



Our Dynamic Beaches by Dr. Lenore Tedesco, Executive Director



One of the main attractions of the shore is its beaches. They drive our love for this area and are a keystone of the shore economy. If you spend time exploring the beach, you will notice the dramatic changes that take place there. Beaches have a seasonal rhythm.

The beach is a marker of sea level; think of it as zero elevation. It makes sense when you are measuring the height of a mountain relative to it, but gets a lot trickier when you factor in the tides. This variability in the level of the water (tides) and the energy of the waves (seasonal and storms) means that the actual beach face is highly dynamic and constantly changing.

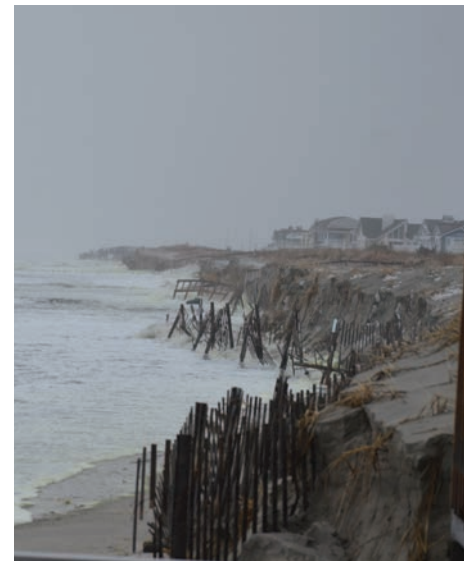
Wave energy is responsible for moving sand on the beach and it moves sand both onshore and offshore depending on wave energy. The higher the wave, the stronger the wave energy. During the winter, larger waves take sand from the beach. The beach is steeper but the sand isn't gone - it's stored in bars just offshore of the beach. It is common to have a series of sand bars separated by deeper

troughs sitting just offshore. You can see them when waves break on them even though they are submerged.

During the spring and summer, when waves are gentle, the beach rebuilds itself. The sand bars and troughs move back onto the beach and the gentle wave swash pushes the sand up onto the beach. Breezes blow the finer sand into the dunes where vegetation traps it. Summer beaches are wide and relatively flat and the bars and shallow pools make great places for kids to play. The bars are constantly moving so that it is unlikely that they will be just where you remember them. As sand moves onshore and offshore, it also moves to the south. Thus, rather than a zig zag pattern of sand moving on and off the beach, it is more of a sawtooth pattern, with sand moving offshore and south, and then back onshore even further south.



This is the repeatable rhythm of our beaches. Narrow and steep beaches in the winter, and wide gently sloping beaches in the summer.



But, superimposed on this regular rhythm of the seasons, is the change caused by major storms. During storms, the intense waves push water higher onto the beaches and erode sand from the beach and dunes. The beach works to protect itself by creating a broad sloping ramp to spread wave energy. Sand from the beach and dunes is again moved offshore into bars. These bars however, are usually further offshore than the normal winter bars and can take longer to move back on to the beaches. During particularly large storms, beach sand can also be pushed inland. When storm energy has time to reorganize the beach to the configuration that matches current sea level and energy - she does.

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Visit Us

Hours: Open daily 9:30 to 4:30 from May 2 to October 9. Special evening hours until 8pm Tuesday, Wednesday and Thursday from June 13 to September 5.

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.

Marsh Musings

by Dr. Lenore Tedesco, Executive Director



It's spring! Hasn't quite felt like spring in the marsh through most of April and early May. The marsh got nice and green, but the temperatures stayed cold and the rain just kept on coming. My fingers are crossed that the weather turns glorious.

As I write this column in early May, one thing is certain – the sounds of the marsh are glorious. It's a regular symphony of sounds and it's always a fun time of year. Birding by ear is an important skill and especially for the oldest and slowest member of *the Marshketeers*, something I need to work on every year. So much of the bird life out there is never really seen, but only heard. Of course, each year, I find I have to relearn so many of the calls.

The chirping of the Ospreys followed closely by the chorus of the Willet is a true harbinger of the season on the marsh. Both of these birds are easy to see, and thankfully abundant in our marshes. This year, the new martin house has expanded the colony noticeably so

that their chatter is a new and ever present sound on the back deck. They're such social birds and their vocalizations really do seem to be friendly conversation.

Then there are my favorites. The secret marsh birds – those that we only rarely see – but the well-tuned ear can often hear. The Clapper Rail is one such bird. The term thin-as-a-rail actually comes from these

birds. They make their living in the marsh moving amongst the *Spartina* blades and their bodies are relatively thin so that the grasses barely move. Their call is a loud, rattling noise that is a common sound in our marshes. Nesting pairs enhance their pair bonding by merging their calls until they sound like one bird. A group of clapper rails are collectively known as an "applause", "audience", or "commercial" of rails attesting to the dominance of their vocalizations. You won't see them very often – but a visit to the Institute or some quiet time in the back bays will get you an earful.

