From the Captain’s Quarters

What a busy and rewarding year!

Last winter, MAMEA’s State Representatives and their collaborators provided one to two-day Mini-Conferences that offered members unique marine education opportunities. North Carolina held their gathering at the NC Maritime Museum in January, Virginia’s took place at the Virginia Aquarium and Marine Science Center in February, and in March, Maryland offered theirs at the National Aquarium in Baltimore. In all, over 160 educators participated in MAMEA mini-conferences, many of them as first-time MAMEA members.

In late March, the Board held a productive meeting, with an agenda nearly 20 items long. This year’s Association initiatives include revamping Board member duties, improving MAMEA representation at NMEA, streamlining elections and improving communications with members. At this Fall’s MAMEA meeting, the membership will be asked to vote on changes that will bring some of these projects to fruition.

MAMEA was well represented at the annual NMEA Conference, held June 27-July 2 in Monterey, California. And, our own Past President, Adam Frederick (2007), began his year as President of the national association.

Now – in just a few weeks – the jewel in the crown of MAMEA annual activities! Our annual Fall Conference takes place October 2-4, in Lewes, Delaware and you won’t want to miss it! Conference Chair and President-Elect Tami Lunsford has organized a weekend filled with simulating activities and presentations, and lots of opportunities to network with fellow marine educators. An added bonus is access to Delaware’s Coast Day – an annual tradition and one of the Mid-Atlantic’s biggest marine-focused events. Be sure to register for the conference that combines fun, camaraderie, and quality professional development at a very reasonable price.

Carol Hopper Brill  
MAMEA President 2009

An Evening in Doc Ricketts’ Cannery Row Lab
by Terri Kirby Hathaway, John Steinbeck Fan

Dateline: NMEA Conference, Monterey, CA

It was a beautiful evening on Cannery Row. We knew it was going to get even better. But let me go back to the beginning of this particular story.

The auction is a traditional part of each and every National Marine Educators Association’s (NMEA) annual conference. Silent auction, bag auction, live auction … collectively, they serve as a fund-raising event for NMEA. Conference scholarships come out of that pool of money – so we all benefit from the NMEA auctions in one way or another.

The live auction tends to have higher dollar, more valuable items available for one to wish for, dream about, bid on, etc. And this year’s auction was no exception. A beautiful hand-stitched quilt made by Jane Breidahl of Australia was purchased by former MAMEA member Lundie Spence. A metal and glass “dancing marlin” end table was “won” by MAMEA member Bill Martin. Former North Carolina teacher Mandi Young had the high bid on a one-of-a-kind NMEA surf board featuring 2009’s hand-shaped logo.

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The MAMEA Board of Directors meets twice a year. If you are interested in serving on the Board, please visit http://www.mamea.org and click on “Board.”

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From the Editor
Hello MAMEA! I hope you are enjoying the Summerish 2009 digital Masthead. Thank you to those members (and a few soon-to-be members!) for contributing to this edition. In the following pages, you will notice numerous references to the upcoming MAMEA conference in October, and I hope you are as excited as I am to partake in the fun (and learning) that is the annual conference. It is by far my favorite conference of the year! Realizing that budgets are tight, Conference Chair Tami Lunsford has done her best to keep cost lows, but still maintain the education and entertainment value the conference offers. I hope to see you all there. In the meantime, enjoy what’s left of summer and thanks for reading The Masthead!

- Chris Petrone

To submit an activity, lesson plan, event, or other feature, please email the piece to petrone@vims.edu.

About the Cover Ship
Each issue of The Masthead features a different Mid-Atlantic sailing ship in the cover banner. This issue’s ship is the Schooner Sultana.

The Sultana is a detailed replica of a Boston-built merchant vessel that was the British Royal Navy’s smallest schooner. Officially launched in 2001, the Sultana is based in historic Chestertown, on Maryland’s Eastern Shore. Deemed the “Schoolship of the Chesapeake,” it hosts almost 5,000 students for educational programs each year. Sailing between April and November, the Sultana hosts an extravagant downrigging festival each fall.

Visit the Schooner Sultana at www.sultanaprojects.org.

The Masthead is the official newsletter of the Mid-Atlantic Marine Education Association (MAMEA) and produced quarterly with support from:

MAMEA is one of 17 regional NMEA chapters. To become a member of NMEA, please visit www.marine-ed.org
MAMEA Members to Vote
by Carol Hopper Brill

Last Spring, the MAMEA Board members made progress outlining some important initiatives that we believe will improve Association representation and participation at both the National and regional level.

At the October MAMEA meeting, members will be asked vote on changes to two MAMEA By-Laws that will allow us to:

- institute electronic voting for MAMEA Board members and
- shift our elections to earlier in the year

The Board recommends a YES vote at the coming meeting, Saturday, October 3, at the Virden Center in Lewes Delaware.

For detail of the exact changes, please visit http://www.mamea.org/admin/ByLawChangesVote2009.pdf.

