



*THE  
MASTHEAD*

**Vol. 32 No. 4 WINTER 2012-2013**

***Mid-Atlantic Marine Education Association***

### ***From the Captain's Quarters***

I am pleased to address the membership for the first time in the Masthead as MAMEA President. I hope that all of our members and their loved ones are safe following Superstorm Sandy. As marine educators we understand the power of nature. I am guessing that many lessons on climate and weather followed the days off of school during the storm.

Thank you to all of our members who attended the annual conference in October. The conference was very successful with 68 participants, 2 invited speakers, 15 concurrent sessions, 3 Smith Island cakes, a campfire with s'mores, and a bushel of steamed crabs. MAMEAns from all four of our traditionally defined states and the District of Columbia, as well as members from outside of our traditional region, attended the conference. All four of our registration scholarships were awarded, and the success of the auction ensures the continued funding of the scholarship program. The MAMEA Board was also pleased to expand our support of the National Ocean Science Bowl and cover the registration fees for the winning coaches from our regional bowls. Two of the three winning coaches from our regional bowls attended the annual conference. A special thanks to the Education Programs team at the National Aquarium for their support in ensuring the conference was a success.

Before we know it the holidays will be here and the New Year will be upon us. Please be sure to stay tuned for the state sponsored MAMEA events that all of our State Representatives are busy planning. Also, please note that the MAMEA mid-year Board meeting will be on Saturday, April 27<sup>th</sup> in Lake Anna, VA. All members are welcome to attend. As always we are looking for new people to serve on the Board whether assisting on a Committee or exploring a position to run for this spring. Contact me if you are interested in attending or if you have any questions at [kfuller@aqua.org](mailto:kfuller@aqua.org).

Best wishes and an early Happy Holidays!

Kathy Fuller  
MAMEA President

The MAMEA Board of Directors meets twice a year. If you are interested in serving on the Board, please visit [www.mamea.org/board.html](http://www.mamea.org/board.html).

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[kfuller@aquaria.org](mailto:kfuller@aquaria.org)

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Chesapeake Bay NERR  
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U of Delaware; MATE Center  
[tami.lunsford@gmail.com](mailto:tami.lunsford@gmail.com)

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NC Aquarium at Fort Fisher  
[megan.ennes@ncaquariums.com](mailto:megan.ennes@ncaquariums.com)

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[ruth.gourley@ncaquariums.com](mailto:ruth.gourley@ncaquariums.com)

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VA Sea Grant/VIMS  
[ayers@vims.edu](mailto:ayers@vims.edu)

**Standing Rules**

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**MAMEA Webkeeper**

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VA Sea Grant/VIMS  
[ayers@vims.edu](mailto:ayers@vims.edu)

**Masthead Editor**

**Chris Petrone**  
DE Sea Grant/Univ. of Delaware  
[petrone@udel.edu](mailto:petrone@udel.edu)

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**Kathy Fuller (Chair)**  
[kfuller@aquaria.org](mailto:kfuller@aquaria.org)

**Lisa Lawrence (Website)**  
[ayers@vims.edu](mailto:ayers@vims.edu)

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[petrone@udel.edu](mailto:petrone@udel.edu)

**MAMEA Archives**

**David Christopher**  
National Aquarium in Baltimore  
[dchristopher@aquaria.org](mailto:dchristopher@aquaria.org)

**State Representatives**

**Delaware**

**Chris Petrone**  
DE Sea Grant/Univ. of Delaware  
[petrone@udel.edu](mailto:petrone@udel.edu)

**District of Columbia**

**Bill Simpkins**  
National Aquarium in DC  
[bsimpkins@nationalaquarium.com](mailto:bsimpkins@nationalaquarium.com)

**Maryland**

**Beth Schap**  
Carroll County Schools  
[eschap@hotmail.com](mailto:eschap@hotmail.com)

**North Carolina**

**Andy Gould**  
NC Aquarium at Fort Fisher  
[andy.gould@ncaquariums.com](mailto:andy.gould@ncaquariums.com)

**Virginia**

**Carrie Bateman**  
Atlee High School  
[cbateman@hcps.us](mailto:cbateman@hcps.us)



**From the Editor**

Greetings MAMEA!

From what I can tell, it seems most of our region and our members fared pretty well through Hurricane Sandy. Our thoughts are with our colleagues and those most affected in New York and New Jersey. The storm further proves how vital our work in marine education continues to be. We have increased urgency for impressing upon all of our audiences how important preparedness and ocean literacy are. As we enter this Season of Thanks, be sure to keep those who lost everything in your thoughts, and donate what you can.

On a much happier note, it was absolutely wonderful seeing old friends and meeting new ones at our annual conference in October. Huge congratulations to MAMEA President Kathy Fuller and her entire conference committee on putting together a fantastic event. From the amazing opening keynote to the last delicious s'more made at the campfire, the learning taking place was second only to the camaraderie and laughs we all enjoyed. As always, the annual conference has me clamoring for more MAMEA, and I'm already looking forward to MAMEA 2013 in Newport News, Virginia!

In this issue of *The Masthead*, you will read about some of our very impressive members who have a received several prestigious awards. You will also read about fantastic student and community programs that took place earlier this fall, including a student field experience that resulted in the opportunity to participate in a beach-side whale necropsy. Starting things off, we have Kathy Fuller's inaugural view from the captain's quarters. A big thank you to all those that contributed articles for this issue. Enjoy this edition and have a great winter—stay warm!