I hope you will find the time to hear the symphony of the birds of the marsh. Taking the time to be still and listen brings such richness. Stop by and visit, take a walk on the elevated walkway and be serenaded by all the sounds of the marsh. We're here every day and the welcome mat is out.

Osprey Nest and Cam

By the time you read this, our osprey pair should be parents. We have watched them incubating tirelessly since early May. The first egg came on May 1st followed by 2 more eggs in the following days. We are hopeful for a successful nest and hoping for 3 healthy chicks.

You can watch them grow LIVE on our website at wetlandsinstitute.com/livecams





A Generational Outlook to Preserving and Protecting Coastal Wetlands

My family has been coming to the seashore for generations. Some of my fondest memories are of family times spent at the shore. Bodysurfing and fishing with my father and children and many days hanging out on the beach or on the back bays sailing, kayaking or swimming. There is nothing like taking a walk on the beach or watching a glorious sunrise coming up over the ocean or a sunset in the back bays.

I want to ensure that my children, grandchildren and great grandchildren can continue to come to the seashore and enjoy a lifetime of memories. It is a very special place where many enjoy the wonders of the beach, ocean and the back bay environments. For this reason and many more, I strongly support The Wetlands Institute. The Wetlands Institute's mission is to promote appreciation, understanding & stewardship of wetlands and coastal ecosystems through their programs in research, conservation, and education. They have education programs for students and are doing internationally renowned research for the conservation of the seashore environments. The institute's work will help protect the natural resources of the seashore and help our families to continue building endless memories.

Hank Schellenger, Member Board of Trustees

Merits of the Marsh

Wetlands are incredibly important and biologically diverse ecosystems. Many species of plants and animals spend their entire lives in wetlands. Many others find food in wetlands, use them as nesting or nursery grounds or stop in them to rest during migration.

Wetlands help to maintain water quality and marsh grasses slow run-off and allow sediments to fall out of suspension. Marsh plants remove excess nutrients and marsh mud can remove toxic heavy metals from the water. Wetlands help to control floods and reduce erosion during storms. Coastal wetlands provide valuable open space for recreation, education and research, while at the same time protecting the mainland from the destructive power of storm waves.

As you can see, the benefits of wetlands are vast. In efforts to support

visitors of all ages in understanding the function and value of the salt marsh, The Wetlands Institute is introducing a series of three educational signs along our elevated walkway. These signs, created by past Environmental Education Interns Celina Daddario and Rachel Landman, highlight how wetlands function as filters, buffers and nurseries, while also explaining how these functions provide value to humans, wildlife and the surrounding environment. Each sign offers an exploration section encouraging visitors to locate items of interest along the walkway.

At The Wetlands Institute, we seek to have the salt marsh be a place of inspiration and exploration for both children and adults. So stop in for a visit, take a stroll along the walkway, and enjoy your self-guided exploration of the salt marsh!



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Paperless newsletters are more sustainable and they help reduce our cost. Sign up for our e-newsletter at wetlandsinstitute.org/about-us/newsletter.

find us on



Research & Conservation



Keeping our Beaches Clean

The Wetlands Institute served as a Beach Captain for Clean Ocean Action's Spring Beach Sweep for 7-mile Island on April 30. Twenty-three people, including members of Stone Harbor's Borough Council and Police Department, showed up to remove trash and debris from the beach. In total, we collected 500 pounds of debris! Join us with your friends and family on October 22 for the fall Beach Sweep. It's a great way to help the beaches we enjoy so much.

This spring we also organized cleanups at three Delaware Bay beaches with reTURN the Favor partners and volunteers to improve conditions for the horseshoe crab spawning season. Large concrete rubble, construction material, tires, monofilament line, and trash were among the items removed. Each year, thousands of crabs become stuck in these hazards on our beaches. We're working to minimize these losses by rescuing impinged crabs and reducing risks on these important spawning beaches. We are grateful to NJ Corporate Wetlands Restoration Partnership for their financial support of this work.

Wetlands Institute joins Frogwatch USA

The Wetlands Institute is excited to announce we are partnering with Cora Hartshorn Arboretum and the Association of Zoos and Aquariums to participate in New Jersey's chapter of Frogwatch USA.



Frogwatch USA is a citizen science project which aims to

collect data on amphibian breeding calls. These data are then used to better understand species distributions and develop ways to conserve amphibians and our freshwater wetlands. Frogwatch USA allows trained volunteers to participate in collecting scientific data while also learning more about local amphibians and freshwater wetlands.

If you are interested in becoming a Frogwatch USA volunteer in southern New Jersey, please email Brian Williamson at bwilliamson@wetlandsinstitute.org to be kept up to date on future training workshops.