MAMEA Grant Program
by Allison Besch

The MAMEA Educational Project grant program provides funding to classroom teachers and other educators for marine and aquatic education projects.

Two $1,000 grants are available annually. One for formal educators (classrooms, K-16) and one for informal educators (museum, aquarium, zoo, science center, government agency staff). Projects must focus on marine or aquatic topics. Applicants are encouraged to plan innovative projects that conform to the program structure outline found on the website. Any current MAMEA member with at least one year’s membership may submit one proposal per year. Applications are due by September 21, 2009. The funding period is one year from the award date in October.

For more information, please visit www.mamea.org/minigrant.html.

MAMEA Board Initiates New Roles
by Carol Hopper Brill

This year, the MAMEA Board initiated some changes to Board tasks that are designed to improve our chapter representation at NMEA, and to take advantage of the Past President’s experience by assigning some key committee chair tasks to that post. These amendments require changes to the Standing Rules and a Board vote.

- Change MAMEA’s representation at NMEA from a one-year term (currently served by the Past President) to a two-year term, managed by a Committee Chair.
- The Past President position will absorb new duties, serving as the Chair of both the Mentorship and Nominating Committees.

To effect these changes, the Board voted to change related MAMEA Standing Rules. Unlike changes to By-Laws, Standing Rules amendments require only Board approval. Members will not have to vote on the changes that affect the role of the Past President or NMEA representation. You can review these changes at http://www.mamea.org/admin/StandingRulesChanges2009.pdf.

2009 MAMEA Board Nominations
by David Christopher

This year’s slate of candidates is brief, but distinguished. MAMEA members will have the opportunity to vote October 3rd, 2009 at the annual conference in Lewes, DE. This article serves as the official announcement of candidates, as required by the MAMEA bylaws. Nominations will also be accepted from the floor just prior to voting. The candidates are:

President Elect: Ruth Gourley, NC Aquarium at Fort Fisher
Secretary: Kathy Siegfried Fuller, National Aquarium-Baltimore, MD
NC Representative: Amy Sauls, Jones Senior High School, NC
Delaware Representative: John Lunsford, Paul M. Hodgson Vo-Tech High School, DE
Maryland Representative: none at this time

For more information on all the MAMEA board positions, please visit http://www.mamea.org/admin/BoardOfficerDuties.pdf.
Join us in Lewes, Delaware, October 2-4, for the 2009 MAMEA Conference: New Inspiration in Marine Education. This year’s conference highlights the latest marine research in the Mid-Atlantic region and how educators can use the new information in their classrooms and programs. We kick off the conference on Friday afternoon with optional field trips: kayaking and a tour of the Dogfish Head Brewery; a nature walk and beachcombing trip at Delaware Seashore State Park; or deep sea fishing. Friday evening, the full conference begins with dinner and the keynote address by Gary Kreamer from the Delaware Aquatic Resources Education Center and creator of the Green Eggs & Sand curriculum on horseshoe crabs.

Saturday morning begins with a share-a-thon featuring free educational resources and materials, followed by three outstanding plenary addresses on the latest marine research. Doug Levin from NOAA and Art Trembanis from the University of Delaware (UD) demonstrate their use of ROVs and AUVs in both research and education. Dr. Matt Oliver (UD) discusses his research using ocean observing systems, and Dr. Rodney Cluck, the Chief of the Branch of Environmental Sciences, Minerals Management Service (MMS), focuses on offshore renewable energy. Each presentation is followed by breakout sessions so educators can brainstorm how they can use the new information in their classrooms and programs. Saturday afternoon includes presentations from educators across the Mid-Atlantic with lessons, projects, and ideas. Presentation proposals are being accepted now! The evening’s events include dinner, a fun-filled auction and a party complete with DJ.

Finally, Sunday, October 4, is the University of Delaware’s Coast Day. Coast Day is a free “fun, educational event for the whole family” that includes tours of the UD research vessel and labs, hands-on activities, food, and more.

The entire weekend is sure to be filled with marine science and education opportunities. Registration costs range from conference-only at $75 to $210, including all meals and accommodations. See the MAMEA website (www.mamea.org) to register today!

Conference scholarships are available! Visit www.mamea.org/conf.html for more information!
Extend your stay!
Meet marine scientists, sample seafood, at Coast Day
by Lisa Tossey, Delaware Sea Grant

Attending the annual Mid-Atlantic Marine Education Association conference in Lewes this year? If so, consider extending your visit to experience the University of Delaware’s 33rd annual Coast Day! Held on the same campus as the conference, Coast Day is a unique opportunity to connect with Delaware’s marine and coastal resources.

This year’s theme, “Climate Change and Our Coast,” highlights how UD researchers are tackling many of the region’s and the world’s toughest environmental issues.

Coast Day is a wonderful educational event. Visitors can tour ships, meet laboratory scientists who share their research, try hands-on activities, and attend lectures on a range of topics. There are also opportunities to sample local chefs’ seafood recipes through the Crab Cake Cook-Off or vote for your favorite chowder in the Seafood Chowder Challenge.

