

Connecting People, Nature and Community

## Stepping Stones

I think the seed for the Institute for Conservation Education had its beginnings long ago on Mammy Morgan's Hill near Easton. Walks with my grandfather from the woods near our home down to the Delaware River carved an indelible niche in my heart and soul which would remain throughout my life.

Funny how things transpire. When I was teaching high school biology back in the early 1960s my students and I created a learning woods – The Oerwood Nature Center in York County. One of those students went on to earn degrees at Dartmouth and MIT. He never lost his quest for nature and went on to become one of our Institute's most valued supporters.

There is a young boy living near me. His name is Lucas Wessner. We take walks together with his friends. Lucas is an insatiable discoverer, an ardent bird enthusiast, aquatic stream investigator. A year ago he found a bed of fresh-water mussels in our stream. I've lived on this stream for the last 35 years and never found a mussel. Lucas did.

Each spring we meet twenty-some kids from urban Philadelphia. The JZAP (Junior Zoo Apprentice Program) kids work as volunteers at the Philadelphia Zoo. They travel from Philadelphia to the Pocono Mountains in northeastern Pennsylvania for a weekend in the forest. Arriving they are all hip and rap. When they



leave on Sunday afternoon they cry. Their lives have changed in a few short days. Nature has touched them in a way they could never have imagined.

Come join us.

—Jim Brett

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*Co-founder and Director*

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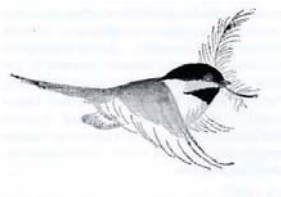
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Emily Brodsky

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For more information on our programs and to download registration materials, visit our website: [www.PICEweb.org](http://www.PICEweb.org)



## Program Highlights: 2007

**2007** was an exciting year for the Institute and has ushered us into a period of program growth. In addition to our field seminars and retreats, we have been working on several programs and projects with partnering organizations throughout the year.

### Wildlife Leadership Adventures First Year Successes

We kicked off the inaugural year of WLA in July with our first field camp focusing on white-tailed deer biology and management. The program involved over 20 wildlife biologists, educators, and media specialists as instructors, 24 high school-aged youth participants, and 4 science teachers as adult participants. It was an exciting week by all accounts. Participants started out the week by getting their hands dirty during a necropsy session where they learned about the anatomy and physiology of deer. Students spent time in the field



studying habitat, research methods, and botany. Indoors, they engaged in discussions about management issues, ethics, and ecosystem health. Bob Frye (author of *Deer Wars*), Gary Abdullah (WPSU), and Gary Alt led a media session where students

gained experience in television, radio, and print media communications.

In November we received the Early Bird Record Books, where the youth document their public outreach and conservation service activities following camp. Twenty-five percent of our students submitted Early Bird Books, documenting over 25 programs, 123 contact hours with the public, and reaching an audience of over 900 people in 5 counties throughout the state. Final record book submissions are due mid-April 2008, and we are looking forward to seeing what our 2007 graduates have accomplished.

### Completed Feasibility Study for the Master Naturalist Training Program

The Master Naturalist training program is a new program area for PICE and last year we accomplished two important planning goals. First, we completed our feasibility study which has confirmed a need for this program in Pennsylvania and has also provided a great deal of direction and input on curriculum development. If you would like a copy of the study summary, contact the Program Coordinator, Gail Farmer. The other important planning goal for 2007 was identifying our pilot ecoregion. We have decided to develop our pilot module in the Northern Piedmont and emphasize urban ecol-

ogy of the greater Philadelphia region. We are very excited about this urban ecology module as it is an increasingly important branch of ecology and ecological understanding.

"I believe that a program like this is long overdue in PA. The time when field courses in natural history were offered by colleges and universities is long gone and has left a void."

– *Master Naturalist survey respondent*

In 2007 we submitted several foundation grant applications to support the N. Piedmont/Urban Ecology module and expect to hear back in late spring '08. If the funding is granted, we plan to launch the pilot module in spring 2009.

