



## 25 Years of Protecting Diamondback Terrapins

by Brian Williamson



If you spend time at the shore, you probably are familiar with diamondback terrapins. They are our local saltmarsh turtle; unique in that they are the only reptiles that thrive in this habitat. They are most often seen when the females come out of the marshes to nest from May until July. You also may have seen their heads as you kayak through local creeks. Perhaps you have seen the quarter-sized hatchlings, which emerge from their nests in the fall and spring.

Yet terrapins are in trouble throughout their range. They face the effects of habitat loss due to human development and climate change. Although males rarely leave the water, nesting females often must cross roads to nest and hundreds are killed each summer. Untold numbers are caught as bycatch in crab traps and drown each year. Nest and hatchling predators, such as raccoons and skunks, are now more abundant due to the feast our garbage provides. This overabundance of predators reduces the number of hatchlings that survive to maturity. All of these threats combine to make the future of terrapins uncertain.

The Wetlands Institute has worked diligently for over 25 years to make sure

terrapins remain a vital part of our local coastal ecosystem. Started by Dr. Roger Wood in conjunction with Stockton University, our terrapin research and conservation program works to increase our understanding of terrapins and develop ways to protect them from the threats they face.

In 1991 we began patrols of local roadways to document impacts of vehicles on terrapin populations. Each year, from May through July, we patrol 38 miles of roads from Stone Harbor to Sea Isle City. Data collected on patrols have revealed the scale of the threat roads pose to terrapins - nearly 500 female terrapins are killed each year on these roads.

While this is a sobering statistic, our patrols allow us to reduce impacts from roads. Many terrapins killed on roads still hold viable eggs. We retrieve these eggs and incubate them in our lab. Incubation temperature determines sex for terrapins; therefore, we adjust incubator temperatures to produce female hatchlings and help offset the loss of their deceased mothers. With the help of Stockton University and trained school teachers, we raise these hatchlings for one year, keeping them active and fed year-round. This process, called headstarting, allows terrapins to reach a size up to three times that of a wild turtle the same age, and leaves them less vulnerable to predators. Over the years, we have released 2,250 headstarted terrapins to local marshes. Each year we also treat injuries and save hundreds of terrapins crossing roads, and work with partners to limit the number of terrapins crossing roads.

Since 1997 we have been conducting a long-term population study of terrapins in our local marshes. Each year, we capture terrapins and mark them with uniquely coded microchips that let us identify individuals. To date, we have marked nearly 5,000 terrapins. By marking, releasing, and recapturing turtles over many years, we can derive population size, survival rates, growth, movements, and individual nesting habitat preferences to help us better understand and protect them.

We also protect terrapin nests with predator exclosures, distribute Bycatch Reduction Devices to keep terrapins out of crab pots, work with volunteers to rescue terrapin hatchlings from storm drains, mentor interns each summer who help conduct research projects on terrapins, and engage the public in terrapin conservation. Over the past 25 years The Wetlands Institute has become a leader in diamondback terrapin research and conservation. We remain committed to monitoring and protecting terrapin populations near and far, and look forward to continuing our legacy of terrapin conservation into the future.



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## Visit Us

**Hours:** 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.*

# Marsh Musings

by Dr. Lenore Tedesco, Executive Director

## Rising Waters – A View From the Marsh

On January 23<sup>rd</sup>, the southern Jersey shore experienced a strong blast of winter, in a winter that had largely been noted for unseasonably warm weather. Yet again, our communities were battered with storm tides that sadly flooded many homes and businesses. The beaches and dunes, our front line of defense in these storms, did their job and protected the ocean front homes. However, they again experienced significant erosion in the process. Unfortunately, these storm flooding events are becoming more and more common.



The View from the Tower is changing. I see change. The marsh is now routinely flooded over several high tide cycles each month. Maybe you have noticed it too when you are driving on the causeways to the islands. Maybe you notice that your floating dock, if you are fortunate enough to have one, now floats higher than level sometimes. These are all visual evidence that sea level has risen. If we look at long-term records of measured sea level in our area, the trend is clear. Sea level in southern NJ has risen more than 6" since the 1980's. Yep – 6". This isn't a model or a prediction. It's an actual measurement.

To some that may not seem like a lot, but the reality is that 6" of rise is dramatic. It means that during storms, the water level is already ½ a foot higher before the storm tides come. On the beach, it means that the water already comes up

higher on the beach and closer to the dunes. In the meadows, it means that the marsh has already absorbed a lot of water, before the storm tides come. Along the Bayfront, it means that water is already 6" higher on the bulkheads that are helping to prevent flooding of our communities.