There are great activities for families too. Children can explore the events of the day by going on a treasure hunt that allows them to search for answers to questions about the environment and Coast Day exhibits. Children especially love the opportunity to meet marine animals such as horseshoe crabs at the critter touch tanks.

The event, which is sponsored by UD’s College of Earth, Ocean, and Environment (CEOE) and the Delaware Sea Grant College Program, has an environmentally friendly focus. Guests have the opportunity to sample seafood cook-off entries using biodegradable utensils, park their bikes on campus, and purchase reusable tote bags.

The free, family-friendly event takes place Sunday, Oct. 4, from 11 a.m. to 5 p.m., rain or shine. For more information about Coast Day visit www.decoastday.org or call (302) 831-8083.

To learn more about Delaware Sea Grant, visit www.deseagrant.org. For more about CEOE, visit www.ceoe.udel.edu.
NMEA Update
by David Christopher and Carol Hopper Brill

Hello MAMEAns,

It was exciting to see so many of you at the 2009 National Marine Education Association's conference in Monterey, California. It was a wonderful week of exploring California's aquatic habitats while getting reaquatinted with old friends and meeting new ones.

NMEA's annual board meeting was held on Saturday, June 27 at the Monterey Bay Aquarium. This was a great meeting with much of the conversation centering on how NMEA can reach out to diverse audiences. In addition, the NMEA Ocean Literacy committee announced that after much work the Ocean Literacy Scope and Sequence had been completed.

The Mid-Atlantic chapter made quite a showing at this year’s annual NMEA Conference. More than twenty-five MAMEAns attended the national gathering. MAMEA members and Mid-Atlantic marine educators were involved in the conference at several levels. We delivered more than eight concurrent session presentations and posters. We manned the Bridge website exhibit, which always garners national interest, and our busy folks coordinated or contributed to seven committee meetings. MAMEA sponsored a successful NMEA Auction basket featuring specialties from our region. And, long-time MAMEA member, Adam Frederick (President 2007) began his 2009-2010 term as NMEA President.

In the next few months you will also hear about a new initiative in which NMEA and its regional chapters will be participating in conjunction with Consortium for Oceanographic Leadership. Keep an eye out on this space for upcoming information.

Finally, it's never too early to start planning for next year's NMEA conference which will be held in Gatlinburg, Tennessee on July 18-23, 2010 (see ad on page 12).

MAMEA Conference Auction Update
by Ruth Gourley

Planning on coming to the MAMEA conference in Lewes this year? Please consider donating something to the annual auction! Everything from fishy printed gear to resource books, even yellow submarines will be accepted! Check your classrooms and your closets for fabulous finds for the auction. Consider it a green way of helping your fellow members by reusing (or regifting) your stuff. All proceeds go to the MAMEA scholarship fund to help members get to our conferences. Please see the auction donation form here. And remember while you are at the auction, bid high and bid often!

Editor's note: Pants being worn at the time of auction will not be up for bid.

MAMEA TechCorner
by Chris Petrone

Even if you have not visited the largest internet video depository and one of the most visited sites on the internet, YouTube, you have heard about it; you may even have an account complete with “Favorites.”

What are in my YouTube “Favorites?” Mostly clips from the show Scrubs and those Pedigree dog food commercials that take place in the animal shelter.

But have you ever posted your own educational videos to the web, or had your students upload their original work?

Producing and editing videos can be a great learning tool for students of all ages. With high quality digital cameras and camcorders readily available for under $200, anyone with a computer and a little creativity can create valuable educational content.

Using software such as iMovie and Movie Maker, students can edit clips, add or delete soundtrack and incorporate transitions and special effects with minimal effort and without previous experience.

Is your budget shuttering in fear at the sound of all this equipment and software? Fortunately, grants are available to help you purchase these technologies for educational use, including the Toshiba America Foundation and the Bill & Melinda Gates Foundation.

For tips on creating video for education, visit eSchool News or Dartmouth’s Student Video Project website.

Good luck and let those creative juices flow!
MAMEA Communications Update
Can You Hear Us Now?
by Carol Hopper Brill

Our electronic communications initiative of 2009 has several objectives. We want to improve communications with MAMEA members, to make sure everyone is getting the news of events and opportunities, while moving toward paperless media.

Members can rely on the Association webpage to have the most current information about any MAMEA events, programs, and opportunities. Be sure to check in regularly for Conference information, scholarship or grant applications. The Board’s contact information is also posted here, along with lots of other information about your Association.

To contact you directly, the Board uses the MAMEA email Communications List. When you join MAMEA, you are automatically added this list. Only MAMEA Board and Committee members have access to it and use it for official Association announcements. All of your important MAMEA updates, newsletters and program announcements should be reaching you via this list. If you are not getting our messages, it means we don’t have a working email address for you. Please contact Secretary Kathy Fuller with your best year-round email so you can keep up with MAMEA activities and benefits.

