

## THE RETURN OF THE OSPREY

by Dr. Lenore Tedesco

This summer, we are excited that a young osprey pair has taken up residence on the Institute's Osprey platform that has the nest cam. We have all been monitoring the daily nest activities and chick rearing, both day and night, from our live osprey feed.

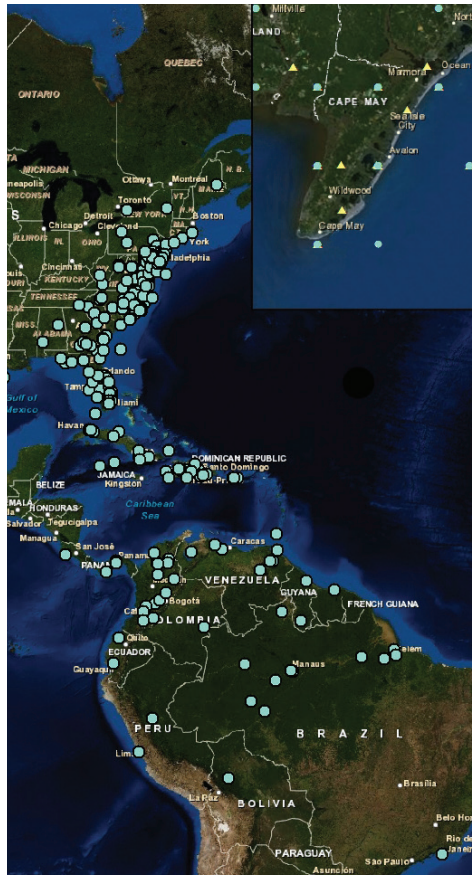
The Osprey nest platform had not been used since the summer of 2011, when the nest material was blown out of the nest platform by Hurricane Irene after the chicks had fledged. In 2012, and the subsequent years, the camera platform was not utilized, but surrounding platforms were.



member of the Board of Trustees of the Institute, worked tirelessly on osprey conservation. An article in the Seven Mile Beach Reporter dated July 10, 1964; entitled "Bands 35 Ospreys in Avalon Section" highlights some of Joe's work banding nestlings at various Stone Harbor sites and on Cedar Island in Avalon. He was licensed for bird banding by the US Dept. of the Interior and banded birds in the area from more than 2 decades. Joe believed that the local area was the last strong nesting site for osprey because it gave the bird easy access to waters where the fish on which they feed are plentiful and the effects of DDT were not as severe as in more populated areas.

The return of the Osprey is an amazing story and remains one of the great conservation stories of our time. Ospreys, Eagles, Peregrine Falcons, and many other top predators fell victim to the effects of DDT. DDT was being used to manage insects but had a catastrophic effect on the reproductive success of these majestic birds. Historically, before the effects of DDT caused the state's osprey population to decline, there were more than 500 osprey nests in NJ. The combination of habitat loss caused by extensive coastal development and reproductive failure due to food chain poisoning, caused osprey populations to plummet. By 1974, only 50 nests remained in NJ, and the osprey was listed as endangered in the State of NJ. Similar declines were being reported throughout their North American range.

Thanks to work by dedicated conservationists, researchers, and attorneys, armed with public awareness sparked by Rachel Carson's seminal book *Silent Spring*, DDT was banned in 1972. The Institute has a long and proud history of research and conservation related to osprey. Joseph Jacobs, a founding



Historical banded osprey resightings from 1926 - 2013 (blue circles) and recent banding stations (yellow triangles inset map). Data from Bird Banding Lab.

Joe Jacobs pioneered the use of nesting platforms. Prior to the nesting platforms, osprey were nesting on the tops of the telephone poles along Stone Harbor Blvd and with the increase in traffic and the DDT problems, the nests numbers were declining. One day in the early 1970's, Joe, who was a builder by trade, took the materials for a platform into the marsh and erected what he felt would be a site attractive to a nesting pair, and walked back to his car. When he reached the road, he turned back to look at the platform and was thrilled to see that an osprey had already found it. The rest is history—since the first one was a success, he continued to erect others, both in the Stone Harbor and Avalon areas where he had usually banded the nestlings. Artificial nest platforms are now the predominant conservation measure to encourage and aid osprey nesting throughout their range.

Joe and Herbert Mills, founder of the Institute, both conducted research on osprey populations in NJ and contributed significantly to their recovery. By 1986,

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*Promoting appreciation, understanding and stewardship of wetlands and coastal ecosystems through our programs in research, conservation, and education.*

*Founded in 1969 by Herbert Mills, Executive Director of the World Wildlife Fund*

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### Hours:

**September 2 - October 12 - Open daily**  
9:30 - 4:30 - Monday - Sunday  
**October 13 - 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.