2016 SUMMER INTERNSHIPS



Coastal Conservation Research Program:

We're spending our summer with a great crew in the Coastal Conservation Research Program:

- Elliott Fackler, Bloomsburg University
- Aaron Mitchell, The University of Southern Mississippi
- Adeline Schlussel, St. Mary's College of Maryland
- Lauren Seacrist, Lander University
- Wolf Trumbauer, Widener University
- Charles (Pat) Williams, Stockton University

And leading the group this summer is CCRP Coordinator Victoria Musumeci, a CCRP alum.

Environmental Education Program:

Our Environmental Education Interns are already leading public programs. If you come visit this summer, you will likely meet them. We welcome:

- Alexis Arnold, Lock Haven University
- Anna Caputo, Green Mountain College
- Emily Colombo, George Mason University
- Diana Moczula, Carleton University

Marketing and Communications Program:

This year, we are piloting a new formal Marketing and Communications Internship and we are thrilled to have Victoria Deever of Penn State University, join us for the summer.

It's Time to Explore the Shore!

Summer Nature Programs are filling up fast and you don't want to miss it!

For children ages 5-13, programs are held weekly from July 6 - August 17, 2016 and include field trips and beach days. Children age 4 can enjoy special programs during the weeks of July 6, July 18, August 1, and August 15, 2016.

For complete details, including theme descriptions, availability, pricing and registration information, please visit our website at wetlandsinstitute.org or call 609-368-1211.



 **July 6-8**
Color My World with Nature

 **July 11-15**
Explore the Shore: One World Ocean



 **July 18-22**
Crabulous Crab Week

 **July 25-29**
Marine Mammal Madness: Sea Life's Web

 **Aug. 1-5**
Wild Wetlands

 **Aug. 8-12**
Surf to Turf: Exploring Seaside Farms

 **Aug. 15-17**
Rockin' and Rollin' at the Seashore

Crabulous Crab Day
FRIDAY JULY 22
9:30AM TO 3PM

Crabulous Fun All Day!

CRABBY CRAFTS AND GAMES
CRABBING TIPS & TRICKS
CRAB CAKE COOK-OFF
MEET THE CRABS TEACHING TANK
CRABBING TOURNAMENT
APPEARANCES BY CRABBY SCUTE AND MORE!



find us on



Summer Happenings and Events

The Wetlands Institute will be open daily from 9:30am-4:30pm with extended evening hours and activities until 8:00pm Tuesday-Thursday from June 13-September 5, 2016! Unless otherwise stated, all activities are free with admission and occur onsite at The Wetlands Institute. Questions? Please call The Wetlands Institute at 609-368-1211.



Salt Marsh Safari

10AM, 12PM & 2PM **Monday - Friday**

11AM & 1PM **Saturday - Sunday**

Start by watching our award-winning film, *Secrets of the Salt Marsh*, then join us for an interpretive marsh walk along our elevated walkway and out onto the dock overlooking Scotch Bonnet creek!



Creature Feature

11:15AM & 1:15PM **Monday - Friday**

During this live animal presentation, get up close and personal with turtles, fish, crabs, sea stars and urchins, mollusks, horseshoe crabs, or the popular animals of *Finding Nemo*.



Aquarium Feeding

3:15PM **Tuesday and Thursday**

2:15PM **Saturday**

Help us feed the local marine life! We will open up feeding three times each week so you can see the octopus eating crabs and the horseshoe crab gobbling shrimp.



Catch 'o the Day

11:15AM & 3:15PM **Monday-Wednesday-Friday**

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 to find crabs, shrimp, fish and more.



Seashell Sunday

10AM **Sunday**

Seashells at the seashore! Join us to learn all about seashells, how to collect them without harming the environment and touch an assortment of live mollusks and cool artifacts.



Totally Turtle Tuesday & Horseshoe Crabmania Thursday

5PM **Tuesday and Thursday**

Tuesday and Thursday nights are bursting with fun as we highlight our favorite reptiles and arthropods. Each week we'll bring you live turtles or horseshoe crabs and a special terrapin or horseshoe crab hatchling release.



Dune and Beach Walk

9AM **Wednesday**

Meet at 48th Street and Dune Drive in Avalon for an interpretive walk along the maritime forest and dune trails to learn about the flora and fauna that call this area their home. *Suggested \$3 donation to The Wetlands Institute.*



Exploration Point

9:30AM **Monday**

Bring your buckets! Meet at the trailhead at 122nd Street in Stone Harbor and explore Stone Harbor Point for awesome seashells, cool birds, and fun things that live under the sand. *Suggested \$3 donation to The Wetlands Institute.*



Hooked on Fishing

9:30AM **Saturday**

Go fishing! We'll teach you how to bait a hook, cast a line, catch a fish and reel it in. We've even got fishing poles and bait.