Member to Member…so what’s to talk about?
Members have two on-line venues for keeping in touch with one another; the MAMEA email discussion list and our Facebook page.

The email discussion list is a great place for members to exchange marine education questions and answers, share new resources or opportunities of interest in the Mid-Atlantic. This voluntary email list includes both members and non-members. It is like NMEA’s and Bridge’s Scuttlebutt, but focused on our Mid-Atlantic region.

Fall House Cleaning: We are getting ready to clean-out the cobwebs and dead emails from this list. If you want to stay on the MAMEA email discussion list, please check-in at www.mamea.org/communications.html by October 31st. All other addresses will be deleted. You can always sign-up or remove yourself from the list – it’s easy using the instructions on the MAMEA website.

MAMEA’s Facebook page is a fun way to keep in touch and see what other MAMEA members are doing. Official announcements are posted there, but you can also catch up on marine education activities, resources, and news of fellow MAMEAns that might not appear anywhere else. Social networking can pay off!

MAMEA supports Mid-Atlantic participation in the National Ocean Sciences Bowl
by Carol Hopper Brill

Each year, the Mid-Atlantic hosts three National Ocean Sciences Bowl (NOSB®) regional competitions for high school students, one each in Maryland, Virginia and North Carolina.

As many as sixteen teams participate in each regional competition. In this academic quiz-bowl competition, students answer multiple-choice and short-answer questions, as well as longer analytical questions drawn from scientific and technical ocean science disciplines.

NOSB regional competitions within the Mid-Atlantic region include:

- The Chesapeake Bay Bowl – March 6, 2010. This contest draws schools from Maryland, DC, “beltway” Virginia, as well as Delaware. For information, contact Coordinator Staci Lewis chesapeakebaybowl@hotmail.com.
- Virginia’s Regional Competition is the Blue Crab Bowl – March 6, 2010. It is presented by Virginia Institute of Marine Science and Old Dominion University. Visit the Bowl website at www.vims.edu/bcb or contact Carol Hopper Brill at chopper@vims.edu.
- North Carolina’s Blue Heron Bowl – February 6, 2010 – is hosted by the UNC-Wilmington. Check the NOSB website for the NC Bowl Coordinator.

Competition rules and details, practice questions, recommended resources and tips on how to prepare are available on the NOSB® website, www.nosb.org. And, check out the abstract and minutes from a NMEA round table titled, Preparing a Team to Excel at the National Ocean Sciences Bowl, also available on their website.
Species Spotlight

**Common group name:** Mantis shrimp

**Scientific name:** *Squilla empusa*

**Range:** Cape Cod to the Gulf of Mexico; Coast of Brazil; Mediterranean Sea

**Habitat:** Multi-entrance burrows in inter- and subtidal zones out into deep water; Favors muddy sediment

**Size:** Can grow to 30 cm. long (8-10 inches)

**Diet:** Soft bodied animals such as shrimp, shrimps, small fish

**Field identification:** brown in color; iridescent green eyes; six sharp spikes on telson; eight pairs of appendages; powerful claws for feeding and defense

**Interesting factoids:** nocturnal; see polarized light and four colors of ultraviolet light; are a delicacy in some cultures; no commercial value in U.S.; their strike is one of the fastest movements in Kingdom Animalia, taking less than 8 milliseconds; solitary and highly aggressive; can serve as a pollution indicator; studied by scientists interested in understanding the visual system; commonly taken in shrimp trawls

**Conservation status:** Not threatened in the U.S., very common

**Additional Resources**
- University of Michigan Museum of Zoology, [Animal Diversity Web](http://animaldiversity.org)
- Lippsen and Lippsen, *Life in the Chesapeake Bay*

Pearls of the Lynnhaven

by Helen Kuhns, Lynnhaven River NOW

Lynnhaven River NOW has a watershed full of Pearls. These are not your typical pearls—they are Pearl Schools. The City of Virginia Beach boasts 23 Pearl Schools for 2009, the most schools to achieve the award since its first round of awards 3 years ago. A Pearl School is exceptional in its environmental education program.

Recognizing that teachers in the public and private schools are often our best stewards and advocates, Lynnhaven River NOW launched the Pearl School program to encourage and support the efforts of these teachers and schools. Through the Pearl School Program, schools earn points by carrying out educational and service programs that teach environmental concepts. These include teaching an understanding of our watershed, its unique characteristics and its problems, and encouraging students to take an active role in tackling some of our environmental challenges through service projects in their schools and in the community.

Lynnhaven River NOW encourages teachers and schools to expand their environmental focus by providing support and training opportunities. The Pearl School designation encourages action within the schools, especially when combined with workshops and classroom programs that provide teachers the resources they need to implement programs. These partnerships offer a win-win situation, providing schools with additional resources and giving our students a personal connection to their local environment, the Lynnhaven River and the Chesapeake Bay.