1075 Stone Harbor Blvd  
Stone Harbor, NJ 08247  
609-368-1211

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*continued from page 1*

the osprey population had surpassed 100 pairs and their status was upgraded to threatened in the state. By 2006, the state's osprey population hit a new post-DDT record of more than 400 active nests and by 2009, osprey numbers in the state were close to historic populations of osprey.

There are 5 Osprey nest locations within view of the Institute and the Osprey Learning Station at the Institute provides lots of great information collected by the state's osprey banding programs. Since 1926, 279 of the 358 osprey banded near Cape May County have been sighted in 18 different countries. The oldest osprey on local record was banded in 1957, encountered and released alive in 1979 at a nest in the same vicinity, and lived at least 22 years.

We are watching the chick in the osprey nest behind the Institute. The chick is growing rapidly and we have hopes for a successful fledging in a few weeks – perhaps by the time this newsletter reaches you.

The osprey recovery in NJ – and especially in the marshes in Cape May – is one of the great conservation stories of our lifetime. Next time you see these majestic birds, or hear their chirps, remember that it was active conservation that has returned them to their former glory. They are a great example of how we can coexist with wildlife and how the work of a few can be a sea change.



## MARSH MUSINGS

by Dr. Lenore Tedesco, Executive Director

It's hard to believe but the rhythms of the season are already leaning toward fall. The signs are already evident in the marsh and the Institute. Migratory shorebirds are already abundant on the beaches and in the marsh – headed southbound after nesting in the Arctic and northern Canada. Beach nesting birds at Stone Harbor Point have successfully fledged their young and are abundant on the flats and in the tide pools. Migratory dragonflies have become abundant, and the first Monarchs have been sighted starting to move south. The Summer Nature Programs have wound down and we are gearing up for the start of school and traveling environmental education and field trip programs. The Fall Migration Festival is just around the corner and we will delight in celebrating one of the last great migrations on earth – right here through our backyard. I hope you will join us for some of the fun.

Speaking of Celebrations, the inaugural Summer Celebration was held on August 1st. After 33 years of hosting the auction at the Institute, we made a break. We combined the Sunset Soiree with the Wings 'N Water Auction and had a great cocktail party, auction, and raffles. Wear and tear on the Institute, and the desire for a fresh approach to match the fresh approach we have been taking with so many of our programs, fueled the decision to make the move. The event was a resounding success. We met many new faces and caught up with so many of our old friends. Thanks to everyone that donated items and supported the Institute. We more than doubled our fundraising totals this year. It is your support that makes what we do possible. I am so pleased to count so many of you among our supporters.

Thank you! We have **made no small plans** – and you are all a part of the journey to greatness that we are all on.



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# AUTUMN HAPPENINGS

It is autumn in the marsh and The Wetlands Institute is open daily from September 2 - October 12, 2015! Unless otherwise stated, all activities occur onsite at The Wetlands Institute and are included in the price of general admission. Questions? Please call The Wetlands Institute at 609-368-1211.

## Salt Marsh Safari

Starting in Marsh View Hall, watch our award-winning film, *Secrets of the Salt Marsh*. Then join us for a guided interpretive walk through the wetlands! Together we will travel along our 750-ft elevated walkway, down the salt marsh trail and out onto the dock overlooking Scotch Bonnet Creek. To fully experience the marsh, make sure to wear shoes that can get wet and muddy!

*Daily: 11:00am and 2:00pm*

## Creature Feature and Craft

We will highlight a different live animal or group of animals each day! Get up close with turtles, 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!

*Monday and Friday: 12:30pm*

## Catch 'o the Day

Get your feet wet (or wear waders!) as you discover what swims in the back bays. Help us drag a seine net through the water, use dip nets along the shore or pull up 'fish condos' to find crabs, shrimp, fish and more. Activity recommended for ages 8 and up. Younger children are welcome to attend and can assist in removing creatures from the net!

*Wednesday: 12:30pm*

## Aquarium Feeding

Act as an Aquarist for a day and help us feed the local marine life! We will 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.**

*Tuesday, Thursday and Saturday: 12:30pm*

## Seashell Sundays

Starting a shell collection? Want to know where shells come from? Can't figure out what you found on the beach? Bring it in and we will tell you all about seashells, how to collect them without harming the environment and feature an assortment of live mollusks and cool artifacts.

