



# COVE CURRENTS

## Greetings from the Executive Director

Winter will arrive on December 22, 2011. Yes, I know that I am writing for and you are reading the Fall Issue of Cove Currents; however, we did have a wintry mix of weather on the Saturday before Halloween. Snow falling not only before Christmas, but also before Thanksgiving and Halloween, represents an historic weather event in our region. Consequently, I began thinking, once again, about the topic of Climate Change.

Just a few days before our misplaced winter weekend, Palmyra Cove Nature Park had the pleasure of hosting a presentation on Climate Change. Merchantville School science teacher Vanessa Van Sciver and social studies teacher Shawn Waldron discussed the science of climate change and its impact on the United States. Vanessa and Shawn focused their program on the results of the U.S. Global Change Research Program, 2009 (USGCRP).

As a result of the Global Change Research Act of 1990 and the work of USGCRP, National Climate Assessment(s) keep the President and Congress apprised of climate changes across the country and of the impacts of these changes on various socio/economic and political conditions in different parts of the country. USGCRP identifies the changes like the recent drought and extremely high temperatures in Texas, for instance, thereby providing government agencies and local communities with the science information and projections needed to devise a plan to deal with that situation and with its impact on the future.

The science is clear. Temperatures are rising faster than they have at any time in history and carbon dioxide levels in the atmosphere have increased. Both are projected to increase further in the future and they are related.

Many government departments and agencies are involved in working on the USGCRP including the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Interior, State, and Transportation, as well as the Environmental Protection Agency, National Aeronautics and Space Agency, National Science Foundation, Smithsonian Institution, and the US Agency for International Development. Each department and agency uses climate change science to address issues over which it has responsibility.

For those of us who are not scientists, those of us who do not collect the data or analyze the data, but who want, or, I should say, need to know what the impacts of climate change will be on our daily lives, I highly recommend a visit to the USGCRP website, [www.globalchange.gov](http://www.globalchange.gov).

The site describes in detail, based upon the 2009 USGCRP report, what effects climate changes are having in areas overseen by the United States' Departments and Agencies listed above and how these changes differ in different parts of the country. In addition, "Climate Literacy: The Essential Principles of Climate Science" is a guide available to anyone who wishes to "understand how climate influences them and how they influence climate," [www.climate.noaa.gov/education](http://www.climate.noaa.gov/education) or Google Climate Literacy.

The **Global Climate Change Impacts in the US (2009)** section highlights the following: "**Climate changes are underway in the United States and are projected to grow.** Climate-related changes are already observed in the United States and its coastal waters. These include increases in heavy downpours, rising temperature and sea level, rapidly retreating glaciers, thawing permafrost, lengthening growing seasons, lengthening ice free seasons in the ocean and on lakes and rivers, earlier snowmelt and alterations in river flows. These changes are projected to grow. **Crop and livestock production will be increasingly challenged.** Agriculture is considered one of the sectors most adaptable to changes in climate. However, increased heat, pests, water stress, diseases, and weather extremes, will pose adaptation challenges for crop and livestock production. **Threats to human health will increase.** Health impacts of climate change are related to heat stress, waterborne diseases, poor air quality, extreme weather events, and diseases transmitted by insects and rodents. Robust public health infrastructure can reduce the potential for negative impacts."

If you are interested in specific changes occurring in specific regions of the United States, I encourage you to see: [www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/regions](http://www.globalchange.gov/publications/reports/scientific-assessments/us-impacts/regions). You will find a discussion of such topics as the relationship between extreme heat and air quality; climate shifts and agriculture production; sea level rise along with heavy rains and the incidents of severe flooding; and the relationship between warming and a shift of the lobster industry "...to the northern regions of the Gulf of Maine..."

With all of the other problems facing us as a national and world community, it is easy to think of climate change as something vague and slow moving, something to be dealt with in the future. It isn't. With help from the scientific data which is fully accessible to the layman we can educate ourselves on one of the most pressing issues of our time. Then, with a full year of presidential politics ahead of us we can ask our candidates for their plans to address the issue. We should press for serious answers.

Clara Ruvolo, Executive Director



# Education Corner

**School Visits:** About 500 students visited Palmyra Cove this fall. Moorestown Upper Elementary School (MUES) led the way with almost 300 fourth grade students. MUES has been coming to Palmyra Cove every year since 2004. Other returning schools included King's Christian, Roosevelt Elementary, Rowan University (Principles of Ecology students), St. Joseph's Pro Cathedral, and YALE.

