From the Captain’s Quarters

Dear MAMEA members,

We had a great start to fall with the 40th annual conference in Portsmouth, Virginia. I would like to extend a thank you to all that attended, presented a session or helped with the planning. The saying goes it takes an army and it is so true when planning the conference. We had 65 people attend the conference held November 9 through the 11th. Friday night we were treated to an evening at Nauticus with Dr Joe Hoyt speaking from the Monitor National Marine Sanctuary Program. Dr Hoyt discussed the discovery of U-boats from World War II less than 20 miles off the North Carolina coast. Using new laser technology, they were able to map and create a 3D image of the intact submarine. On Saturday, attendees were able to choose from 16 concurrent sessions. Sessions ranged from creating ROVs for competition to the incorporation of technology into lessons. Who can forget the holographic tattoos and stickers. Dr. Debbie Steinberg, Professor of Marine Science at Virginia Institute of Marine Science served as our plenary speaker on Saturday. During her talk she emphasized the importance of plankton in the marine food web and polar environments. The festivities ended with our very successful auction, that raised money for our numerous scholarships and grants.

Keep an eye out for upcoming events and mini-conferences on our new Facebook group (https://www.facebook.com/groups/191675828384888/) and Instagram page (https://www.instagram.com/teachmamea/). We are always looking for ways our members can get involved with MAMEA. If you are interested in joining a committee please fill out the following form (MAMEA Involvement Form). We are always looking for new voices in planning the annual conference or maybe you’re interested in helping us grow our social media presence.

Finally, I would like to thank Celia for all the hard work she has put in getting our MASTHEAD published and out to our members. This will be her last installment as editor, leaving us to find a new MASTHEAD editor. If you are interested in this position please email me at ccarlin@hcps.us as soon as possible. I hope everyone has a wonderful and relaxing holiday season.

Sincerely,

Carrie Carlin
MAMEA President
NMEA Representative Report

Kathy Fuller
MAMEA Chapter Representative to NMEA

NMEA at NSTA

The NMEA Mid-Year Board Meeting will be held at the NSTA National Conference on Science Education in St. Louis, Missouri on April 10th. On April 11th NMEA will be hosting a track of marine education related sessions that will be kicked off with a Whale of a Share-a-Thon. Be sure to join us in St. Louis.

NMEA 2019 Conference Call for Presenters Due March 15th!

Make sure your calendars are marked for the 2019 NMEA conference in Durham, NH July 22-25. Visit the NMEA website (https://www.marine-ed.org/page/2019Conference) to get up to date information on the conference. See you in New Hampshire as we learn more about Turning the Tide!
Nominating Committee Update

Lauren Fauth
Nomination Committee Chair

2019 MAMEA Election Cycle

This spring, MAMEA will be conducting elections for several very important positions. With the exception of President-elect, which is a three year term (one year as President-elect, one year as President, and one year as Past-President), these Board positions all serve a two-year term. If you are interested in any of these positions, please contact the Nominating Committee Chair, Lauren Fauth (lfauth@aqua.org) or any current Board member or visit www.mamea.org/toolkit.html for more information. If you are interested in serving on the Nominating Committee, please contact Lauren.

2019 Elected Offices:
President-elect
Secretary
MD Rep
NC Rep
1- At-Large

MAMEA Elections Timeline:
March 8-May 7- Nominations accepted
May 8- Candidates are announced to the membership
June 8- July 8- Online election (paper ballots are accepted for those who prefer one)
July 22-25- Election results are announced at the National Marine Educator’s Association Conference

Have YOU got a great project idea that needs funding?

Carol Hopper Brill
Grants Committee Chair

Put your thinking caps on, MAMEA is looking for great ideas to support in its upcoming grant cycle (2019/20). You can get your next educational project off the drawing board and into reality, engaging students or fellow educators. Be ready for the next round of MAMEA Educational Project grants - start working on your proposal now!

