

COVE CURRENTS

Greetings from the Executive Director

Winter is the perfect time to ponder an idea, put together a plan, and move it toward implementation. In other words, the staff spent plenty of time this winter, brainstorming. Our goal is to add to the excellent programming in environmental education that we already offer to pre-school through college age students at PCNP. In fact, there are 3,000 students scheduled for spring field trips at PCNP this year. That number represents the highest number of students we have hosted and the maximum number we can accommodate in a single season. In addition, it indicates that our programs are of high quality and are in great demand. For that the credit goes to Ed Sanderson, Director of Education, and to his excellent teaching staff.

Kristina Merola, Naturalist, or “Miss Kristina” as her Cove Caterpillars call her, has reached the maximum number of participant in her classes as well. Throughout the winter and into early spring budding scientists ages three to five years participated in Kristina’s classes each week.

In the 2011 Spring/Summer issue of Cove Currents, I introduced the GLOBE/Palmyra Cove Nature Park partnership and our plan to promote geosciences and STEM education at the Cove.

We took a giant step in that direction when John D. Moore, after twenty-eight years as a classroom teacher of geosciences at Burlington County Institute of Technology and two years as an Albert Einstein Distinguished Fellow at the National Science Foundation in Washington, DC, joined the staff of PCNP in late December, 2011. John is now Director for Geoscience STEM Education at Palmyra Cove.

With John on staff, we have an opportunity to offer GLOBE Teacher Training Workshops and American Meteorological Society (AMS) DataStream Courses, to pre-college teachers. To those courses we have added Eyes in the Sky II, funded by NASA. All of these workshops and courses are completed by pre-college teachers in the tri-state area. Our intention, at Palmyra Cove Nature Park, is to develop a STEM (Science Technology Engineering and Math) Master Teachers’ Corps with the teachers who have completed these and other professional development courses in geoscience and related fields.

As part of our expanding effort to bring high quality educational

experiences to teachers and students in the region, Palmyra Cove Nature Park is introducing its Institute for Earth Observations. We intend to make the “Institute for Earth Observations an ongoing educational endeavor to engage teachers and students in an innovative study of Planet Earth from both earthbound and space borne perspectives using state of the art technologies and educational resources. Building upon established Geoscience related field studies, observations, and measurements, the Institute for Earth Observations expands the study of our planet through the use of remote sensing and geospatial technologies and provides leadership for developing STEM applications in the classroom.” (John D. Moore, Director Geoscience STEM Education, PCNP)*

But, we want to go a step further. We will create a “Club House” for our Master Teachers so that they may continue the relationships they develop with other teachers in our workshops and courses. While these teachers will certainly take their new knowledge and experience back to their respective schools to share with their students, we want them to have an opportunity to circle back to share continuing knowledge and experience with their fellow Master Teachers. Hence, the “Club House.” Ultimately, we will develop a coalition of teachers who are AMS, GLOBE, and NASA trained to facilitate Professional Development Courses for regional teachers.

The Master Teachers who belong to the “Club House” and who participate in the programming offered through the Institute for Earth Observations will become the teachers who teach the teachers who teach the students. The Institute builds on ten years of successful program development at Palmyra Cove Nature Park focused on the Cove’s ecosystems with all of their interdependent components, and expands the study of our planet to the world around us through the eyes of technology.

This plan is ambitious and far-reaching with the potential for a broad impact. Also, it is timely and well within our mission and ability to accomplish.

* For more information on the Institute for Earth Observations please visit our website at www.palmyracove.org.

Clara Ruvolo, Executive Director





Enjoying Fine Arts

All Exhibits are Open and Free to the Public

You are encouraged to attend the "Meet the Artists" Receptions.

During the months of June through August, 2012, local artists will bring a variety of new art and photography to Palmyra Cove Nature Park.

In June Debbie Pey will exhibit her incredible mixed media paintings. Ms. Pey works in handmade papers, acrylic, and other mediums. She exhibits throughout New Jersey and has

won numerous prizes. Debbie is known for her skillful

abstracts and lovely realistic work.

Jim Sutton will exhibit photography, pastels, and other art during the month of July. Jim has been an artist for many years, worked at the Philadelphia Museum of Art, and regularly contributes his talent to many art organizations and individuals.

In August, I have the privilege of exhibiting my work along with Neal Knobler and Marlene Robinson. Together, we will show the viewer a variety of mediums and styles. Neal, a professional graphic designer, will also display his unusual photography.