- Chris Petrone

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MAMEA is one of 17 regional NMEA chapters. To become a member of NMEA, please visit



[www.marine-ed.org](http://www.marine-ed.org)

## MAMEA Announces Educational Project Grants

by Carol Hopper Brill, MAMEA Grants Chair

For the last 5 years, MAMEA's Educational Project grant program has provided support for marine and aquatic education projects proposed by its members. Each year, two grants of up to \$1,000 each are available: one for formal educators in classrooms K-16; one for informal educators working at a museum, aquarium, zoo, science center, or government agency. The 2012/13 grant project was announced on October 13, at the 2012 MAMEA conference in Cambridge, Maryland.



The 2012-13 Informal Education Grant was awarded to Sarah McGuire, of the Chesapeake Bay National Estuarine Research Reserve in Virginia (CBNERR-VA). Ms. McGuire is the Education Coordinator for CBNERR-VA, located at the Virginia Institute of Marine Science in Gloucester Point, Virginia.

“The primary goal of the CBNERR General Education and Public Outreach Program is to increase awareness, understanding, appreciation, and responsible use of the Chesapeake Bay estuary. We offer informal and formal education programs for K-12 and college audiences, teacher-training workshops, and programs for the general public,” explained McGuire. She coordinates several different education programs, including many field experiences for middle school students in nearby counties.

The MAMEA grant will provide support for the popular CBNERR-VA Discovery Lab series. The monthly Discovery Labs provide educational science experiences in fun, family-friendly ways. Each lab focuses on a specific Bay-related topic through a series of hands-on activities for kids and adults. Participants use microscopes, observe live animals, make crafts or play games, even examine and discuss research posters. VIMS faculty, professional staff and graduate students contribute as speakers, sharing their cutting edge research with the general public in an intimate setting.



A mix of information and activities attracts and informs both youngsters and adults. Guest speakers offer cutting edge science updates. A mix of related displays and hands-on activities give learners a chance to investigate first hand.

Each Lab can accommodate 100 participants and many families attend every session. One parent wrote that his three daughters look forward to attending each lab and they talk about them for weeks afterward. He reported that “Thanks to the Labs, they are learning how marine life affects people’s lives every day. And, as a result of their experiences, they are talking about becoming marine scientists.”

Thanks to this MAMEA Educational Project Grant, McGuire will be provide the supplies and printed materials that support each lab, despite budget cuts from other sources. And, she plans to pilot expanded hours for the Labs, as well as test the potential of traveling lab boxes for local schools.

If you have a good idea for an educational project, consider submitting a proposal for the 2013-2014 MAMEA Grant cycle. For information on eligibility, grant requirements, and grantee responsibilities, see the MAMEA Grants page on the website at [www.mamea.org/minigrant.html](http://www.mamea.org/minigrant.html).

## Rollins Receives 2012 MAMEA Classroom Teacher Award

by Megan Ennes, MAMEA Awards Chair and Carol Hopper Brill

CAMBRIDGE, MD– The Mid-Atlantic Marine Education Association (MAMEA) honored Sherry Rollins of Peasley Middle School (Gloucester, VA) with its 2012 Classroom Teacher Award. The presentation was announced at the group’s annual conference on October 13, 2012 in Cambridge, Maryland.

A teacher for 26 years, Sherry Rollins received her undergraduate degree in biology from the College of William and Mary in 1992, and holds a Master’s degree in Integrating Technology in the Classroom from Walden University (2006). Rollins exemplifies the concept of lifelong learning and has completed many professional development courses in addition to her degrees.

For the past 19 years of her career, Rollins has been a middle school science teacher in Gloucester County, Virginia. Two years ago a tornado demolished Page Middle School and along with it her classroom filled with Chesapeake Bay resources and aquaria. Undaunted, Sherry picked up where she left off at Peasley Middle School. She’s enriched her sciences classes with unique experiences including: growing oysters; creating video and photography projects; and exploring the Bay on marine science field trips. She has invested her personal time after school and on weekends to take students on boat and canoe trips. And, she models environmental responsibility by mentoring the Green Team at her school. Sherry Rollins’ students have a passion not only for marine science, but science in general, thanks to her use of hands-on activities in and out of the classroom.

In addition to her role as a 7th grade life science teacher, Rollins collaborates with the Virginia Institute of Marine Science (VIMS) on education projects. She has served as a Mentor Teacher for the VIMS GK-12 P.E.R.F.E.C.T. Partnership since 2009. The goal of GK-12 is to enhance the communication skills of graduate students and enrich classroom STEM education. Ms. Rollins and two of her colleagues at Peasley Middle School host VIMS graduate students as “scientists in residence,” guiding them in the development of lesson plans and activities that enrich the seventh grade Life Science curriculum with authentic research topics and methods.



President-Elect Sarah McGuire and Past-President Lisa Lawrence presented Sherry Rollins with her MAMEA Classroom Teacher Award in a surprise visit to her classroom at Peasley Middle School on November 8. Rollins was unable to attend the MAMEA Conference; colleagues kept her Award a secret so they could surprise her.



Sherry Rollins teaching her students about Oysters. Photo by Carol Hopper Brill.

Rollins has also partnered with educators from the Chesapeake Bay National Estuarine Research Reserve in Virginia (CBNERR-VA). This field-based program addresses 7th grade Life Science Standards of Learning and introduces the students to their local estuarine environments. Students learn about marine biology, Chesapeake Bay issues and efforts to restore the health of the Bay. Thanks to Meaningful Watershed Educational Experiences, students are immersed in hands-on activities and they gain a deeper awareness of the Chesapeake Bay and its inhabitants.