At The Wetlands Institute, we are working every day to assess the health of our marshes and their ability to continue to help protect our communities. We are working to test measures to help the marshes cope with rising water levels and to educate our community about how they are changing. We are working to restore animal populations that are important to helping maintain balance in these stressed ecosystems. We are working to help everyone understand and appreciate the importance of these natural resources.

Our coastal ecosystems face constant threats and we work tirelessly to help ensure they are healthy and here for generations to experience and enjoy. If you want to learn more, view my TEDx talk or the Institute video – both are on our homepage [wetlandsinstitute.org](http://wetlandsinstitute.org). The support of our friends and donors is crucial to enabling the work we do. Thank you for being a part of our journey as we continue to build excellence.





# Thanks To You The Wetlands Are Better Off!

As we embark upon another amazing year at The Wetlands Institute, we want to say THANK YOU for all you have done to support the preservation and restoration of these treasured resources and for enabling so many kids to learn to love the wetlands too!



## Reflections from a Volunteer

*"I have been volunteering with The Wetlands Institute for many years. I have to say; every time I see a turtle release with all of those kids I am moved. The children are there, in their T-shirts hanging to their knees holding baby turtles that have been saved from their mother who could not be saved and incubated as eggs at the Institute. Witnessing their excitement is something very special. It's like a culmination of the important work that we do." – Diana*

If you would like to volunteer, and contribute to making a difference, visit [wetlandsinstitute.org/volunteer](http://wetlandsinstitute.org/volunteer).

## Two Nations for One Wetlands

In 2014, The Wetlands Institute, Wetland Link International, and Wetlands International Russia teamed up to generate a beneficial international dialogue between wetland centers in the US and Russia. This project, Russia-USA Wetland Center Exchange Program: Linking People and Wetlands, brought staff from wetland centers in the US and Russia together to share best practices and approaches in environmental education, support the development of effective outreach and education activities, and directly link peers to foster greater cultural understanding.

Through a series of full immersion exchange visits throughout 2015, six wetland centers equally divided between the US and Russia were able to travel abroad to visit their partner centers and spend several days exploring commonalities and differences between the two centers. This past October, The Wetlands Institute (TWI) hosted their project partners Dmitry Belyaev and

Alexander Kochergin from Smolensk Lakeland National Park. For five days, Dmitry and Alexander explored South Jersey ecosystems, while visiting local environmental education organizations and learning from TWI community partners.

The culmination of the project was a 3-day international conference held at The Wetlands Institute. The conference brought all wetland centers together to explore lessons learned, discuss best practice approaches for using social media, data sharing and outreach to further environmental education, and produce a bilingual best practices manual for use in wetland centers. The highlight of the conference was a public open house where project partners shared their experiences and lessons learned. To view, the open house presentation, please visit the project website at:

[wetlandsinstitute.org/Russia-USA](http://wetlandsinstitute.org/Russia-USA)



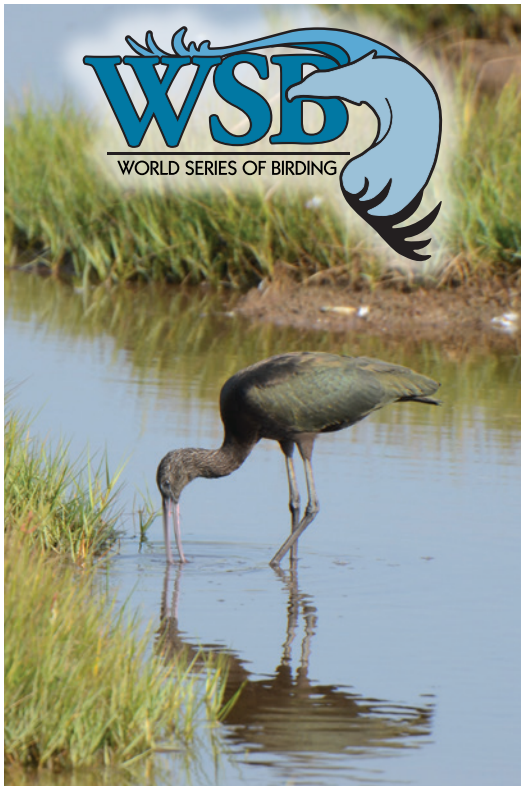
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find us on



# Conservation in Action



## 2016 World Series of Birding

The countdown to the World Series of Birding on May 14, 2016 has begun. Our team, The Marshketeers, will join with other teams across New Jersey to raise money for bird conservation in this annual 24-hr marathon of birding. The more species we see, the more we can do for conservation.

