

1972-2012

A Sense of Place



Our Mission: The Pocono Environmental Education Center (P.E.E.C.) advances environmental education, sustainable living and appreciation for nature through hands-on experience in a national park.

Our Vision: An Environmentally Enlightened World.

— *40th Anniversary* —

CELEBRATING QUALITY ENVIRONMENTAL EDUCATION IN THE DELAWARE WATER GAP NATIONAL RECREATION AREA

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A Sense of Place

There is a great deal of talk these days about saving the environment. We must, for the environment sustains our bodies. But as humans we also require support for our spirits, and this is what certain kinds of places provide. The catalyst that converts any physical location – any environment if you will – into a place is the process of experiencing deeply. A place is a piece of the whole environment that has been claimed by feelings. Viewed simply as a life-support system, the earth is an environment. Viewed as a resource that sustains our humanity, the earth is a collection of places. We never speak, for example of an environment we have known; it is always places we have known – and recall. We are homesick for places, we are reminded of places, it is the sounds and smells and sights of places which haunt us against which we often measure our present.

~ Alan Gussov, 1931-1997, artist and French-intensive gardener; President, 'Friends of the Earth' Foundation; Author, *A Sense of Place: The Artist and the American Land*; Originator/implementer, the National Parks "artists-in-residence" program.

Helen Conover

Former Trustee, Educator 92nd St.Y

During the 35 or so years that I birded at PEEC, canoed on the river, hiked the forests, paddled around the pond, and counted new species on my lists, I also became the PEEC SEASONS editor, developed a special teachers' edition and eventually became a Trustee. Through it all the best was being outside (I live in New York City). I got my first glimpse of Jupiter at PEEC, saw my first east coast eagle there and countless tiny warblers, and swam in the pool! The most meaningful was a feeling of being a part of this world's wonderland, the birds and pond, animals and insects were a part of my life and me a part of theirs. We weren't separate; that knowledge was better than my 1,000 species bird list from all over the world any day.

Chairperson Board of Trustees



Barbara Brummer, Ph.D. Chairperson

"The joy of watching people engage and appreciate nature in this most intimate way at PEEC is inspiring and contagious."

FORTY YEARS OF ENVIRONMENTAL EDUCATION AND LEADERSHIP

In 1972 a formal partnership between Keystone College and the National Park Service was initiated and the Pocono Environmental Education Center was born. Fourteen years later (1986) a group of 8 founding trustees formed the Board of Directors that would lead this organization with a goal to help teach the importance of conservation and environmental stewardship. Our vision statement is simple. We look forward to and strive for: "An Environmentally Enlightened World".

The vision of our founding trustees (seven men and one woman ahead of her time) endures and is even more resonant in today's world. We salute our champions of conservation and we admire those before them that inspired the environmental movement. Conservation Giants like: John Muir; Gifford Pinchot, Aldo Leopold and Rachel Carson inspired us all to protect the environment from the impacts human activities. Our job now is to carry on in "teaching" the importance of stewardship for our planet.

Our by-laws outline the vision of our founding trustees and apply to this day: serve the people as a residential center for environmental studies; convene workshops and symposia for formal and non-formal educators concerned with the development of concepts that enhance a sanative (healthful and healing) environment; develop and implement educational programs for kindergarten through high school, college, and university levels, as well as at adult and continuing education levels; establish a network of educators and educational resources concerned with the development of a concept that maintains a sanative environment; and publish diverse reports, newsletters, texts, and units of study concerned with the development of a concept of conservation of human and natural resources.

Forty years of environmental leadership – PEEC is a model to be admired. For all those who have participated in PEEC programs, you know what we mean. It is an enduring concept with measurable results in the faces of our enthusiastic staff and most of all – the children that enjoy their experience in our outdoor classroom. Never has the need for environmental education been greater; let us continue the journey and spread the message for 'An Environmentally Enlightened World'.

Barbara Brummer; Chairperson
PEEC Board of Trustees

Executive Director



Jeff Rosalsky, Executive Director
2009-Current

Over the past 15 years, my three children have grown up with PEEC as a vital part of their lives. It has influenced who they are and what they hope to do with their futures. From my 17 year old daughter and her friend Emily (who she met on a PEEC hike at age 4) confidently running Tumbling Waters Trail to look for lost hikers, to my 16 year old son helping to extract a dead bear from the woods for an EcoZone exhibit, to my youngest son winning mud camo at summer camp and then teaching as a counselor; PEEC has made their lives fuller. They learned by being steeped in the wonder that is PEEC and the beautiful national park in which it is located. At the end of every day, they took a little bit of PEEC home with them, with their dirty hands and muddy clothes and in the guidance and teaching from the amazing PEEC educational staff.

After 40 years, PEEC's mission and methodology of experiential learning are just as relevant, perhaps even more so. Mobile electronic devices in this century, like the manufacturing revolution of the mid-twentieth century, have served to disconnect people from nature and the sources of the food and water that sustain us. My suggestion for the next forty years is to coop the technology to enhance the learning process, rather than to fight it. A single mobile device can carry every field guide in PEEC's library—what an amazing educational tool. The key is to know when to turn it off and put it down, just to listen and to observe. The natural world is already fascinating and exciting; we need to guide students to see it, to understand it and to want to sustain it. At its core, PEEC is charged with not just educating the next generation of environmentalists, but the next generation of concerned, informed and enlightened citizens.

Recently, we led a group of high school students, who had never before been in a canoe, on an expedition down the Delaware River. Afterward, one of the young women remarked that she reveled in the fact that we "trusted her enough to be in charge of her own destiny." I realized that is all my three teenage children want. Ultimately, isn't that what all children want as they mature into adults? PEEC provides exploration, context and guidance for tens of thousands of students each year and prepares them to be in charge of their own destiny.



Jeff Rosalsky
Executive Director

PEEC's Sense of Place



Flo Mauro, Director of Development

We have been talking for well over a year now about PEEC's 40th Anniversary and how to celebrate it. The possibilities are/were endless. Big events and special dinners are simply not what we are about or what PEEC represents. After much deliberation we chose to celebrate the 'Sense of Place' that PEEC is to everyone who has been here, worked, studied and played here. The quote from Allan Gussow has been on my desk for my entire career...and that's a long time. It is very special to me, has served me well and seemed a perfect complement for what we wanted to portray and accomplish.

While PEEC has gone through many physical changes and adaptations these past four decades, several things have remained the same. PEEC is and always has been a place where people of all ages and abilities have the opportunity to learn about nature and natural systems. The environment is the context for learning at PEEC. We believe we make a difference.

And when I reached out to the many friends, staff, trustees, teachers and students who have or had an interest in PEEC and asked them to reflect on their experience, each one commented on the people they met here, the educators who inspired them, challenged and mentored them, worked with them and made a difference in their lives, personally and professionally. We celebrate them.

We are taking the journey through 'The Sense of Place' that is PEEC through the images, photographs and reflections of our Founders, Trustees and Executive Directors, mentors, friends, colleagues, staff, teachers and students who have visited, lived, worked and studied here through the past four decades.

This 40th Anniversary SEASONS newsletter is a small snapshot of PEEC's illustrious history. We have re-printed excerpts from the very first 'messages' written by PEEC's Executive Directors, Jack Padalino, Jim Rienhardt and Jeff Rosalsky as well as their new message. It was and is their leadership that brought PEEC to its place of prominence in education.

The articles written by PEEC's Naturalists and staff over the past 30 years or more have always been special to us. They were and still are a focal point of our work and our publications and we wanted to include some of them here for you. There are hundreds more. We will be reprinting more Naturalist Articles, photographs and images of PEEC throughout the next six months as we continue to celebrate PEEC's 40th Anniversary.

It's been fun and enlightening to work on this project...enjoy,



Flo Mauro

Message from 1983



Jack Padalino, Executive Director
1974-2001

One hundred years ago, people left a world that, with respect to quality of environment, closely resembled the world into which they had been born. That is no longer the case, and it will be even less so in the years immediately ahead.

Author John Naisbitt has forecasted ten Megatrends shaping our society. These are:

FROM

Industrial Society
Forced Technology
National Economy
Short Term
Centralization
Representative Democracy
Hierarchies
North
Either / Or

TO

Information Society
High Touch / High Tech
World Economy
Long Term
Decentralization
Participatory Democracy
Networking
South
Multiple Options

Colleagues in outdoor environmental education have identified a trend toward increased activity and interest in residential environmental education. PEEC, as a year-round base for learning in, for and about environment, has been conducting programs, short-term institutes, workshops and conferences for more than a decade. Keystone Jr. College of LaPlume, PA and the National Park Service have been working together to provide experiences for approximately 20,000 visitors to the center each year.

PEEC has helped those who learn about the environment; learn how to learn, and learn what, how, and when to choose from whom to learn with a degree of independence. Our Learning Styles Workshop in March will present information about learning styles and teaching modes.

Through interactions with nature and natural systems, friends who visit PEEC have had greater opportunities to contribute to and benefit from the quality of life in a technological age we identify as the information era.

Jack Padalino
Executive Director

Message from 2001



Jim Rienhardt, Executive Director
2001-2009

On behalf of PEEC, I want to express our deepest sympathy to all those who lost family members, friends and loved ones as well as those who sustained some type of injury, during the September 11th tragic terrorist attack upon our beloved America. We at PEEC are deeply heart broken, as some of our school children, who have come here in the past, have lost family members. It is times such as this, that we somehow find inner strength to bond together and move forward and we are doing just that.

It's been eighty-four days from my first day at PEEC to the Autumnal Equinox, giving me a broader grasp of PEEC's operations, identifying specific needs, and establishing priorities. It's a pleasure being part of a Board of Trustees and management team who are moving towards achieving PEEC's goals.