Sherry Rollins has been active in the Oyster Reef Keepers of Virginia for twelve years. This oyster restoration project is part of a statewide effort to restore the native Chesapeake Bay oyster reefs. Using her training as a Master Oyster Gardener, Rollins brings oyster biology, aquaculture, experimentation, data collection and analysis to the classroom. Late in the school year, she guides her students as they plant the oysters on a sanctuary reef during a class field trip. One of the goals of this project is to model environmental responsibility.

## Takacs Receives 2012 MAMEA Informal Educator Award

Jackie Takacs of the Maryland Sea Grant Extension Program was honored with MAMEA's 2012 Informal Educator Award. The presentation was announced at the annual conference.

Jackie Takacs received her undergraduate degree in Life Sciences (Marine Biology) and a Master's in Marine, Environmental, and Estuarine Sciences from the University of Maryland.

As most informal educators do, Takacs wears many hats and works with many different groups of people. As a Watershed Restoration Specialist for the Maryland Sea Grant Extension Program, she partners with researchers to make their studies more accessible to teachers and she works with teachers to translate that research into the classroom, helping educate students on issues related to the Chesapeake Bay. Jackie also provides technical assistance for aquaculture and pond management programs in Southern Maryland. Most recently, she has created a watershed sciences-based summer camp for her local 4-H program.

Ms. Takacs also works to find funding for educational and watershed restoration projects. She has recently obtained funding to develop the design for a 1500 feet living shoreline in Calvert County. Jackie also secured funding for a buffer management plan for a tidally-influenced embayment in Saint Mary's County. She has worked with the Saint Mary's Watershed Association and the Center for Watershed Protection to develop a watershed plan for the Saint Mary's River. Her other watershed work also includes creating rain barrel/rain garden education and outreach programs for the citizens of Southern Maryland.

Jackie is dedicated to making marine education fun. With programs such as "Which Way to the Oyster Bar?," who can doubt her passion and enthusiasm. She can just as often be found digging dirt to make a rain garden as she is found in the lecture hall. Her dedication to educational organizations such as the Mid-Atlantic Marine Educators Association is evident in her willingness to remain treasurer for over five years.



Jackie Takacs (right), Watershed Restoration Specialist for the Maryland Sea Grant Extension Program, received MAMEA's 2012 Informal Educator Award. Out-going MAMEA President, Lisa Lawrence (left) presented the award at the Annual Conference in October. Photo by Carol Hopper Brill.

## NMEA Update

by Tami Lunsford, MAMEA's NMEA Rep

As you may have heard, NMEA and MAMEA have been working to increase membership benefits for both organizations. There are now five organizations who offer discounts to MAMEA members: all of the North Carolina Aquariums ([www.ncaquariums.com](http://www.ncaquariums.com); Roanoke Island, Pine Knoll Shores, Fort Fisher, and Jennettes Pier) are offering 10% off admission; and *Under the Sea* is offering 15% off their outstanding presentations! *Under the Sea* ([www.touchthesea.org](http://www.touchthesea.org)) provides live animal outreach presentations for all ages at schools, camps, libraries, and other locations in VA, MD, PA, DE, WV and DC. Just present your MAMEA membership card to receive these discounts. Be patient as this is a new program and there may be some small glitches at the beginning, but everyone is doing their best. If you need a membership card, please contact Lisa Lawrence, MAMEA Past-President and Membership Coordinator, at [ayers@vims.edu](mailto:ayers@vims.edu).

Does your organization want to be part of this great new MAMEA/NMEA program? If so, contact Tami Lunsford ([tami.lunsford@gmail.com](mailto:tami.lunsford@gmail.com)), the MAMEA Representative to NMEA!

Finally, NMEA is preparing for the big Whale-of-a-Sharathon at NSTA on April 10 in San Antonio, Texas. If you have a great hands-on activity you would be willing to share (even if you won't be there!), or if you will be at NSTA and want to help out, please contact Tami (see above).

## Hathaway Receives Environmental Educator Kudos

Terri Kirby Hathaway, North Carolina Sea Grant marine education specialist, was recognized as the 2012 Outstanding Practitioner by the Environmental Educators of North Carolina, or EENC.

The award recognizes an EENC member who helps to build environmental education as a profession through statewide efforts and leadership, as well as by being an advocate for excellent education.

“Terri has been a leader in environmental education in North Carolina, and the South Atlantic and Mid-Atlantic regions, as well as on the national level. It is great to see her creativity and hard work recognized by the EENC,” says Jack Thigpen, Sea Grant extension director.

Hathaway was cited for her dedication to environmental education and educators statewide, her enthusiasm for the discipline and her long-term impact in the field.

“It is Terri’s contagious enthusiasm for anything related to the ocean and teaching that makes her an outstanding practitioner of environmental education,” notes Beth Cranford in the nomination. Cranford, an educator at the N.C. Museum of Natural Sciences, writes that Hathaway’s warmth and enthusiasm is “a priceless contribution” to the profession.



Terri loves to beachcomb. Here, she finds a bowling ball in a Delaware marsh. Rumor has it she bowled an impressive 280 using this very ball.

Hathaway facilitates the Methods of Teaching Environmental Education course, which is required for EE certification, and trains state educators on ocean-related topics. She develops coastal curricula for North Carolina classrooms and organizes teacher workshops. In addition, she serves as an education specialist with the Center for Ocean Sciences Education Excellence Southeast, serving North Carolina, South Carolina and Georgia.