Do we have your support? This is an important fund-raising event for the Institute. In 2015, The Marshketeers saw 130 species and raised nearly \$5,000. We want to make 2016 even better! This year we'll be on the lookout for our Bonus Bird, the Glossy Ibis. Proceeds will be used to support coastal bird research and conservative programs at the Institute. There are several ways to support us:

1. Pledge an amount per bird species identified, and mail your contribution after the results are in for the year.
2. Contribute a fixed amount to send in right away.
3. Offer an additional pledge based on whether this year's "bonus bird", the Glossy Ibis is found.

To support the 2016 Marshketeers, call 609-368-1211, or visit **[wetlandsinstitute.org/wsob](http://wetlandsinstitute.org/wsob)** to download a printable pledge form or to make your donation online.

## A Record Breaking Sanderling

Migratory shorebirds are attracted to barrier island beaches for resting and foraging along their many-thousand mile long annual journey. Sanderlings are the shorebirds commonly seen running in and out with the waves, quickly grabbing food from the sand with their bills. One such individual we spotted foraging on Stone Harbor Point last fall carried around its leg a band with a unique code. By submitting the code, we learned that this sanderling was the oldest sanderling ever found- at least 13.5 years old! This individual, like millions of others, depends on opportunities to rest and eat undisturbed at critical habitats provided by our barrier island beaches year after year.

Want to help? Avoid disturbing birds on the beach and follow posted signage throughout the year.



## Volunteer for Research and Conservation

Are you interested in helping terrapins, horseshoe crabs and birds this spring and summer? We are looking for dedicated volunteers to help with several new and ongoing research and conservation projects.

These opportunities are a great way to get involved and learn more. Training will be provided for all those who commit to help, and only a limited number of volunteers can be accepted for each project. Volunteers must be at least 14 years old unless stated otherwise. Check out the volunteer opportunities on our website by clicking the VOLUNTEER button on the top of our website or visit: **[wetlandsinstitute.org/volunteer](http://wetlandsinstitute.org/volunteer)**



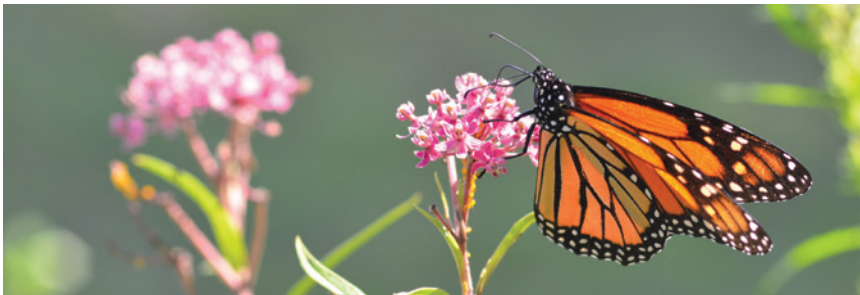
# Native Plants Among Us

by Dr. Lenore Tedesco, Executive Director

Aligning your garden and landscaping to be beneficial to butterflies, pollinators and songbirds is a great way to help support a healthy environment. Few things are as interesting and wonderful as butterflies and hummingbirds enjoying a vibrant and beautiful garden.

Unfortunately bees, butterflies, and many songbirds are on the decline and native plants and native pollinators are inextricably linked. Creating a healthy, vibrant pollinator and butterfly friendly garden is easy and by increasing the number of pollinator-friendly landscapes, we can support the health of bees, butterflies, birds and countless other pollinators.

On May 21 and 22, the Institute will hold its first annual native perennial plant sale. We have selected a beautiful array of plants that will bloom throughout the season and provide all the various food resources that butterflies and other pollinators need to thrive. Knowledgeable native plant and garden naturalists will be on hand to answer questions and many of the plants are in the gardens. Check the Institute website for details on available plants and for order forms if you want to pre-order your plants to ensure the best selection.



**MAY**  
**21-22**  
9:30am-4:30pm

## 4<sup>th</sup> Annual Spring Shorebird and Horseshoe Crab Festival

Located on the Cape May Peninsula between the Delaware Bay and Atlantic beaches, The Wetlands Institute is situated in an area considered to host one of the "wonders of the world." With an act of timing only Mother Nature can provide, Horseshoe Crabs climb onto the beaches of Delaware Bay to lay their eggs, while thousands of shorebirds time a stop on their northbound spring migration route to feed on these energy-packed eggs. Our shores host the largest concentration of spawning horseshoe crabs in their range, and the shorebird migration is one of the last great migrations on Earth. What an amazing front row view of these spectacular wildlife events we have, and it can be seen right here in Cape May.