I am excited to be given the opportunity to lead PEEC into the 21st century and to work with many local, regional, national and international partners and educators in making PEEC the most renowned residential Environmental Education Center in the entire National Park System. Our existing partnership with the National Park Service will be expanded by pooling our collective resources to better serve the general public.

I am looking to build upon the multi-state customer use by reaching out aggressively to the greater Pocono Region. PEEC has great potential to provide even broader services to Monroe and Pike Counties. The recent approval of the Monroe County Open Space Plan by the County Commissioners, the projected reconnection of passenger rail service to the Poconos within 3-4 years and the population explosion in the two counties all sets the stage for PEEC to be a major provider of environmental education, outdoor recreation and cultural programs for all children, adults, and senior citizens of this great Pocono Region.

Another primary focus is the capital campaign which was started in 1999. One of the core priority projects is the 9,000 square foot Visitor Activity Center. Recent growth at PEEC has necessitated us to build a new multi-purpose classroom/dining facility. Other important core projects include a new roof for our Administration/ Classroom Building, refurbishing our 50 cabins, constructing a new waste-water treatment facility...

AS I REFLECT BACK UPON THE TIME I WAS AT PEEC, it was a time of developing partnerships and relationships with multiple umbrella Community based organizations, corporations, foundations and the local, state, Federal governments and the National Park Service. We were successful in utilizing their resources to rebuild PEEC's infrastructure! In addition to that success, we also enhanced PEEC's local image throughout the Poconos, Pike and Wayne Counties. This was accomplished through emphasis on a concentrated marketing and outreach effort at all levels. We specifically focused on electronic and print media, presentations to civic and community based organizations and participated at multiple organizational public fairs & festivals.

In closing, I would say that our Board and Staff Team brought PEEC to a new level of renewal and into the 21st Century in providing excellent Environmental Education to all of its students and families alike!

And as I always thought and ended every message... 'By Working Together, We Did Make a Difference!'

Jim Rienhardt
Executive Director

Honeymoon Haven to



It Began Forty Years Ago

The Scrantonian--Sunday, September 10, 1972
"National Park Service, Keystone Junior College Plan Education Center"

"Keystone Junior College and the National Park Service (NPS) have become partners in the operation of a facility to be known as the Pocono Environmental Education Center. The Center will be a part of the Delaware Water Gap National Recreation Area and is expected to provide, among other things, environmental education and cultural programs for park visitors."

According to Harry K. Miller, former Keystone College president and Founder and Chairman of PEEC's Board of Trustees, this partnership, forged in the early 1970's, was the first time that the National Park Service made an agreement with an institution of higher education to provide education in a national park on an ongoing basis. The foundation for this pioneering agreement was laid almost twenty years earlier:

In 1955, two tropical storms caused severe flooding along the Delaware River. The floods were followed by drought conditions in the early 1960's. As a result, Congress authorized the Army Corps of Engineers to study the water resources of the Delaware River Basin.

The study recommended the construction of the Tocks Island Dam across the main branch of the Delaware River five miles north of Stroudsburg. The resulting reservoir would have stretched thirty-seven miles north to Matamoras, Pennsylvania, covering about 12,500 acres of land with water. The purpose of the dam was to provide a protected water supply, recreation, hydroelectric power, and flood control. Congress then authorized the development of the Delaware Water Gap National Recreation Area (DWGNRA) in conjunction with the dam project. The Recreation Area was established, but the dam was never built due to environmental and economic concerns, and lack of public support.

During the 1960's and early 1970's the Army Corps of Engineers was involved in acquiring land for the Tocks Reservoir and the Delaware Water Gap National Recreation Area (DWGNRA). When the Corps acquired a property, if it was located below where the high-water line would be, the property was retained by the Corps. If it was located above the high water line, ownership of the property was turned over to the National Park Service for administration, but the Park Service didn't have the legislative authority to do anything with the properties. According to Jerry Howard, PEEC's first Director, the idea to get non-profit organizations to do something with the properties came from Peter DeGelleke, who became the first Superintendent of the DWGNRA.

In 1972 Honeymoon Haven, a functioning 38 acre resort located above the high water line, was acquired by the US Army Corps of Engineers for the DWGNRA and turned over to the NPS. Relationships between the Park Service, the Army Corps, and local residents were strained

Environmental Education Center

because of the acquisitions being made in the area, and there were concerns about leaving the resort property unoccupied. Peter DeGelleke had a previous relationship with Keystone Junior College because two Keystone faculty members operated a successful Youth Conservation Corps camp in the area. He approached those faculty members with the idea of establishing an environmental education program in the Honeymoon Haven buildings.

NPS officials sought the services of a competent educational institution to develop programs for the center. Why Keystone? Through Congressman Joseph M. McDade's interest, KJC in cooperation with the University of Scranton and Penn State University (Worthington-Scranton Campus) had been chosen to conduct a Youth Conservation Corps (YCC) camp during the summer of 1972 at Sky's Edge in the DEWA not far from Honeymoon Haven.

Mr. De Gelleke and his NPS colleagues were favorably impressed by the efficient and creative way the YCC camp was operated under the leadership of Howard Jennings, a KJC biology instructor and Dr. Michael W. Mould, KJC Director of Athletics. With the potential site for an environmental education center within its management and the need for education in National Parks becoming more apparent, the NPS turned first to KJC as a possible partner and cooperator. College trustees and administrators, after on-site inspections, conferences with NPS officials, and a feasibility study conducted by Dr. George Fuge, Professor at Cortland College, NY, decided to enter into a partnership with the NPS. This partnership with PEEC has lasted for almost a half century.

DeGelleke's proposal was presented to Keystone President, Harry Miller, and within ninety days the Pocono Environmental Education Center became a reality. Jerry Howard, then Dean of Students at Keystone, was appointed Director of PEEC. According to Howard, the first winter was spent "trying to keep the pipes from freezing, and figure out what was what." Nevertheless, during that first year the PEEC staff expanded to include the soon-to-be PEEC President, Jack Padalino, and together, Padalino and Howard began to develop an innovative residential environment education program that served over 1,800 visitors that first year.



Cabins 1 & 28



The 30's

When KJC accepted the challenge to occupy the property, it included a large central building (Main Building) which contained a swimming pool, sauna, locker rooms, a six-lane bowling alley (now classrooms 1, 2, and 3), offices and large open areas. There were 59 cottages including a half-dozen "Cinderella coaches," trailers that were removed during the mid-eighties. Most of the cottages were constructed after 1960. A dining hall contained a fully equipped kitchen. Rounding out the structures were a laundry, garage, maintenance workshop, pump houses, and storage sheds.

A variety of recreational facilities including an outdoor swimming pool, basketball court, miniature golf course, toboggan run, archery range, shuffleboard deck and a half-acre pond were also on site. Only the basketball court remains. NPS has made available additional adjacent property and facilities including housing for staff members. The use of adjacent property for trails and the responsibility for managing Loch Lomond and the Schoolhouse has enhanced the partnership as well as our cooperative programs.

PEEC was founded at a time when the proposed Tocks Island Dam was still in the NPS master

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Honeymoon Haven



PEEC's Dining Hall



PEEC's Entrance

plan. With completion of the dam it was envisioned that approximately 10.5 million annual visitors would frequent the DEWA. One clientele for PEEC would be park visitors. Today, with Tocks Island Dam no longer part of the master plan, DEWA serves over 7 million visitors. This distinguishes the park as among the top ten most visited places within the 370 units of the National Park system. PEEC's educational programs, which are offered to park visitors, include workshops, institutes, and special programs.

An early vision that came to fruition was the services that PEEC would provide to school districts in the tri-states area. Park professionals looked to PEEC to provide courses for family groups and retired persons that would be aimed at encouraging the enjoyment of and respect for natural, cultural resources and the environment while they studied earth systems. As KJC saw it the center would eventually become a multi-purpose campus suitable for research in the life and behavioral sciences, new college curricula, and field trip experiences in conjunction with present programs at area schools.

How did PEEC fare during the early days? Jack Padalino became Director in '73 and a report to the KJC President on PEEC's development and current operations noted: "In the first four years of operation PEEC has developed into a nationally recognized field education facility dedicated to environmental education." The number and variety of users increased dramatically from 600 the first year to 16,000 during fiscal year 1975 and in 1997 approximately 24,000 people. KJC financial officers claimed that, "The development of the center has been hampered only by the limitations of the College's ability to underwrite the cost of operation." The problem that existed was that despite the success of PEEC from a client/user perspective, the financial burden which it has placed on the College had reached a critical stage.

From a financial perspective through June of '76, KJC supported PEEC expenses of approximately \$1 million with a return income of \$ 600 thousand. The operating deficit was approximately \$400 thousand and included an 8% fee for management services. As of fiscal year 1976 PEEC was on a sound fiscal basis since income exceeded expenses. PEEC was now in a position to begin to repay a portion of its \$400 thousand debt to KJC and the trustees assured continuation of the then operating arrangements for PEEC and the reduction of upward pressure on user rates created by the need to recover start-up costs.

Dr. Miller stated at the launching of PEEC, "We are convinced that the long-range benefits to be derived far outweigh the initial expenditure of funds and effort involved." He noted that "Keystone is offered the ground-floor opportunity to move forward in areas which are of growing interest to this region and the country, and to develop new programs which will augment, not replace existing programs offered at the College."

"This unprecedented opportunity of the partnership and cooperative arrangement with the National Park Service ... is the determining factor in making the operation feasible." PEEC remained a subsidiary of KJC for the following decade.

