From the Captain’s Quarters

Hello fellow MAMEAns,

Thank you to everyone who attended the National Marine Educators Association Annual Conference in Savannah. It was a great week reconnecting with old acquaintances and meeting new ones. It was also a time to honor two of our members who received special recognition at the conference. First, Joanne Powell received the Marine Education Award for outstanding work and leadership in any aspect of marine education. Joanne is the Curator of Education at the North Carolina Maritime Museum and has been an active member, supporter, and former Board Member of MAMEA. Second, our very own current Past President, Adam Frederick of Maryland Sea Grant, has been elected as the NMEA President Elect. Congratulations to both Joanne and Adam!

In addition to the national conference, the past few months have been very busy in MAMEAland. This past March, MAMEA held two very successful mini conferences: one on March 7th and 8th at the North Carolina Aquarium in Roanoke and one on March 14th and 15th at the National Aquarium in Baltimore. Both of these programs were sleepovers for educators that provided them with a fun and educational experience.

MAMEA also held its mid year board meeting in Lake Anna, Virginia on April 6th. The board spent several hours discussing new initiatives and projects we will be working on in the coming months. Some of the things you can expect to see in the near future:

- MAMEA will be updating its website, www.mamea.org, and we will give it a fresh new look.
- MAMEA will be creating promotional items and exhibit materials to help raise the organization’s presence in the region.
- MAMEA will be working to strengthen our relationship with the National Marine Educators Association (NMEA).
- MAMEA has voted to more formally support the regional National Ocean Science Bowl competitions.
- The board will be exploring changes to the MAMEA conference planning process in order to allow members to better plan for upcoming conferences.

Finally, I want to encourage all of our members to attend MAMEA’s 2008 Annual Conference on October 24-26 in Virginia Beach, Virginia. This looks to be an incredible conference, and you can find more details in this issue of Masthead.

I look forward to seeing you all in Virginia Beach!

David Christopher
MAMEA President

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MAMEA Annual Conference

October 24-26, 2008 in Virginia Beach!

(See page 3 for more details.)
High School teachers from the Mid-Atlantic inspire their students and compete for regional and national honors in the National Ocean Sciences Bowl Competitions

The Mid-Atlantic hosts three National Ocean Sciences Bowl (NOSB®) regional competitions, offering high school science teachers an exciting way to engage motivated students. Veteran teacher-coaches credit the National Ocean Sciences Bowl for sparking student interest in sciences and for helping to win administration support for courses in marine-related sciences and technology. The challenge of competition can stimulate and enrich student mastery of science in many marine-related subjects. Moreover, the team structure of the Bowl encourages cooperative learning and problem solving. And, it doesn’t hurt that valuable prizes and experiences are awarded for both students and teachers at both regional and national events.

NOSB regional competitions within the Mid-Atlantic region include:

- The Chesapeake Bay Bowl, with headquarters in Washington, DC. This contest draws schools from Maryland, the DC metropolitan area, as well as selected cities in Northern Virginia and Delaware. For information, contact Coordinator Staci Lewis at chesapeakebaybowl@hotmail.com.

- Virginia’s Regional Competition is the Blue Crab Bowl. Coordinated by VA Sea Grant staff at the Virginia Institute of Marine Science and colleagues at Old Dominion University’s Department of Ocean, Earth & Atmosphere, the Blue Crab Bowl is held either at the VIMS campus or at Old Dominion University. Visit the Bowl website at www.vims.edu/bcb or contact Carol Hopper Brill at <chopper@vims.edu>

- The University of North Carolina-Wilmington hosts the Blue Heron Bowl this year. Contact Coordinator Diane Talley at talleyd@uncw.edu.

All three of this year’s Mid-Atlantic regional competitions are slated to take place on February 21, 2009, at their respective venues. Teachers must register their teams well in advance and most competitions have deadlines in November. Contact the Regional Coordinators above for current information.

At each regional competition, up to sixteen teams are selected to participate. In this academic quiz-bowl competition, students answer multiple-choice, short-answer, and long-answer analytical questions drawn from scientific and technical ocean science disciplines. Topics covered include biology, chemistry, physics, earth and environmental sciences, marine engineering and technology, geography, maritime history, as well as current issues in marine research, economics and policy. Bowl officials and judges manage the matches and rule on answer acceptability. Competition rules and details, practice questions, recommended resources and tips on how to prepare are available on the NOSB® website, www.nosb.org.