### Moving Forward with the Elk Country Visitor Center

The Rocky Mountain Elk Foundation and the Department of Conservation and Natural Resources are building a new state-of-the-art visitor center in Winslow Hill, Elk County, designed to provide visitors with easy, efficient and safe access to the prime elk viewing location in the eastern United States. The Institute has been asked to design an innovative and field-based education program for the Center. We are currently conducting a feasibility study to examine how the outstanding tourism and public outreach/education opportunity provided by the Center can be best developed. The results of this study will help us to strategically design an educational program for the Center that encourages lifelong exploration and stewardship of nature.

### New Staff Member at PICE

We are pleased to announce the addition of a new staff member with PICE. Emily Brodsky has joined us part-time as our Program Assistant. Since receiving her B.S. in Environmental Education from Unity College in Maine (2004), Emily has involved herself in conservation through various seasonal positions in education and assisting with ecological research. Emily brings a great deal of experience and energy to her work and she will be involved in all PICE programs.



# 2008 Featured Field Seminars & Retreats



### Field Geology of the Appalachians

JUNE 17-19, Bucknell University and surrounding environs, *Craig Kochel, Ph.D. and Richard Nickelsen, Ph.D.*

In this class, participants will explore and learn about the geologic landscape of ancient glacial outwash plains, in a geomorphological mix of the Ridge and Valley Province of Central PA. For classroom teachers, educators and others interested in bringing geology into their educational programs, this exciting 3-day program is loaded with field and hands-on experiences and absorbable knowledge from instructors with over 60 years of experience.



### Bat Ecology

JULY 30, 31 AND AUG 1 (WED – FRI), Canoe Creek State Park, *Heidi Boyle*

This workshop will explore bat habitat, bat identification, and the impact of bats on their environment. You will learn research techniques and how to handle a variety of equipment such as an ultrasonic detector, harp trap and mist nets for bat sampling. This is a hands-on opportunity to experience ongoing research; we'll attempt to catch and release bats. Evening activities will also include watching 20,000+ bats emerge from a summer maternity site.



### Grasses, Sedges, and Rushes

AUGUST 13 AND 14 (WED – THU), Shaver's Creek Environmental Center, *Sarah Miller*

This course is designed with consultants, natural resource professionals and students in mind. Join an experienced botanist to learn skills necessary to identify these challenging plant species using diagnostic characters and botanical keys. Each day will consist of both classroom sessions and fieldwork. Participants will have the opportunity to visit different wetland types in the area to practice their plant identification skills.