Two grants for up to $1,000 are available annually. One for formal educators (classrooms, K-16); and one for informal educators (museum, aquarium, zoo, science center, government agency staff). Projects should actively engage learners and focus on marine or aquatic topics.

To be eligible, applicants must be current MAMEA members with at least one year’s membership. To be competitive, projects should meet the program structure described on the MAMEA Grants page at www.mamea.org/minigrant.html. To read about projects that have received MAMEA support in the past, see www.mamea.org/pastgrants.html.

Visit the Grants page on the MAMEA website for the grant application form, as well as important details about the application process and grantee responsibilities. Or, contact the Grants Committee Chair, Carol Hopper Brill at chopper@vims.edu. Proposals are accepted throughout the year, but the deadline for the 2019/20 cycle is September 15, 2019. Grant awards will be announced at the MAMEA conference in November 2018, and the funding period is 12 months, from November 2019 to October 2020, with no extensions.
MAMEA Education Program Grant News

Past Grantees Report on Their Projects in MAMEA Conference Sessions

At the 2018 MAMEA Conference, two Grantees reported on their successful projects and the lessons learned. Andrew Wilson, Director of Glen Echo Park Aquarium in Maryland, was the informal educator grantee for 2016/17. In his presentation titled “Chesapeake Enrichment through Virtual Field Trips,” he explained the distance learning and enrichment opportunities he developed for schools using a MAMEA grant.

Andrew Wilson reported on his MAMEA grant at the 2018 MAMEA Conference, sharing lessons learned as Glen Echo Park Aquarium reached out into their community with distance learning opportunities. Photo courtesy of Glen Echo Park Aquarium.

2017/18 classroom educator grantee Jason Vansant is a STEM instructor at Bogue Sound Elementary School in North Carolina. He described how he used his grant to transform a classroom into a STEM laboratory for elementary students. His school has now integrated a marine exploratory tank into their lab. Key to Jason’s project success was outreach into the community, building wide-ranging partnerships with a wide range of collaborators, including Carteret County Community College, NOAA, Duke Marine Lab, NC Coastal Federation and others.

At the MAMEA Conference, grantee Jason Vansant demonstrates one of the many activities he employs to engage students’ hands and minds in the STEM lab at Bogue Sound Elementary. Photo: C.Hopper Brill

So that all members can benefit from the investments made by the MAMEA Grant program, Grantees share the outcomes, lessons learned or educational products from their grant projects. This may be in the form of a Masthead article or as a session presentation at the annual Conference.
2018/19 Educational Program Grant Awarded to Andy Gould

Andy Gould, School Programs Coordinator for the North Carolina Aquarium at Fort Fisher, is the recipient of MAMEA’s 2019/20 Educational Grant for Informal Educator. His project, “Amphibian Citizen Science in the Classroom” is designed to expand involvement in FrogWatch USA by schools in his area. FrogWatch is a national citizen science program of the Association of Zoos and Aquariums – it provides individuals, groups and families with an opportunity to learn about wetlands in their communities and report data on the calls of local frogs and toads.

Andy has been working to involve schools in the project. He has a dedicated partner school that has worked closely with him, allowing students and teachers to accompany him into the field at night for in-person monitoring of frog calls. But, not all schools are willing to take students into wetlands after dark. So, to expand the program and attract the participation of additional schools, he needs to add additional options.

Andy’s grant funds will allow him to purchase sound recording equipment. This will allow project staff to make recordings of ambient frog calls from local wetlands and have students analyze it during class time via Skype. He hopes to recruit 1-3 new partner schools and will compare learning outcomes between the school conducting in-person monitoring and those using the recordings. Based on the outcome of this project, Andy hopes it will allow him to expand FrogWatch participation, developing new school partnerships. Additional wetland sites may also be added, increasing the amount of useful data collected and giving a more complete picture of frog populations in our region.
Newly Elected Delaware State Representative

Amy Barra, the Outreach & Education Coordinator at the Delaware Center for the Inland Bays, was elected as the DE State Rep. She’s excited about the opportunity, but is unsure if she can pull off a pair of “auction pants” like her predecessor, Chris Petrone.