JoAnne Powell Honored with National Award

JoAnne Powell, Curator of Education for the North Carolina Maritime Museum, and former MAMEA president and long-time member, has received the 2008 Marine Education Award from the National Marine Educators Association. NMEA’s Marine Education Award is a national competitive award honoring excellence in marine science at the local or national level.

JoAnne was honored on July 23 at a ceremony during the National Marine Educators Association’s annual conference, hosted by the Georgia Association of Marine Education Association in Savannah. Over 400 educators and scientists from around the US and from several other countries were in attendance. Congratulations, JoAnne!
2008 MAMEA Annual Conference
What Do We Know and How Do We Teach It?

WHEN: October 24-26, 2008
WHERE: Virginia Beach, VA
WHAT: Mid-Atlantic Coastal Environments: What Do We Know and How Do We Teach It? At this year’s MAMEA Conference, we turn our attention to the status of our Mid-Atlantic coastal environments and ask “What do students and citizens need to know?” Our guest speakers will provide a status report and identify crucial trends and topics. Through session presentations, we’ll share strategies, examples and best practices for “How do we teach them?”

CONFERENCE REGISTRATION

The early-bird member registration fee of $95 will cover sessions, evening events and meals. Non-member and “a-la-carte” pricing will be available soon.

CALL FOR PRESENTATIONS

Call for Presentations has been sent out. If you are interested in presenting please visit the MAMEA website at www.mamea.org/conf.html. Deadline for submission is September 8, 2008.

CONFERENCE VENUE

Cape Henry Collegiate School
1320 Dam Hill Road
Virginia Beach, VA 23454
Located on a 30-acre campus in a residential area within five miles of the Atlantic Ocean, Cape Henry Collegiate School is a pre-K through 12th-grade, college-preparatory, coeducational, independent, day school. It’s Sparks Science & Technology Center provides exceptional science teaching facilities. We will have access to classrooms and other meeting spaces. For more information about our meeting venue, visit: http://capehenrycollegiate.org.

BRING THE FAMILY!

Virginia Beach is a family-friendly destination, with lots to see and do! You may want to consider bringing your family and/or extending your stay.

HOTEL

ACCOMMODATIONS

Our Conference hotel will be the
Virginia Beach Resort & Conference Center
2800 Shore Drive
Virginia Beach, VA 23451
Located near the mouth of the Chesapeake, this hotel commands a view of the Bay and is less than 5 miles from our conference venue.

www.virginiabeachresort.com
Phone: 757-481-9000 or 1-800-468-2722

Nightly rate for suite:
$119.00 (single & double, not including taxes). We encourage you to share with fellow MAMEAns. Rooms can accommodate up to 4 individuals (triple rate = $129; quad rate = $139, not including taxes). These rates will be offered, based on availability, 3 days before and 3 days after Conference dates.

NOTE: Individual reservations will be due no later than Thursday, September 25, 2008. Reservation requests made following the cut-off date will be honored on a rate and space availability basis.

Other accommodations?

Virginia Beach is noted for its many hotel choices, some waterfront, some not. You may be able to find something even more economical. First Landing State Park is also nearby with cabins and campsites available.

Visit the MAMEA website for conference updates and the registration form.
WHAT IS IT & WHERE DOES IT COME FROM?

Carbon Dioxide - CO\(_2\)
- It is a colorless, odorless, non-poisonous gas that makes up about 0.03 percent of the atmosphere.
- It is naturally produced through respiration, decay, ocean processes and volcanic eruptions.
- It is a vital component in maintaining a balanced global carbon cycle between the atmosphere, the land and the oceans.

Too Much of a Good Thing?
Humans are artificially increasing the amount of CO\(_2\) in the atmosphere through the following:
- Burning of fossil fuels (natural gas, oil & coal)
- Production of cement

These artificial increases cannot be handled by our natural carbon cycle and as such have led to some potentially serious environmental impacts.

1. Global Warming – excess CO\(_2\) contributes to an increase in greenhouse gases resulting in global warming (CO\(_2\) traps heat in the atmosphere warming the earth). Global warming has been associated with sea level rise, habitat loss and other environmental issues.
2. Ocean Acidification - a decrease of ocean pH due to the formation of carbonic acid as a result of increased dissolved CO\(_2\) concentrations.

SOUR OCEAN?

Effects of Ocean Acidification
- Many organisms in the oceans make their shells and other parts out of calcium carbonate – taking the ingredients they need directly from the ocean.
- When ocean pH drops the chemical composition of seawater changes making some of the needed ingredients no longer available for use.
- Organisms that can not make their shells die.