### Ferns and Mosses

SEPTEMBER 6 (SAT), Ricketts Glen State Park, *Susan Munch, Ph.D.*

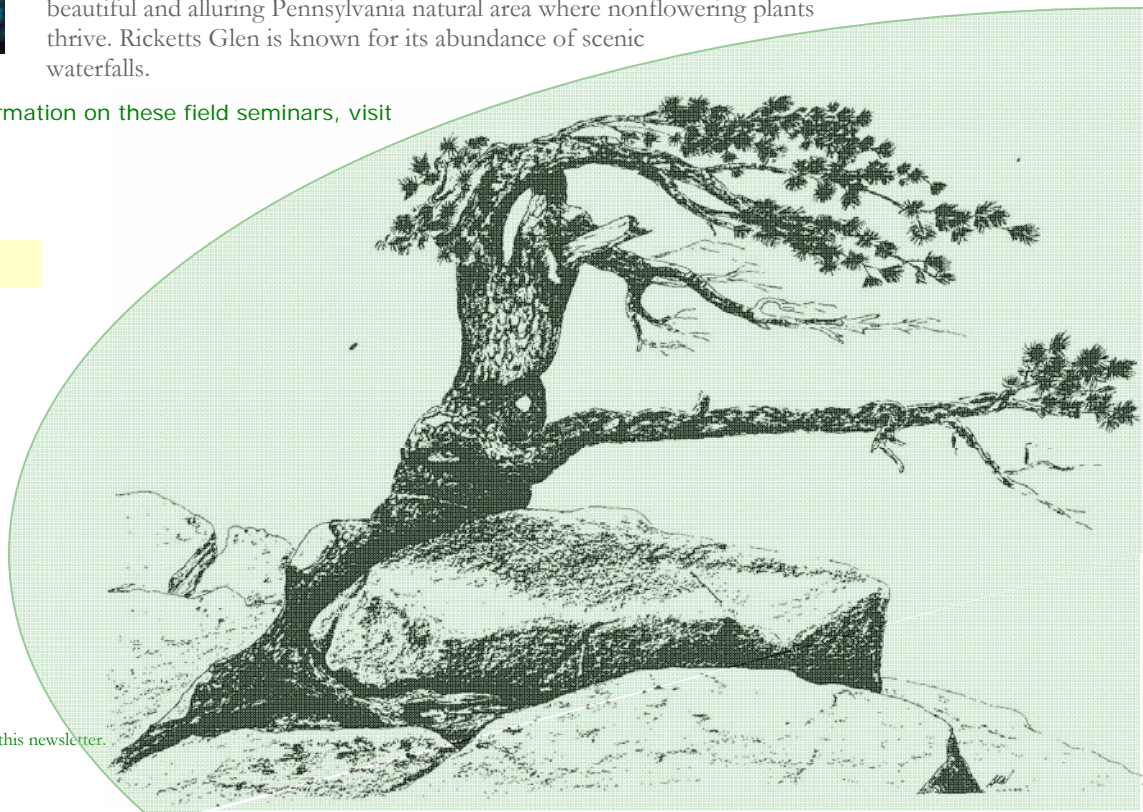
The forests of Pennsylvania provide ideal habitat for luxuriant growth of ferns and mosses as well as other nonflowering plants. Investigate the habitats and uniqueness of these fascinating plants as we explore old forests, wetlands and Appalachian landscapes. Learn to identify major common genera and species from an experienced botanist. For our field studies, we will explore the most beautiful and alluring Pennsylvania natural area where nonflowering plants thrive. Ricketts Glen is known for its abundance of scenic waterfalls.

For details and registration information on these field seminars, visit our website [www.picweb.org](http://www.picweb.org).

### FEATURED ARTIST

#### ALEX NAGY

Alex Nagy was a Pennsylvanian naturalist and artist. He worked as the second curator of Hawk Mountain Sanctuary from 1966-1981, where he published *Feathers in the Wind* with Jim Brett.



## Science News for Naturalists

A summary of relevant research on wildlife and ecology.

### Global Climate Change and Bird Extinctions.

In the newest study examining the effects of climate change on bird species, researchers calculated the extinction risk of 8,400 landbirds in the world. They predicted outcomes for various climate warming scenarios; however, for the most likely outcome ( a rise in temperature of 2.8 degrees Celsius by the turn of the century) they estimated that 400-550 bird species could go extinct. Species most affected are those that experience habitat loss due to range shifts. With latitudinal range shifts, species in the northern hemisphere move north, and species in the southern hemisphere move south as temperatures rise. With the elevational range shifts, species living at high elevations move up and up as

temperatures rise, however, available habitat decreases as elevation increases until eventually, there is nowhere to go but extinct.

Sekercioglu, C.H. et al. 2008. *Climate change, elevational range shifts, and bird extinctions. Conservation Biology* 22(1): 140-150.

