

DOCK RECONSTRUCTION

by Christine Mattera

Completed and *Better Than Before*

A year has gone by since Hurricane Sandy's wrath took aim on our region and put a damper on programming at The Wetlands



Institute by destroying our dock. Deprived of much needed access to Scotch Bonnet Creek, we had to cancel some of our summer activities including back-bay boating tours on the

Skimmer, hooked on fishing and crabbing at the dock. But with much determination, we managed to revise our programming and have a very successful season.

Our back-bay kayak tours were launched from alternate locations. We even made do with the low tide which left us little access to water during our Crabulous Crab Day. Our visitors enjoyed a full schedule of programs but it wasn't quite the same. We were missing an integral part of our facility.

Another significant challenge brought on by the loss of our dock was the loss of our salt water pumping system. This system is used to pump water along the quarter-mile long Salt Marsh Trail to maintain our aquarium. Losing this system meant having to haul water by truck in a 500 gallon tank every week.

The new dock was officially opened to the public in September, during our 1st Annual Fall Migration Festival. And it was well worth the wait! The 122 foot long structure is higher and is constructed of all new non-polluting materials. Its railing system has two heights providing safe and great views for kids. We have boat slips for our 2 research boats and an area for the Skimmer to dock. Gates provide access to water monitoring research equipment that will be installed in the spring. A new submerged pump has the pumping facility back on line.



The rebuilding was made possible through your generosity. We couldn't have done it without all your support and we are thrilled to be back in business and better than before. The McLean Contributionship supported the project with a \$15,000 grant and contributions to The Wetlands Institute's Sandy Rebuilding Fund raised more than \$40,000. The remaining funds will come from a Federal Emergency Management Agency disaster assistance grant.

Although it made for a challenging year, the setback brought by Sandy has not affected our motivation to keep moving forward. Our rebuilding efforts continue. We are about to begin construction on a new and expanded elevated loop boardwalk to replace the damaged walkway. We have substantial expenses to complete this construction. A FEMA grant will pay \$100,000 of the estimated \$250,000 cost of the new boardwalk but we need to finish construction this winter to qualify for the grant. So we still have much to do!

These are exhilarating times at The Wetlands Institute as we build a center of excellence in research, conservation and education.

We are grateful to all of you and hope you will continue to support our rebuilding. Hope to see you soon enjoying our new facilities.



“To promote appreciation, understanding and stewardship of wetlands and coastal ecosystems through our programs in research, education and conservation.”

Founded in 1969 by Herbert Mills, executive director of the World Wildlife Fund

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Hours:

October 14 - May 1

Open Friday, Saturday & Sunday 9:30 to 4:30

Closed Monday through Thursday

Check our website for Holiday Hours

General Admission:

Members Free

Non-members \$8 Adults \$6 Children 3-12

Views From the Tower is the quarterly newsletter of The Wetlands Institute and can also be found on our website.

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Stone Harbor, NJ 08247
609-368-1211

wetlandsinstitute.org



MARSH MUSINGS

by Dr. Lenore Tedesco, Executive Director



I look out my window at the golden hues and the mosaic of color of the fall marshes. It is another very high tide so that the marsh is a mixture of open water pools and a maze of grassy patches that reach above the glassy water surface. Fall migration is in full swing and each afternoon, we marvel at the collection of shorebirds and waders that use the salt pannes at the Institute to rest before they continue on their long

journeys to the warmth and plentiful food resources in their wintering grounds to the south. It really is inspirational and a time honored tradition that reminds me of the passing of seasons and gives me pause to reflect upon the past year. This October marked my second year in south Jersey. It's been both a trying year and a remarkable year.