Amy is passionate about creating meaningful partnerships to accomplish ambitious program goals. As the DE State Rep and in her position with the Center, she will be working to create a strong network of partner organizations working to leverage resources and attain lofty goals.

Upcoming Events:

May 4, 2019- Native Plant Sale and Bay-Friendly Homes Expo
James Farm Ecological Preserve, Ocean View, DE

Is your home bay-friendly? If not, come learn what you can do to create a more ecological friendly living space! Purchase native plants that require less maintenance, watch demonstrations from experts and learn about green alternatives to standard home building and maintenance practices. Homeowners and renters are encouraged to attend! Have an idea for a demonstration or exhibit space? Contact abarra@inlandbays.org for more information!

Save the Date: October 2019, Teaching science in an outdoor setting!
Hyatt Hotel, Dewey Beach, DE

Amy Barra from CIB and Liz Wist from the Maryland Coastal Bays Program are teaming up to offer an all-day training session during the National Estuary Program Meeting this October! Join us to learn some new techniques for communicating science in the field. This training will be geared towards beginners and veteran educators or administrators. We’ll work to refresh stale programs and provide new curriculum to enhance your program! Interested? E-mail abarra@inlandbays.org to get on the contact list!
Blue Fin: The Last of the Giants - Film Screening
Date: February 13, 2019 from 7:00 pm - 9:00 pm at The Havre de Grace Maritime Museum, Lafayette Street, Havre de Grace, MD, USA

In the stunning documentary Bluefin, director John Hopkins crafts a tale of epic stakes set in the “tuna capital of the world.” Filmed in North Lake, Prince Edward Island, Canada, the film explores the baffling mystery of why the normally wary bluefin tuna no longer fear humans. Hopkins documents this phenomenon with breathtaking cinematography and brings the issues into sharp focus, at the heart of which lies a passionate concern for the fate of these giant fish.

Project Wild Workshop
Saturday February 23rd, from 9:30 - 4:00 at the National Aquarium in Baltimore.

Engage in hands-on, inter-disciplinary activities focusing on wildlife, the environment and conservation. Activities are drawn from the popular Project WILD K-12 Curriculum and Activity Guide. This workshop is appropriate for informal and formal educators of K-12 students. Participants receive copies of both the Project WILD and WILD Aquatic curriculum and activity guides. Participants may be eligible to receive 1 MSDE Professional Development Credit.

Cost is $15 per person.

Trashed - Film Screening
March 13, 2019 from 7:00 pm - 9:00 pm at The Havre de Grace Maritime Museum, Lafayette Street, Havre de Grace, MD, USA

If you think waste is someone else’s problem…think again.

In Trashed, actor Jeremy Irons sets out to discover the extent and effects of the global waste problem, as he travels around the world to beautiful destinations tainted by pollution. The film reveals surprising truths about very immediate and potent dangers to our health. It is a global conversation from Iceland to Indonesia between Jeremy and scientists, politicians and ordinary individuals whose health and livelihoods have been fundamentally affected by waste pollution. Visually and emotionally, the film is both horrific and beautiful, equal parts a story of human interest and a political wake-up call. This is a meticulous, brave investigative journey that takes the viewer from skepticism to sorrow, and from horror to hope.
Opportunity for a Virginia Teacher in Grades 5-12!
Virginia Space Grant Consortium (VSGC) will sponsor one teacher from Virginia for a Summer Professional Development Institute.

Liftoff - Legacy of Apollo
http://www.tsgc.utexas.edu/liftoff/
VSGC sponsorship is open to teachers in Virginia who have never attended a Liftoff workshop before!
Application deadline April 1, 2019.