**Adopt A Beach:** This fall was by far our most successful cleanup effort. More than 150 volunteers collected 170 bags of trash from our shoreline. Cinnaminson High School Interact Club provided 38 students. Palmyra High Interact Club, Moorestown High Interact Club, the Unitarian Universalist Church of Cherry Hill, and the Eastampton and Hainesport Scouts also had strong participation. Additionally, numerous individuals not affiliated with any particular organization joined the effort. This "Adopt A Beach" cleanup is part of a statewide endeavor led by New Jersey Clean Communities. We had great support from our Burlington County Clean Communities Coordinator, Pam Tidswell. Additionally, Sue Migliaccio of the Palmyra, Riverton, Cinnaminson Rotary recruited many volunteers.

The New Jersey's "Adopt A Beach" program is part of a worldwide effort spearheaded by the International Ocean

Conservancy. Our estimate of total bags, pounds, and types of debris was sent to the State of New Jersey and will be forwarded to the International Ocean Conservancy. The International Ocean Conservancy makes this information available at its website (<http://www.oceanconservancy.org/>). Removing the trash from our beaches saves the lives of countless marine animals.

**In the Park:** Fall may be the best time of year to hike the park. It is a time of transition that seems to energize the wildlife. It is a time of migrations by birds and fish. Groundhogs are voraciously consuming calories to carry them through the winter. Frogs, turtles, and snakes are capturing the warm afternoon sunlight to increase their metabolism. The deer are mating and scouring the landscape for food before winter. The beavers are gnawing away at black cherry trees and piling their branches on their lodge. The young turkeys, who are now an edible size, roam the park at will. The park's animals are racing against the inevitable colder temperatures and diminishing sunlight. This natural drama can be witnessed every day at Palmyra Cove Nature Park. The best viewing times are mornings before 10 AM and evenings after 4 PM.

**Edward Sanderson, Director Environmental Education**



Letters to the Editor can be mailed to Clara Ruvolo at Palmyra Cove Nature Park, 1300 Route 73 North, PO Box 6, Palmyra, NJ 08065-1090.

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*.

# Wild in the City

I was recently in the wonderful city of London, England. While on a late night pub crawl in the very urban North London area, I had a strange encounter. As my friends and I tottered along a busy avenue, I saw what looked like a red fox eyeing us from an alley way. Not quite believing what I saw, I asked my host if it were possible that I had seen a fox. "Oh sure," he replied "there are loads of foxes in London."

When I got home, I did some research. Indeed there were foxes in London. There were an estimated 10,000 in 2006 according to the National Geographic Magazine. They started appearing after WWII, driven into the city as their natural habitat was gobbled up by urban sprawl. Instead of dying out, they adapted to city life. While some people like them, others consider the foxes to be pests because they dig through the garbage and sometimes attack household pets.

My encounter with the city fox got me thinking about our own urban wildlife and some of the interesting species that have become common in our cities and suburbs. Topping the list is the white tailed deer. Trapped in large urban parks and the suburbs by loss of habitat, white tails are a common sight in many areas of the Delaware Valley. Burgeoning deer populations have created a few problems. Deer will eat almost any form of vegetation and they have decimated the forest understory in many parks and preserves. When they have finished eating everything in the park, they wander into adjoining neighborhoods and plunder backyard gardens. They have become a hazard on busy highways causing many vehicular accidents. Still many people, myself included, enjoy seeing deer and would not want them to go away completely.

Another group of species that has adapted well to city life is birds of prey or raptors. The peregrine falcon is particularly interesting. The peregrine was almost extinct in most of the U.S. because of the widespread use of the insecticide DDT. After DDT was banned in the early seventies,

conservationists sought to bolster the remaining Peregrine population by releasing birds bred in captivity into the wild. Peregrines like to nest on the faces of cliffs in remote areas. The scientists found that it was hard to monitor the bird's progress in that environment and instead decided to use artificial nesting sites on tall buildings to reintroduce the falcons to the "wild". The birds have done quite well and thrive in their urban environment, feasting on the abundant pigeon population. Falcons nest on skyscrapers in most big U.S. cities. Here at the Nature Park we have resident falcons living on the Tacony-Palmyra Bridge. The birds have done so well that conservationists are taking birds from the city and reintroducing them to their traditional wild environment.