For a list of the school receiving the Lynnhaven River NOW Pearl School Award, please visit our website [www.lrnow.org](http://www.lrnow.org). Lynnhaven River NOW is a small grassroots environmental organization dedicated to improving water quality in the Lynnhaven River. Through community partnerships and education, Lynnhaven River NOW works to reduce pollutants in the legendary Lynnhaven River and restore critical habitat including oyster reefs and salt marsh areas.
MAMEA Abroad

Studying Costa Rica’s Environment and Culture with Toyota
by David Wehunt, Soddy Daisy High School, Soddy Daisy, Tennessee

For two weeks in April, I was one of 25 teachers selected from around the country to explore the Florida Everglades and Costa Rica with the Toyota International Teacher Program. Before I describe the trip let me describe the Toyota International Teacher Program. Sponsored by Toyota, the program is administered by the Institute of International Education (IIE). The purpose is to take twenty-five to thirty teachers to Costa Rica, the Galapagos, and other locations with the idea of improving their knowledge of the sites’ culture and environment. The expectation is that the teachers will take their international experience back to their classroom, school, school district, and community to help those people make connections to the people and policies of the countries they visited.

We were flown into Miami on a Saturday and welcomed by representatives of Toyota and IIE at the Intercontinental Miami Motel with lunch. That evening we met each other, were given an overview of the program and participated in an activity simulating the Toyota Production System. The next day, after a lecture by Dr. Tom Dunne (one of four on sustainability given during the trip) we went to the Florida Everglades. There we met with the park superintendent and members of his staff, explored the Anhinga Trail and a cypress dome, and learned new activities for use in the classroom. While exploring the park we saw anhinga (a type of bird, seen at left) catch and eat fish, many alligators, and met a water moccasin up-close and personal.

The next day we left for San Jose, Costa Rica.

The first three days we stayed at the Aurola Holiday Inn in San Jose while we explored the city learning about the history and culture of Costa Rica. While in San Jose, we visited the Jade Museum, Peace University (a United Nations University that draws students from all over the world and where the Peace Monument is located), and Nature Air, a certified carbon-neutral airline. At the U.S. Embassy, we learned about the United States’ relationship with and role in Costa Rica. We experienced fine dining in a number of restaurants including one that serves organic food grown on its own farm. We also had three more lectures about sustainability, and how environmental issues can affect world peace.

We left San Jose on Thursday with two stops along the way to the Earth University. We visited Guayabo National Monument, an archeological site of a people who lived there for 3000 years, but who disappeared prior to the arrival of the Spanish. Then, we visited a working replica of an old sugar mill, had lunch and watched how sugar cane becomes sugar.

The Earth University selects students from over twenty countries and teaches them how to develop businesses in tropical environments. During our 3-day stay we visited two local public schools, grades 5-11, and had lunch with teachers from each school. Surprisingly, these teachers have the same problems with students that we experience in America. We went bird watching, visited a banana plantation on campus, a paper-producing plant that uses the banana cast-offs, and the campus farm, which is totally self-sustaining. They even use pig waste to generate methane and use it to fuel the generator that operates the farm equipment, and then clean the waste water before releasing it back into the local streams.

The highlight of the Earth University visit was the homestead experience. We were we divided into seven groups and stayed on local farms. Our farm, Buenavista, is self-sustaining and features a farmhouse that is smaller than my classroom. We spent about 20 hours there and worked with the farmer on the land. It was a great experience.

continued on next page
Mid-Atlantic Marine Education Association

Toyota International (con. from page 9)

After leaving Earth University we went on to Arenal volcano—one of the 10 most active volcanoes in the world—for two nights. There, we enjoyed a luxurious stay at the Kioro Motel. In the surrounding rainforest, we ziplined through the canopy. The longest line was half a mile long and took 55 seconds to traverse. Lectures on sustainability at the Kioro Motel added to those we received at Earth University.

Our next to last stop was Monteverde, high in the mountains and home of the Monteverde Cloud Forest at 5000 feet above sea level. Based at the El Establo Motel, we took both day and night hikes in the cloud forest, visited the Cloud Forest School (a K-11 school), enjoyed a lecture by Mark Wainwright, who has published a number of books on the flora and fauna of the cloud forest. We worked on projects with the Monteverde Institute and met with a panel of local leaders about ecotourism and its impact on Monteverde.

Finally, we returned to San Jose, visited Purdy Motors, the local Toyota plant and dealership, and had our final dinner together at Bacchus, a very nice restaurant. We departed in different groups the following day, which was a sad experience as we had become close over the two weeks we were together.

The many rainforest animals and plants we saw added to the excitement of our trip. In Costa Rica we saw a sloth on the ground, many hummingbirds, iguanas, howler monkey, macaws and other parrots, vultures, many insects and a wide variety of plants, including several orchids. We visited coffee and banana plantations, sugar cane fields and saw cocoa trees. The list goes on!

