

## **The Fight against Climate Change: Breaking down Barriers between Youth and Scientific Research through Education on Sea Turtles**

Phoebe Shoap, *Ursinus College*

There are many different organizations from coast to coast that focus on educating the public about the surrounding marsh and coastal environment. At The Wetlands Institute (TWI) the three main mission objectives include, not only education, but also conservation and research. Integrating information on research projects and conservation initiatives into general admission programs is something TWI prides itself in doing. Unfortunately, an unintended barrier is often built between impressionable young ears and eyes and scientific research. TWI uses interactive activities and programs to translate complex scientific research into education and action which, in turn, breaks down barriers and presents information in a way that young or old visitors will not only understand, but can also put into action.

Turtles are an important area of focus at TWI with much of the education and research focused on Northern Diamondback Terrapins. However, there are seven different species of sea turtles that live in the oceans around the world, and several off the coast of New Jersey. All seven of these species are endangered and some due to climate change altering their environments such as sea level rise slowly engulfing nesting beaches and warming temperatures around the globe creating an imbalance in male and female populations. After much scientific research on Google Scholar and JSTOR, my project uses a fun and informational PowerPoint Presentation and a Magnetic Sea Turtle Matching Game to translate this complex research issue into a more tangible message that can easily be understood and retained by children, thus breaking down barriers between youth and scientific research.

## **It's true! Learning Can be Fun: Creating a Seasonal Seek and Find Program at The Wetlands Institute and Stone Harbor Bird Sanctuary**

Amanda Devers, *West Chester University*

The Wetlands Institute is a place where learning turns into fun. Acknowledging that people learn best when they are having fun opens up a realm of creative new teaching opportunities. The Wetlands Institute (TWI) offers many educational programs both onsite at TWI and at various offsite locations in Stone Harbor and Avalon. One such offsite program is a guided tour at the Stone Harbor Bird Sanctuary. During this program, an educator leads an interpretative walk through the Sanctuary while explaining the ecosystem of the barrier islands and some of the rich history of Stone Harbor. A similar type program, Salt Marsh Safari, is offered onsite at TWI and goes over the importance of the marsh ecosystem as well as all its inhabitants that thrive there.

Both these programs give the general public an overview of the wide biodiversity of species living on the barrier islands or in the marsh. However, to get all the information, one must stay for the entire walk, which not everyone will do. In efforts to allow for flexibility and fun in learning, my project creates 8 unique, seasonally-focused seek and find cards that allow visitors at both locations to learn about the seasonal array of wildlife, plants, and birds that live and thrive in both the marsh and the Stone Harbor Bird Sanctuary. These cards offer place-based learning opportunities; are developed for all ages and seasons; and allow anyone to explore the areas on their own time and still gain important knowledge.

## **A Much Needed Makeover: Revitalizing the Salt Marsh Trail Identification Signs**

Hannah Locke, *Eckerd College*

The Wetlands Institute (TWI) is a place of education, where people from all walks of life come to learn about the surrounding salt marshes. TWI has wonderful programs that teach people about the wetlands. However, not all visitors to TWI are able to attend these programs. For that reason, TWI has educational signs along the salt marsh trail to help educate visitors about what they are seeing around them. Most of the current signage is a part of the National Park Service's New Jersey Coastal Heritage Trail that extends throughout south Jersey. The program was created by the U.S. Department of the Interior to educate the public about the environmental history of the area, including habitats, plants and wildlife.

A series of signs installed on TWI property were effective in displaying some of the wildlife that exists in the marshes, but fell a little short in fully encompassing all the life that calls TWI home. Additionally, after years of wear and tear, some of the signs have seen significant damage and in some cases the signs are no longer standing. Visitors come to TWI to learn about the salt marshes and the signs on the property should reflect that passion for learning.

To that end, my project works to update the existing signage, while also adding new educational signs. The revitalized signage along the salt marsh trail creates new opportunities for visitors to learn about the plants and wildlife living within the salt marsh.

## **Put Waste in the Right Place: Promoting Responsible Disposal at The Wetlands Institute and Sustainability at Home**

Danielle Meeker, *Christopher Newport University*

Sustainability is something everyone should strive to achieve. With their sustainability initiative, The Wetlands Institute (TWI) has made strides towards becoming a more eco-friendly work place. The goal of the sustainability initiative is "to make a positive impact on the environment and to increase awareness of how easy it is to make a meaningful contribution towards a healthier, more sustainable world". TWI has the power to set an example for their community and educate people on ways to become more sustainable in their own home and work place environments.

TWI's sustainability initiative is broken up into various Go Green Initiatives. These initiatives include: Print Smart, Responsible Disposal, Rethinking Supplies, Healthy Work Environment, and Renewable Energy. Identifying the objective with the highest amount of public education and engagement, my project focuses on improving aspects of the Responsible Disposal initiative. By properly labeling indoor trash and recycling receptacles and providing educational signage around frequently used cans, TWI will have improved compliance with Cape May County Municipal Utilities Authority's Single Stream Recycling program. In addition, the construction of a new compost bin made from recycled pallets will provide a source of enriched soil from garden waste and kitchen scraps. Educational signage placed near the new compost bin and a Composting 101 brochure will help educate and promote composting at home. Lastly, the creation of a Science Feature dedicated to home sustainability will further our mission to increase awareness. Through this combination of improvements, I have enhanced some of TWI's sustainability initiatives.