PROGRAM ANNOUNCEMENT
Beginning in the summer of 1990, the NASA’s Texas Space Grant Consortium initiated weeklong professional development training for teachers. This aerospace workshop, called Liftoff, emphasizes science, technology, engineering, and mathematics (STEM) learning experiences by incorporating a space science theme supported by NASA missions. Teacher participants are provided with information and experiences through speakers, hands-on activities and field investigations that promote space science and enrichment activities for themselves and others.

PROGRAM HIGHLIGHTS
The moon has been the destination of some of humanity’s most monumental and challenging expeditions. As the moon becomes more accessible to both national space programs and private enterprise, what did we learn and where will this knowledge take us? 2019 is the 50th anniversary of Apollo. Join us for: Legacy of Apollo, June 23-28, 2019

PROGRAM FEATURES:
> Presentations by NASA scientists and engineers
> Tours of NASA and Space Center Houston
> Hands-on, inquiry based classroom activities aligned to educational standards
> Career Exploration
> Teacher Feature (sharing of classroom lessons and activities)
> Opportunity to interact with researchers dedicated to space missions

To apply for VSGC sponsorship, please email your resume by April 1 to Chris Carter, VSGC Deputy Director (cxcarter@odu.edu).

You must apply directly through the Liftoff application system to be considered for the workshop. The deadline for receiving applications is April 1 for Liftoff 2019 and should be submitted through the online system: http://www.tsgc.utexas.edu/liftoff/

**The selected teacher will be required to attend the complete event, participate fully, and submit a report summarizing the experience to VSGC. The selected teacher may also be asked to present on the experience at VSGC-sponsored events and meetings.**

For Questions about VSGC sponsorship of one teacher from Virginia, please contact Chris Carter:

Chris Carter
Deputy Director
Virginia Space Grant Consortium (VSGC)
600 Butler Farm Road, Suite 2200
Hampton, Va. 23666
(757) 766-5210
(757) 766-5205 (fax)
cxcarter@odu.edu
http://www.vsgc.odu.edu
Discovery Labs are provided each month by the Chesapeake Bay National Estuarine Research Reserve (CBNERR). These labs provide fun, family-friendly opportunities to learn about the Chesapeake Bay and our local environment. Each lab focuses on a different topic and includes exhibits, demonstrations, and hands-on activities for kids and adults. Labs also include a short presentation by a topic expert.

**2019 Winter Schedule**

**January 22:**
**Animal Tagging**
You may be familiar with tagging from television programs such as Shark Week. In this lab, we will investigate the types of questions and answers that can be addressed with animal tagging technology. Participants will be able to practice tagging a dead fish, and will hear from an OCEARCH representative about their shark tagging research.

**February 19:**
**Sustainable Fisheries**
A sustainable fishery is one that is harvested at a rate where the fish population does not decline over time because of fishing practices. Sustainable fisheries are critical to protecting our world ocean and feeding future generations! Learn about the research VIMS is doing to inform fisheries managers while sampling sustainable seafood.

**March 19:**
**Marine Careers**
In this lab, attendees will learn about a variety of different careers that are either directly or indirectly related to marine ecosystems. VIMS graduate student Taylor Coelz will be sharing information about the different stakeholder groups that she frequently works with throughout the Chesapeake Bay region.

CBNERR Discovery Labs take place from 6:00-8:00 PM at the Virginia Institute of Marine Science (VIMS) in Gloucester Point, Virginia. The speaker presentation occurs from 6:30-7:00 PM. While the labs are free, registration is required due to limited space.

Youth Conservation Series

Opportunities for middle and high school students to explore science through field experiences and conservation action.