This year many communities were rebounding from the effects of Hurricane Sandy. Our beaches and wetland ecosystems were no different. We undertook a transformational project with our partners to help restore critical habitat for wildlife on Delaware Bay. And The Wetlands Institute rebounded as well – and we rebuilt and continue to rebuild to be better than before. Prior to the storm, we chartered a course of growth and change for the Institute that involved building critical human resources and upgrading our facilities to better serve our constituents and embrace our mission. Then Sandy struck, destroying the dock and boardwalk and crippling our aquarium support infrastructure. The board and staff never flinched. Our rallying cry became: Stay the course and use this as an opportunity to be even better than imagined. It's been a difficult and exhausting year, but also an exhilarating one. As I sit and look out over the marsh, I can see and feel our progress.

In mid-September, we reopened the dock and it truly is built better than before. We have two work stations on the dock that allow us to expand our research efforts. We are planning a water quality monitoring station that will help us build baseline data sets to better understand the bays and estuary. Our research boats are in the water. The new Disney Conservation grant will allow us to buy sonar equipment to significantly upgrade our capabilities in terrapin and fisheries conservation. Our Education team now has the ability to significantly enhance program offerings to the public and to school groups.

Dedicated philanthropic gifts are fueling the beginnings of our avian conservation work and our research director has been out working with the Delaware Bay Shorebird team to trap and band juvenile shorebirds on their way south for the first time. These birds were given a chance because of the remarkable beach restoration project that we were thrilled to help spearhead and that we continue to work on.

Our next big efforts are underway. The elevated boardwalk, with its research and education stations, is in final design stages and work is set to begin. The dormitories are undergoing a much needed renovation to accommodate new staff and better serve our summer interns and programs.

It's been a very busy year, and 2014 will no doubt shape up to be another whirlwind year. I am proud of all we have accomplished and look forward to continuing on our amazing journey. At The Wetlands Institute, we are only as strong as our members and supporters. As we grow and rebuild, our needs are great. We are **Making No Small Plans** and I sincerely hope you will be a part of our growth and support our efforts.

Looking for a Way to Share Your Talents? The Wetlands Institute is always looking for new volunteers to help us achieve our mission. For more information, visit our website at: wetlandsinstitute.org

WINTER HAPPENINGS

↪ means kid-friendly!

Find us on



Even though it might be cold outside, it is always warm inside at The Wetlands Institute! Please join us for activities on the marsh every Friday, Saturday and Sunday from now until May 1, 2014. Unless otherwise stated, all activities occur onsite at The Wetlands Institute. Questions? Please call The Wetlands Institute at 609-368-1211.

↪ SEASONAL SCIENCE ACTIVITIES AND CRAFTS

We believe children and adults learn a great deal through moments of self-exploration. Each week we will offer a new self-guided science activity or craft related to seasonal changes in nature. We provide the supplies and you create the learning! Possible activities include bird watching, nature journaling and observation, simple science experiments, nature crafts, and much more! **Free with admission**
Friday, Saturday & Sunday: 10:00am - 4:00pm

LUNCH AND LEARN

Join us for a weekly exploration of topics important to our coastal and wetland ecosystems. Bring your lunch and The Wetlands Institute will provide coffee and dessert. Each week we will feature a different speaker and topic of discussion! Please check our website for complete details.

Every Friday 11:45am Starting January 10 – March 21, 2014
except on dates of Covered Dish Dinners (Jan. 31 & Feb. 28)
Cost: \$3 for members \$5 non-members

↪ CREATURE FEATURE AND CRAFT

We'll highlight a different live animal or group of animals each day! Get up close with terrapins, fish, crabs, sea stars and urchins, mollusks, horseshoe crabs and the animals of Finding Nemo. After the presentation, create a take-home craft related to that day's Creature Feature! **Free with admission.**
Friday and Saturday: 2:00pm

↪ AQUARIUM FEEDING

Help us feed the fish and octopus, or just watch them gobble down their food. We'll open up feeding three times each week so you can see the turtles chasing minnows and the horseshoe crab gobbling shrimp. **(Not all animals are fed every day).**
Free with admission
Saturday: 11:00am