Who are these organisms? Why should we care?
- Many of the affected organisms are microscopically small and probably unknown to most of us, but they play important roles in the aquatic food web.
- Others – like coral and oysters – are more recognizable and support commercial industries, as well as, being a vital link in the aquatic environment.

Ocean Acidification…how carbon dioxide in the atmosphere makes seawater go sour! (Submitted by Maryland Sea Grant)

Happy 10th Birthday, Bridge

The Bridge celebrated its 10th birthday at NMEA 2008 in Savannah, GA last month. Launched at NMEA 1998 in Puerto Rico, the Bridge is an online clearinghouse providing educators with quality ocean science resources, lesson plans, data, and professional development opportunities (www.marine-ed.org/bridge). The Bridge was originally funded by the National Oceanographic Partnership Program (NOPP) and is now supported by the National Sea Grant Office. Throughout its 10 years, the Bridge has partnered with the National Marine Educators Association and its regional chapters to support ocean science education across the country. Along with its 10th birthday, the Bridge debuted its new graphic design and dynamic function. The site is now database-driven meaning that visitors will always have access to the most up-to-date information with a more powerful search engine.

How much CO\(_2\) are you responsible for?
Determine your carbon footprint at: http://www.climateprotect.org/aa17

WHAT CAN YOU DO TO REDUCE YOUR CARBON OUTPUT?
- Use energy efficient appliances
- Recycle
- Carpool
- Turn off lights
News from Around the Region

North Carolina

North Carolina Maritime Museum

Discover deep sea features and marine life of hydrothermal vents in watercolor illustrations in the "Beyond the Edge of the Sea" exhibit that opens in September at the Muscarelle Museum at the College of William and Mary and in January at the North Carolina Maritime Museum in Beaufort, NC. The artist, Karen Jacobson who accompanied Dr. Cindy Van Dover, was the first woman pilot of the Alvin on deep sea explorations to record the organisms and habitats of the deep sea world. Educational materials relating to the deep sea habitats, exploration and organisms will be accessible on both museum websites (www.ncmaritimemuseum.org and http://web.wm.edu/muscarelle). Contact the North Carolina Maritime Museum for more information on the exhibit and a teacher workshop scheduled for the winter.

The museum’s Cape Lookout Studies program initiated the North Carolina Monofilament Recovery and Recycling Program to address the problem of marine wildlife (whales, dolphins, sea turtles and birds) getting entangled and dying in discarded fishing line. The 5 receptacles installed on Carteret County beaches, docks and piers in September 2006 have collected approximately 8 miles of fishing line. In January 2004, a 33.5’ male sperm whale washed ashore at Cape Lookout. The carcass was buried and the bones have now been collected. The museum will prepare and reconstruct the skeleton for display in the NC Maritime. For more information please see: www.capelookoutstudies.org

Knights of the Black Flag focuses on rogues who plied the waters along the eastern US and the Caribbean during the Golden Age of Piracy and presents the life of a pirate through clothing, food and weapons (through Dec. 28). Researcher, author and filmmaker Kevin Duffus will speak about his book, "The Last Days of Blackbeard the Pirate", on Oct. 2 at 2 PM. The Secrets of Blackbeard and the historical age of piracy are revealed by the artifact recovery from the Queen Anne’s Revenge shipwreck presented by NCMM Nautical Archaeologist David Moore on Oct. 9 at 2 PM. Women Pirates, such as Anne Bonny & Mary Read, plied the east coast dressed up as men and were just as fierce as the likes of Blackbeard. This is presented by Connie Mason, Maritime Heritage Tourism Officer on Oct. 22 at 2 PM.

Call the museum for details and view the current Calendar of Events and Education Services Guide at www.ncmaritimemuseum.org  E-mail: maritime@ncmail.net  Phone: 252.728.7317  Jeannie Kraus

Frogs on the 4’s! At the North Carolina Aquarium at Fort Fisher

Frogs on the 4’s was designed to help support AZA’s Year of the Frog by providing one day each month specifically focused on amphibians. All programs, films, activities, feedings and crafts are themed towards our slimy stars.

The Aquarium offers two interactive auditorium programs daily, a Creature Feature at 11:30 and a Wetland Odyssey at 1:30. The Aquarium has created a totally new program, Slime vs. Scales, where an educator leads a debate between two costumed characters, a frog and a snake, about who’s adaptations make them the coolest animal in the swamp. In Swamp Symphony the audience helps create a suitable habitat for these awesome amphibians and meet a few live critters while your having a stomping, clapping good time.