Harry Miller was one of the "magnificent seven" that came to PEEC's aid during the negotiations with KJC in 1986. When the College trustees encouraged PEEC to become a not-for-profit corporation, Harry served as a founding trustee and guided us with his wisdom through the initial phase of establishing a non-profit corporation and defining operating procedures and policies. Harry is the author and reviser "in perpetuity" of PEEC's By Laws.

Jack Padalino served as PEEC's Director and President from 1973 through 2001. It was during his leadership that PEEC's mission, purpose and goals were established and many of its current programs, traditions and partnerships were initiated and nourished. PEEC programs were founded on the basic ecological principles that are still play. Jack put PEEC on the map and made it an annual education destination for thousands of visitors. It was during Jack's tenure that PEEC; incorporated as its own 501 (c) (3) non-profit organization in 1986, became one of only six resident environmental education centers located within the country's National Parks and its Memorandum of Understanding (MOU) with NPS was given 10 year status.

Jim Rienhardt became PEEC's Executive Director in 2001. In the following 10 years Jim concentrated his skills, efforts and leadership in developing partnerships and relationships with multiple umbrella Community based organizations, corporations, foundations and the local, state, Federal governments and the National Park Service. His efforts were successful in utilizing the area's combined resources to rebuild PEEC's infrastructure. The National Park Service continued to recognize PEEC's achievements and leadership in environmental education renewing its MOU with PEEC for 30 years.

After serving as a PEEC volunteer for 12 years and a member of PEEC's Board of Trustees, Jeff Rosalsky was named PEEC's Executive Director in 2009. Over the past three and a half years, he has focused on improving PEEC's educational offerings for both school groups and the local community as well as the creation of PEEC's innovative EcoZone exploration and discovery room.

And now, forty years later, PEEC is still identified with programs of regional, national, and international significance that reach out to students, educators, families, underserved populations, and park visitors of all ages and abilities-over 24,000 people each year. PEEC programs will continue to grow and evolve, but some things have not changed much from that first winter in 1973-it's still all we can do to keep the pipes from freezing!

*Kate (Monahan) Foord
with Gerry Howard, Jack Padalino, Harry Miller, Flo Mauro*



Ring of Aldyth



Old Front PEEC

PEEC Founders



Marie Kuhnen

Dr. S. Marie Kuhnen

1917-2009

She inspired generations of biology teachers; she created a love of the outdoors in thousands of people who otherwise would never have come to know the beauty and complexity of nature. A woman ahead of her time – she became the first Chair of Montclair State's Bio Department when it was founded in the late sixties; she helped to found the School of Conservation in Stokes State Forest; she was a founding Trustee of the Pocono Environmental Education Center; she worked tirelessly to preserve the hemlock forest in Valhalla Glen in partnership with The Nature Conservancy well before most people had an appreciation of protecting unique natural communities.

She gave us all a new perspective on the natural world. And yes, we will always remember our days with her; but most of all we will remember her – the energetic and 'larger than life' – Dr. S. Marie Kuhnen, a woman whose passion and energy made an impression that changed lives.

Paul F. Brandwein

1912-1994

In addition to his involvement with primary and secondary education in America, PFB participated in many roles with graduate and undergraduate institutions throughout the world. He became education director and later co-director of the Pinchot Institute for Conservation Studies at Grey Towers in Milford, Pennsylvania combining his interests in education and conservation. Those interests were again realized as he also became a founding Trustee for PEEC. The property where he and his wife, Mary, made their home was also intended to realize this commitment to conservation. The Rutgers Creek Wildlife Conservancy established by Paul and Mary has been administered by the Brandwein-Morholt Trust since Paul's death in 1994. In affiliation with PEEC, the Conservancy served as a site for educational programs and research. The Paul F-Brandwein Institute advances Paul's intention for the land as a place of learning and discovery for students, teachers, scientists, and those interested in natural systems and the environment.

Dr. Harry K. Miller

In the 1970's Harry was the President of Keystone College, a colleague of Howard Jennings, a personal friend of Peter DeGelleke and an acquaintance of US Congressman Joe McDade. Harry Miller forged the partnership that formed PEEC. That partnership, forged in the early 1970's, was the first time that the National Park Service made an agreement with an institution of higher education to provide education in a national park on an ongoing basis. Harry is the original founding Trustee and Chairman of PEEC's Board of Trustees.



Carol Padalino, Dr. Paul Brandwein and Jack Padalino



John Mac Farland, Dr. Harry Miller and his wife Peg

Learning Comes Naturally

Jeff Shreiner

Naturalist, PEEC 1978-1993

Biologist, Delaware Water Gap National Recreation Area 1993-present

Jeff Shreiner first came to PEEC because he "...needed a job..." He was PEEC's first Naturalist. Little did he know then just how prestigious an appointment that was and still is. When asked what made him stay for 16 years, he hesitated and then said simply "...I loved it..." For Jeff, that was it, no more, no less. He loved his job and especially the people and staff he was privileged to work with every day.

Jeff will always be grateful for those who taught, mentored and challenged him throughout his tenure at PEEC especially Jack Padalino, Marie Kuhnen and Helen Ross Russell. He refers to them as 'larger than life', tireless in their pursuit of learning and teaching. Several staff members who in turn worked with Jeff say the same about him. They also say that the best thing he ever did was marry Patti.



Jeff Shreiner



John Serrao

John Serrao

Naturalist, Author, Photographer

John Serrao moved to the Poconos in 1986 with aspirations of becoming a freelance Naturalist good enough to support a family. He wanted desperately to become affiliated with PEEC because he heard that PEEC was the '...best of the best...' as far as environmental education was concerned.

Jack Padalino called one day asking John if he could come and help out at PEEC for a winter weekend program. He spent the next 25 years 'freelancing' at PEEC leading workshops, writing articles and training staff. John says if he ever wanted to know where to find a certain bird, reptile, amphibian, grass, tree or shrub, Jack Padalino, Jeff Shreiner or Marie Kuhnen would know where to find it and Helen Ross Russell would cajole him into writing about it. John then became to go-to-guy for PEEC staff and visitors in search of anything that flew, crawled, pranced, swam or grew in the Poconos.

Dr. Helen Ross Russell

Biologist, Naturalist, Author, Educator

Best known for her 1972 book, Ten Minute Field Trips: Using the School Grounds for Environmental Studies, Helen led many workshops at PEEC to teach teachers how to conduct field trips using the resources of their own school grounds, day or night, rain or shine, on the sidewalks or in the fields. During one of her more famous PEEC workshops, thirty participants spent over 3 hours exploring 'field trip' opportunities on the front lawn-never got to the trail or the pond.



Dr. Helen Ross Russell

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Naturalist Articles



PENNSYLVANIA COYOTES

By Betsy Toerge 1985

"A wolf crossed the road right in front of us. It had a heavy ruff and was like a German shepherd. Have wolves returned to Pennsylvania?" a visitor to PEEC inquired with curiosity and some anxiety one December day. But the animal this woman had seen near state game lands in the Poconos was most likely an eastern coyote. Though perhaps less than 100 of these bushy-tailed canids existed in Pennsylvania just a decade ago, their numbers are now increasing and a couple thousand coyotes are presently thought to inhabit the Commonwealth.

Coyotes are most often spotted in north central to north eastern areas of the state where they're most common. Before the turn of the century, the eastern timber wolf was the predominant wild canid of Pennsylvania. But with the extermination of the state's wolves, coyotes gradually encroached on their larger cousins' territories from the north and west. They moved down from Canada, filtered through New England, and eventually reached Penn's woods. A small population also moved into northwestern Pennsylvania from Ohio.

It's possible that eastern coyotes interbred with wolves in Canada. This may partly account for their larger size, later maturation, and tendency to hunt together; characteristics making them different from western coyotes. Though some coyotes may interbred with dogs, to produce "coydogs," most coyotes remain genetically undiluted; the social structure of healthy animals with well-established territories reduces the likelihood of interbreeding.

Pennsylvania coyotes weigh 30-50 pounds, compared with wolves, which weigh 100 or more pounds. They have dense coats ranging from blond to dark brown, and each of their front legs has a dark stripe down the front. Their pointed muzzles, large, alert eyes (proportionately much larger than wolves'), yellow eyes, neck ruffs, and bushy tails make them distinctive from most dogs. Coyotes also have a quick grace and evasiveness that is unmatched by most of their domestic cousins.

Though extremely adaptable and able to survive in nearly all habitats, eastern coyotes seem to do particularly well in brushy field and successional woodlot areas where small game abounds. Their dietary staples are mice and other rodents but coyotes are omnivorous, feasting on berries, apples, grasshoppers, and perhaps a scrap or two of human refuse. Working in teams, they occasionally kill deer, mainly those weakened during winter. Most of the deer coyotes eat, though, are a bonus of hunting season. They glean the shot and lost casualties of hunters' bullets. Cases of livestock depredation by coyotes in the state have been extremely rare.

Eastern coyotes don't breed until their second year, unlike their eastern counterparts which breed when they are a year old. After approximately 65 days, usually in April, five to ten pups are born in an old woodchuck hole or other secluded burrow dug



Lenni Lenape

out by the parents. Both the male and female help to raise the young and the family hunts together in a territory that averages 30 square miles. By fall, the half-grown pups are usually on their own, 25 - 50 miles away from their parents' ranges. The family frequently vocalizes locate each other, to rally for a hunt, or perhaps just to strengthen social bonds. Whatever its motive, the howl certainly seems an emotional expression, eliciting in those of us lucky enough to hear it, longings for a wilderness all but lost. Coyote howls may be difficult to distinguish from dog howlings but they're usually more tremulous and higher pitched and are also frequently punctuated by quavering yips.