Field Experiences

Ocean Collections
October 13, 2018, 8:30 - 11:30 a.m.
Students will have the opportunity to assist in the collection of fish, invertebrates, and plankton using the same tools and methods as marine scientists.
$20 per student; Advanced registration required

Marine Mammals
December 27, 2018, 9:45 a.m. - 4:30 p.m.
Students will learn about some of Virginia’s winter visitors through a Whales & Wildlife boat trip and harbor seal training session.
$20 per student; Advanced registration required

Career Day at the Aquarium
January 26, 2019, 11:00 a.m. - 3:00 p.m.
Meet with scientists and Aquarium professionals to learn about their job duties, what skills and training they need, and how you can get started in their field.
Registration not required, Discounted student rate available

Science Lab Tour
April 13, 2019, 9:00 a.m. - 3:00 p.m.
Explore university science labs and participate in research projects with professors and students.
$20 per student; Advanced registration required

Youth Ocean Conservation Summit
March 2, 2019, 9:00 a.m. - 4:00 p.m.
The national Youth Ocean Conservation Summit empowers students from across the country with the knowledge, resources, and support needed to launch ocean conservation projects to protect marine ecosystems in their local communities. $15 per student, Registration opens January 2, 2019

To register, call 757-385-0278 or email programs@virginiaaquarium.com
Save the Date!
Annual Mid-Atlantic Regional ROV Underwater Robotics Competition
Saturday, May 4, 2019 - 8 a.m.-4 p.m.
Old Dominion University Recreation and Wellness Center - Norfolk, Virginia

FREE! Teacher, Scout Leader, and Team Mentor Workshop at Nauticus!
Get Familiar with Remotely Operated Vehicles (ROVs) | Saturday, January 26, 2019, 9 a.m.-1 p.m | Limit 25

For more information and to register, contact:
Susie Hill, Nauticus Education Specialist/Special Programs Manager
(757) 664-1041 | rebecca.hill@norfolk.gov | midatlantic.marinetech2.org

Nauticus
Featuring the Battleship Wisconsin
(757)-664-1000 • nauticus.org
Sea Turtle Exploration
Saturday, February 9th, 2019
9 AM - 3:30 PM

The North Carolina Aquarium at Fort Fisher presents Sea Turtle Exploration: a curriculum to help educators engage students in the fundamentals of STEAM through ready-to-use, standards based lesson plans and sea turtles. Join us on Saturday, February 9th, 2019 for a hands-on teacher workshop guiding you through our new curriculum and website.

In addition to the curriculum, you will learn about additional resources such as weekly blog posts that will be made during the school year. Topics will include: species profiles, aquarium staff spotlights, behind the scenes videos, new lesson plans and more. Even follow the growth of Aquarium hatchling sea turtles by visiting the blog each week!

Aligned with the new Common Core standards, your class will be able to “adopt” a turtle and learn about its care and growth. By adopting our sea turtle you will receive weekly updates with information including the turtle’s current weight and length. Each class will also receive a certificate of participation. By the end of the workshop, you will be familiar with the website and curriculum and how to implement the lessons in your own classroom. The workshop will include a behind the scenes tour to meet one of our sea turtles. Please bring a reusable water bottle and you may choose to also pack a waste-free lunch.

Our snack shop, Shark Bites will be opened and there are lunch options off-site. This workshop will count towards NC Environmental Education Certification (Criteria I) and consists of 6 contact hours that may count toward CEUs for teachers.

Help keep our seas plastic-free! Please bring a reusable water container, a refillable coffee cup, and a waste-free lunch! The cost of this teacher workshop is $25. This fee includes a Behind the Scenes Tour and access to curriculum. The Oak Island Beach Preservation Society will pay the registration fee for any formal or informal Brunswick County Educators.

For additional workshop information, call 910-772-0546. For assistance with registration, call 910-772-0542.
Please Congratulate our 2018 MAMEA Award Winners!

Rachel Clark
Awards Committee Chair

Each year, we honor selected colleagues for their stellar work in marine education. Based on nominations submitted by their peers, one Classroom Teacher and one Informal Educator are recognized. Additionally, the MAMEA President may acknowledge a highly valued colleague with the President’s Award.