The Aquarium offers four films daily, in the newly refurbished surround-sound auditorium, and the films focus on Amphibians or their habitats. Frogs, Fact or Folklore? discusses the reputation and myths surrounding amphibians, Spring Forth and Multiply! goes into detail about the vernal ponds so necessary to the amazing life cycle of our native frogs and toads, and Eyewitness Amphibians and Eyewitness Pond give the viewer an inside look at these animals and their habitats.

There are two publicly narrated feedings each day at 11:00 and 3:00. For Frogs on the 4’s we will be further developing two amphibian feedings so the public can get an up close and personal look at an amphibian’s lunch and watch how it eats.

There is an amphibian classroom filled with lily pad magnet crafts, coloring, games and lots of prizes. Enjoy live tadpoles, frog sounds, and a wonderful reading nook complete with a huge froggie pillow to sit and explore a book! A froggie hat clad greeter will welcome you when you enter the building and explain to you the schedule as well as the building wide scavenger hunt. Visitors can spend all day, or just a few hours, finding the amphibians exhibits, programs, and extras and return their hunt for a prize. One of the most popular Frogs on the 4’s additions is our Tadpole Table. At this temporary exhibit we take a look at the amazing life cycle of a frog then recreate a pond complete with all the stages that everyone can take home with them.

EENC Annual Conference November 6-9, 2008 in Oak Island, NC

Join the Environmental Educators of North Carolina (EENC) for the annual conference at Fort Caswell Baptist Assembly, former civil war fort turned retreat center. The gathering will be filled with the beauty of North Carolina’s natural areas, professional workshops, sessions on current environmental education issues and ideas, fun evening events, and plenty of opportunities to meet fellow educators. Please visit www.eenc.org for conference information and updates.
Washington, DC

Adventure Tours
The National Aquarium in Washington, DC is proud to announce a new program under the direction of the Aquarium’s Education Department – Adventure Tours. Our first Adventure Tour will be June 1-12, 2009 to The Galapagos Islands – “Darwin’s Enchanted Islands”.

Ecuador’s most beloved and popular national park lies in splendid isolation about 500 miles off the mainland. Made famous by Charles Darwin, the Galapagos Islands are no less enthralling now than they were a hundred years ago. Every year, thousands of curious visitors journey to the remote islands to behold the wondrously variegated wildlife that inspired “The Origin of Species”. Much of the same flora and fauna that inspired Darwin’s theory and book still thrives on the Galapagos today. Appropriately, ninety-seven percent of the island chain is national park. The legendary marine and land iguanas, the giant tortoises, and seal colonies of the Galapagos are among nature’s most fantastic beings. Visitors will gasp at these stunning animals, all of which are highly approachable as their isolated evolution has not conditioned them to fear humans.

This will be a trip of a lifetime as our group sails around the islands for 8 days on a charter yacht. Space will be limited and filled on a first-come, first-served basis. For more information and a copy of the full itinerary and pricing, contact Bill Simpkins, Director of Education, at 202-482-0852 or e-mail bsimpkins@nationalaquarium.com.

Future Adventure Tours may include: cruising the Amazon River, Costa Rica, and Australia and the Great Barrier Reef.

Aquatic and Marine Science for Today’s Classroom Teacher Workshop
The National Aquarium in Washington DC has announced the dates for the “Aquatic and Marine Science for Today’s Classroom Teacher” workshop program for the 2008-09 school year. This stipend based program is supported through funding from the Toyota USA Foundation and is open to all classroom teachers. Space is limited to 10 teachers per session, and the workshop is held on 2 consecutive Saturdays, 9 a.m. – 4 p.m. Teachers will receive a stipend of $100 and approximately $100 worth of classroom materials.

The dates for the program are: Sept. 27 and Oct 4; Nov. 15 and 22; Jan. 31 and Feb 7, 2009; March 7 and 14; April 18 and 25; and May 9 and 16.

For more information and registration materials, please contact Bill Simpkins at 202-482-0852 or bsimpkins@nationalaquarium.com

Delaware

Coast Day 2008
The University of Delaware’s Coast Day will be held on Sunday October 5, 2008. Coast Day offers something for everyone. Visitors enjoy hands-on exhibits, lectures on popular science topics, ship and laboratory tours, crab races, a crab cake cook-off, seafood cooking demonstrations, a boat show, and much more. Kids have special opportunities to speak with marine scientists and learn firsthand about their discoveries. They can also explore the many fascinating careers available in environmental science fields. Admission is free! Please visit http://www.ocean.udel.edu/coastday/ for more information.