In 1974, only 15 coyotes were documented killed in Pennsylvania. Currently well over 200 are shot or trapped each year during hunting seasons for other animals in the state. Whether or not an official season for coyotes will be established remains to be seen. But our attitudes toward the larger predators have changed over the past few decades and hopefully will be reflected in this state's hunting and trapping policies toward the coyote. We now recognize the important ecological role, aesthetic appeal and essence of wildness these animals hold for us. **L**

LENNI LENAPE ORIGINAL ENVIRONMENTALISTS

By Maureen Lynch 1988

In this era of environmental crisis, it seems we are inundated with all types of 'quick fix' solutions. A common belief is that technology created this crisis in part and that it will be able to provide some of the solutions as well. Although it is true we do need some 'high tech' answers, they in themselves are not enough. As important, we need to look at ourselves, to question our own habits and beliefs, and to determine if we are truly good stewards of the earth. An important beginning to this endeavor is to learn about and appreciate other cultures that have or had an honest and successful fellowship with the natural world around them. Pursuing the facts and history about Native Americans will serve this purpose, as well as offer great enjoyment and leave one with an everlasting respect for this country's original environmentalists.

The Lenni Lenape (or Delaware Indians) who were the original inhabitants and environmentalists of the eastern north central region, provides us with a tradition and practices that we can begin to integrate into our own culture today.

We all know that ecology is a branch of science and the Lenape were obviously not scientists. They did not analyze a berry or root and deduce that because it was made up of this and that it will do that. They did not consciously hunt game or harvest the resources with an understanding of 'sustainable yield' but their beliefs demanded a certain type of etiquette which accomplished the same results.

These ethics were a part of their religious views and an understanding of these views would



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A Sense of Place

Celebrating 40 Years at PEEC




Foot Bridge

be useful to modern day man. The Lenape believed that all things possessed a spirit just as they did. Trees, air, rocks, water and animals were all a vital part of the Lenape's existence. Just as the Lenape had a responsibility to each other, they also had an obligation and responsibility to all the things they shared the land with. This feeling of 'being the same' as all other things instilled in them a type of conservation strategy which allowed them to live and harvest the resources available for thousands of years. This mentality is a far cry from modern day man whose basic belief seems to be that we are kings over all!

One example of their conservation mindedness comes from their use of plants, specifically for medicinal uses. The role of the medicine man came with some strict responsibilities which exemplified conservation at its finest. When the medicine man went to collect the necessary plants he would never take the first plant he saw. Instead a ceremony would be performed and sometimes even a small gift would be left. The 'doctor' would move on in the hopes of finding another patch of the same plant. In this manner no species would ever be collected to the point of extinction. One article I read said that this awareness of extinction was the reason so much care was taken.

Another ecologically sound practice of the Lenape is seen in their use of the game which they harvested. In addition to the food which for example a deer would provide, uses were found for other parts of the animal. The brains of the animal would be used to tan the hide, the hide became their clothing and bones such as the shoulder blades were used to dig the furrows for their gardens. This avoidance of waste is a practice which we in our disposable society need to learn.

No matter what geographic location or time in history in which a culture existed, the basic needs for daily living remained the same. The differences between cultures rest in how these needs are met, and the impact by which meeting them has on the environment. We, as modern human beings, can make some strides in solving our environmental problems by becoming aware and possibly adopting some of primitive man's ethics. 



Overlook



Pine Plantation

Environment

Environment and Environment Education

Helen Conover and Flo Mauro 1997-2012

Enough breast beating and inveighing over the fate of the Earth. Our reflections here concentrate on positive events in environmental awareness, turning the tide from disasters to ground swells for preserving our unique surroundings in this country and in the world. We acknowledge these events as moving us in the right direction.

The Return of the Eagle

In the early '70's, eagles on the East Coast were so rare from ingesting DDT that they were declared endangered. Within the last two years, they were removed from that list and named merely threatened. Recovery took almost thirty years, but the eagles came back.

Feds Take Notice

Along the coast of New Jersey, the federal government protects the habitat of three bird species. Least terns and skimmers are now seen regularly fluttering and diving or skimming across the water. Piping plovers, always shy, are harder to find on the dunes.

The Education Route

The first high school devoted to environmental studies in the nation was established in New York City. Robert F. Kennedy, Jr. spoke at the inauguration about the environment's importance, setting a model for the community, the nation and the world.

Grass Roots Growth

In the last century, perhaps two influential nature organizations - the Audubon Society and the Sierra Club - existed. Now hundreds, of more, nature or environment groups blossom and flourish from local to international coverage. Grass roots organizations accomplish everything from saving the whales to buying property for posterity.

Julia Butterfly Hill

As a grassroots protest Julia Butterfly Hill climbed to the top of Luna, a redwood tree slated for the ax in a California forest. Eighteen months later, sustained by friends at the bottom, she keeps in touch by cell phone and won't leave until the lumber company owners cease and desist.

Water and Air Clean Up

The Clean Water Act passed in 1970; the Clean Air Act in 1972. Maybe they're not perfect, maybe we have miles to go, but we've come a long way. In the east, the Hudson, once an open sewer, now has oxygen and fish. Other bodies of water have gone the same route.



Eagle



Scenic Vista



Yurts

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A Sense of Place

Celebrating 40 Years at PEEC



The Blue Marble is a famous photograph of the Earth, taken on December 7, 1972, by the crew of the Apollo 17 spacecraft, at a distance of about 45,000 kilometres (28,000 mi).

Original caption: "View of the Earth as seen by the Apollo 17 crew traveling toward the moon. This translunar coast photograph extends from the Mediterranean Sea area to the Antarctica south polar ice cap. This is the first time the Apollo trajectory made it possible to photograph the south polar ice cap. Note the heavy cloud cover in the Southern Hemisphere. Almost the entire coastline of Africa is clearly visible. The Arabian Peninsula can be seen at the northeastern edge of Africa. The large island off the coast of Africa is Madagascar. The Asian mainland is on the horizon toward the northeast."

National Parks Established

In 1872, Congress designated more than 2 million acres as Yellowstone National Park. Since then more than 100 countries have followed our lead, and today the national parks provide an outdoor classroom for interpretation and education centers.

Book Knowledge

1962's Silent Spring by Rachel Carson was instrumental in changing attitudes toward the environment and made us, as a country, "ecology aware." The elimination of DDT can be directly related to her book. 2005's Last Child in the Woods Saving Our Children from Nature-Deficit Disorder by Richard Louv created a national conversation about the disconnection between children and nature, and his message has galvanized an international movement. Leave No Child Inside initiatives adopted in at least 30 regions within 21 states, and in Canada, Holland, Australia, and Great Britain.

The Children & Nature Network (C&NN) was created as a result of the world wide acceptance of Louv's book and its premise, to encourage and support the people and organizations working nationally and internationally to reconnect children with nature. C&NN is leading a movement to connect all children, their families and communities to nature through innovative ideas, evidence-based resources and tools, broad-based collaboration and support of grassroots leadership.

Earth Summit

On the 20th anniversary of the first UN Conference on the Environment, the Earth Summit convened in Rio de Janeiro, Brazil, in 1992. World leaders joined together to hammer out Agenda 21, and the phrase "sustainable development" was born. **U**

Ruttin' Around This Fall

by Jared McGovern 2008

When I think of autumn, I think of the captivating colors of the changing leaves, the migrating birds, and the cold nights followed by beautiful brisk fall days. I find myself hoping for snow and looking forward to the promise of a roaring fire at the end of the day.

Animals that spend the winter in our area, rather than migrating south, have something completely different on their minds. Many animals are thinking: yikes! The winter is coming; time to fatten up. Male deer, on the other hand, are thinking: ye! The rut is starting and mating season is just around the corner.

Throughout the summer, male deer, also known as bucks, put tremendous amounts of energy into growing new antlers. During the summer months, deer spend their time feeding on succulent plant growth and

Ruttin' Around

abundant acorn crops in attempts to store up fat reserves for the rut and winter. Once the month of September arrives, the buck's antlers are full grown and the velvety coverings of the antlers begin to peel back, exposing bare bone. Also during this time the necks of male deer begin to swell and as muscle mass increases, the rut has begun! By this time bucks are becoming solitary, testosterone driven fighting machines, searching out females, laying down territories, and practicing their sparring technique.

Bucks participate in an activity known as "shadow boxing," where they entangle their antlers with a sturdy shrub or small tree and thrash back and forth scarring the ground surrounding the shrub. In my mind this is very similar to what happens when a fisher man or woman gets their fishing line caught in a tree. As they thrash back and forth trying to get their five dollar lure back, the ground is scarred and the fisher person learns the best way to get their lure unstuck, just like male deer learn the best method of sparring with an opposing male.

Bucks are ready for the breeding season before females and spend most of their time seeking out mates and picking fights with other bucks. The males become less wary, are seen more frequently, and lose weight as a result of their increased activity. If you are ever lucky enough to encounter two bucks sparring, you will witness something spectacular. Sparring is the complete opposite of tug of war as bucks entangle their antlers together, trying to throw the opposing male off balance or trying to thrust their antlers into the flesh of their opponent. Sounds nasty, doesn't it? Most of the time, however, the defeated buck will back off and run away to live another day and the victorious buck is more than happy to remain back, strutting his stuff and flaunting his accomplishment.

Throughout September and October, bucks are in rut. Bucks shadow box, fight each other, and chase the musty scents of females left behind by the tarsal glands, large scent glands on the inside of the hind legs of both males and females, all across the countryside (Personally, I prefer Heavenly perfume by Victoria's Secret).

Male and female deer begin mating in November and have been known to mate as late as February. Since deer have a gestation period of about six to seven months, it is not uncommon to see fawns with white spots as late as November.