There is just not enough room to talk about my fellow participants individually. They are an outstanding group of educators, and I am proud to have been a part of this cadre. Our group leaders from IIE, MarDestinee Perez and Mike McCartt, were great leaders who kept us on track. Rhonda Glasscock of Toyota was a steadying force. Vicky Carazo Alfaro of Green Magic Tours and our two guides, Julio and Isabel, taught us well and took care of us when as if we were their own. All in all, it was a great experience and I highly recommend becoming a Toyota International Teacher!

MAMEA Educator Awards

by Allison Besch

Each year, MAMEA presents two awards to educators nominated by their peers. One award honors a formal classroom teacher, K-16. The other acknowledges an educator in an informal setting, such as museum, aquarium or employees with government agencies. Submissions for the 2009 awards closed on August 31, 2009. The winners will be announced at the conference in October. Thanks to everyone who participated. To nominate someone for a 2010 MAMEA award, please visit www.mamea.org/awards.html for the application, guidelines, and eligibility requirements.

MAMEAn Selected as Volunteer of the Year!

Congratulations to North Carolina Sea Grant’s marine education specialist, Terri Kirby Hathaway, for receiving the 2009 Volunteer of the Year award from the Monitor National Marine Sanctuary. You can read more about Terri’s work with the Sanctuary and the award here.

Terri and proud husband, Kent, joyfully pose after Terri was awarded Volunteer of the Year at the Washington, D.C. ceremony. Congrats Terri! Photo from: www.ncseagrant.org
Ed Ricketts’ Lab (con. from cover)

I spent the evening watching and waiting – I knew that the item I wanted would come up near the end of the auction. Finally, the next-to-last item: a private cocktail party for 10 at Ed Ricketts’ laboratory on Cannery Row! I was thinking that if I purchased this treasure, we would come back to Monterey in the future, schedule the party, and invite some friends from San Francisco, Monterey, and the surrounding area. I soon found out that the private cocktail party had to happen the very next evening, but, I still wanted that event!

The bidding was fierce with several auction paddles popping up again and again. Groups and individuals dropped out as the bidding continued and the ante climbed. I, however, kept going. A number of people approached me offering financial assistance if they could be included in the party, so I continued to bid. Pretty soon, it was down to just two bidders.

And I emerged triumphant!

The next evening, our group of eight, plus the second highest bidder and his friend (who paid $200 for the privilege) met in front of Doc Ricketts’ lab at 800 Cannery Row. Rita Bell, Kathy McElvoy, and Linda Hagelin from Monterey Bay Aquarium’s Education Department were our hostesses. After having our photo taken on the steps to the lab, we entered the lab in awe and wonder!

Susan Shillinglaw, a Steinbeck scholar from UC Santa Cruz, and Jim Conway, city historian for Monterey, were there to share their knowledge with us while we enjoyed heavy hors d’ouerves and some nice California wines. We wandered through the lab, out onto the back deck overlooking Monterey Bay, where we actually climbed into Doc’s holding tanks. We commented, “It’s OK, we’re marine educators!”

Our time in Doc Ricketts’ lab was delightful, and it made us want to go back and read some Steinbeck! In fact, I’m reading The Wandering Bus right now and I can see Between Pacific Tides on my bookshelf!

For additional details about the evening in Doc Ricketts’ lab, ask any of the attendees, they’ll be glad to elaborate! Attending this fine event were the following: MAMEAns Vicki Clark (VA), Kent Hathaway (NC), Terri Kirby Hathaway (NC), Beth Jewell (VA), Bill Martin (NC), and JoAnne Powell (NC); former MAMEAn Susan Haynes (RI); and MAMEA wannabe Barbara Walton-Faria (RI). Oh yes, and the second highest bidder Peter (TX) and his friend Michele (GA).

History lesson: Ed Ricketts

- Edward F. Ricketts (1897-1948) was a coastal naturalist who founded a marine biological supply company on what is now known as Cannery Row in Monterey, CA. He spent his time collecting marine specimens since his company, Pacific Biological Laboratories, sold preserved specimens and prepared slides to schools, laboratories, and research institutions.

- Ricketts met author John Steinbeck in 1930, before either of them was very well-known. They traveled together from the central coast of California down the Baja Peninsula, and into the Gulf of California. When they returned from that trip, they documented their six-week expedition detailing the marine life and habitats they observed. The Log from the Sea of Cortez is Steinbeck’s narration of the journey.

- Steinbeck loosely based some of his most memorable characters on Ricketts, including Doc in Cannery Row and Sweet Thursday and Jim Casy in The Grapes of Wrath. Although Ricketts never completed a degree, many people called him “Doc” after the character in Steinbeck’s novels.

- Ed Ricketts is chiefly known for his 1939 book Between Pacific Tides about intertidal life along the Pacific coast. His life came to an abrupt end in 1948 when a passenger train hit his car while he was crossing the railroad tracks in Monterey.

- Ricketts’ lab still stands on Cannery Row with his original holding tanks in the back. It is currently owned by a group of private citizens; it will be taken over by the city of Monterey in the near future. The building has no definite future.

