth-coming marriage. Bob and Carol met at an EEAC meeting at Queens College Center in April, 1986. Their friendship developed while they worked with Kim Estes on the EEAC newsletter and, lo and behold, a romance sprouted (only fitting for two naturalist/educators). On Christmas Day 1987, their romance blossomed into an engagement announcement. A late October, 1988 wedding is planned. How's that for an EEAC recruitment incentive and membership benefit?

This issue of the EEAC newsletter contains four new features: SPOTLIGHTS, highlighting news about EEAC members; EMPLOYMENT/VOLUNTEER OPPORTUNITIES; BOOK REVIEW; and THINK TANK, you thoughts to share. Future issues will include CLASSROOM AND FIELD ACTIVITIES. We encourage you to submit material for publication. The deadline for the late Spring/Summer issue is April 1. Again, we are grateful to the following individuals and organizations for helping to produce our newsletter. We could not do it without your support: Alley Pond Environmental Center, Pina Quercia (APEC), Con Edison (for printing this and all other issues), Prospect Park Environmental Center and all of the contributing authors.

*Carol Robert Kim*

## *Environmental Education Advisory Council*

EEAC is a special group of educators, youth leaders, environmental professionals and active individuals whose common aim is to encourage environmental education in the N.Y.C. region.

We are an organization that works on "synergy." Through us, members are able to pool their ideas and knowledge, speak with a single voice to influence educational policy, and, as individuals, share many pleasurable and interesting activities.

The main goal of EEAC's coming together is the education of today's young people. The future stewardship of our environment, an immensely important task, depends on their being informed and, as much as possible, experienced in environmental matters. We stress that young people should develop an appreciation both of nature in the wild and of the richness of urban and semi-urban environments, as well as an awareness of environmental problems to be solved.

By exchanging our knowledge, we at EEAC make each other better educators, By advising and influencing where we can, we may make education better as a whole.

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### MEMBERSHIP APPLICATION 1988

\_\_\_\_\_ Renewal      \_\_\_\_\_ Member

NAME: \_\_\_\_\_

AFFILIATION: \_\_\_\_\_ POSITION: \_\_\_\_\_

BUSINESS ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

HOME ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

Your \$10.00 dues payment covers the cost of membership in EEAC for the calendar year 1988. Membership entitles you to receive the EEAC Newsletter, program information mailings and reduced registration fees for environmental education conferences sponsored by EEAC. Please complete this form and mail it with your payment to:

BERNARD KIRSCHENBAUM  
12 GREGORY ROAD  
SPRINGFIELD, N.J. 07081

Check is to be made payable to: EEAC



LISTENING TO NATURE: HOW TO DEEPEN YOUR  
AWARENESS OF NATURE

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By Joseph Cornell; Dawn Publications; Nevada City, CA; 1987

The author of Sharing Nature with Children (1979) has provided us with another wonderful guide to enjoying, understanding and appreciating nature. Joseph Cornell blends bits of Eastern philosophy, quotes from Western naturalists and writers, and simple activities designed to heighten our awareness and focus our perception and attention on the world around us. The photography of John Hendrickson provides an appropriate counterpoint to the text and complements the inspirational quality of the quotations and activities.

Although it is as pretty as a coffee table book, Cornell describes his latest work as a monthly diary - an exercise book that provides the reader with a daily thought, theme and activity. This "new age" naturalist suggests that some of the quotations be used as affirmations to be read and repeated often, and he reminds us that, "As we think, so shall we become." A typical activity guides the reader through a simple and familiar progressive relaxation exercise aimed at increasing our ability to experience and enjoy "still...ness." Some may feel that the activities are not new, that they have seen this all before, but one should judge the total package. And what a slick, workable package he has provided.

Cornell points out that "ecology is the intellectual study of the interrelationships of all living things;" however, he does so as an aside. His real mission is to provide us with opportunities to feel and explore, but not study, our oneness with Life. His workbook is more about knowing and understanding in the feeling sense, than the cognitive sense. He urges us to celebrate our unity with nature even when we are not in the wilderness, and reminds us that we are in good company when we pursue this goal. The reader will detect the influence of the masters of Tao and Zen, as well as Rachel Carson's Sense of Wonder, Henry David Thoreau, and many others: "One's happiness depends less on what he knows than on what he feels." - Liberty Hyde Bailey

"Come forth into the light of things. Let Nature be your teacher." -William Wordsworth  
"Never a day passes but that I do myself the honor to commune with some of nature's varied forms." - George Washington Carver

Whether you follow the activities sequentially or simply open up Listening to Nature at random, you will find valuable words and guidelines that will help you relax, focus, and more clearly listen, see and feel your connectedness to the natural world that surrounds and sustains you. Chances are you will want to share your copy with a friend - what a great idea.

REVIEW BY JOHN KOMINSKI

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ENVIRONMENTAL EDUCATION  
ADVISORY COUNCIL (EEAC)

c/o Prospect Park  
Environmental Center  
The Tennis House  
Prospect Park  
Brooklyn, N.Y. 11215  
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