As the Red Maple leaves turn red, the Pin Oak leaves purple and the beeches turn yellow: the colors of love are in the air. The months of September and October in the world of the deer are violent and full of testosterone-driven bucks, but November is the month of love, and what a fine time of year it is. Who needs rose petals when you have the brilliant colors of autumn? **P**



Fawn



Deer



Two Ponds

40th Anniversary

A Sense of Place

Birds of Summer



Autumn Pond



Trail Head

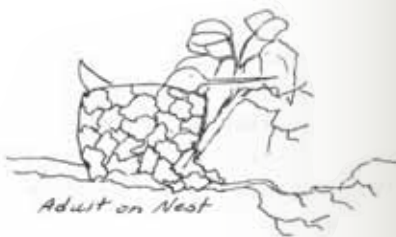


Bee Balm

BIRDS OF SUMMER THE SAGA OF A HUMMINGBIRDS' NEST

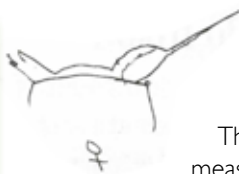
By Marie Kuhnen 2000

The car pulled up under the cherry tree; the driver, a friend, turned off the ignition and very casually remarked: "There is a hummingbird's nest." Thus was started a series of charming observations over a period of five weeks.



Adult on Nest

Location: Where I park to get to my cabin in Keene, N.Y., the High Peaks area of the Adirondacks. Specifically: On a very slender, pencil-thin branch of a white birch which overhung the driveway about 12 feet up. From then on, I sat in the front seat of my van, door closed, window open, in great comfort for many happy hours. Observations became compelling.



The nest was about 1 1/2 inches wide and about 1 1/4 inches high (actual measurements taken after the nest was abandoned). It was coated with carefully-placed Parmelia-type lichens with the lower ones appearing to seal the nest to the twig. Fine grasses and fibers held together by webbing made up the walls. The lining was of fine, cinnamon-colored hairs. They were the same color as the hairs I saw a hummingbird stripping off a stalk of cinnamon fern years ago. The nest was an architectural gem. By the time the birds had fledged, the nest had been flattened out. How the two managed to stay in it is an enigma to me.

The female was very much aware of me, but I believe I was accepted. She "knew" me because she fed rather consistently at my feeder which was across the brook up on a knoll, 200 yards or so deep into the forest. The next was out in the open on the edge of a meadow. She was frightened by binoculars, fleeing when she saw them. I tried hard not to disturb her. No sign of a male was ever seen. She did it all. I was so intrigued I viewed the next hours on end, making copious notes and crude sketches (104 of them!) Frequency of feeding, duration of feeding and all kinds of behavior were recorded. Nothing earth-shattering was seen but there were many delightful moments! The date of hatching is unknown. She was probably still incubating July 29, the day of discovery.

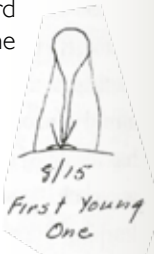


Front



Rear

During the next couple of weeks she sat on the nest much of the time and it was not until August 12 that a little feathered head with a half-inch bill was seen. She looked gigantic against that tiny head. Her long bill found the open mouth and gently pumped food into it for ten seconds or more. There was never the ardent pumping as seen in robins, for instance. By the 15th, the second head appeared. The two little ones were immediately named, with much imagination, #1 and #2. #1 was slick with feathers well-placed, the throat and belly very white and



8/15
First Young One



She looked Gigantic

The Saga of the Hummingbirds' Nest

obviously more developed than #2. #2 was puffy, still showing a few down feathers and quite dusky on the chin and chest. In fact, the lower jaw looked somewhat swollen. "The Odd Couple" was their collective name.

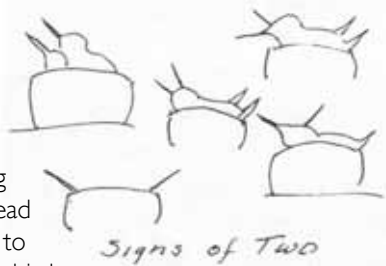


Licking Face

With feeding there never seemed to be competition. The nearer mouth got it first. Usually both got something each time. Once #2 got it all and sat with its mouth open. #1 turned and licked the corner of the mouth of #2! What a delightful moment that was! Feeding intervals were about a half hour or so. The female headed in the direction of my feeder when she left the nest. There was an alternative at Janet's feeders which supported a half dozen birds. The female perched on the edge of the nest when delivering when the babies were small but toward the end she sat of the twigs on either side of the nest. The nest would not hold her anymore.

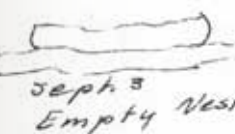
There really was not much activity at the nest. The little ones would orient themselves variously and then would settle down, sometimes facing into the wind if it was strong. BUT- four times I saw this happen. #1 would back up to #2 slipping its rear under that of #2. It would work its feet very rapidly. At the same time #2 would be slowly rising to the nest rim. Once #2 slipped off the rim and was hanging upside down from the bottom of the nest! It managed to work itself around to the back and somehow into the nest. Another time it clung to the rim beating its wings hummngly to maintain its balance. Was #1 trying to get rid of #2. I think it just wanted some room. Things were getting tight. I never saw #2 doing this to #1.

The female undoubtedly had a perch nearby but I never found it. I was in the car. One day she came in, landed on the nest and may have given an order for the little ones immediately disappeared deeply into the nest. There were two ravens calling nearby. It was some time before the young birds appeared again. Yet when a broadwing perched on a dead branch ten feet off the ground, 150 feet away there seemed to be no reaction. I feel certain she knew of the hawk. Hummingbirds are very observant. I have had many rich experiences to back up that statement.



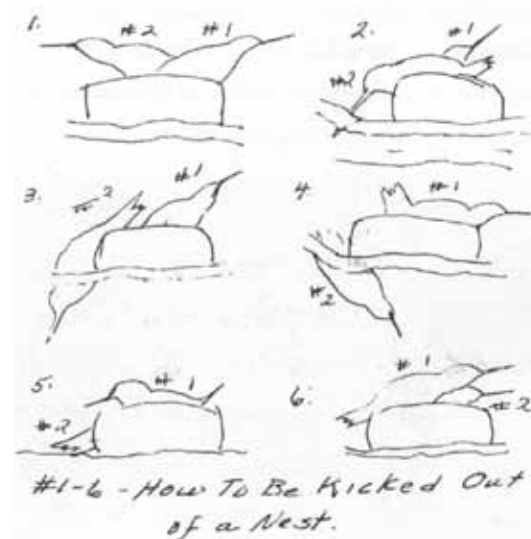
Signs of Two

By the 26th of August the birds, especially #1, actively preened or stood on the rim and beat their wings with hummingbird speed. Throughout the entire period there was no sign of the bills lengthening. At 3:00 pm on September second there were two restless birds in the nest. By 8:30 a.m. September 3, there was one. #1 had left! By this time the feathers appeared well-developed and iridescent. However, #2 was still puffy and far from sleek. It exercised its wings and settled down. Lunch (mine) was 12:00- 12:30. In that half hour #2 had left!! What a disappointment He did not look ready! Besides I wanted to see him take off. (I feel he was the male). Maybe the two birds were perched in the neighborhood and were still attended by the female.



Sept 3
Empty Nest

We never saw them again. This was a very late date for fledgling. Will they make it to Central America? We are wishing them well but have our fingers crossed. Thus ended one of the most delightful experiences of my life. P



#1-6 - How To Be Kicked Out of a Nest.



Trail

Zebra Mussels



Zebra Mussels



Delaware River

ZEBRA MUSSELS: A THREAT TO THE DELAWARE?

By Rance Harmon 1993

Zebra mussels (*Dreissina polymorpha*) are freshwater bivalves native to Eurasia. Since they were introduced into North America they have caused millions of dollars worth of damage to utilities, industries, and cities by adhering to water intake pipes and restricting the flow of water. Zebra mussels were first found in the Great Lakes in 1988 and their range has expanded rapidly since then. Experts predict that zebra mussels will eventually spread to freshwater streams, lakes, and rivers throughout much of the United States and may cause billions of dollars in damages.

WHAT ARE ZEBRA MUSSELS? Zebra mussels are mollusks that usually grow in clusters of many individuals. They securely attach themselves to nearly any hard surface, such as submerged rocks, dock pilings, boat hulls, and water intake pipes by secreting durable elastic strands called byssal fibers. The mussels look like clams with alternating dark and light colored stripes, hence the name "Zebra." The shells of zebra mussels are shaped like the letter "D" and adults range in size from less than one inch up to two inches.

ZEBRA MUSSELS ARE SPREADING RAPIDLY. Scientists first detected zebra mussels in the Great Lakes in 1988, although they believe the mussels have been present since 1986. Zebra mussels were probably first introduced to the region in water that was released from ships that had travelled to the Great Lakes from freshwater ports in Eurasia. Since their arrival, zebra mussels have spread rapidly throughout the Great Lakes and into several major river systems of the Eastern United States, including the Susquehanna and Hudson Rivers.

According to Dr. Eleanor Bochenek, the Coordinator for the New Jersey Sea Grant Zebra Mussel Project, the zebra mussels have not been found in the Delaware River Watershed as of June 1993. It is likely that the mussels will be first introduced to the Delaware or one of its tributaries by recreational boaters or fishermen. Boaters can introduce the mussels when they transport their boats from infested waters where the mussels have attached themselves to the hull to waters uninfested by the mollusks. In an attempt to prevent zebra mussels from being introduced, some lakes and reservoirs are offering steam cleaning services to boats coming from infested waters. Fishermen can introduce the zebra mussels to uninfested waters if they release fish or bait taken from waters containing the mussels because young zebra mussel larvae are very small and can easily be overlooked by fishermen.