Guests to Ricketts’ lab sit in concrete holding tanks found behind his lab. Photo courtesy of Terri Kirby Hathaway.
Bringing NOAA Science into the Classroom
by Ann Marie Chapman

The Environmental Science Training Center (ESTC) provides dynamic and in-depth hands-on training experiences for environmental educators from diverse backgrounds. ESTC is housed at the NOAA Chesapeake Bay Office’s satellite location at the Cooperative Oxford Laboratory on Maryland’s Eastern Shore. Teacher trainings at the Center integrate NOAA’s technical expertise with resources and educational materials. The ESTC facility also serves as a site where teachers and their students can conduct independent research under the guidance of NOAA scientists. Real-world problems and scenarios are used as case studies in order to give the participants a sense of connection to their local watershed community.

The Center is unique among existing environmental education facilities in the watershed because of its intentional ties to the work of NOAA, the Cooperative Oxford Lab, the Maryland Department of Natural Resources, and the Maryland State Department of Education. In recent years, the Center has been expanding to take on a more “virtual” nature by exporting its high-quality programming to other parts of the watershed.

This past June, an AUV (autonomous underwater vehicle) workshop was held in Annapolis for educators and researchers. Scientists were able to share their application of AUVs in the field, and educators gained information on the numerous possibilities for AUVs in the classroom. Doug Levin, a scientist and educator with the NOAA Chesapeake Bay Office, coordinated the AUV workshop.

“Educators had the opportunity to mingle with the professionals so they could learn about AUVs and explore ways they might integrate this technology into their classroom,” Levin reflected.

The NOAA Chesapeake Bay Office, with its resources and technical expertise in coastal and marine science, is in a position to bring technologies such as AUVs to the educational community.

The ESTC provides a gateway for federal and state efforts in the Chesapeake Bay to transfer real, tangible educational products to both formal and informal educators. Various workshops are offered at the Center and around the watershed to empower educators in translating science for their classrooms. Past workshops have included diverse scientific topics, including AUVs and ROVs (remotely operated vehicles), phytoplankton monitoring, Build-a-Buoy, submerged aquatic vegetation, oyster aquaculture and weather.

Workshops are in a constant state of development! To find out when and where an ESTC workshop might be coming to a location near you, please contact Doug Levin at Doug.Levin@noaa.gov (for Maryland opportunities) and AnnMarie.Chapman@noaa.gov (for Virginia opportunities). We look forward to seeing you in the field!

Save the Date! Plan Now!
July 19-23, 2010
National Marine Educators Association
Annual Conference
*Within driving distance of the Mid-Atlantic
*Scholarships available
www.nmeaweb.org/gatlinburg2010/
Masthead Resource Library

- **MAMEA presentations at NMEA2009** - Handouts and PowerPoint presentations are available in pdf format of the MAMEA members’ concurrent sessions at NMEA2009 in Monterey, CA. To access these resources, please visit [www.mamea.org/docs/MAMEAatNMEA09.pdf](http://www.mamea.org/docs/MAMEAatNMEA09.pdf). For handouts and presentations from other NMEA2009 sessions, please visit [http://itconf.mbayaq.org/nmea2009/Program.htm](http://itconf.mbayaq.org/nmea2009/Program.htm); click on the session and you will find presenter information, including contact information and an abstract of the session. If resources are available for a session, they will be hyperlinked above the abstract.

- **Scotch Bonnet is online** - NC Sea Grant’s marine education newsletter, the *Scotch Bonnet*, will move online beginning with the fall issue of 2009. They will continue to produce three issues per year. Online issues will be accessed through a direct url or through a link at [www.ncseagrant.org](http://www.ncseagrant.org). If printed issues are more your style, each issue will be available as a portable document file (.pdf) for downloading and printing. To keep up with what's happening in marine education in our state, send your email address to ScotchBonnet@ncseagrant.org and you’ll receive a message when the newest issue is available on the NC Sea Grant web site!

- **JOIDES Resolution** - Deep Earth Academy ([http://www.deepearthacademy.org](http://www.deepearthacademy.org)) develops programs and materials based on authentic data from research expeditions aboard the magnificent 470’ JOIDES Resolution (JR), the world’s most exciting Earth and ocean science research vessel! Their vision of *Teaching for Science, Learning for Life™* will introduce you to the ship, the nature of science, and the people who make it happen through a multidisciplinary, standards-based, hands-on approach. They invite upper elementary through undergraduate faculty and students to come aboard and join the fun at [www.joidesresolution.org](http://www.joidesresolution.org)! And this fall win a visit from the JR’s crew by entering the J-aRt Contest. See website for details.

- **Free NC Excursions** - Carolina Ocean Studies is conducting free three-hour marine education cruises to Masonboro Island and Shackleford Banks in October. Activities include marsh and beach explorations, tidal flat studies, fishing and crabbing. Wildlife abounds! Both programs are free for NC teachers and they are welcome to bring up to 4 guests. For more information visit [www.carolinaoceanstudies.com](http://www.carolinaoceanstudies.com).

