

UPCOMING EVENTS

**February 10th:**

Ecological Evening -

Thresher Sharks!

7:00 - 8:00 pm

**February 11th:**

Lunch n' Learn -

Optimal Management of Beach  
Nesting Bird Habitats in the  
Wake of Severe Coastal  
Storms

12:30 pm

**March 6th:**

Family Fun -

Something Smells Fishy

7:00 - 8:00 pm

**March 11th:**

Lunch n' Learn -

History of Decoys with Grove  
Conrad

12:30 pm

**March 26th:**

Ecological Evening-

Jersey Shore Folklife

7:00 - 8:00 pm

**April 28th:**

Ecological Evening-

Jersey Shore Folklife

7:00 - 8:00 pm

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# Jacques Cousteau Volunteer Newsletter

VOLUME 5 ISSUE 7-12



WINTER '14 - '15

## JC NERR Happenings

Happy New Year Volunteers! All of us at JC NERR warmly wish everyone a happy, healthy, and prosperous 2015!

The second half of 2014 here at the Reserve was kicked off with our summer programs. We sailed through our busy schedule of Creature Features, Summer Family Fun programs and Ecological Evenings with the enthusiastic assistance of our volunteers who helped all of our programs run smoothly.

Our Education Coordinator Melanie Reding, held a variety of professional development trainings in the summer that our volunteers both attended and assisted with, including - The Wonder of Wetlands and Sand, Surge, and Sea Level: a Teachers on the Estuary Workshop for mid-Atlantic Educators.

In September, our Lunch n' Learn series resumed again with a full house for every program! Lunch n' Learn will continue until mid-May

2015. Please see the side bar of upcoming events for the next Lunch n' Learn dates.

Last newsletter we touched upon all of the great hands-on work our Coastal Training Program (CTP)



staff - Lisa Auermuller, Chris Huch, & Jenna Gatto have been doing with New Jersey's coastal communities focusing on coastal resilience, sus-

tainable planning and hazard mitigation through a newly made online 'Getting to Resilience' tools and subsequent processes. The CTP staff have also been hosting a variety of workshops and programs targeted to municipal planners, town officials, and floodplain managers, including - Coastal Community Resilience, Green Infrastructure, and Hazardous Weather and Flood Preparedness and many more. Volunteers were involved in logistics in setting up/preparation for all of these programs.

Our volunteers also were involved in a variety of field/research work for the second half of 2014. Read on to the following page to see what kinds of research and field work volunteers have been doing.

We capped off the year with our volunteer Holiday Social where we celebrated all our volunteers' contributions over the course of 2014. Thank you all for your, enthusiasm hard work, and dedication!

## Current Events at JC NERR

JC NERR welcomes Jessica Blanchard a new Americorps Watershed Ambassador for 2014-2015. This program is an environmental community service program administered by the NJ Department of Environmental Protection to raise public awareness about water and watershed issues, and to promote watershed stewardship through community involvement. JC NERR is the host agency for the Ambassador for Watershed Management Area (WMA) 14 - The Mullica River watershed.

Jessica has been busy with school presentations, community programs and hands-on biological monitoring in our Mullica River watershed. This past December, Jessica hosted a Rain Barrel workshop at the JC NERR Education Center, and she will be hosting another **workshop on February 21<sup>st</sup>** at the Tuckerton Seaport. Participants will learn the benefits of using a rain barrel and build a barrel to take home with them. Rain barrels harvest rain water to provide an alternative to using the drinking water supply for gardening and other uses, and by col-

lecting rainwater homeowners help to reduce flooding and pollution in local streams, rivers, and lakes.



### Rain barrel in use collecting rain water

If you are interested in more information or attending the workshop please contact Jessica at 609-812-0649 x214 or watershed@marine.rutgers.edu. The cost is \$20 and you must pre-register.



# Volunteer Work in the Field and on Research Projects

The second half of 2014 was a busy time for research and field work, and volunteers were involved with a variety of projects.

## contributed to project

- 16 community outreach/training events
- 1 project website and educational DVD produced

You can find more information and a great video about this project at [www.wecrabnj.org](http://www.wecrabnj.org) and <http://www.wecrabnj.org/videos.html>.

This year, in 2015, our Education Coordinator Melanie, has applied for a second grant that would fund additional ghost crab pot work that will build on the current project, including - teacher trainings and community workshops, and outreach at festivals.

This past summer and fall RUMFS (Rutgers University Marine Field Station) finished up its third and final year of sampling under the NJ DEP's 10-point plan to address the ecological health of Barnegat Bay. This sampling

Volunteers were heavily involved with larval fish sampling, otter trawling, and sediment sampling, with a total of **335 volunteer hours** contributed to the Barnegat Bay project in 2014 alone! Most notably, this past summer and fall, volunteers continued to provide exceptional support for 'Ultimate Bridgenetting' nighttime sampling and sorting events, and otter trawl sampling and sorting.