WHAT ARE THE FINANCIAL AND ECOLOGICAL IMPACTS? Water intake pipes at power generators, water treatment plants, and other industrial facilities serve as excellent habitats for zebra mussels. The flow of water through the pipes provides a continuous source of food and oxygen, while the pipes themselves protect the mussels from predation. These pipes often fall prey to large infestations of barnacle-like colonies of the

Turtles

mussels which drastically reduce water flow. Removal of the mussels from water intake pipes can be extremely costly, and may often require the temporary shut-down of the facility.

Not only can the invading mussels wreak financial havoc, but they also have harmful ecological impacts. Zebra mussels feed by filtering small organisms and decaying matter from the water. Because a mussel colony the size of one square meter filters about 25,000 gallons of water each day, zebra mussels may remove much of the food needed by other organisms, including native mussels. The competition with native species may ultimately cause losses in biodiversity because many of the mussels native to North America are already endangered or threatened. Zebra mussels may also reduce fish populations by colonizing in areas that fish use to spawn. Unfortunately, zebra mussels have few predators in North America. Thus far, researchers have found that only a few fish species, such as sturgeon and freshwater drum, and some diving ducks eat zebra mussels. **P**

TURTLES

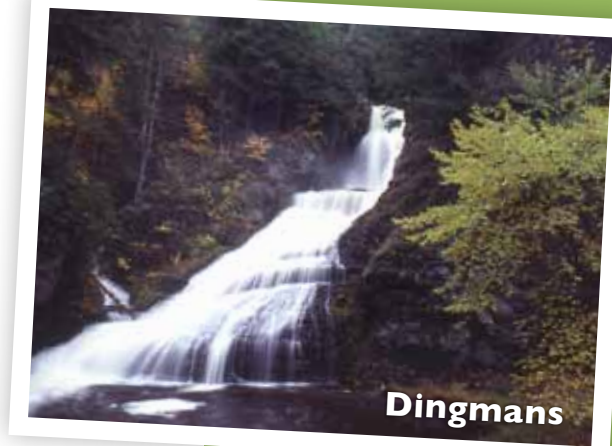
By Molly Check 2011

Turtles can be difficult to study up close. Walk near a group of them sunning on a log and they slip quickly back into the water. If you startle one into its shell, you have to wait patiently before he'll reward you with another peek. However, if there was ever a time for turtle watching, it would be now. Summer has arrived and the reptiles are out in high numbers.

Since turtles are ectothermic (coldblooded), the warm temperatures give them the energy they need to move around, hunt their prey, breed, and lay eggs. All turtles lay eggs, although the number varies greatly between species. Some of the larger sea turtles lay hundreds of eggs in the sand, while the small, terrestrial species, *Clemmys muhlenbergii*, lays only 2-3 per clutch. This species is known as the bog turtle and is one of the smallest turtles in the world, measuring only 4 inches in length. It is currently on the Threatened List of the U.S. Fish and Wildlife Service.

Only 50 counties in the northern U.S. support a population of bog turtles, and 42 of them are in our tri-state area. New Jersey can boast of populations in Sussex, Warren, and Morris counties and New York provides homes for these tiny reptiles in Orange, Rockland, and Sullivan counties. Pennsylvania's populations occur primarily in the southeastern counties, but there are strongholds in Monroe County as well.

The earliest known turtles appeared on Earth over 200 million years ago, before the dinosaurs dominated the land. Since then, they have adapted to a multitude of environments around the world. Living in terrestrial, aquatic, and oceanic habitats, there are more than 300 different species alive today. Each species of turtle has differences in their size, appearance, diet, and behavior; but all of them are grouped in the order Testudines. This order includes all of the turtles, tortoises (usually referring to large land dwellers), and terrapins (those that inhabit brackish waters).



Dingmans



Molly Check

Life and Death in Nature



The classic characteristic of a turtle is its shell, which includes the carapace (upper shell) and the plastron (lower shell). The shell serves as a permanent shelter and offers protection, although not all turtles rely on their shells when threatened. The common snapping turtle, *Chelydra serpentina*, defends itself with powerful jaws and sharp claws. The snapper, which is the New York state reptile, can weigh up to 40 pounds and feeds on snails, worms, leeches, insects, fish, water plants, frogs, tadpoles, salamanders, young birds, and even small turtles!

No matter what type of turtles you have in your area, you can be sure that they are out and about. Throughout June and July, the female turtles temporarily leave the water to lay their eggs. They will travel long distances from the water, looking for the perfect sandy soil in which to dig the nesting hole. The eggs are deposited, covered with soil, and left behind as the adults return to the water. After the eggs hatch, the young must find their own way back to the water while avoiding a multitude of predators.

At the Pocono Environmental Education Center, we are always on the lookout for turtles. Our canoeing programs throughout the summer offer opportunities to look for turtles while paddling across Pickerel Pond. **P**

LIFE & DEATH IN NATURE

By Ethan Huner 2002-2006

During my time at PEEC, I have seen many examples of the highs and lows that animals experience in the wild. The balance of life and death in nature can be both painful and exhilarating to witness.

In late March of 2005, I was disappointed to learn that a snowstorm caused PEEC's nesting pair of Bald Eagles to abandon the eggs they were incubating. Later that spring, the pair built a new nest along the Delaware in a stoic dead white pine tree, but the pair did not mate again. I had watched them contribute seven young eagles to the region between 2002-2005, but this was their first failure.

In April 2006, two chicks were successfully hatched and I was excited about the promise of a new generation of eaglets. Following a severe thunderstorm in late May, I went to check on the nest to ease my anxiety, praying that the centuries-old snag had withstood the winds. To my horror, I found the top of the huge dead pine tree was embedded in the ground below. The nest was a flattened heap of sticks and the contorted bodies of two large nestlings were partially planted in the ground. Their disproportionately large talons reached skyward, still clutching grasses of the lining of the nest material as they had tried to hold on through their thunderous descent. One of the adults sat perched across the river. It was very emotional, and impossible not to question the emotional lives of these majestic icons. Survival is a hard lesson learned in the wild. The terms of "fairness" do not apply in nature.



Ethan minds his distance from a wandering young bear. Ethan is moving on from PEEC after 5 years, but is leaving with great memories of the Poconos (Photo by Luke Poandl)

Beautiful Bioluminescence

On the successful side, after 2 years of failed nesting attempts, the Red-shouldered Hawk pair on PEEC's campus finally fledged 3 young this summer.

The staff was able to observe the entire miraculous life-cycle of these eclectic predators. From the roller-coaster courting flights of the adults in February, to the hatching of the eggs in April; from the pecking order and first flights of the fledglings, to their confidence-boosting first kills; we marveled at the survival skills inherent in all creatures.

Death in nature often serves the sustenance of another's life; and sometimes it occurs without apparent cause or benefit. Nothing in nature's scheme is right or wrong, or good or bad as we might understand it. Life and death is nature's ultimate balancing force. I feel grateful to have experienced these lessons during the portion of my wild life here at PEEC.

After 5 amazing years with PEEC, I will be moving on to explore new opportunities, including returning to my Natural Resource College in Ontario, Canada. I feel fortunate to have spent this time in a truly unique and diverse environment and workplace. I thank those of you who have had a profound impact in my life, and have guided me in my quest for knowledge of the natural world. I will sadly miss friendly faces and most of all, the great Pocono outdoors, which feel as familiar and comforting to me as sitting down with a favorite book. **P**

BEAUTIFUL BIOLUMINESCENCE

By Jeremy Phillips 2009

Watching the trees flow back and forth high up on the hillside, seemingly in slow motion, while the constant sound of a cool dusk breeze blows by my ears made me forget completely why I walked out in the middle of this field. I had been searching for a sight of a prairie warbler (*Dendroica discolor*) for about thirty minutes. Suddenly, flitting from one branch to another, I spot what I was listening to perched on a dead branch. It was a little late for birding and the light was fading. My medium priced Bushnell binoculars and I could barely make out size and shape, let alone the color of this bright bird. Disappointed with the look I got from a thirty minute stake out, I turned and started back towards my car. The sun was setting further but something stalled me for hours that night. A flash appears in the corner of this large field. In the dark parts of the canopy more flashes start to appear. The beginnings of the grand display are about to occur.

Lightning bugs or fireflies (*Lampyridae*) are in the coleoptera order, meaning "sheathed wing." They are also known as beetles and are not true bugs. True bugs come from the order hemiptera (which can often be identified by a triangle on their back). Lightning bugs give us an amazing spectacle in the middle of summer. They can be seen at all times of the day, but are famous for their bioluminescence just after dark.



40th Anniversary

A Sense of Place

Memories of PEEC

BY DAN HENDEY

PEEC Director 1988 - 1994

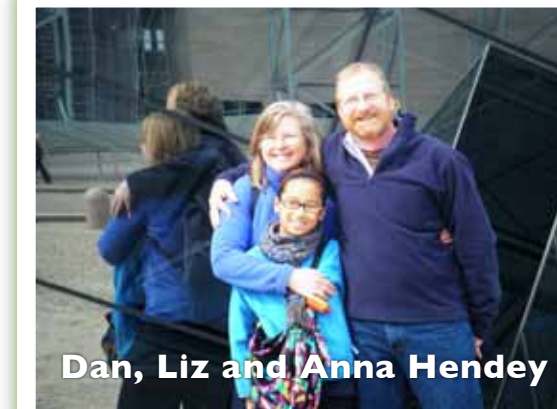
My memories of PEEC are many and mostly fond. I invested a lot of sweat and blood into PEEC but I received so much more. For every memory of crawling under a cabin on a frozen winter night, I have several wonderful memories of great people, new discoveries fun times, and excited students. I did a lot of growing up and I am so grateful for my time there.