### The Dawn Chorus

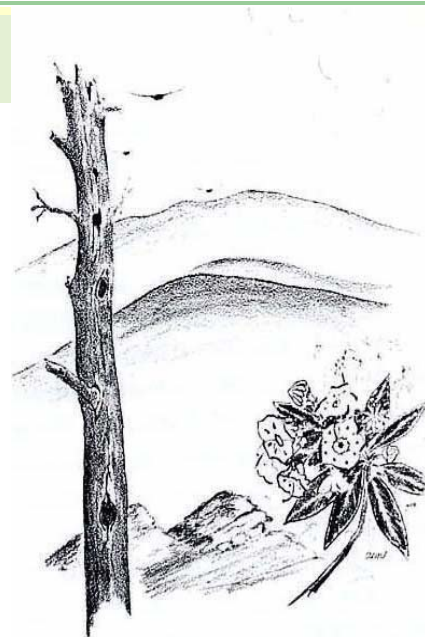
For some of us, it isn't spring until we begin waking to the sound of birds singing outside our window. We know that the birds are singing to attract mates — but why do they all choose to sing first thing in the morning? According to a study by McNamara, Mace, and Houston, it has everything to do with variable nighttime energy requirements. Using an optimizing model, they found that when nighttime energy needs are variable, the opti-

mal strategy is to load-up on energy during the day and enter the night with a surplus. Often, there is energy "left-over" in the morning. Birds take advantage of this "extra" energy and use it for singing.

McNamara, J.M., R.H. Mace, and A.I. Houston. 1987. *Optimal daily routines of singing and foraging in a bird singing to attract a mate. Behavioral Ecology and Sociobiology* 20(6): 399-405.

### Fungal Disease Killing Bats in the Northeast

A new fungal disease, called "White-nosed Syndrome" killed eight to eleven thousand bats in Vermont and New York last year and is spreading to other caves and states. Bats affected by the disease have low fat, are emaciated, and a small portion of them have a



white fungal growth visible on their muzzle. Of the six species inhabiting the affected area, only the big brown bat is unaffected by the disease. Scientists are investigating the cause of the disease which is currently unknown.

Burton, A. 2008. *Emerging disease hits bats hard. Frontiers in Ecology and the Environment* 6(3):117.

—Gail Farmer

## Wildlife Watching Hotspots

### Middle Creek Wildlife Management Area

*Where:* border of Lancaster/Lebanon counties

*What's there:*

Pair of nesting Bald Eagles

Heron rookeries

Nesting Barn Owls

Large flocks of Canada Geese

Spectacular flocks of Canada Geese and Snow Geese during migration.

*For more info:*

[www.pgc.state.pa.us](http://www.pgc.state.pa.us)

### Canoe Creek State Park

*Where:* Central PA; 12 miles east of Altoona

*What's there:* The Church Sanctuary is home to the largest nursery colony of little brown bats in Pennsylvania.

A deep limestone mine is a hibernaculum to over 20,000 bats of six different species, including the endangered Indiana bat .

*For more info:*

[www.dcnr.state.pa.us](http://www.dcnr.state.pa.us)

### Raccoon Creek State Park

*Where:* Western PA; southern Beaver County.

*What's there:* Home to a 314 acre Wildflower Reserve. One of the most diverse stands of wildflowers in western Pennsylvania.

Peak wildflower blooms occur in late April and early August.

Great birding trails.

*For more info:*

[www.dcnr.state.pa.us](http://www.dcnr.state.pa.us)

# Naturalist Rambles

**Pete Duncan**, Vice President of the Institute's Board of Directors, brings an enormous amount of insight and wisdom to the table, stemming from his many years of experience as a forester and outdoorsman. After serving the Commonwealth of Pennsylvania as Secretary of the Department of Environmental Resources and Executive Director of the Pennsylvania Game Commission, Duncan assumed the position of Deputy Commissioner for Natural Resources in New York State. Some of his most notable accomplishments were the acquisition of more than 125,000 acres of state land while working for PGC and the addition of one half million acres during his tenure in New York. I recently met with Pete to discuss the experiences and philosophy that drive his passion.

**What experiences do you attribute to the development of your passion for the natural world?**

I suppose the experiences that developed that passion were hiking, hunting, fishing and camping trips with my father, who was an avid outdoorsman. There were other family and friends who took me on these kinds of trips too.

**Where do you go to escape the hustle and reconnect with nature?**

Anywhere outdoors and solitary - it might be hunting for grouse or woodcock, fishing for trout, taking hikes with binoculars, or searching for mushrooms during this time of year - anywhere uncrowded. The outdoors is where life seems to make sense. You never master it; you're always a student. It is beautiful beyond anything man has ever created.