The eastern coyote is another animal that is becoming increasingly common in urban and suburban areas. Unlike the other species that I wrote about, the eastern coyote seems to be invading urban areas on its own accord. What exactly is an eastern coyote? There is no general agreement on this. Is it a cross between a coyote and a domestic dog or is it a hybrid wolf-coyote? Where are they coming from? When did this species, if it is a distinct species, first evolve? No one seems to know. What we do know is that they are here in every area of the Northeast, including every county of New Jersey and Pennsylvania. Coyotes are medium sized canines resembling a German Shepherd with a bushy tail. They have a distinctly wild appearance. Coyotes are drawn to the urban environment by easy pickings from garbage cans. They are a threat to small pets and can spread rabies.

In this rapidly changing world it makes you wonder what will turn up next.

**Clyde Croasdale, Guest Contributor**



# Those Little Stinkers

I am sure we have all encountered a stink bug. *Pentatomidae* is a family of insects belonging to order *hemiptera* that includes stink bugs and shield bugs. They are residents here at the cove and seek shelter for overwintering in our Environmental Discovery Center. The bug resembles a medieval shield of armor with five segmented antennae and a four-segmented beak (for sucking plant fluids). The name stink bug derives from their tendency to eject a foul smelling glandular substance when disturbed.

My friend and colleague Debbie Lord brought in an article published in *The Philadelphia Inquirer* (Sunday, October 9, 2011) regarding these insects. After reading it my jaw dropped to my knees. Those little stinkers who were thought to be just a nuisance are so much more. Agricultural pests or crop killers would be more appropriate terms to describe them.

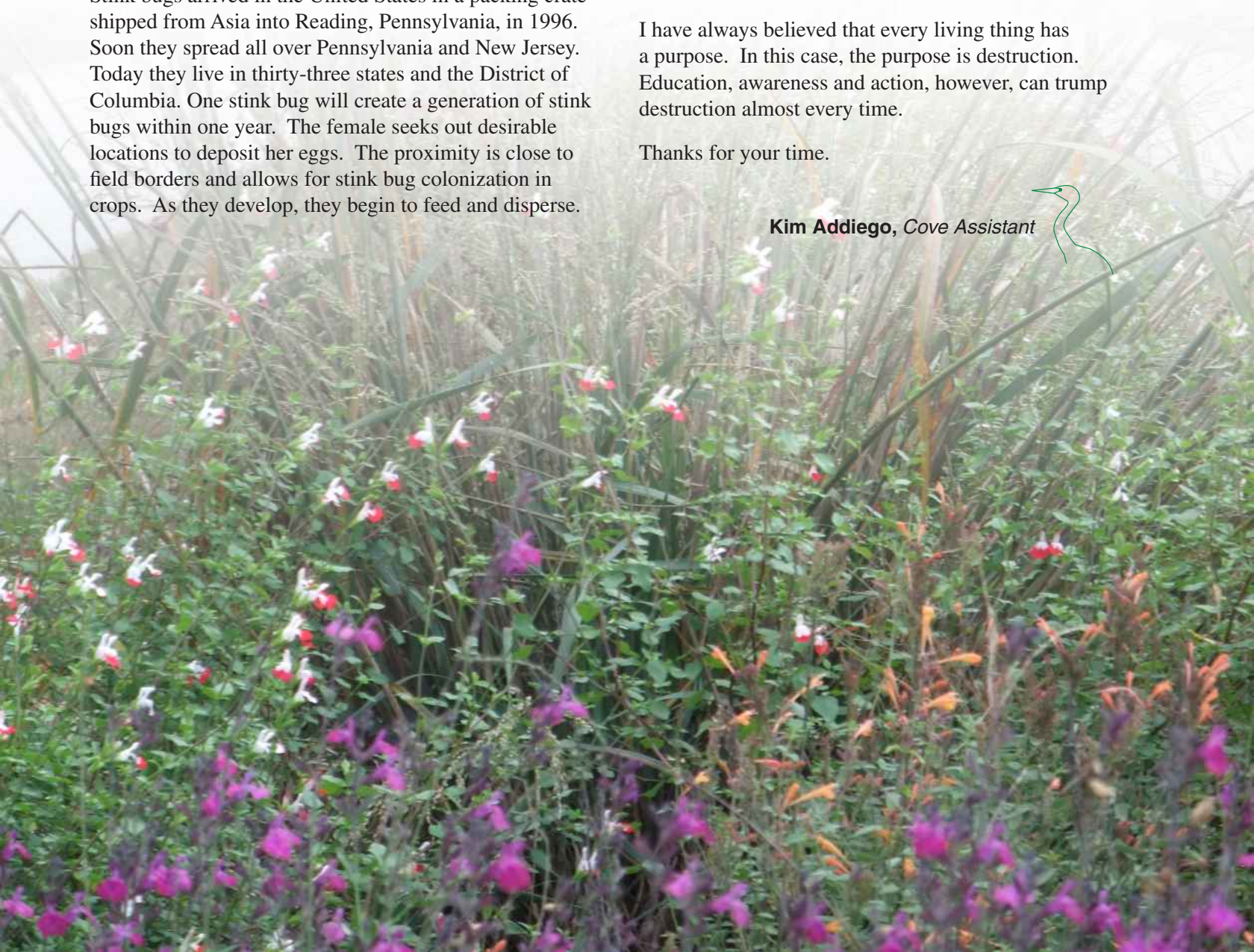
Stink bugs arrived in the United States in a packing crate shipped from Asia into Reading, Pennsylvania, in 1996. Soon they spread all over Pennsylvania and New Jersey. Today they live in thirty-three states and the District of Columbia. One stink bug will create a generation of stink bugs within one year. The female seeks out desirable locations to deposit her eggs. The proximity is close to field borders and allows for stink bug colonization in crops. As they develop, they begin to feed and disperse.