State Rep Reports

**NORTH CAROLINA**

The North Carolina Maritime Museum
The NC Maritime Museum education department underwent several personnel changes this year. Longtime MAMEA members, Jeannie Kraus and JoAnne Powell both announced their retirements in December 2008 and June 2009 respectively. Jeannie and JoAnne have each given over 30 years of service to the museum and have shaped the education department into what it is today. Patrons who miss their expertise and humor should check upcoming calendars for special appearances in field programs starting this fall. The department would like to welcome Laurie Streble as Associate Museum Curator. Laurie came to the museum in July 2009 and will be coordinating public programs for the museum. She has previously worked as Outreach Coordinator at the NC Aquarium at Pine Knoll Shores and holds a B.A. in Biology from Allegheny College in PA.

The annual museum Calendar of Events can now be found as a pullout section of the museum’s newsletter, the *Waterline*. Please pick up a copy of the *Waterline* today for the latest public programs and special events at the museum. This fall, visitors can enjoy a variety of activities including nature trips to Rachel Carson Reserve & Shackleford Banks, a taste of local marine delicacies at the new Maritime Seafood Dinner Series, and can be tricked and treated by Fright Night at the Museum. Free museum lectures will feature the latest on modern piracy, the archaeology of the *Queen Anne’s Revenge*, and an investigation of hurricanes, nor’easters, and tornadoes in the Graveyard of the Atlantic. For more details and information, visit [www.ncmaritimemuseum.org](http://www.ncmaritimemuseum.org) or email maritime@ncmail.net.

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N.C. Report continued

Luna - the Albino Alligator at NC Aquarium at Fort Fisher
After much anticipation and hard work, the NC Aquarium at Fort Fisher is opening its new albino alligator exhibit this summer. Come meet Luna, the Aquarium’s newest resident. Aquarium staff will be on hand to answer questions and share the albino alligator’s story throughout the day, every day. The Aquarium acquired this rare jewel for its collection in February. Construction for her permanent home in the Cape Fear Conservatory began shortly afterward. Built in-house by Aquarium staff, the albino alligator exhibit features a deck and viewing panel. A six foot tall, stainless steel “phantom” mesh barrier surrounds the exhibit, although it is largely hidden by native vegetation. Obtained from St. Augustine Alligator Farm in Florida, this alligator originally came from a nest in Louisiana. Eggs taken from a specific nesting location resulted in a small number of albino hatchlings for many years. Although the parents weren’t white, they carried the recessive gene for albinism which resulted in approximately 25% of their offspring being albino. Left alone in the wild, the albinos would not survive. Less than 50 albino alligators are known to exist in the world. Come watch Luna grow as a new permanent exhibit for the NC Aquarium at Fort Fisher.

Albemarle-Pamlico National Estuary Program Division of Natural Resources Planning & Conservation
North Carolina Dept. of Environment & Natural Resources

North Carolina's first Outdoor Classroom Symposium will be held Oct. 23 at the N.C. Botanical Garden in Chapel Hill. The symposium will be co-sponsored by the Albemarle-Pamlico National Estuary Program, the N.C. Office of Environmental Education, the Environmental Education Fund and the Natural Learning Institute at N.C. State University. It will focus on techniques for creating, maintaining and using outdoor classrooms and strategies for integrating outdoor learning into the curriculum. Registration is set to begin in late August at: www.eenorthcarolina.org/outdoor_classrooms_home.htm

Twenty-four 8th–12th grade educators attended an annual teacher institute, “Environment & Health: Making Connections through Water Quality Investigations,” held July 12 – 17 at the Trinity Center in Salter Path, N.C. The week-long institute provided an in-depth investigation of the diverse environmental science, health and civics issues related to water quality in North Carolina. Science teachers were taught to use an interdisciplinary approach to address important water quality issues both in the classroom and in outdoor environments. Hands-on, real world experiences were emphasized. Content and activities were aligned with the N.C. Standard Course of Study. The Albemarle-Pamlico National Estuary Program supported the institute, along with the N.C. Office of Environmental Education, the Environmental Education Fund and the UNC Superfund Research Program.

100% of the educators who attended:
- would recommend the institute to a colleague.
- felt the institute met or exceeded their expectations.
- gave the institute an overall evaluation of very good or excellent.
- believe the materials they received will help increase student environmental awareness, interest and classroom performance.
- feel their content knowledge in environmental education, including general water quality, environmental health and non-point source pollution issues, has increased as a result of the institute.

*Reader’s Review*

So what did you think of this issue of *The Masthead*? Please submit your comments!

If you did not get your program announcement or lesson plan in this issue of *The Masthead*, be sure to submit today for the fall issue (due out in late November). In the meantime, stay tuned to the MAMEA website and Facebook group for the latest news, information, and networking opportunities from the greatest marine education association in the Mid-Atlantic!