She authors the Scotch Bonnet ([blogs.ncseagrant.org/scotchbonnet/](http://blogs.ncseagrant.org/scotchbonnet/)), a marine education newsletter, three times a year. She also is a regular contributor to Sea Grant’s magazine Coastwatch ([www.nccoastwatch.org](http://www.nccoastwatch.org)).

In 2009, Hathaway was named the Monitor National Marine Sanctuary’s Volunteer of the Year for her work on educating the public about the sanctuary.

This article was reprinted, with permission from North Carolina Sea Grant. The original article can be found at <http://www.ncseagrant.org/>.

## MAMEA Member honored as Virginia's Outstanding Biology Teacher

by Carol Hopper Brill

MAMEA member Dr. Carol Stapanowich has been recognized as Virginia's Outstanding Biology Teacher. The Award from the National Association of Biology Teachers (NABT) was presented during the 2012 Virginia Association of Science Teachers Professional Development Institute held November 8-10 in Williamsburg, VA. Dr. Stapanowich teaches at Bishop Sullivan Catholic High School in Virginia Beach.

The NABT Outstanding Biology Teacher Award program recognizes an outstanding biology educator (grades 7-12) in each of the 50 U.S. states, districts and territories, and the Canadian provinces. A major portion of the nominee's career must have been devoted to the teaching of biology/life science, and candidates are judged on their teaching ability and experiences, cooperativeness in the school and community, inventiveness, initiative and student-teacher relationships. Recipients are honored at a special event during the NABT Teachers Professional Development Conference.

During her teaching career to date, Stapanowich has taught science to students of all ages, from Kindergarten to adults. She started teaching in New York State, while attending earning her graduate degree in toxicology. Initially, it was lectures about human physiology to paramedics enrolled in community college. After receiving her Ph.D., she continued teaching physiology at the graduate and undergraduate levels. Since moving to Virginia Beach, Carol has focused on younger science learners at the elementary and high school levels. She has been member of the Bishop Sullivan Science Department faculty since 2005, and has taught: Biology (honors and AP), Honors Chemistry, Environmental Science (regular and AP), Anatomy and Physiology, Forensic Science and Toxicology, as well as lots of fun science topics to younger students.



Carol Stapanowich, science teacher at Bishop Sullivan Catholic High for 8 years, was recognized as Virginia's Outstanding Biology Teacher at the recent VAST Conference in Williamsburg, VA. Photo by Janet Krenn.

When asked what she likes most about teaching, Stapanowich reveals her love of hands-on science. "My favorite aspect of the classes is the labs — a chance to take the classroom information into a hands-on and more memorable experience. I enjoy watching the students move from 'I don't get this!' to 'This is so cool!' I feel that I teach what the students need to know to complete the labs and translate the theoretical into the practical."

Carol, your fellow Virginia MAMEA members congratulate you!

## NMEA2014 Update

by Tami Lunsford and David Christopher, NMEA2014 Co-chairs

The NMEA2014 conference planning committee had a great and productive meeting at the MAMEA conference in October. You can see the detailed minutes, action items, committee members, and planning timeline at <http://nmea-2014.wikispaces.com/>. We are now busy recruiting keynote presenters and planning our promotional video to show at NMEA2013 and other locations. Our next meeting will be held at the Loews Annapolis hotel on January 5 from 9-2. Please contact one of the co-chairs (Tami Lunsford at [tami.lunsford@gmail.com](mailto:tami.lunsford@gmail.com) or David Christopher at [dchristopher@aqua.org](mailto:dchristopher@aqua.org)) or any committee member if you have any questions or would like to be involved!



## European Marine Science Educators Association

*The first professional association for marine science educators in Europe has been formed to proactively support ocean literacy in the classroom, laboratory, field and beyond.*

Ocean Springs, MS, November 15, 2012 –The European Marine Science Educators Association (EMSEA) has been formed as ocean literacy continues to grow in importance and relevance in addressing STEM (science, technology, engineering, and mathematics) education efforts.



The visionary behind EMSEA, Evy Copejans, is a member of the National Marine Educators Association (NMEA) based in the U.S. Evy was inspired to bring the same level of support, nurturing, and professional opportunities to her European colleagues she has experienced through NMEA.

Her efforts came to fruition during the inaugural Conference on Ocean Literacy held last month in Bruges, Belgium. Supported by NMEA President Craig Strang and NMEA International Committee Chair Peter Tuddenham, Evy officially formed the first professional association for marine science educators in Europe. As she explains, “Providing resources doesn’t guarantee an effective educational transformation. Educators need to be motivated...and feel supported. It is therefore critical to pay close attention to how we engage and equip each one of them and provide them with opportunities to get a personal connection to the ocean.”

The first official EMSEA conference will be held in September, 2013 in Plymouth, UK. You can connect with EMSEA at [www.emsea.eu](http://www.emsea.eu) or look for them on Facebook. The website includes a summary, photographs, and presentations from EMSEA’s October Conference on Ocean Literacy in Europe.

## Mid-Atlantic Research Update

Compiled by Chris Petrone

[Research focuses on sand tiger shark conservation](#) – **Delaware State University** fisheries staff and students are working in collaboration with the Delaware Department of Natural Resources and Environmental Control (DNREC) and the National Marine Fisheries Service as part of a five-year \$350,000 grant. The primary focus of this grant is to develop a conservation plan for sand tiger sharks in the Delaware Bay, which serves as an essential habitat for the species.

[Horn Point Oyster Hatchery has record year](#) - The Horn Point Laboratory Oyster Hatchery of the **University of Maryland** Center for Environmental Science produced a record number of oysters in 2012 as part of its efforts for restoring Chesapeake Bay. In partnership with the Oyster Recovery Partnership and the Maryland Department of Natural Resources, the Horn Point Hatchery produced more than 880 million oyster spat (young oysters that are attached to a larger oyster shell) this year. This is the fifth year in a row that production has exceeded half a billion.