When Flo asked me to share a favorite memory, I have to admit that I was stumped. Thinking back through my six years there, I realized that I had an embarrassment of riches. From numerous tours of Dingman's Falls (waterfall tricks) to "too many Wednesdays without a helmet" (thanks for that one Jack) to treks with John Serrao (cue the bear in the river) - What an awesome place to be!

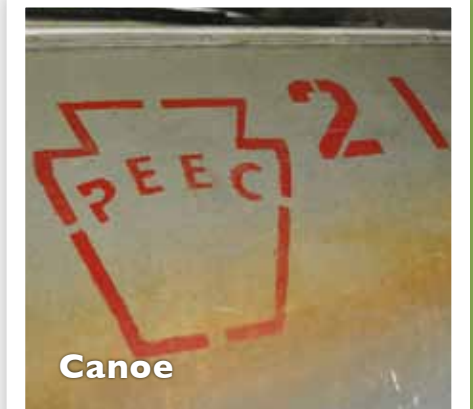
However, I do have one memory that is with me to this day and I hope she will be with me for the rest of my life. I met my partner, Liz, at PEEC 21 years ago.

I was weekend director at PEEC. On this particular late April weekend, Jack had secured Dr. Cliff Knapp to lead a workshop on outdoor education. As weekend coordinator and maintenance person, I had always been too busy to participate in the workshops but this time, I decided that I would attend to improve my outdoor instruction skills. It was a small workshop with about a dozen people and I was excited to be a participant.

The First time I saw Liz she was walking down the road on her way to the old dining hall for the Friday dinner. I was coming up from behind in the truck and that is when I first noticed her. As I passed, she was smiling and we said hi to each other. I thought I saw a spark in her eye and I took it as a good sign. I found Dr. Knapp's workshop interesting but Liz even more so and we engaged in numerous conversations



Dan, Liz and Anna Hendey



Canoe



Chimney



Abandoned Car




Trail Sign

How do they light up? Bioluminescence is a chemical reaction within an organism which produces light. In lightning bugs, a substance called luciferin, stored inside special cells of the insect, react with oxygen that is taken in from the surroundings, to produce the greenish-yellow light. The energy that it takes to produce this light is not wasted, it is said that lightning bug light is about 90% efficient! This is compared to the 10% efficiency of an incandescent light bulb (the rest is lost to heat).

Lightning bugs flash mainly to attract a mate of the same species. Usually the male flashes in flight and the female responds with a flash back, although this varies from species to species. In fact, one species of lightning bug, photuris, will mimic and attract other species to draw them in close enough to eat. Some do not flash at all.

But this night, searching for this prairie warbler until the waning hours of light was the best thing I could have done. My night was filled with thousands of fluttering lights dancing in the field and in the trees.

Freeman Tract Road in Bushkill, a 3 mile long stretch of gorgeous overgrown farmland just off River Road past the Park Service Headquarters, was exactly the place to be. Just after dark, the field lit up like it was the 4th of July.

July is a great time for natural fireworks. Some of the greatest places to see these amazing insects are South of Milford, along Route 209, on Freeman Tract Road in Bushkill or, often, in your own back yard. 



Dining Hall

40th Anniversary

A Sense of Place

over the years



Tom Shimalla

throughout the weekend. By workshop's conclusion on Sunday, we had exchanged numbers and agreed to get together again.

That was 21 years ago and we have been together ever since. So while I have many great memories of special people and events at PEEC, meeting my wife is front and center. Thank you PEEC and I wish all best to the great people who bring it to life every day.

By Tom Shimalla

Director 1991 - 2008

PEEC has played an important role in my career and my life. I finished my Master's degree from Ball State University in the spring of 1990 with a ten month internship at the New Jersey School of Conservation. While working in Milford, PA I met a recreation assistant, Laurie Pfahler, who the Program Coordinator Intern at PEEC. She informed me that PEEC was interviewing for the permanent Program Coordinator position. I applied for it and, despite my lack of experience, PEEC took a chance on me. And so began my 17 year journey in residential environmental education.

I chose an environmental education career in hopes to reach children before they developed their attitudes about the environment. I believe that students that engage in direct experiences with the outdoors begin to understand natural systems. In time, and with progressive nurturing from home and school, some of these youth strive for even deeper connections, appreciation, and stewardship of their surroundings. I see PEEC as instrumental in providing this foundation.

PEEC provided many opportunities over the course of my tenure and literally, everyday was different. As everyone close to PEEC knows, PEEC hosts schools, scouts, and families. Photographers, writers, hikers, teachers, canoeists/ kayakers, volunteers, poets, nature enthusiasts, cross-country skiers, and many more come to PEEC to explore and discover the Poconos. At the core, the people who work at and come to PEEC, I believe, do so to connect with nature and other people. It is the reason I first came to PEEC and the reason I stayed at PEEC.

Now I am with the New York State Department of Environmental Conservation incorporating what I learned and experienced at PEEC. Whether I am working with the summer camp program, assisting the environmental education centers, or coordinating



Tire Wall

By Linda Hill

Principal

What I love the most, from my visits to PEEC with my students, over the years, is the way even the most challenging adolescent student is transformed into a "child" discovering an environment that is foreign, but inviting and calming.

By Mike Brubaker

Director 1999 - 2006

When I first thought back to what PEEC meant to me, I immediately thought of all the great people I had the privilege of working with. From my fellow instructors, some who remain my closest friends, to the teachers, campers, parents, and families, everyone had an impact on me and made, (and still make) PEEC a remarkable place. There were also many mentors along the way who helped mold me into the person I am today.

Of course I can't leave out the single biggest influence on my life while at PEEC-meeting and marrying my spitfire wife Kristen (Garvin). We met as instructors in 1999 and actually got married in the new Visitor Activity Center (the first event in this facility) in 2005.

PEEC always believed in me. I was able to grow from Instructor, to Camp Director, to Assistant Director of Education, and eventually Director of Education. I came to PEEC as a shy, reserved, not so sure of himself young man and left as a still shy but confident educator and leader.

By Rachel Sloan

PEEC Instructor

I think back to my PEEC days all the time. I reminisce on night hikes, pond studies, painting the nature center, games of camouflage, BANTO and much more. I have finally landed my own social studies classroom out in Colorado, and if it weren't for PEEC I may not have made it this far. Being on PEEC staff really helped me realize my passion for teaching. It also helped prepare me for those tough situations in which I must improvise



Moo Ducks



Gazebo



Main Building

40th Anniversary

A Sense of Place

Celebrating 40 Years at PEEC



YCC Foot Bridge

on the spot. In an ideal world, I may have stayed at PEEC all my life! But I am grateful for where it led me.

By Stephanie (Anzman) Frasca

PEEC Instructor 2002-2005

I worked at PEEC during the summers of 2002-2005, mostly with the Wet & Slimy day campers. I feel endlessly fortunate that my summer job afforded me opportunities to teach (and learn about) children and to be out and about in nature.

PEEC, in combination with my undergraduate and graduate studies in psychology and human development, certainly shaped my career path: I'm currently working as a research associate at Tufts University, focusing on childhood obesity prevention. My experiences at PEEC showed how physical activity, outdoor time, and hands-on learning can boost multiple aspects of a child's health, including physical health, as well as self-confidence, concentration, creativity, enthusiasm, social skills... the list goes on and on. These lessons inspire me to seek creative ways to help kids be healthy, active participants in their environments in an increasingly sedentary world. Thank you PEEC for giving me some of the best summers I can remember and having a lasting impact.



Shannon Queen

By Shannon Queen

PEEC 2004-06

PEEC - A centre of excellence in environmental education. A place where the community of staff I was so lucky to work with shared my passion for nurturing nature education in all ages—a place graced with four season beauty and wildness.

My journey began at PEEC as an environmental education instructor. I was a girl from Canada with big dreams of new adventures. The students, staff, volunteers and other PEEC visitors I worked with taught me so much more than I ever thought possible.

PEEC was and is a truly special and unique place that touched my heart and changed me forever... PEEC will always remind me of some of the best times of my life both personally and

professionally. I am an environmental educator for a local school board in London, Ontario CANADA.

Thank you PEEC! Happy 40th!

By Heather (Barrett) and Andy Desko

PEEC 2006

We met in May 2006 while going through canoe intern training sessions along the front pond of PEEC! Who knew that being able to identify a thwart from a gunwale would lead to love?

PEEC has also played an important role for us in our professional lives. Andy went on to work as an Environmental Education Specialist with PA State Parks and is now working as the Southeast Regional Education Specialist with the PA Fish and Boat Commission. Heather worked one year as an AmeriCorps New Jersey Watershed Ambassador, and is currently an Assistant Watershed Protection Specialist with the NJ Water Supply Authority.



Andy and Heather Desko

By Susan (Amtower) Smith

PEEC 1989-1992

It has been 20 years since I worked there! And yet it still holds a very special place in my memories that makes it seem like it couldn't have been that long. I will always be grateful to Jack Padalino and Flo Mauro for taking a chance in hiring a young married couple as interns and then making it possible for us to stay for several years. The lessons I learned at PEEC were life changing and I have yet to meet or be associated with leaders that I respect more for their vision and skills than either of them.

There are so many stories and memories I have of my years at PEEC. I am proud that I can say I was there in the "early years". Congratulations on 40 years and continuing to touch lives in unique ways for many more to come!