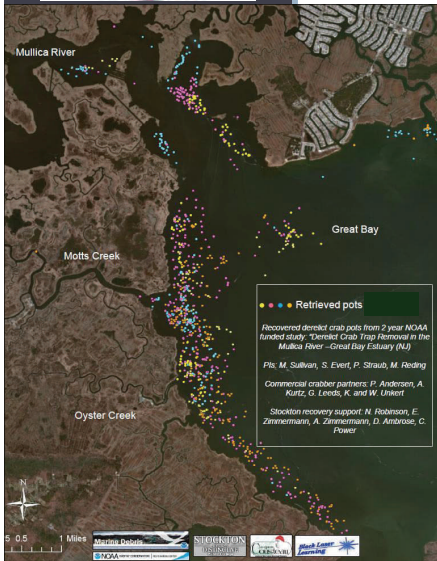
Otter trawling in the summer and fall garnered prodigious amounts of seaweed along with fish, and volunteers were integral in assisting with sorting through all the seaweed to extract fish - so much seaweed that volunteers were called in at nighttime hours to continue sorting the catch from the early morning!

October 2014 brought the final 'Ultimate Bridgenet' effort, with volunteers once again contributing a large amount of time to help collect and sort larval fish. In 2015, RUMFS will continue its weekly larval fish sampling at Little Sheephead bridge on Great Bay Blvd in Tuckerton (Read on to the next page to learn about how this long-term data is being used to assist in management of fish populations and commercial/recreational fisheries!).

Seine sampling for juvenile fish off of Great Bay Blvd on the Tuckerton Peninsula and at Graveling Point in Little Egg Harbor, also took place over summer and fall of 2014, with volunteer Ali Shepherd taking the lead on field sampling, heading up an all-volunteer crew.

In 2015, we again look forward to seine sampling starting in late spring/early summer, with a possible expansion to additional sampling sites.

Thank you to all of our volunteers who gave their time in support of research and field work for RUMFS and JC NERR!



Last newsletter, we highlighted the first year of a collaborative project between JC NERR, Stockton College, and local commercial crabbers - Derelict crab trap removal in the Mullica River-Great Bay Estuary (NJ): a sustainable, community based effort.

This project identified and mapped lost crab pots - also called ghost pots - in the Mullica River-Great Bay Estuary with sonar surveys.

Following the imaging and mapping of ghost pot locations, pots were removed and disposed/recycled and if usable, pots were returned to the commercial crabbing community. The project also identified areas of frequent crab pot loss, and educated recreational and commercial fisherman and boaters about crab pot loss and hazards of this type of marine debris.

Below are just some of the many accomplishments of this successful collaborative project:

- ~ 2200 pots imaged with side scan sonar
- ~ 22 km<sup>2</sup> of Mullica River-Great Bay estuary surveyed
- 1,116 ghost pots and associated debris removed from water
- 2,760 acres of estimated habitat restored
- \$13,240 estimated value of pots that were returned and reused by crabbers
- \$5000 estimated value of reusable parts and recycled scrap metal from pots
- **81 JC NERR volunteer hours**



(Photos courtesy of RUMFS)

included, larval fish sampling ('Ultimate Bridgenetting'), otter trawling for juvenile fish, gillnetting for adult fish, and benthic sediment sampling for marine/estuarine invertebrates.

**Above:** 'We Crab NJ' logo & website produced from ghost pot project. The map shows a portion of the Mullica River-Great Bay Estuary, & where lost crab pots were retrieved.

## Center column -

**Top:** RUMFS technicians sort through seaweed & algae in an otter trawl catch to locate, identify, & measure fish.

**Middle:** A RUMFS technician extracts a crab trap caught in the otter trawl net during summer sampling.

**Bottom:** RUMFS technicians & a volunteer otter trawl sampling in the fall, catch the same crab trap as above!\*

\* Don't worry each time the crab trap was returned safely & intact to the water to continue fishing and to be retrieved by its owner!

## Thousands of larval fish collected - what happens to all of the data?

Larval fish sampling has been conducted in Great Bay/Little Egg Inlet for a little over 25 years! RUMFS conducts weekly ichthyoplankton (larval fish) sampling at Little Sheepshead Creek bridge on Great Bay Blvd. This sampling, (also known as 'bridgenetting' because the plankton net used to collect the fish is hung from a bridge) produces consistent data on what kinds of fish are coming into the estuary. Collecting larval fish data is one of the first steps in learning about the life history of fishes, which is critical in being able to successfully conserve, restore, and manage fish populations.