*Sunday: 12:30pm*

Winter hours and activities start October 13, 2015! Starting then, The Wetlands Institute will only be open Friday, Saturday and Sunday. Please check our website calendar for programming updates as we transition from autumn to winter hours!

[wetlandsinstitute.org/events/calendar](http://wetlandsinstitute.org/events/calendar)



## FALL Migration — FESTIVAL —

# September 19-20

9:30am to  
4:30pm

Come witness an amazing spectacle of nature and see what makes the Cape May Peninsula one of the top birding destinations in the world!

- Live Butterfly Presentations and Tagging
- Guided Nature Walks Focusing on Birds, Butterflies Dragonflies, and Bees
- Guided Back-Bay Boat and Kayak Tours
- Fish, Sea Turtle, Butterfly and Bird Crafts, Migration Themed Games and Activities
- Special Autumn Terrapin Release
- Live Animal Presentations by Community Partners
- Native Plant Garden Tours



**Two-Day Ticket Price:**  
Non-Member: \$15 Adult, \$10 Child  
Member: \$13 Adult, \$8 Child

**One-Day Ticket Price:**  
Non-Member: \$10 Adult, \$8 Child,  
\$30 Family Pack of 4  
Member: \$8 Adult, \$6 Child, \$25 Family Pack of 4



Find us on



# RESEARCH AND CONSERVATION

by Dr. Lisa Ferguson

## 25 Years of Terrapin Patrols

This year marked our 25<sup>th</sup> year of conducting patrols to save nesting terrapins and document their use of our local roads during the busy nesting and summer tourism seasons. Over these years, we've documented roughly 500 terrapins (an average of 492 to be exact) killed annually on our road patrols. We also save, on average, roughly 275 terrapins from harm on the roads, help numerous injured terrapins, and release over 150 head-started terrapins back to the marsh each year of late. It is incredible to think of where the state the local population would be in without our terrapin conservation program in place.



As a result of construction along our well-worn road patrol route, many aspects of our road patrols changed. Due to the extended closure of the Townsends Inlet Bridge, as well as the construction project along Sea Isle Boulevard, we were forced to alter our route. To help us continue to monitor roads in Sea Isle frequently despite the changes, we had the help of several devoted volunteers. Collectively, our terrapin team, comprised of staff, interns, volunteers and community friends, tallied 736 terrapin encounters along our local coastal roads during the 2015 nesting season. Over 322 were live animals helped out of harm's way, and 414 were nesting females killed by vehicles. In addition, we encountered 67 injured females that were either rehabilitated or euthanized, 23 of which have been successfully treated and released. Believe it or not, we saw a lower than average number of road-killed terrapins this year and saved an above average number of turtles from roads.

On our property, we tracked terrapin nesting activity by conducting 5 patrols per day, starting in late May. We had assistance from a small troupe of junior volunteers who helped keep a look out for nesting terrapins, and of course visitors, school groups, and summer nature program participants that were fortunate enough to spot nesting terrapins during their tours. Some days there were not enough of us to keep pace with the terrapins. This year we captured terrapins nesting on our property over 170 times! These included 96 females previously marked with microchips for identification (5 of which were released as headstarters after being incubated and reared in our program) and 77 new (to us) nesting females that we microchipped. We also protected 89 nests with exclosures to keep them safe from predators. Be sure to check them out the next time you visit!

## Coastal Conservation Research Program



(back row) Lauryn Freedman, Cate O'Neill, Lindsay Diehl, Shane McFoy, (front row) Jennifer Terry, Matthew Sehrsweeney.

The Coastal Conservation Research Program (CCRP) interns recently completed an intensive 10-week program that included participation in on-going and new research and conservation projects, as well as the completion of their own individually crafted research projects. The interns conducted patrols, pit-tagged, and released diamondback terrapins, surveyed and rescued horseshoe crabs, and assisted with our avian studies. They also had the opportunity to explore local habitats such as vernal pools, maritime forests, barrier beach systems and, of course, the wetlands.