Maryland

Project WET Teacher Workshop
The National Aquarium in Baltimore will be holding a Project WET Teacher Workshop on Saturday November 8, 2008. This workshop is $7 per person, and participants will receive a copy of the Project WET Curriculum and Activity Guide as well as Aquarium admission. Please visit www.aqua.org for more information.

Virginia

Estuaries 101 and Chesapeake Exploration
The Chesapeake Bay National Estuarine Research Reserve and the Virginia Institute of Marine Science is offering this 4-day curriculum training opportunity, August 11-14, 2008, in Gloucester Point, Virginia. This workshop is designed to provide teachers from throughout the Chesapeake Bay region with the resources, knowledge, and experience necessary to facilitate the integration of estuaries and their related issues into the classroom. The training program offers educators hands-on experience using the new curriculums, Estuaries 101 and Chesapeake Exploration. A stipend may be available. Contact Sarah McGuire at mcguire@vims.edu for further details.

Extreme Explorations Exhibit
The Muscarelle Museum of Art at the College of William and Mary will be opening their Extreme Explorations exhibit September 6th – October 26th. The exhibit will feature Beyond the Edge of the Sea: Diversity of Life in the Deep-Ocean Wilderness and Underwater Explorations. For direction, hours, and costs, please visit web.wm.edu/muscarelle.

Project WET Teacher Workshop
Project WET workshop will be held at Environmental Solutions, Inc in Richmond on November 29th. This is a free workshop and will focus on Water Conservation and Supply. If you are interested, please email Kris Jarvis at kjarvis@deq.virginia.gov or call at 804-698-4274.
Awards, Scholarships, and Grants...Oh My!

**MAMEA Annual Awards**

MAMEA sponsors TWO annual awards to recognize outstanding efforts by marine educators in our region:

- One award honors a formal classroom teacher, K-16, primary through college;
- The other acknowledges an educator in an informal setting, such as museum, aquarium, zoo, science center staff or employees with government agencies.

The awards are presented at MAMEA’s annual conference. Nominees should be individuals who have been MAMEA members for at least one year and:

- Demonstrate a commitment to marine education
- Excel as educators
- Develop and use innovative marine education materials
- Share information with colleagues
- Promote marine education professionally

Nominations should be submitted by August 15 to John Chubb, Box 836, Eastville, VA 23347. For more information on MAMEA Awards or to fill out an online Awards Nomination form please visit [http://www.mamea.org/awards.html](http://www.mamea.org/awards.html).

**Paul Standish Scholarship**

Each year, FOUR scholarships are available to members interested in attending the MAMEA Annual Conference, but are in need of financial assistance. These scholarships will be open for members from any state.

**Eligibility:** Any current MAMEA member with at least 6 months membership may apply for a conference scholarship.

**Call for Nominations for the 2009 MAMEA Board**

This year we are accepting nominations for the following positions:

- President Elect
- Treasurer
- Delaware Representative
- Virginia Representative
- Washington, D.C. Representative

All nominations must be received by September 17, 2008.

Financial support: These scholarship funds will cover costs including accommodations and travel associated directly with attending the conference. No cash-advance funds are issued. Allowable conference registration fees are waived for scholarship recipients and relevant costs are reimbursable based on valid receipts up to a total of $300 (this includes conference registration fees).

To apply: Complete and submit the online application form found at [http://www.mamea.org/conf.html](http://www.mamea.org/conf.html). Application deadline is September 20, 2008.

**Educational Project Grant Guidelines**

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

Two $500 grants will be 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 grant program structure.

**Eligibility:** Any current MAMEA member with at least one year’s membership may submit one proposal per year.

To apply: Please visit [http://www.mamea.org/minigrant.html](http://www.mamea.org/minigrant.html)

**Application Deadline:** 2008 Grant applications are due on September 22, 2008. The funding period is one year from the award date in October, through September of the following year.

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Please send your nominations to:

David Christopher
National Aquarium in Baltimore
501 E. Pratt St.
Baltimore, MD 21202

or
dchristopher@aqua.org

An announcement of candidates will be posted on the MAMEA website and sent to the MAMEA listserv by September 19th. Voting will take place on October 25th at the MAMEA conference in Virginia Beach, Virginia. We look forward to seeing you there!
Did you know that your MAMEA membership entitles you to grants, scholarships, and invitations to annual events and mini-conferences?