↪ AQUARIUM TEACHING TANK

There is no better way to learn about the local creatures found in the salty waters of the ocean or back-bays than to experience them firsthand! Join us for a unique, interactive learning experience as we teach about whelk, skates, sea urchins, sea stars, mud snails, and more! **Please come prepared to touch the animals by not having any bug spray, hand sanitizer or lotion on your hands.** If needed, hands can be washed with mild soap and water in our bathroom before the program. **Free with admission**
Sunday: 11:00am

↪ SCIENCE FEATURE AND ACTIVITY

Each Sunday we will focus on a different conservation issue or science "hot topic"! Some of the topics include Marine Debris, Osprey Conservation, Renewable Energy, Sustainable Seafood, Horseshoe Crab Conservation and Terrapin Conservation. After the presentation, participate in a hands-on activity related to that day's Science Feature! **Activity recommended for ages 8 and up, but younger children are welcome to attend.** **Free with admission**
Sunday: 2:00pm

A YEAR IN REVIEW - Friday, December 6 at 6:00pm

What a year we have had at The Wetlands Institute! Come join us for "A Year in Review" as we celebrate through pictures, stories, videos and discussion all the twists, turns, achievements and efforts we have made over the course of 2013. Also, throughout the evening, learn about some of the exciting plans we have in store for 2014! This is a covered dish dinner, so please bring an entrée, salad or dessert to share with at least eight people. **RSVP by December 5**

Admission: A covered dish plus \$7 for members and \$12 for non-members.

COVERED DISH DINNERS

Please bring an entrée, salad or desert to share with at least eight people.

Admission: A covered dish plus \$7 for members and \$12 for non-members

The Ecology of Moths

Moths are more than just brown-winged flying insects! Come learn about the ecology and life cycle of moths from Matt Sichel of Stockton College. During this presentation, Matt will share his current moth ecology research while highlighting the broad range of local moth diversity.

Friday, January 31 at 6:00pm
Reservations by January 30

The American Oyster: An Ecological and Economic Engine Powering a Fishery, Aquaculture and Restoration.

Come meet Dave Bushek, director of the Haskins Shellfish Laboratory of Rutgers University. Dr. Bushek will discuss efforts at oyster restoration, aquaculture and fisheries in Delaware Bay and compare and contrast different approaches.

Friday, February 28 at 6:00pm
Reservations by February 27

Bird-Window Collisions: The Second Largest Human Source of Avian Mortality on Earth

Join Dr. Daniel Klem, Professor of Biology and Sarkis Acopian Professor of Ornithology and Conservation Biology at Muhlenberg College, as he discusses the relevant moral, ethical, and legal aspects of bird-window collisions and what conservation efforts are being made to save more bird lives including the use of ultraviolet signals that transform window panes into barriers that birds see while retaining the unobstructed view of the outdoors.

Friday, March 28 at 6:00pm
Reservations by March 27



Shorebird Beaches

Visitors to our beaches during the late summer and fall are likely familiar with the small shorebirds huddled in clusters on our shores or feeding in groups at the waterline and on the flats.

These shorebirds, some weighing as little as an ounce, are endeavoring a migration thousands of miles long, from breeding grounds in the Arctic to wintering areas as far south as Argentina. Many of the shorebirds we see in the fall are juveniles making the trip for the very first time. To make this incredible journey, shorebirds depend on undisturbed time on our beaches – their resting and refueling grounds.



They don't always have it so easy though. Peregrine Falcons, also on migration, take advantage of the shorebird masses as an easy target for a meal. Disturbance from beach visitors and their pets is an additional source of stress.

When chased by predators, people, or dogs, most shorebirds will be lucky enough to get away, but this does not mean the pursuit is without consequence. The toll of heavy disturbance, by way of constant vigilance and evasion, can exhaust the very resources the birds are here to replenish, and ultimately can degrade their condition.