Unfortunately, they are resistant to most pesticides and do not have any known predators. Stink bugs feed on developing seeds of many hosts, including trees, shrubs, vines, weeds and many cultivated crops. They may also feed on the stems and foliage when seeds are not present. Both nymph and adult stink bugs pierce plants with their needle-like mouth parts and suck sap from pods, buds, blossoms, and seeds. The degree of damage depends on the developmental stage of the plant when it is attacked. Immature fruit and pods become deformed as they develop. Seeds are often flattened and shriveled. Germination can be reduced or the seeds may fail to germinate at all. They also feed on peaches, apples and other fruit early in the growing season. In 2010 stink bugs destroyed thirty-seven million dollars worth of apples. The damage done to soybeans, corn, tomatoes, raspberries, and grapes has not yet been calculated. The United States Department of Agriculture just designated five million seven hundred thousand dollars towards a scientific study of these bugs.

I have always believed that every living thing has a purpose. In this case, the purpose is destruction. Education, awareness and action, however, can trump destruction almost every time.

Thanks for your time.

**Kim Addiego, Cove Assistant**



# Enjoying Fine Art at Palmyra Cove Nature Park

In addition to enjoying wonderful flora and fauna at the Nature Park, visitors are treated to original art. It has been my privilege to locate local and regional professional artists and to invite them to hang their work in the Environmental Discovery Center— creating a gallery of fine art that is both high quality and available for sale at reasonable prices, should a visitor find something that they “just must have.”

In 2012 we will feature the artists of the Willingboro Art Alliance in January, New Jersey Pastel Painters Society in February and March, and the Burlington County Art Guild in April and May. Individual artists will have exhibits during the remaining months of the year.

All mediums are represented – painting from watercolor to pastels to oils – and all forms of photography from traditional to digitally enhanced. I hope you will view and enjoy the art during your next visit to Palmyra Cove Nature Park.

**Myra Ryan, Art Exhibit Coordinator at PCNP**



## Upcoming Events Winter 2011/2012

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](mailto:kmerola@bcbridges.org). Note that cancellations may occur due to weather conditions, so please call ahead.

December 17	Beginning Birding	9:00 a.m. – 12:00 p.m.	Adults
December 25	CLOSED		
January 1	CLOSED		
January 7	Family Hike	9:00 a.m. – 11:00 a.m.	All Ages
January 9	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
January 10	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
January 16	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
January 17	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
January 21	Beginning Birding	9:00 a.m. – 12:00 p.m.	Adults
January 23	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
January 24	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
January 30	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
January 31	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
February 4	Family Hike	9:00 a.m. – 11:00 a.m.	All Ages
February 6	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
February 7	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
February 13	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
February 14	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
February 18	Beginning Birding	9:00 a.m. – 12:00 p.m.	Adults
February 20	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children
February 21	Nature Craft and Story Time	10:00 a.m. – 11:00 a.m.	Preschool Children

Families, civic groups, and scouts can reserve an activity (see our website: [www.palmyracove.org](http://www.palmyracove.org)) by contacting Ed Sanderson at (865) 829-1900 x 263 or [esanderson@bcbridges.org](mailto:esanderson@bcbridges.org).



Cove Currents Issue #26 – Fall 2011



COVE CURRENTS  
 Palmyra Cove Nature Park  
 1300 ROUTE 73 NORTH  
 PO Box 6  
 PALMYRA, NJ 08065-1090  
 WWW.PALMYRACOVE.ORG