Join us and help us celebrate this amazing spectacle of nature. Activities include:

- Guided shorebird viewings
- Horseshoe crab workshops
- Horseshoe crab spawning surveys and *reTURN the Favor* rescue walks
- Aquarium teaching tank and aquaculture tours
- Naturalist-led Salt Marsh Trail walks
- Opportunities to view shorebird tagging with the International Shorebird Research Team
- Native plants workshops and sale
- and other hands-on education and conservation-based activities.

Tickets and more information available online at: [wetlandsinstitute.org/SSHC](http://wetlandsinstitute.org/SSHC)

SPRING  
*Shorebird*  
— AND —  
*Horseshoe Crab*  
FESTIVAL



Supported in part by a Grant from the New Jersey  
Department of State, Division of Travel and Tourism.



# Spring Happenings

As winter becomes spring, The Wetlands Institute will be open daily starting May 2, 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

11am and 2pm **Daily**

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!



## Catch 'o the Day

12:30pm **Wednesday (tide dependent)**

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.



## Creature Feature and Craft

12:30pm **Monday and Friday**

During this interactive presentation, get up close with turtles, fish, crabs, sea stars and urchins, mollusks, horseshoe crabs or the animals of *Finding Nemo*. After the presentation, create your very own take-home craft!



## Seashell Sunday

12:30pm **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.



## Aquarium Feeding

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

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 crabs gobbling shrimp.

Summer hours and activities start June 13, 2016! The Wetlands Institute will be open daily from 9:30am – 4:30pm with special evening hours until 8:00pm on Tuesday, Wednesday and Thursday. Please check our website calendar for programming updates as we transition from spring to summer hours!

# 2016 Special Events

## TurtleFest

March

26



## Summer Celebration

August

6



## Spring Shorebird & Horseshoe Crab Festival

May

21-22



## Fall Migration Festival

September

17-18

## Crabulous Crab Day

July

22



## Wetland Wonderland

November

26



# In a Donor's Words

## The Natural World is Important to Me

Having been a member of The Wetland's Institute for over fifteen years, I decided to include The Wetlands Institute in my estate planning. The natural world of the shore is both enjoyable and important to me.

As a young child, I loved being outside! Nature was a big part of my life. My grandmother could catch a fly in flight and would say "We have to put this fly outside because it is part of nature's big plan."

I bought a small house in Stone Harbor in 1998. My heart bursts with gratitude for my little home. While there I walk to the beach as often as possible. It's paradise. I am so thankful for The Wetlands Institute. With every visit I learn something new. The staff and volunteers are superb. Their dedication to education, research and conservation is so evident. Through tireless efforts, they encourage humanity to blend, to coexist with nature's fragile web.

I have never been able to catch a fly like my grandmother, but I can be a small part of the Herbert Mills Legacy Society and be proud of that. As a mother and grandmother, I want the Institute to be an ongoing part of my family's life and continue their work which benefits us all.

Evelyn Rider  
Herbert Mills Legacy Society Member



## Tidepool Shop

Our book and gift shop is open every Friday, Saturday and Sunday 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. Great finds that support our mission!



### Turtle Shell Tee

New arrival! These bright t-shirts feature a plastron on the front and carapace on the back. Perfect for every turtle lover! Available in child sizes 4T to Large and adult sizes Small to Large.

### Wildlife Books

Learn all you need to know about shorebirds and horseshoe crabs just in time for spring shorebird migration and horseshoe crab spawning season. We carry a variety of nature and wildlife books as well as children's books.



### Soft Shell Jacket

Women's water resistant light weight soft shell jacket with embroidered Wetlands Institute logo. Knit hand warmer with thumbholes. Available in black or white.

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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/](http://wetlandsinstitute.org/about-us/sustainability/) for more on our sustainability initiatives.



## Views from the Tower



The Wetlands Institute's Summer Nature Program has never been so much fun! But, you better hurry because discounted registration ends **May 1, 2016!**

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. Children ages 4-5 attend programs daily from 9:30am - 12:00pm and children ages 6-13 attend programs daily from 9:30am - 2:00pm. For complete details, including theme descriptions, pricing and registration information, please visit our website at [wetlandsinstitute.org](http://wetlandsinstitute.org) or call 609-368-1211.



**SUMMER  
NATURE  
PROGRAM**  
at The Wetlands Institute



July 6-9

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