Crabbing at the Dock

2:15PM **Sunday**

Drop a line in the water and see what pinches it! We'll provide the bait and handlines... You reel in the blue crabs!



Stone Harbor Bird Sanctuary Tour

10AM **Sunday (Memorial Day to Labor Day)
Saturday (July and August)**

Grab binoculars and your best bird guide! Then meet us at Egret Espy trail, 2nd Avenue Entrance in Stone Harbor for a guided tour of the Stone Harbor Bird Sanctuary.



Jersey Cape Shell Club Show

Stop in to see incredible collections of shells from around the world, including shells and shell artwork that will be available for sale.

Friday, August 19 - Sunday, August 21.

Free with admission.

Shell Show only: \$3, children under 12 free.

Summer on the Water

Reservations required for all activities. Please check our website for complete schedule and pricing. Unless otherwise stated, all activities leave from The Wetlands Institute dock.

Ocean City Back Bay Birding and Wildlife Tours

Join us aboard the Duke o' Fluke for a special sunset sail on the Ocean City back bays. Cruise past endangered skimmers, dozens of osprey, and the area's largest rookery of herons and egrets. Trip departs from the Bayside Center, located between 5th and 6th Streets, in Ocean City. Call 609-368-1211 for reservations.

Back Bay Birding and Wildlife Tours

Board The Skimmer to cruise the beautiful back bays of Stone Harbor. Highlights include bird watching, salt marsh wildlife viewing and marine life touch tanks. Trips depart weekly, Tuesday through Thursday, with both daytime and evening tours available. Call 609-884-3100 for reservations or book online at skimmer.com.

Back Bay Kayaking and Paddle Boarding

Kayaking and paddle boarding have become very popular ways to explore the marsh. Join us Monday through Friday, day or evening, for a guided kayak or paddle board tour of the coastal marsh ecosystem in a single or tandem kayak or atop a paddleboard. Call 609-368-1211 for reservations.

Full Moon Paddling

For two nights each month, hop into a kayak as the sun sets and the full moon rises. During this guided tour, if needed, we'll paddle with lights on for safety beneath the moonlight. Call 609-368-1211 for reservations.



Junior Duck Stamp Competition Winner

Congratulations to New Jersey's 2016 Junior Duck Stamp Competition winner, Ashley Yae. "I was initially drawn to the species' vibrant majestic colors and striking white stripes, but what really caught my attention was the wood duck's flowing helmeted head and piercing bright-red eyes. I wanted my artwork to not only convey the beauty of the wood duck but also a sense of serenity and peacefulness of the early morning calm. I hope that my artwork, Wood Duck in Early Morning Fog, captures the mood that I was trying to achieve."

Ashley has won several art awards including a gold key, silver key and two honorable mentions for her submissions in the 2016 Scholastic Art and Writing Award Competition. Ashley currently studies art at One Art Studio in Norwood, NJ.

Tidepool Shop

Our book and gift shop is open every day from 9:30am to 4:30pm. Can't visit us? Call and purchase by phone. We will ship your purchase anywhere in the United States.



Coasters & Placemats

Just in! Made from collectible Wings n' Water poster images, these placemats and coasters are both beautiful and durable.

New T-Shirts

New arrivals from Marsha's Collection featuring beautiful artwork on 100% cotton t-shirts. We have two designs available: horseshoe crabs (available in ladies and unisex) and red knots.



Hand Crafted Art

We have a new selection of hand crafted decorative tiles from Rowe House Tiles and hand-carved shorebirds from Nyman Decoys.



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

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As a conservation organization, we have a special responsibility to address the global challenges of climate change and sustainability. We are committed to minimizing environmental impacts in all aspects of our operations. Visit our website at wetlandsinstitute.org/about-us/sustainability/ for more on our sustainability initiatives.



Views from the Tower



The Wetlands Institute's Annual

50/50 RAFFLE

Drawing: August 6, 2016 at 8:30pm

WIN UP TO \$12,000

(or 50% of proceeds)*

Only 240 available - Get yours today!

TICKETS: \$100 EACH

Call 609.368.1211 or stop in to buy tickets.

*\$12,000 if all 240 tickets are sold. No substitution of the offered prize may be made. Winner does not need to be present to win. Must be 18 years of age or older to participate. If you or someone you know has a gambling problem, call toll-free 1-800-GAMBLER (1-800-426-2537). Net proceeds will be used to further environmental education and conservation programs at The Wetlands Institute. RA-2016-04 481-5-25895 Stone Harbor.

SAVE THE DATE!

THE 2ND ANNUAL

summer

CELEBRATION

benefitting

THE WETLANDS INSTITUTE

saturday

AUGUST 6TH 6-9 PM

THE REEDS AT SHELTER HAVEN
9601 THIRD AVENUE, STONE HARBOR, NEW JERSEY

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