**The best thing anyone ever taught me is:**

Love of the outdoors.

**The best thinker(s) in my field:**

There are so many. You can't read Aldo Leopold's books without being mesmerized. He was an excellent scientist and an extraordinary writer. Roger Latham, who was the former director of research for the PA Game Commission and the Outdoor Editor for the Pittsburgh Press was an extraordinary scientist and naturalist. Walking with him was like walking with an encyclopedia; he didn't force it upon you, but he would tell you anything you wanted to know. Ned Smith, a writer for the PA Game News, was also a very accomplished artist. Ralph Abele, a director of the PA Fish Commission, was a very accomplished naturalist and an excellent writer. I was employed by Ralph after the army and he had an enormous influence. He was a deeply committed conservationist.

**What's the most influential book that you've read?**

*A Sand County Almanac* (Aldo Leopold) was very influential, as was *Silent Spring*. Rachel Carson was courageous beyond words. Her findings were carefully documented and referenced beyond belief. From a scientific point of view, you couldn't argue with them. She was criticizing the very agricultural colleges that she was a product of. I had just finished college, and I remember the book being panned by everyone. Professors said it was pseudo-science. She stood up for it. That took an incredible amount of courage.

**The principal I wish I could live by is:**

That I am living in a way that is sustainable for future generations. This is both an individual and a collective effort. Sustainability is an overused term, but it's a good term. We have to tread as lightly as we can, and we have to make sacrifices that we haven't had to before because there are so many of us. We put a heavy burden on the environment.

The best thing that I've done is buy public land. Many foresters have a perspective



Our good friend, Pete Duncan

that the land must be managed, so they don't purchase land unless the resources are available to manage it. But even if a chunk of land is purchased and set aside without being managed by humans, it doesn't mean the land won't be in better shape than it would be otherwise; nature will manage, and might do a better job than we can.

—Emily Brodsky

**GoodSearch**, a Yahoo-powered search engine, donates half its advertising revenue to the charities its users designate. You use it just as you would any search engine, select PICE as your charity, get quality search results from Yahoo, and watch the donations add up for The Institute! [www.goodsearch.com](http://www.goodsearch.com)



# Support Our Work

## OUR MISSION AND PURPOSE

The Institute is dedicated to stimulating knowledge of, interest in, and an appreciation of natural history by providing extraordinary field-based educational opportunities in Pennsylvania and beyond.

We are committed to creating a more ecologically literate population; one that becomes increasingly engaged in the conservation of natural resources.

Your support makes our programs possible. Please let us hear from you today and we will put your contribution to work.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

Phone \_\_\_\_\_

Email \_\_\_\_\_

Yes! I want to help at the following level:

\$60

\$250

\$500

\$1000

Other \_\_\_\_\_

Method of payment

Check, payable to PICE

Money Order

Return this form to: PICE, 1 D Teaberry Rd, Bloomsburg, PA 17815



## Let Your Kids *Connect*



Children ages 12-14 years old learn about wildlife, explore the ecology of Pennsylvania and meet new friends interested in discovering natural habitats. These half-day programs are field-based, hands-on learning experiences where youth will explore the natural world with the most talented and knowledgeable state naturalists. Youth completing 3 or more sessions will earn a certificate and receive an Eco-Kit with discovery tools to continue their discovery and explorations at home.

Tuition per class is \$45 for one youth and one mentor/guardian. Classes will meet at a location near Hawk Mountain Sanctuary and Kempton in Berks County. Youth must be accompanied by a mentor or adult family member.

### **Wild About Frogs and Salamanders**

APRIL 19, 2008 (SAT)

10 am – 2pm

### **Swamps, Springs and Streams:**

#### **Exploring Aquatic Habitats**

AUGUST 9, 2008 (SAT)

10 am – 2 pm

### **Birds and Butterflies**

MAY 17, 2008 (SAT)

9 am – 1 pm

### **Fall Migration**

SEPTEMBER 20, 2008 (SAT)

9 am – 1pm