[Researchers, colleagues unlock mysteries of Atlantic deepwater canyons](#) – During a recent three-phase research cruise, marine scientists from **University of North Carolina Wilmington** and Oregon Institute of Marine Biology explored vast submarine canyons off the U.S. East Coast, yielding remarkable preliminary results, including a potential new species of mussel.

[Saving the fish that saved Jamestown](#) – Researchers at **Virginia Commonwealth University** are documenting an increase in Atlantic sturgeon in some of Virginia’s most historic rivers.

## Leveraging Social Media for Marine Education

by Chris Petrone and Lisa Tossey

Building on a very successful presentation on using social media in marine education by Jim Wharton (Seattle Aquarium) and Julie Henry (Conservation Enterprises Unlimited) at the 2012 National Marine Educators Association conference in Anchorage, Alaska, Lisa Tossey (Delaware Valley College) and Chris Petrone (Delaware Sea Grant/University of Delaware) presented a session of similar content at the MAMEA annual conference in October.

Prior to the official start of the session, Lisa and Chris displayed Twitter posts (“tweets”) via [www.visibletweets.com](http://www.visibletweets.com), which aggregates public tweets based on search terms. In this case, they displayed tweets discussing science communication (Twitter hashtag #scicomm), tweets relevant to Deep Sea News topics (#DeepSN), and tweets posted about the ongoing MAMEA conference (#mamea12).

Once the session kicked off, Chris and Lisa discussed why social media is important for organizations and businesses, some of the tools of the trade, and examples of social media successes, debacles, pitfalls, and suggested practices.

To see the list of links and resources from the presentation, please visit <http://post.ly/9Yqfj>.

For Lisa and Chris’ Prezi (presentation), check out <http://prezi.com/mvsyyckakvdw/mamea-2012-presentation/>.

For a different way to see the October conference—as it happened—read through the Storify story of #mamea12 at [http://bit.ly/mamea12\\_storify](http://bit.ly/mamea12_storify).

For all of your MAMEA and NMEA social media needs, check out these links:

MAMEA Facebook page – <http://www.facebook.com/teachmamea>

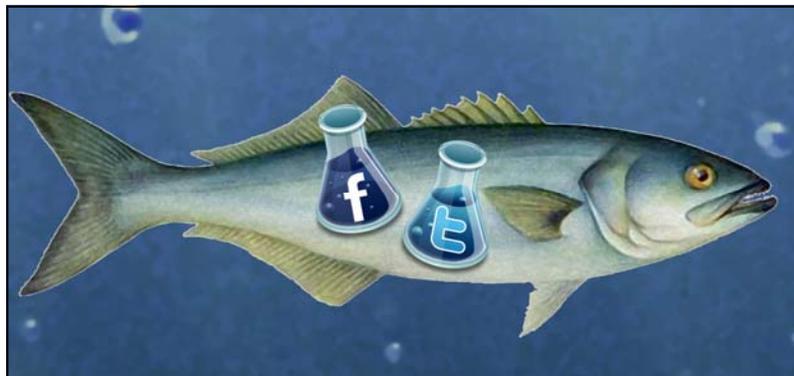
NMEA Facebook page – <http://www.facebook.com/NatlMarineEd>

NMEA Twitter handle – <http://twitter.com/NatlMarineEd>

NMEA 2014 (Annapolis, MD) Facebook page – <http://www.facebook.com/nmea2014>

NMEA 2014 Twitter handle – <http://www.twitter.com/nmea2014>

NMEA 2014 Twitter hashtag – #nmea14



## Whale of a Tale

by Bethany Smith, Chesapeake Bay Governors School

For several Chesapeake Bay Governor's School (CBGS) students and faculty members, an early morning beach run in Nags Head, NC turned into more than a chance to stretch their legs. Instead of seaweed and other flotsam washed up on the beach, they found a deceased 5 meter (a little over 15 ft) long female Beaked Whale (*Mesoplodon mirus* – True's Beaked Whale).

CBGS biology instructor J. Daniel Maxey reported the stranding to the local authorities, explaining to the students the strict laws protecting marine mammals (dead or alive). The group took some rough length measurements along with pictures and video that will be used in future lessons at CBGS. While the sighting of this rare marine mammal stranding is exciting alone, this experience was about to provide the CBGS students with a unique field-based educational opportunity.



A marine mammal scientist carefully examines the stranded whale while CBGS seniors look on.

At breakfast the next morning, CBGS instructors were fortunate enough to recognize the University of North Carolina at Wilmington marine mammal stranding response team by a graphic on one of the members' T-shirts. Pouncing on what was to be an extraordinary educational opportunity, the CBGS faculty and students moved to the beach to witness the scientific data collection from this rare whale stranding. "While we had originally planned other data collection activities for the morning, the opportunity for our students to witness the necropsy (scientific autopsy) of a marine mammal was something that we faculty members couldn't pass up," CBGS Marine and Environmental Science instructor Bethany Smith noted. Immersing students in close-up, unique opportunities to see science in action as well as interactions with scientific experts is a central part of the CBGS mission. The students watched in awe, making detailed notes and drawings as the scientists processed the carcass, taking body measurements and blubber and organ samples.



A Marine Mammal Scientist explains the unique adaptations of beaked whales while CBGS students (L to R – Haley Balderson, Carrington Balderson, Sam Friday, and Bradley Hudson) carefully record notes.