Perhaps the highlight of the program is the unique opportunity to select and develop their own research questions, design a study, and conduct a project and data analysis with the help of our staff. Lindsay Diehl (Elizabethtown College) measured the elevation of terrapin nests and evaluated the effect of body condition and substrate saturation on nest fate. Jennifer Terry (Bucknell University) examined nest site fidelity of terrapins over an 11-year period and assessed how nesting terrapins respond to human disturbance on The Wetlands Institute's property. Shane McFoy (Philadelphia University) studied the dynamic of salt pannes around our property and the patterns of fish-eating bird use within the pannes. Cate O'Neill (St. Mary's College of Maryland) explored the prevalence and abundance of a trematode parasite in the digestive tract of terrapins collected at different locations along our road patrol route. Matthew Sehrsweeney (University of Michigan) used a novel technique, bioacoustics, to detect differences in laughing gull densities at the colony on Ring Island. Finally, Lauryn Freedman (University of Massachusetts, Amherst) conducted a presence/absence and site characteristic study of potential spawning locations for horseshoe crabs in the backbays of southern New Jersey. The CCRP interns presented this impressive suite of topics during our annual Intern Symposium on August 3.





2015 Environmental Education Interns (from left) Jacob Lipton, Hannah Sinclair, Mary Birrer and Joseph Seebode.

As Environmental Education Interns, Mary Birrer, Jacob Lipton, Joseph Seebode and Hannah Sinclair are responsible for leading all public programs including Salt Marsh Safaris, Creature Features, Catch 'o the Day, Aquarium Feedings, Totally Turtle Tuesday, Horseshoe Crabmania Thursday, Crabbing at the Dock and Hooked on Fishing, just to name a few! In addition to leading these programs, they are asked to develop and implement an education project of their choosing that is personally and/or institutionally beneficial. The development of individual projects assists them in honing skill sets that are essential to creating fundamentally successful programs or initiatives within the field of environmental education.

Completed projects were presented at this year's Intern Symposium on August 4 and highlighted at a special Water Awareness Day held on August 7. This was a fantastically innovative group and their commitment and dedication to developing quality education projects will benefit The Wetlands Institute for years to come!

Below is a brief summary of their projects:

## ***The Evolution of Marion's Gardens***

Mary Birrer, Rutgers University

One of the first sights to greet visitors when they arrive at The Wetlands Institute is the beautiful plant gardens, known as Marion's Gardens. My project focuses on increasing the educational characteristics of the Institute gardens by: 1) creating 25 new plant identification signs that educate about and highlight how native and naturalized plant species play an important role in providing food and shelter to native wildlife; 2) redesigning and enhancing the dedication sign for Marion's Gardens; and 3) creating a trifold brochure identifying several common invasive species of Cape May County and native alternatives available for planting in home gardens.

## ***Revitalizing the Osprey Learning Station***

Jacob Lipton, Stockton University

For most guests visiting The Wetlands Institute, the first exhibit they see is the osprey learning station located in the lecture hall. In efforts to create a stronger visitor impression and enhance the year-round appeal of this exhibit, I am creating new interactive activities that highlight the complete phenological cycle of the osprey, providing visitors with a holistic understanding of osprey behavior. Activities include live osprey nest camera feed, current events signage, interactive marine debris diorama, 2D osprey growth puzzle, and biomagnification lessons.

## ***Sustainability and Stewardship in Action***

Joseph Seebode, College of the Holy Cross

Sustainability and environmental stewardship are at the heart of The Wetland Institute's (TWI) mission and goals. The first part of my project focuses on water conservation as a way to promote environmental sustainability, by installing three rain barrels at strategic locations around TWI's grounds, creating a rain barrel educational pamphlet and spearheading a Water Awareness Day. The second part of my project focuses on environmental stewardship by creating a series of kid-friendly environmental stewardship pledges, a pledge wall mural and initiating a social media campaign, #DifferenceMakerTWI.



## ***Kaleidoscope of Worlds within Worlds***

Hannah Sinclair, Medgar Evers College

The Wetlands Institute has an established reputation for educating youth on environmental conservation and awareness. Occurring during the winter months, Science Feature programs are tailored to older children and feature guided presentations, followed by interactive activities related to the Science Feature theme. The basis of my project is to create a new Science Feature that allows kids to explore the 'unseen' world of plankton – the kaleidoscope of worlds within worlds. This program utilizes modern technology tools like digital smartphone microscopes, plankton nets and 3D models and a unique educational approach incorporating visual, interactive and documentation techniques.



# AROUND THE MARSH

## Honoring our Donors

The Wetlands Institute invites you to join the Herbert Mills Legacy Society! Named after our founder, the Herbert Mills Legacy Society honors people who have left The Wetlands Institute in their will. If you have already done so, please let us know so that we can welcome you as our newest member! If you have any questions or need additional information or sample language, please contact Heather Gee at 609-368-1211. Thanks to all of our current members! A simple bequests can be a very powerful way to invest in the future of the Institute!