At the 2018 MAMEA Conference in Portsmouth, VA, out-going President Lauren Albright had the honor of presenting three awards this year during the Annual Business Meeting on November 10.

Sara Beam received MAMEA’s 2018 Classroom Educator Award. She was not able to attend this year’s conference, but was presented the award in her classroom before the holidays. Sara teaches two courses in Foundations in Marine and Environmental Sciences at Chesapeake Bay Governor’s School. She engages sophomores, juniors, and seniors from the Middle Peninsula and Northern Neck regions of Virginia. She connects students to their community through activities such as growing oysters, monitoring water quality, identifying plants and animals in various habitats, and understanding the social connections of environmental restoration. Sara is very interested in climate change and how it impacts the communities where her students and their families live. She has put a great deal of thought into developing curriculum that will help her students understand the science of climate change and sea level rise and how this will affect livelihoods, homes, and ecosystems. She instills an infectious sense of wonder in her students and many have gone onto college and careers connected to the foundations she provides.

Sara has been working for 25 years to be an inspiration to thousands of students and she gives her time freely to them and her community. She ensures all students have a hands-on, active learning opportunity in marine and environmental science. She combines this with several speaking assignments to ensure the next generation of scientists have a foundation in effective communication as well as a solid foundation of scientific principles. She has been an active member of MAMEA since 2009 by attending and presenting at conferences. She has been a long-standing and active coach for the Blue Crab Bowl and has worked to sponsor awards for participating student’s teams. Congratulations and great job on all the wonderful work Sara!
MAMEA’s 2018 Informal Educator Award was presented to Chris Petrone. Chris recently took on the role of Director of Delaware Sea Grant’s Marine Advisory Services and previously served as the Education Specialist. In that position, he had a variety of duties including running innovative educator workshops, planning and implementing K-12 schools programs, assisting with the production of education publications and videos, and representing Delaware Sea Grant on local and regional education committees and organizations. He’s participated in discussions with the Delaware Department of Education about adoption of the Next Generation Science Standards, served as coordinator of the regional Chesapeake Bay Bowl, acted as a Rules Judge in the National Ocean Sciences Bowl finals, and provided in-house training sessions for his colleagues on preparing logic models.

When Chris began his role at Sea Grant, he hit the ground running and has had a significant impact on science education in the region as a result. In addition to being an excellent educator and science communicator, Chris is known for his skills working with the newest technology and innovative practices. He is quick to embrace these new platforms as an effective way to share information and engage a wider audience. A recent example of this work is the development and use of BreakoutEDU boxes. This is a fun, new immersive learning platform that requires a group to work as a team to answer clues that open various locks on a box within a set period of time. Chris has developed and tested games on watershed science and alternative energy as part of his teacher workshops.

Chris has been extremely involved in MAMEA over the years serving in the president chain, organizing the 2016 MAMEA Annual Conference, acting as the Delaware State Representative, and attending and presenting at numerous annual conferences. He has also been involved with NMEA serving on the board as the Marketing & Promotions Chair for the 2014 Annual Conference. He’s also been involved with other organizations such as Maryland and Delaware Climate Change Education Assessment and Research (MADE-CLEAR), the Delaware Association for Environmental Education, and Lewes Education Coalition serving as a board member, conference planner, coordinator, or presenter.

It is clear that Chris is simply the kind of person who you want on your team – he’s dedicated, knowledgeable, eager to try new things, and passionate about science education. His reputation as a valuable project partner is widely known and he’s sought out by administrators, teachers, and researchers for collaborative work. You’ve done an amazing job serving your community. Congratulations Chris!
Are you up for the challenge of MASTHEAD Editor?

If you’re interested in carrying the MAMEA newsletter forward, please give us a shout! Those who expressed an interest at the conference are encouraged to reach out formally by emailing Carrie Carlin <CCarlin@hcps.us> Thanks!

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The MAMEA Board meets twice a year. For more information visit: http://www.mamea.org/board.html