Early on, the stranding team determined the beaked whale was pregnant, and students were able to view the fetal beaked whale before it was carefully wrapped up and packed away for future studies. "You are part of a small, small percentage of people who have ever witnessed the stranding of a True's Beaked Whale," CBGS Marine & Environmental Science instructor Jim Beam told the students afterward.

CBGS student and Rappahannock High School Senior Megan Knight came away from the experience with affirmation of her future plans. "I'm sure now that I want to be a doctor. Seeing the necropsy made me confident I can handle medical school." For teachers and students, the educational experience didn't end when they walked off the beach. CBGS faculty are in contact with Dr. William McLellan, the marine mammal stranding coordinator for the state of North Carolina, and Dr. Ann Pabst of the marine mammal stranding program at UNC-W, and have already received data and additional information about this stranding. CBGS faculty hope to continue this partnership, allowing the

students to see how data collected from this whale can advance scientific knowledge of a very cryptic and poorly understood species. For the students and instructors on the trip, this is one whale of a tale that will be told for years to come!

## SPARK Creek-Watchers Clean up after Frankenstorm

by Anne Armstrong and Matt Cormons, Marine Science Consortium

“This is the worst storm I’ve ever seen!” It was the Saturday following Frankenstorm Sandy and these were the words of Kenny Linton, owner and operator of Kenneth Linton Seafood assessing the damage to his softshell crab facility on Messongo Creek near Saxis, VA. We first met Mr. Linton during better times in early October, when we had shown up at the pier next to his crab shack to eat lunch. With a big smile and a lot of enthusiasm, he graciously took the time to tell us about the history of crabbing, how he processed his soft-shell crabs, and many fascinating facts about blue crabs.

We, the SPARK Creek Watchers, have been studying Holdens and Messongo Creeks in a year-long partnership between the nature-based family-learning program SPARK (Shore People Advancing Readiness for Knowledge) and The Marine Science Consortium. Our group comprises 11 families with children ages 9-18. We go out the first Saturday of every month to explore creeks (by kayak in warmer weather) in Accomack County, take water quality data, clean up trash, and learn about and enjoy the natural history of these areas.



This program is funded through an Audubon and Toyota TogetherGreen Fellowship that invests in environmental leaders from all backgrounds, providing them with resources, visibility, and a growing peer network to help them lead communities nationwide to a healthier environmental future.

On this chilly Saturday in early November, we piled into cars to survey the storm damage at Holdens and Messongo Creeks and to test their water. As we drove through Sanford on the way to the crab shack, we saw flooded yards, trees lying heavily on houses, and people loading damaged furniture and other possessions into trucks and dumpsters. Turning left onto Hammock Road, passing by groundsel bushes and loblolly pine stands, we saw that the crab shack was still standing. But when we got there our jaws dropped!

The pier adjoining the shack, which had contained the tanks of hundreds of crabs, was completely gone. To the left of the shack, in the water and on the nearby dock was a tangle of PVC pipes, disarticulated and broken lumber, metal roofing, a very costly fishnet, electrical wires and other remains of the crab shack pier. The dock itself, recently built to support trucks, on which we had eaten lunch when we were last there, was buckled like an undulating serpent from the force of Sandy’s super-high tides and strong waves.

We hadn’t planned to do much more than check out the storm damage, pick up litter and return to the warm lab at the Marine Science Consortium. Mr. Linton was there with his son and daughter, about to leave in dismay. When he recognized us from our October visit, he asked, “Here to clean up?” He may have been joking, since it seemed an impossible task, but we replied, “Yes, we are!” Within an hour our families had cleared the buckled dock of everything and made piles of usable lumber and trash. The huge piles of reed grass (*Phragmites*) the waves had deposited on the dock were shoveled by SPARK dad Ducky Harris into the water and left to eventually decompose, while Mr. Linton worked with the SPARK kids to salvage as much of the fishing net as possible.

It was heartening to see the wonderful spirit of everyone as they worked so enthusiastically. Storms like Sandy can bring out the worst in people, but they can also highlight the best in strong communities as exemplified by the Eastern Shore. This was evident that Saturday, as kids and their parents dug through the mess of marsh grass and debris to salvage boards for Mr. Linton, the cold wind nipping at their faces and bare hands. No one complained, not even Mr. Linton who was facing the damage to his crab shack. Everyone was smiling, joking, and working together to achieve a goal.

## Rain Barrels Blossom at Jennette's Pier

by Jim Gould and staff, Jennette's Pier

Jennette's Pier educators, Jim Gould and Lydia Courtright, teamed up with Coastal Education Coordinator, Sara Hallas from North Carolina Coastal Federation to lead their first ever "Rain Barrel Workshop" on Oct. 13.

Sara Hallas began the workshop with a 20-minute presentation outlining the need for and benefits of water conservation in northeastern North Carolina. Particular attention was given to the effects of run-off pollution on nearby fisheries. These fisheries are a main source of income for our local economic engine.

Then, Gould and Courtright guided 14 participants in the barrel building process. Tops were jig-sawed, holes were drilled, spigots were inserted, caulk was applied, screen was stapled, and rain barrels were made! Supplied with power tools and paint, it took the eager participants about an hour to transform 50 and 30 gallon fertilizer drums donated from Kilmarnock Golf Club into colorful, functioning rain barrels.