The art on display is available for purchase through the artists. Bring friends, hit the trails, and then "cool down" inside with the always interesting and creative art display.

Myra Ryan, Art Exhibit Coordinator at PCNP



Bird Watching for Beginners

Bird watching, or "birding", as some prefer, is one of the most popular pastimes in the United States. The National Wildlife Service estimates that twenty percent of the U.S. population are birdwatchers. Birdwatchers spend an estimated thirty six billion dollars a year on their hobby. Most folks are birders by degrees. Some are very casual, observing birds in their backyards or neighborhood park. Others go all out, buying expensive optical gear, subscribing to birding publications and traveling to exotic locations in pursuit of their hobby.

One of the popular activities at the Nature Park is the "Beginners Bird Walk." People who are curious about birding are given the chance to hike through the park with our Naturalist and learn some basic information about birds and birding. I'm going to provide some tips for those who are not able to come out to the park with us.

What do you need to get started? The simple answer is nothing. You don't need anything except your eyes to enjoy birding. For some folks it is enough just to enjoy our avian friends on a purely aesthetic level. Most people want to go beyond this most basic level. To do this you will need two pieces of equipment.

The first item is a binocular. A binocular lets you see the birds up close. It gives you the opportunity to see all the

clues that will help you identify the little critters. A binocular also enhances your enjoyment of the experience. You do not need to spend a great deal of money to buy a good binocular. Companies like Bushnell and Nikon make very good binoculars in the one hundred dollar range. I particularly like the Nikon "Action" series. When you buy a binocular, look for one with a magnification power of seven, eight or ten. A more powerful binocular will not be a good birding binocular. A binocular with a magnification power greater than ten is almost impossible to hold steady.

The second item is a field guide for bird identification. Field guides are books that help you identify birds through the use of illustrations or photographs and descriptive text. The guide you select should cover the area where you will be birding and be small enough to carry with you in the field. Popular field guides include the Peterson's field guides, Kaufman's and Sibley's. Peterson's is the granddaddy of them all. Roger Tory Peterson published his first field guide in 1934. It has been in print ever since. Now in its fifth edition, it has been constantly updated and improved. This is my favorite guide for beginners. Field guides cost around twenty bucks and are commonly available at your neighborhood book store or online. Some field guides are even available as "apps" for your smart phone.

That's all you need to get into birding. If you find you like it and want to go further, I recommend joining a bird club or society. Bird clubs offer outings, most of which are free, that give you the opportunity to go out with experienced birders. You will be surprised how fast you learn and how much you will see. The Audubon Society is a good one to join. The society has many local chapters. There is sure to be one near your home.

Clyde Croasdale, Guest Contributor





Naturalist Notes

Spring is a time when people seem to appreciate nature the most. After a long, gloomy or cold winter, the sights and sounds of spring are a welcome change. An early morning hike can leave you with sensory overload from the symphony of songs, bright showy colors, and strong perfumed smells. If you change the scale from the large overall cacophony, there are small, quiet signs of spring to discover, as well.

If you take a hike along the driveway from the parking lot you will come to our first wetland, called Bullfrog Pond. You may see a few Canada Geese or Mallards swimming. If you close your eyes and listen, you will hear various birds singing around the pond, including the rich, clear whistle of Baltimore Orioles, the sweet, high, clear notes of Yellow Warblers, the low whistled phrases of American Robins, the trills of the Song Sparrows, and the loud, harsh, gurgling trill of Red-winged Blackbirds. You may also hear very high-pitched trills coming from the trees: Northern Gray Treefrogs. If you're lucky, you may come across one of these tiny amphibians while walking Bullfrog Pond Trail. Northern Gray Treefrogs are small, can range in color from bright green to mottled gray, and they can call very loudly.

Around the edges of Bullfrog Pond, you may hear the “EEEEEP” of a Green Frog, the “jug-o-rum” of an Ameri-

can Bullfrog, or the “bwwaaaaaaah” of a Fowler’s Toad. Look at the floating logs in the pond and you may see Red-bellied or Painted Turtles basking. On the surface of the pond, little black beetles, called Whirligigs, zip along feeding on small animals trapped on the surface of the water. Water Striders can be observed skating on the water surface.