The next time you are out jogging or walking your dog on the beach, make sure to be aware of shorebirds and give them some extra space in this habitat that we share. We are fortunate to live in a place where we get to be witness to these amazing shorebird migrations. By respecting these shared spaces, we improve the odds that the shorebirds will return for generations to come.

Looking for a unique gift?



Give the gift of conservation with one of our adoption programs:

- **Adopt-A-Terrapin** or
- **Adopt-A-Horseshoe Crab**

Call 609-368-1211 or visit our website at wetlandsinstitute.org/conservation for more information

2013 Review of Research and Conservation Projects

We were busy with projects throughout Cape May County in 2013. Terrapin Research and Conservation projects took us from crabbing creeks and bays in the area, along on our well-worn road patrol route covering



38-miles of terrain from Stone Harbor to Sea Isle, and finally to storm drain grids across our coastal communities. Bird surveys were conducted at the Institute and nearby islands, and we managed a habitat restoration project at the Stone Harbor Bird Sanctuary. Our Fisheries projects included Horseshoe Crab surveys and habitat restoration work on the Delaware Bay beaches and the installment of Monofilament Recycling Stations at popular fishing spots throughout the county. Many thanks to the volunteers, staff, interns, members, partners, and agencies who supported our work!

Wetlands Field Ecology Course



Gloucester County College students in a Wetlands Field Ecology course led by Dr. DeGraff (right) learn about beach geomorphology at North Reeds Beach.

Every Wednesday this fall, The Wetlands Institute hosted a Wetlands Field Ecology Course for Gloucester County College, offering students a chance to explore new research topics and techniques. Research and Conservation staff led laboratory sessions that covered: Introduction to Wet-

lands; Terrapin Conservation; Migratory Shorebirds; Horseshoe Crab Conservation; Delaware Bay Beach Profiling; Micro-organisms of the Marsh; Water Quality Testing; Salt Panne Seining and Testing. Given the Institute's incredible geographic location, we were able to present students with many unique field experiences.

MARVELOUS MONARCH MIGRATION

by Sue Slotterback



By far the most widely studied insect migration is that of the Monarch butterfly. The Monarch holds the record for insect migration at nearly 3,000 miles – one way! At least some of them travel that far. Most Monarchs may only migrate a few hundred miles before they mate, lay eggs, and die. But for some the migration is certainly marvelous.

Monarchs found east of the Rockies, winter in the Transvolcanic Mountains of central Mexico. At the end of February, Monarchs rouse out of their winter shelter in the oyamel fir forests. They mate and migrate north arriving in Texas, or Louisiana, where they lay eggs then die. And so it goes with each generation living long enough to migrate a little farther north until they reach southern Canada, the northern most range of their host plant milkweed. By this time it is mid-August and the seasons are turning, signaling the Monarchs to put their energy into migrating –south – all the way to Mexico.

The journey will take them nearly 2 months to complete. When they arrive in early November, they huddle by the hundreds of thousands in fir trees until the end of February, just like their great, great grandparents did the year before. This autumn generation of migrating Monarchs will live for 8-9 months, surpassing their parents', grandparents', and great grandparents' life span by more than seven months.

This year the number of migrating monarchs has not been particularly "marvelous", in fact they've been noticeably low. Several factors seem to have contributed.

First, for several years genetically modified crops, (modified to reduce insect pest damage by the insertion of genes into crops which essentially act as insecticides) have been used in the midwest. When the pollen of the GMO crops lands on milkweed, the Monarch caterpillars eat it and die.

Second, the spreading use of newly genetically modified "Round Up Ready" crops is quickly becoming an issue. Round Up is a very popular and very effective herbicide. This practice effectively gets rid of all plant species on field margins, including milkweed.

Weather events also throw a curve. The severe drought in the Mid-West also affects milkweed, as well as the nectar plants which are food for the butterflies. Then add Hurricanes Irene and Sandy which hit the East Coast during the Monarch's autumn migration two years in a row.