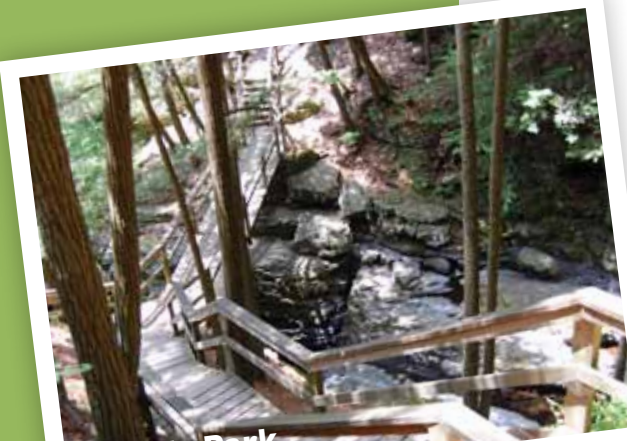


Susan (Amtower) Smith

40th Anniversary

A Sense of Place

Thank You PEEC!



Childs Park

By Meg Welker

PEEC Instructor 1995-1996

I always said I was going to grow up to be a teacher. My interests took me outside to my "dirt pile" or down to the "creek" running along the back of my neighborhood. I lived about 45 minutes from PEEC, but didn't do much exploring there until I came home from college, with a Bachelor of Science degree in Environmental Resource Management. My dad suggested I submit a resume to PEEC and soon became an instructor at that amazing place. I spent time teaching, of course, and on BANJO, helping keep PEEC clean and tidy, but it's all part of the job and we made it fun! What a great opportunity to dive right in, at age 22!

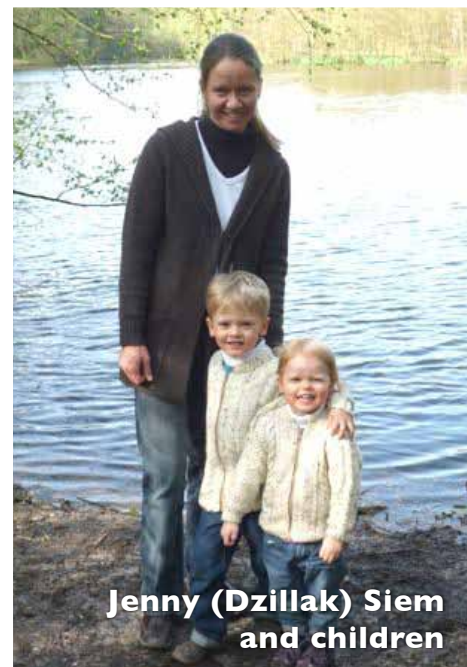
I soon joined PPL as a naturalist at the Lake Wallenpaupack office. I was reluctant to leave my PEEC family and all the fun and active learning; I could not pass up the opportunity to bring my new environmental education knowledge to the local energy company. Now, 16 years later, I reflect and am so thankful to have had such a great jump start to my career at this jewel we know as PEEC. Thank you just doesn't seem like enough!

By Jenny (Dzillak) Siem

PEEC Instructor 1996-97

I still remember how impatient I was waiting for an answer to my application. I had just finished school in my home town Hamburg in Germany. At that time I did not know that the coming year would be the greatest of my life. Flo told me that she initially wanted to talk to me because of the "cute" letter I sent instead of an official application. The first weeks were overwhelming: the new impressions, the fact that I was now part of the PEEC staff, living at PEEC surrounded and getting the opportunity to share my love for nature with children - I think I was the happiest person! The nights I spent translating and learning all the new vocabulary. Everybody was very patient and helped me.

There are no words to describe my feelings when I saw the sparkles in the children's eyes after the experience of a night hike, to share the excitement of finding a backswimmer or caddisfly larvae during pond study or to watch how the children grew together to a "real" group at the ASE course. Working and living at PEEC has affected my whole life - I became a special education teacher and whenever I enter a classroom I try to share a little of the magic from PEEC with the children. People who know me know that a part of my heart is still along the Delaware River and it will always be. I cannot wait to visit PEEC again and show that special place to my own children. "PEEC CHANGED MY LIFE"



Jenny (Dzillak) Siem
and children

for the great Memories



EcoZone



Bat Cave

Robert and Kris Newmark

Friend of PEEC, Educators for Gateway 1990-2012

PEEC Changed My Life

My great friend, Arthur Kupferberg introduced me to PEEC and it changed our lives forever. I met Arthur 30 years ago while I was taking a camping course for NYC Teachers at Gateway National Recreation Area, Floyd Bennett Field. At Arthur's insistence I joined Educators for Gateway, a teacher supported organization, and my life changed. He then convinced me to bring my family up to PEEC for the Martin Luther King Family weekend holiday. We had no idea what to expect...and we have been coming back to PEEC every year since then.

In this age of great protectiveness, we were able as adults to release some of our protectiveness and allow our children the freedom to explore their environment and release their creativity on their own. My family learned to hike, canoe, swim, and most important a love for the "OUTDOORS" and nature. My son, Michael, carried on this wonderful tradition, when he became a counselor for PEEC's summer enrichment programs.

Our sincere thanks to Jack and Flo and all the staff from the past, present and future, for their enduring effort in making PEEC a safe place for families to enjoy the environment and nature. PEEC was the platform for creating some wonderful memories and forging long lasting bonds within our families [Newmarks] and our life-long friends [Kapps] we met there.

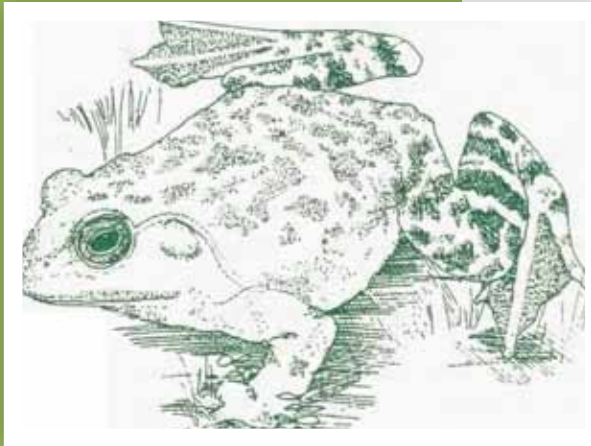


Bear Skeleton

40th Anniversary

A Sense of Place

The Wonder of Frogs



Fossils show that amphibians are the oldest terrestrial vertebrates. Today, the modern amphibians (frogs and salamanders) are declining in numbers throughout the world. Much of this decline is due to human activities, such as wetlands destruction, air pollution, and tropical deforestation. I hope future generations will be able to hear the croaking of bullfrogs on warm summer nights.



Tumbling Waters

THE WONDER OF FROGS

By Perry Ellis 1991

Song

Big fat green bullfrog
sings at the moon in his pond
drums air for a mate
Why do you keep me awake?

Amplexus

Male frog grasps female
clumps of pearls, jets of white milk
a potent mixture
Is this why you were singing?

Egg

Full of squirms, wiggles soon
it breaks into the pond
freedom for new life
How do you like your new home?

Tadpole

Algae is tasty
swim away from big fish; birds
eat, grow, stay alive
What simple rules you have!

Winter

The water gets cold
tadpole digs into warm mud
drowns until spring
Do you dream while you sleep?

Spring

A warm alarm clock
tadpole squirms free of the mud
swims around the pond
Do you know what happens next?

Changes

Two new limbs unfold tadpole's
tail grows in reverse more
limbs, bigger mouth
Your mother wouldn't recognize you!

Terra Incognita

Frog leaps from the pond
gets his first gulp of sweet air
munches on blackflies
What a strange new world!

Child

Strange monster lifts frog:
"Teacher, can I take him home?"
frog leaps to freedom
Isn't he home already?

Circle

Winters come and go
it's time- frog sings in his pond
drums air for a mate
I know why he keeps me awake

Poetry by PEEC

THE TREES

- Anonymous

I am in the wilderness, in the woods, writing what I see.
I look up from where I'm sitting on the ground full of needles, looking up at trees.
I see thick, thin, big, short, green, crooked,
Straight, and baby trees.
I see a tree right beside me that is very pretty.
It is old, yet natural looking.
It is as wide as the width of a car.
The length from here looks like the size of the skyscrapers!
It is the most beautiful
Of all of them that are around me.

(Poem and illustration by students participating in the summer 1990 ICE program at PEEC.)

"...THE FOREST I CARRY IN MY HEAD..."

By Sten Hoiland 1990

"I wish you could realize the loveliness of this forest, the forest, I carry in my head."
- Anonymous youth from New York City

Although common field biology may be important to appreciate nature's diversity, environmental education is becoming less rigidly "scientific" and increasingly humanistic.

This trend follows an intrinsic need in humans to reconcile their outer and inner environments. Indeed, the way we feel internally about ourselves is directly related to the way we feel about our outer environment. This realization is at the heart of the humanistic trend in environmental education. Humanized education means less memorization of Latin names. Memorization is an individual form of education which may develop a competitive focus - "I can name more plants than you". Instead, humanistic education focuses on learning skills such as respect, trust, caring and cooperation, all of which help build a sense of self as an individual within a community.

Humanistic education goes beyond the dualities of right and wrong present in labeling, and approaches nature on the level of feelings. It is hard to say someone is wrong for feeling ecstatic about a flower. This kind of education empowers children (and adults) to explore nature and their feelings about it, without the fear of ever being shot down with a resounding "wrong."

Nature has so much to teach us. Its cycles give perspective to our own high and low points in life. Its beauty instills a sense of peace in our hearts. Developing an understanding and appreciation of nature, ourselves, and others is an important step in resolving the many environmental and social problems our planet faces. When we feel apart from nature and people around us, we feel threatened by them and put a lot of our personal energy into fear.

Only when we each realize that we are part of a natural and human community will we be able to begin to successfully deal with the world's problems.

A humanistic approach to environmental education acknowledges these realities, namely the "loveliness" of the forest we "carry in (our) head(s)."



The Trees



"...the forest I carry in my head..."



PEEC
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A Sense of Place



PHOTO BY: Nic Lehoux