Educators Lydia Courtright and Jim Gould work to cut off the top of a recycled barrel. Once the lid was removed, the barrel was washed out and window screening was placed over the opening for rainwater to pass through (courtesy of [jennettespier.net/Daryl Law](http://jennettespier.net/DarylLaw) photo)

that when his wife Mandi went on a recycling kick in her Kill Devil Hills neighborhood, their neighbors followed suit. Now they hope to set a similar trend by collecting and reusing rainwater.

From everyday uses to emergency situations, having 50 gallons of rainwater on hand can be both convenient and comforting. If municipal water service is interrupted by a major storm, rainwater can be used for many things, including flushing toilets. According to Sue Dineen of Southern Shores, her rain barrel will be put to use as part of a self-sustaining master plan. "I'm intent in making things for survival and this is part of our survival kit," she said.

The class cost \$30 and guaranteed one rain barrel per person and they received a rain barrel recipe to construct another barrel on their own, Gould noted.

For Kill Devil Hills' resident Melissa Cooper, the class resulted in something extremely useful for her household. "I want to be more water conscious and conserve water," she said, as she painted royal blue waves on the bottom of her barrel and a bright yellow sun at the top. Cooper already has a place in mind for her barrel. She said it would go under the eaves where there's a valley in her home's roof. As for uses for the water, she has many ideas. "Watering the garden and even washing things outside that don't require fresh water, like the cat litter pan and trash cans," Cooper said. She likes the idea of reusing something precious such as water.

Ed Marzano also plans on using the collected rainwater for gardening. "Conserving water is good for the environment," he said. "Rainwater is a lot better for plants than house water." Marzano added

## State Rep Reports

### **DELAWARE**

The **Delaware Association for Environmental Education** is now accepting session proposals for their 2013 annual conference through November 30. The conference will take place Saturday, March 2, at the Ashland Nature Center. The 2013 keynote speaker will be Bo Hoppin of the Boston Nature Center, who will speak on place-based education. For more information on DAEE, please visit [www.daeonline.org](http://www.daeonline.org). To submit a session proposal, please visit <http://bit.ly/DAEE2013callforpapers>.

**Delaware State Parks** is happy to announce the release of “A Teachers Guide to Delaware State Parks: Field Trips and Outreach Opportunities.” With 16 parks, five historic sites and many natural areas, DSP offers a comprehensive view of the state’s natural and historical heritage. This guide will help teachers connect what they teach in the classroom with hands-on natural, historical and cultural experiences.

From using a geologist’s hammer and exploring a streambed for minerals, to conducting water quality tests, helping a Civil War laundress with her daily tasks, or using percussion instruments to explore the rhythms of nature, Delaware State Parks brings learning to life. The guide is available at [www.destateparks.com/downloads/school/Teachers-Guide-DE-State-Parks\\_.pdf](http://www.destateparks.com/downloads/school/Teachers-Guide-DE-State-Parks_.pdf).

#### **Delaware Nature Society**

*DuPont Environmental Education Center*, Wilmington, DE

#### **School programs**

Specific connections with Delaware Science Content Standards including coding for Standard, Strand, and Statement at each grade level are available by request. Contact [Lesely@delawarenaturesociety.org](mailto:Lesely@delawarenaturesociety.org) for more information or to register. Please visit the DNS website for additional courses and information, [http://www.delawarenaturesociety.org/school\\_progs.html](http://www.delawarenaturesociety.org/school_progs.html).

#### Pre-K – 3

##### **Water Wise**

*2 hours, \$6/student*

Discover the properties of water through scientific experimentation and examine the water cycle first hand. Investigate a tidal pond and wetland, test the permeability of different surfaces, and put water to work in a water powered obstacle course.

#### Grades 4-5

##### **Fantastic Fish**

*2 hours, \$6/student*

Meet the many fish of the Christina River and the marsh at DEEC. Study fish anatomy and use body parts to predict what fish eat, how fast they swim and if they are a hunter or the hunted. Use a spinning cast net, reel in fish traps, and dip with nets to try your luck catching fish.

##### **Land & Water**

*2 hours, \$6/student*

Look at the land from the perspective of an osprey, raccoon, and snapping turtle. In the marsh, find evidence of water interacting with the land. Investigate how humans affect soil erosion and deposition.

*continued on next page*

Grades 6 – 8

**Wilmington’s Wetlands and Watershed**

*2.5 hours, \$7/student*

Think globally, act locally to learn what wetlands and watersheds have to do with the quality of our streams and rivers. Test four water quality parameters, investigate point source and non-point source pollutants, and measure biodiversity along the Christina River and its adjacent wetlands.

**Climate Change Science**

*2 hours, \$6/student*

Explore what sea level rise would mean for Wilmington’s Riverfront and survey the aquatic biodiversity of the marsh to learn what’s at stake. Conduct a science experiment that demonstrates the greenhouse effect and examine what you can do to reduce the effects of global climate change.

**Delaware Nature Society**

*Abbots Mill Nature Center, Milford, DE*

**Beach Discovery (PK-1<sup>st</sup> grade)**

*1½ hours, \$4/student*

Explore Slaughter Beach while learning about crabs, sea turtles, and other animals of Delaware Bay. Build with sand, create a sea turtle nest, walk like a crab, and help “sand” turtles get to the water. Program meets at Slaughter Beach. Available May-September.

**Seashore & Saltmarsh (2<sup>nd</sup>-3<sup>rd</sup> grade)**

*2 hours, \$5/student*

Comb the beach, scan the dunes, and explore saltmarsh habitats at Slaughter Beach while discovering the unique plants and animals that live in each area. Learn about conserving these fragile ecosystems. Program meets at Slaughter Beach. Available May-September.