Despite all of these challenges, the game isn't over yet. It's important to note that all species populations naturally fluctuate from year to year. According to the Cape

May Monarch Monitoring Project's census data (<http://www.monarchmonitoringproject.com/mmptwo.html>) we have had population fluctuations between 8.9 and 359.8 monarchs per hour over the past twenty years with only six years having higher numbers than the twenty –year average of 89.9. The average for this year is 13 Monarchs per hour, but the census for this year is not complete. Additionally there has been an increasing trend in monarch numbers in the last few years. So, in other words, given this year's numbers, things really aren't so bad, in fact there have been previous years with much lower numbers.



The Wetlands Institute receives grant from Disney Worldwide Conservation Fund

For the third consecutive year, The Wetlands Institute received a grant from the Disney Worldwide Conservation Fund. The \$24,450 award enables us to continue many projects that benefit our local population of Diamondback Terrapins, including road patrols, storm drain rescues, and the distribution of Bycatch Reduction Devices.



The grant provides resources to purchase a side-scan sonar system, a tool that will be used to search for and recover lost or derelict blue crab traps so they are no longer a threat to terrapins and other species. Disney funding also helps to support our summer intern program and allows for further development of terrapin-based teaching modules, a project initiated with our first Disney grant. The Wetlands Institute staff will work with local teachers to develop a comprehensive terrapin-based learning module that will be made available on our website and distributed at conferences and workshops. We are very grateful to again be a recipient of a grant from the Disney Worldwide Conservation Fund and are looking forward to the projects and results that come from their support.

Find us on



EXCITING EVENTS



It was a beautiful weekend as we celebrated our 1st Annual Fall Migration Festival. Visitors of all ages enjoyed myriad activities. There were opportunities for all to learn about the amazing array of wildlife surrounding them both from our naturalists and exhibitors.

Visitors had the opportunity to take part in nature photography workshops, presented by our featured artist Geoff Coe. And if you couldn't take part in one of our guided walks, kayak tours or viewings to catch a glimpse of wildlife; we also featured live animal presentations by the Philadelphia Zoo, Cape May Point State Park, Canalside Retrievers and Woodford Cedar Run.

Kids enjoyed crafts, games, and even a special terrapin release along side our brand new dock!



Monarch Madness

Once again this October, we hosted a celebration of the beauty of Monarch butterflies and sent them off on their amazing 3,000 mile migratory journey.

Butterfly themed crafts, scavenger hunts, and face painting were on the program. During special presentations, visitors learned about the ecology of moths and butterflies and tips on gardening to attract pollinators.

To top the day off, our Environmental Educator, Sue Slotterback gave a live butterfly tagging demonstration.



To see more pictures of our events and activities, visit us on Facebook and Pinterest

Wetland Wonderland

Saturday, November 30

9:30am – 3:00pm

Come discover the wonders of the wetlands! As the season changes, hibernation, adaptation and migration are just a few ways the animals on the marsh prepare for winter. Throughout the day, we will have family fun activities including indoor and outdoor scavenger hunts, special creature features on winter survival strategies, aquarium feedings and extended teaching tank interactions, special appearances by Scute, winter activities, crafts, games and more!

Member:

\$8 Adult, \$6 child, \$25 family pack of 4

Non-Member:

\$10 Adult, \$8 child, \$30 family pack of 4

AROUND THE MARSH

Find us on



Bycatch Reduction Devices

by Katie Sellers



Orange Bycatch Reduction Devices attached to the entrances of a commercial-style crab pot

Do you enjoy crabbing or know someone who does? Do you use Bycatch Reduction Devices on your crab pots?

Crab pots are quite good at catching crabs for our dinner tables, but unfortunately they efficiently catch other non-target animals such as the Diamond-back Terrapin. The State of New Jersey requires

the entrances of commercial-style crab pots to be equipped with Bycatch Reduction Devices (BRDs) to reduce mortality of terrapins and other non-target species.