If you look into the pond, you will find tiny, black Fowler’s Toad tadpoles, medium-sized Green Frog tadpoles, and large American Bullfrog tadpoles swimming close to the edge. If you see a jelly-like substance attached to a leaf, it is a mass of frog eggs. You may also see insects scurrying around under the water. These freshwater macroinvertebrates include backswimmers (swimming with their white undersides up), water boatman (beetles that use their back oar-like legs to move through the water), or golden-colored Predaceous Diving Beetles. If you bring a small aquarium net, you can even search the edges of the pond for camouflaged species, like Damselfly and Dragonfly larvae, which look like underwater crickets.

From loud and showy to quiet and camouflaged, Bullfrog Pond is one place you can visit to enjoy all that spring has to offer.

Kristina Merola, *Naturalist*



Photos credited to Bennett Landsman, Steve Greer, Jonathan Maccornack and Barbara Farnsworth. Palmyra Cove Environmental Education Foundation thanks Ed McCabe for his assistance in editing Cove Currents. Cover: Kristina Merola, Naturalist, PCNP and Kathy Clark, Supervising Zoologist, NJ Division of Fish and Wildlife, banding Peregrine falcon chicks atop the Tacony Palmyra Bridge.

Education Corner

Staff Spotlight:

Due to the decrease in school visits during the colder months, our teaching staff shrinks in the winter months and then expands in the spring. Since we have scheduled about 3000 student visitors this spring, three additional teachers have been added to our staff. We welcome Maria Blatcher and Laura Swanson, Moorestown residents, and Barb Smyth of Riverton. All three have experience working as educators, and we expect them to make significant contributions to our programs. At our staff meeting in March, we focused on expanding our inclement weather activities and making adjustments to accommodate larger groups.

Winter Activities:

Our major winter activity was our “Owl Prowl” on January 26th. We offered a live owl presentation by Cedar Run Wildlife Refuge, which was to be followed by a walk in the woods to look for owls. We had a capacity crowd this year, but canceled the walk segment due to rain. Those who attended the owl prowl were permitted to schedule another hike at no cost. Some of those hikes yielded interesting sights — a great horned owl nest, wild turkeys roosting in the same tree with the owl’s nest, and screech owls calling near Beaver Pond.

Physical changes took place in the park that required some housekeeping. Volunteers played an important part in the housekeeping. Cole Hurley (Moorestown), Mark Matuliewicz (Palmyra), David Barton (Philadelphia), and Dan Wiseman (Philadelphia) were responsible for a major cleanup around Red-winged Blackbird trail. We still have more trash to remove, but this group of young men got the

effort off to a good start.

Another important physical change was the extension of a half-mile trail from the footbridge to the property boundary. Much of this area was inundated by debris that has accumulated over decades. George Wunder, a regular volunteer, cleaned up much of it by himself. More than 200 bags of trash, 70 tires, and other assorted items have been removed by him. Due to the location and the difficulty of getting vehicles down there during high tides, it has been challenging to haul the debris out of that area. This will be an ongoing challenge, but George Wunder’s work has been nothing short of amazing. He is so efficient at collecting the debris that we cannot take it out as fast as he collects it. Our park staff, in particular, is very appreciative of his Herculean efforts, but all park visitors will benefit from those efforts.

This winter we began offering safari tours of the park in our utility vehicle. Several people scheduled tours in February. The rides last about 45 minutes to one hour and cost \$5 per person. The vehicle can shuttle four adults in addition to the driver. This activity is free to members. Please request dates two weeks in advance.

Trail Maps

We have updated our trail maps to illustrate the new trail on the other side of the footbridge. The new map also superimposes an aerial view of the park and adjacent area. We hope the new map provides additional clarity to improve visitors’ hiking experience.

Edward Sanderson, *Director, Environmental Education*





Adult Peregrine falcon

Birds of Prey

I have always found the birds of prey at Palmyra Cove Nature Park to be fascinating. I have seen Owls, Turkey Vultures, Bald Eagles, Peregrine Falcons, and Hawks. I have not seen an Osprey yet but they are here. These birds of prey are the aerial predators of Palmyra Cove Nature Park and we are extremely lucky to have them, even if some are just visiting. The Peregrine Falcons which nest on the Tacony-Palmyra Bridge are my favorite. As I am writing this article, I am happy to report that we have three new additions to our Peregrine family. This is the first time this pair of falcons has had three chicks!