In June, we created two additional ways of honoring people who support the Institute. The Loyalty Society was created to honor those individuals who have made contributions to the Institute for the last ten consecutive years. We thank these loyal supporters!

In addition, we have a new Lifetime Membership level. The Board of Trustees voted to give Lifetime Memberships to a group of people who have given their time, talent and treasure to the Institute for many, many years. We are grateful to each of you!

## Thanks to our 2015 Corporate Sponsors!

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## Crabulous Crab Day

A crabtastic appearance by Crabby Scute made this year's Crabulous Crab Day extra fun! Throughout the day, visitors enjoyed blue claw and fiddler crabbing tournaments, a crab teaching and touch tank, crabby games and crafts, an interactive photo and video scavenger hunt and samples of delicious crab cakes donated by local businesses. Special thanks to all who donated or participated in the day's activities!



## TIDEPOOL SHOP

by Joyce Ferguson

As our busy summer season draws to a close, a special "Thank you" needs to be said to highlight the teamwork of the Front Desk/Tidepool staff and our dedicated, loyal volunteers who support us every week in the Shop!

New merchandise is arriving for your fall shopping needs. Books, nature related stationary, puzzles, puppets, jewelry and gift items await your visit. Long sleeve T-shirts for adults and youth and our popular hoodie sweatshirt with The Wetlands Institute logo are in stock. Denim shirts and zippered fleece jackets are also sure to please.

The selection of Made in America items continues to grow – including wood cut-out ornaments with our logo. Now is the time to support federal conservation efforts and purchase a 2015 Federal Duck Stamp! And, a Wetlands Institute Gift Card may be the perfect answer to your gift giving needs.

Our SALE corner features 30-50% mark downs of many items. Remember, with a phone call to the Tidepool Shop we are happy to help you with a sale and mail your purchase to you.

We are looking forward to your visit during this season of migration!



# INAUGURAL SUMMER CELEBRATION

Our inaugural Summer Celebration at the Reeds was a resounding success! The event - a blending of our former Wings N' Water Auction and Sunset Soiree - is the newest of our revamped mission-focused special events. With all the changes at the Institute, we really wanted to have an intimate event where we could showcase the great work we are doing and increase support of the Institute to a new level.

The evening's festivities featured great food and drinks, live entertainment by the Dan Martin Trio, basket raffles, our 50/50 raffle, a live auction hosted by Michael Powers, and spectacular scenery and view of the Institute property. Our emphasis for the evening was on raising funds in direct support of mission-based programs. The new venue provided the perfect ambiance for the renewed focus.

The Summer Celebration is the Institute's premier fund-raising event and is critical to supporting the continued growth and development of the Institute into a world-class research, conservation, and education facility.



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*A non-profit organization studying, preserving and protecting wetlands and coastal ecosystems*

## 2015 CITIZEN CONSERVATION AWARD

by Brooke Knapick

It is with great pleasure that we present the 2015 Citizen Conservation Award to Donna Rothman – a year-round volunteer at The Wetland Institute (TWI) and a true voice for conservation in her community.

For over ten years, Donna has served as a Wetlands Institute Summer Docent and Aquarium Care Volunteer. Every Thursday from May-September, Donna dedicates her time to leading Salt Marsh Safari tours at 10:00am and 12:00pm. She is informative, passionate and committed to educating the public about the diversity of plants and animals in the salt marsh, while instilling in them the need for environmental stewardship and conservation. As summer transitions into fall, Donna shifts her focus from Wetlands Institute Summer Docent to Aquarium Care Volunteer. It is here that she oversees and cares for the animals in our aquariums and provides a much needed area of support to TWI. In just 10 months, she has volunteered more than 125 hours of service to TWI and we see no signs of slowing down!



Donna's focus on conservation education transcends the boundaries of TWI and extends into her local community. Most recently, Donna spearheaded and oversaw the creation, installation and opening of the Avalon Dune and Beach Trail, while serving as volunteer chair for The Avalon Environmental Commission subcommittee dedicated to the project. This

unique interpretive trail is located between 48th and 44th Street along Dune Drive in Avalon and features 10 signs that educate visitors about the importance of this rare maritime forest ecosystem. Her passion and enthusiasm for the project, coupled with her innate ability to attract others towards her work, was a driving force to the completion and success of the trail.

Donna is a wonderful collaborator, mentor and educator and we truly appreciate her commitment and dedication to her community and The Wetlands Institute. We are proud to include her as a Citizen Conservation Award recipient and look forward to all that she will accomplish in the future.