As we've said many times before, our volunteers are integral in ensuring that this work gets done efficiently by assisting in all aspects of the project - collection, sorting fish, and entering data. And sampling every week for this amount of time certainly accrues a lot of data! Long term data sets are especially valuable because you are able to track change over time and make comparisons from year to year.

So what happens to all of these data (and any data that are collected, for that matter) that our technicians and volunteers at RUMFS work so hard to collect?

Data are organized, checked, and entered into a long-term database for storage, where they become accessible for statistical analysis. In addition to the hundreds of peer-reviewed scientific publications that have been produced by RUMFS that are available for reference, these data are also used by fisheries managers to make the best practice decisions for how to sustainably manage commercial and recreational fishing stocks.

JC NERR along with the North Carolina NERR (NC NERR) and the North Inlet-Winyah Bay NERR (NI-WB NERR) in South Carolina are working on a collaborative project that aims to increase fishery management precision by integrating long-term data sets on larval fish recruitment and related environmental variables. The goal is to open up access to data that allows fisheries managers to assess impacts on fish populations from climate and environmental

change over time, by creating an online portal for scientists and fisheries managers to share long-term data sets.

This project spans a large geographical range - In addition to JC NERR, both NC NERR and NI-WB NERR sites have access to long-term larval fish data sets from sampling within their Reserves, which will be integrated with environmental data to support future ecosystem-scale fisheries management decisions.

To read more about this exciting project in detail about how RUMFS larval fish data is being used please see the full article at: <http://jcnerr.org/volunteer.html>



**Larval winter flounder (~ 5mm) caught while ichthyoplankton sampling** (Photo courtesy of RUMFS).

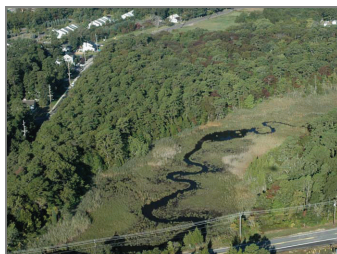
## Life on the Edge exhibit - news and updates from the Interpretive Coordinator

With a newly renovated interpretive 'Life on the Edge' exhibit, there have been continued proposed plans to advance the Life on the Edge experience with an interpretive trail on the Grassle Marsh located behind the JC NERR Education Center. Below is a message from Interpretive Coordinator, Ida Scott, detailing these exciting goals.

" In 2010 JC NERR received a NOAA (National Oceanic and Atmospheric Administration) grant for the redesign of the Life on the Edge Exhibit, the major public interpretive program for the Reserve, located at Tuckerton Seaport Visitor Center. The project was completed in 2013 and press reviews and public reaction have been overwhelmingly positive.

The JC NERR exhibit steering committee, along with our capable design studio, VS&R, had planned the exhibit redesign to be Phase I of the project. After conducting several visitor evaluations and reviewing comments from both general audiences and from teachers on school field trips, we aspire to further enhance the visitor learning experience and

expand content delivery with the second and final project- Phase 2. Building on the great



**Above:** Signs denoting the Grassle Marsh. The green sign is now located directly on Great Bay Blvd.

**Below:** Aerial view of the Grassle Marsh. The trail is proposed for the upland forest of the marsh (lower right hand corner in photograph)

success of the revamped exhibit, Phase 2 is a request is for funds to create a natural interpretive trail on newly acquired 15.29 acres of wetlands and marsh habitat: The Grassle Marsh.

The JC NERR proposes to construct an interpretive and educational trail to complement the Life on the Edge exhibit, which will be open to the public, and support teacher professional development, coastal decision-maker training, family and public programs. Trail signage to describe living resources and facilitated tours will discuss the importance of different marsh habitats. The trail would be within the upland forest and Grassle Marsh behind and adjacent to the JC NERR Education Center in Tuckerton, NJ.

With the proposed trail, JC NERR hopes to foster stewardship of our natural resources by connecting people to our shared coastal environment and spirit of the bay."

~ Ida Scott, Interpretive Coordinator

We look forward to the next steps for the Reserve and are hopeful to receive funding to make this trail a reality!

**Contact info**

Kimberly Capone - Volunteer Coordinator  
130 Great Bay Boulevard  
Tuckerton, NJ 08087

capone@marine.rutgers.edu  
Phone: 609-812-0649 x203  
Fax: 609-294-8597  
Website: www.jcnerr.org



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ESTUARINE  
RESEARCH  
RESERVE  
SYSTEM



**“Where the Mullica River Meets the Sea”**