The one feature that distinguishes birds of prey from all other birds is the method by which they catch and kill their prey. Most birds of prey use the sharp talons of their feet as their primary method of killing their prey. One exception are Vultures, who feed primarily on carrion (dead animal flesh). I like to refer to groups of Vultures as clean up committees. They perform a service of monumental proportions.

In general, most female birds of prey are larger and more aggressive than the males. All birds of prey have remarkable eyesight. Their vision is easily ten times better than ours, they see in far more detail, and are more sensitive to movement. It is believed that most diurnal (day hunters) raptors can distinguish color and see a wider range of color than humans, some well into the ultraviolet spectrum. The word "raptor," a term used to refer to all birds of prey, comes from the Latin word "rapere" meaning to seize and carry off.

The breeding and nesting habits of raptors you may find

surprising. Many birds of prey mate for life, but preservation of the species is first and foremost. When one partner dies, within hours the other is searching for a mate. After a period of time, usually weeks and after teaching their chicks to hunt, the chicks become viewed by their parents as competitors for food. Armed with independence and self sufficiency the young will begin to fledge. Young peregrine falcons begin flying after forty days from hatching.

Hunting techniques among birds of prey vary enormously. We are used to thinking of them as excellent fliers, soaring high and swooping, tirelessly chasing their prey on the wing. But many raptors do not want to put that much effort into getting their food. Some favor "still hunting" which is sitting still on a suitable perch waiting for prey to come into reach. Others prefer "perch hunting" making short flights between suitable perches looking for prey in flight. Peregrine falcons are the kings of speed. They have long narrow wings which are swept back from the body enabling them to fly very fast. The dark strip of feathers on the face reduces the effects of glare in the bird's eyes. They rely on both speed and agility to catch their prey. Peregrine falcons usually hunt smaller birds while in flight. Most have an elongated middle toe, which is often used to help grasp prey while in flight. Eagles and Osprey may fish for their food. Osprey will immerse their entire bodies into the water to catch the fish they desire. Conversely, eagles gracefully skim the top of the water catching their fish seamlessly. Both rely on their keen eyesight mentioned earlier. Come and see for yourself the majesty of Palmyra Cove Nature Park.

Kim Addiego, Cove Assistant



Upcoming Events

Registration is required to participate in Palmyra Cove Nature Park programs.
For more information please contact Kristina Merola at (856) 829-1900 x 267 or kmerola@bcbridges.org.

July 4	Palmyra Cove Environmental Discovery Center closed		
July 7	9:00 a.m. – 11:00 a.m.	Family Hike	All Ages
July 9	9:00 a.m. – 12:00 noon	Cove Campers Summer Camp Week 1 begins	3rd - 8th grades
July 16	9:00 a.m. – 12:00 noon	Cove Campers Summer Camp Week 2 begins	3rd - 8th grades
July 21	9:00 a.m. – 12:00 noon	Beginning Birding for Adults	Adults only
July 21	9:00 a.m.	Garden Maintenance	
August 4	9:00 a.m. – 11:00 a.m.	Family Hike	All Ages
August 6	9:00 a.m. – 12:00 noon	Engineers of Tomorrow Camp begins	3rd – 6th grades
August 18	9:00 a.m. – 12:00 noon	Beginning Birding for Adults	Adults only
August 20	10:00 a.m. – 2:00 p.m.	Kids Photo Camp Session 2 begins	6th – 8th grades
August 25	9:00 a.m.	Seed Collecting and Garden Maintenance	
September 1	9:00 a.m. – 11:00 a.m.	Family Hike	All Ages
September 1	10:00 a.m. – 11:30 a.m.	How to Create a Butterfly and Hummingbird Garden with Pat Sutton	Adults only
September 3	Palmyra Cove Environmental Discovery Center closed		
September 10	10:00 a.m. – 11:00 a.m.	Cove Caterpillars preschool program	2-5 years with adult
September 10	1:00 p.m. – 2:00 p.m.	Cove Caterpillars preschool program	2-5 years with adult
September 11	10:00 a.m. – 11:00 a.m.	Cove Caterpillars preschool program	2-5 years with adult
September 15	9:00 a.m. – 12:00 noon	Beginning Birding for Adults	Adults only



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 Palmyra Cove Nature Park
 1300 ROUTE 73 NORTH
 PO Box 6
 PALMYRA, NJ 08065-1090