**Beach Ecology (4<sup>th</sup>-8<sup>th</sup> grade)**

*3 hours, \$7/student*

Choose 4 activities to explore the coastal ecosystem: beachcombing, seining, horseshoe crabs, shorebirds, salt marsh, or dunes. Compare and contrast these habitats and the unique organisms that occupy each site. Experience the interactions between shorebirds and horseshoe crabs in the Delaware Bay. Program meets at Slaughter Beach. Available May-September.

To schedule a program, please email [jason@delawarenaturesociety.org](mailto:jason@delawarenaturesociety.org) or call 302-422-0847.

**MARYLAND**

***How Do We Explore?***

Professional Development for Educators of Grades 5-12 provided by NOAA’s Office of Ocean Exploration and Research and the NOAA Ship Okeanos Explorer. The training will take place on Saturday, February 2, 2013, at the National Aquarium, Baltimore. The workshop will run from 8:30am to 4pm. Please see the National Aquarium’s website at [www.aqua.org/learn/teacher-programs/teacher-workshops](http://www.aqua.org/learn/teacher-programs/teacher-workshops) for more information.

## State Rep Reports

### **NORTH CAROLINA**

#### **Bring a workshop from the NC Aquarium at Fort Fisher to you!**

The NC Aquarium at Fort Fisher would like to offer our “Not too Hot to Handle” educator workshop focused on climate change education in your back yard. All lessons, activities, and materials provided include up to date information on climate change, and are correlated to the NC Essential Standards. Are you interested in bringing a workshop to your school, district, or county? Please contact Andy Gould at [andy.gould@ncaquariums](mailto:andy.gould@ncaquariums), or call (910) 458-8257, ext. 236.

#### **Graduate courses available in North Carolina through the American Meteorological Society**

DataStreme Ocean explores the ocean in the Earth system with special emphasis on the 1) internal properties and workings of the ocean, 2) the interactions between the ocean and other components of the Earth system; and 3) the human and societal impacts on the ocean and the response to those interactions.

DataStreme Ocean is a 13-week course that uses electronically transmitted data and learning materials combined with Study Guide readings and investigations. Free graduate credit in science is offered through the State University of New York at Brockport. This course is delivered online in weekly installments; all materials and texts are provided at no cost to participants; and there are two required face-to-face meetings (here in NC) each semester.

Participants are expected to attend both face-to-face meetings! The first meeting will be in Raleigh on a Saturday or Sunday in January. The final course meeting will be in Duck on a Saturday in April. A mid-course meeting might be scheduled, but we haven't done that in several semesters.

There are still spaces available in the Spring 2013 semester of DataStreme Ocean! The only cost to you is your time — time to complete the weekly investigations and time to attend the meetings (plus whatever costs are involved for travel to the meetings).

Go to: [www.ametsoc.org/amsedu/DS-Ocean/index.html](http://www.ametsoc.org/amsedu/DS-Ocean/index.html) for an application (click on “Apply for DS Ocean!”) and additional information. Download, print, and complete the application and mail it ASAP to me at the address below.

If you're interested in DataStreme Ocean or if you have additional questions, contact Terri Kirby Hathaway at [terrikh@csi.northcarolina.edu](mailto:terrikh@csi.northcarolina.edu) or at 252-475-3663, ext. 32.

**Professional Development Opportunities offered through the Association of Zoos and Aquariums** (*note: you do not have to be a member of AZA to attend, however priority is given to those associated with an AZA accredited facility.*)

#### **Conservation Education: Effective Program Design**

Feb. 4-9, 2013 at Oglebay Resort, Wheeling, WV.

Conservation Education: Effective Program Design provides zoo and aquarium educators with a comprehensive overview of how to design, develop, implement and evaluate education programs and exhibit interpretive elements. Course materials include the latest research and trends in informal science education.

To learn more or register, visit <http://www.aza.org/CED.aspx>.

## State Rep Reports

### VIRGINIA

#### Mini-conference Update

Virginia will be holding its mini-conference in the spring, most likely in May or June. This year we are planning to go paddle boarding in Rudee's Inlet, followed by dinner. We are also looking into getting together several times throughout the summer, by attending a Richmond Flying Squirrel's baseball game, meeting at Busch Gardens and going to watch a sea turtle necropsy. Stay tuned for further information.

#### Upcoming workshops:

##### *How Do We Explore?*

Professional Development for Educators of Grades 5-12 provided by NOAA's Office of Ocean Exploration and Research and the NOAA Ship Okeanos Explorer. The training will take place on January 26, 2013 at Old Dominion University in Norfolk, Virginia.

Join NOAA OER Facilitator for the latest professional development opportunity for educators based upon the voyages for NOAA's new ship and America's ship for Ocean Exploration, the *Okeanos Explorer*. This offering introduces the second volume of the *Okeanos Explorer* Education Materials Collection, **How Do We Explore?** Topics include searching for anomalies, selecting sites for exploration, communication tools, telepresence technology, mapping techniques, water column study and operating remotely-operated vehicles. This course contains inquiry-based lessons for all grade-levels, and facilitated online reflective conversations about how we approach the study of our largely unexplored ocean. Educators who attend the full day will receive a \$50 stipend. Each participant will receive Volume 1 of the Okeanos Explorer Education Materials Collection, *Why Do We Explore?*, materials related to activities presented during the workshop, a NOAA Ocean Exploration Certificate of Participation, continental breakfast, and lunch. Registration Deadline is January 4, 2013. To register, please contact: Jennifer Kodolitsch at 757.664.1044 or [jennifer.tabor@norfolk.gov](mailto:jennifer.tabor@norfolk.gov).