The Wetlands Institute has been actively involved in promoting the use of BRDs. In fact, Dr. Roger Wood of The Wetlands Institute and Richard Stockton College first developed BRDs in the 1990s as a means to reduce the number of terrapins drowning in crab pots. The Wetlands Institute is currently distributing a limited number of BRDs free of charge to recreational crabbers. Contact Katie Sellers at ksellers@wetlandsinstitute.org to arrange pick-up.

Donations in Memory of:

- Geoffrey Moskowitz
- Robert Daisey, Jr.
- Marian "Terrie" Powers Flammer
- Carolyn L. and James J. Kilsdonk

Earth Share New Jersey

Earth Share New Jersey is a workplace giving campaign, similar to the United Way, where employees choose to have donations deducted from their pay checks. Each member's organization works to conserve the natural environment in New Jersey. Whether you're an employee or a CEO, please explore a campaign in your workplace. Call Earth Share's Paula Aldarelli at 609-989-1160 or e-mail paldarelli@earthsharenj.org.



Welcome Aboard!

Brian Williamson was hired as a part-time Associate Research Scientist to assist with terrapin projects at The Wetlands Institute this fall. Brian graduated with a Master's degree in Biology from Marshall University and has studied Diamondback Terrapins and Eastern Box Turtles.

TIDEPOL SHOP

by Joyce Ferguson

The Tidepool Shop, your destination shopping experience for educational nature related books and gifts, is OPEN every Friday, Saturday and Sunday from 9:30 AM to 4:30 PM. Of course, we are always available by telephone (609-368-1211) or by email (tidepool@wetlandsinstitute.org).

The shop supports the mission and programs of the Wetlands Institute and offers local food items, Made in America and Fair Trade products and eco-friendly clothing items. Look for hooded sweatshirts and fleece vests with the Wetlands Institute logo as well as



our popular custom items. From binoculars to a unique selection of books for children and adults to jewelry to beautiful art glass we have that gift you've been seeking.

Our friendly Shopkeepers will help you with your purchase and free gift wrapping is available on request. Two special volunteers, Diana McFadden and Amy Welsh, have donated their time and expertise along with employees Margaret Conrad, Charlene Smith and Stephanie Stroble in creating a positive, helpful atmosphere in which to shop. We look forward to your next visit!





1075 Stone Harbor Blvd.
Stone Harbor, NJ 08247-1424

or Current resident



A not-for-profit education and research organization studying, preserving and protecting wetlands and coastal ecosystems

EDUCATION

SCHOLARSHIP OPPORTUNITIES FOR SCHOOLS



We know how important it is for children to interact with nature and learn about the environment around them, but we also recognize the challenge school districts face when allocating funds for outside field trips.

With that in mind, The Wetlands Institute is pleased to announce the introduction of our new scholarship program which provides worthy schools with an all-expense-paid Environmental Education Field Trip Program or Science Education at Sea (SEAS) Program! This scholarship program has been made possible through generous donations received during the Wings 'N Water Benefit Auction – to all those who donated, we thank you!

Do you know a teacher or school that would be a perfect fit for our scholarship program? For more information on this program, including eligibility and application guidelines, please visit our website at: wetlandsinstitute.org/education/scholarship-opportunities/

SAVE THE DATE! 2014 SUMMER NATURE PROGRAM



The weather may be turning colder, but here at The Wetlands Institute we are already looking ahead to warmer months!

Spend this coming summer discovering the New Jersey Shore in a fun and hands-on way! Engage in science experimentation and exploration, play games, go on field trips, explore the beach and marsh, create arts and crafts, and much more all while enjoying a new theme each week!

Programs for children age 5-12 begin July 1, 2014! Special programs for children age 4 begin July 14, 2014! Complete details including weekly theme descriptions, pricing and registration information will be available on our website mid-January 2014. wetlandsinstitute.org

NEW! - Go Paperless

Email us at staff@wetlandsinstitute.org to let us know if you prefer to receive your newsletters via email!

