

# MASTHEAD

Quarterly Newsletter of the Mid-Atlantic Marine Education Association

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## Captain's Quarters Evan Beatty, MAMEA President

Greetings MAMEA Members,

We have some exciting news from the MAMEA Board. At the beginning of May, your MAMEA Board held our Mid-year Board Meeting. One of the topics discussed was our strategic plan. Our current strategic plan was written to be in effect until 2023. That being said, we are working on updating our strategic plan as we move forward. Be on the lookout for a membership survey to help us identify what our membership feels are top priorities that our organization should be addressing in our next strategic plan.

We will also have elections coming up in the coming weeks. Thank you to all of our members who submitted nominations for our open positions. Open positions that will be voted on this year include President-Elect, Secretary, Maryland Representative, North Carolina Representative, and At-Large Representative. Please be on the lookout for our list of nominees in the near future.

Be on the lookout for mini events in your state. Virginia just held a mini conference May 21st focusing on Ocean Literacy (More photos on page 2).

*VA Teachers discuss Ocean Literacy Principles and how they can apply them in their classes.  
(Celia Cackowski)*



Finally, we are excited to see some of our favorite MAMEA members at this year's NMEA conference in Hempstead, New York. This year the hybrid conference will be hosted at Hofstra University from July 10 through July 13. Our MAMEA Chapter Meeting is scheduled for July 11th from 12:30-1:30pm ET. We will share a Zoom link for you to attend virtually if you are not able to attend in person. Overall conference registration is still open, so register today to make sure you don't miss out on a great conference. Conference registration and general information can be found [here](#).

Evan Beatty, MAMEA President  
[ebeatty@hershey.k12.pa.us](mailto:ebeatty@hershey.k12.pa.us)



Creating Science Education videos for K-12+ and general audiences (Science by the Sea)



# Lifeline

With the “unofficial start of Summer” behind us, the increased potential for heat related emergencies is just around the corner. Heat Cramps, Heat Exhaustion, and Heat Stroke.

Prevention is the best First Aid with hydration being key. When you are out in the heat, don't wait until you are thirsty to drink water or your favorite electrolyte beverage. Avoid caffeine.



**Heat Cramps and Heat Exhaustion** can usually be handled by simply moving to a cooler area (air conditioning if possible or shade with wetting down and fanning person if not) and hydrating. If in doubt, call 911.

**Heat Stroke** is a true-life threatening emergency. Rapid cooling is necessary, and calling 911 is a must. Douse the person with cold water and fan aggressively. Repeat as the water evaporates. If cold packs are available, place one on each side of the neck, one in each armpit, and one on either side of the groin (a total of 6 cold packs). Stop cooling efforts if the person starts to shiver.

Have a Safe and SUNsational Summer!  
*Chuck Fuller*

## Do YOU Need Money for a Fabulous Project?

*Dawn Sherwood, Grants Committee Chair*

MAMEA is looking for great ideas to support in its upcoming grant cycle (2022/2023). You can get your next educational project off the drawing board and into reality, engaging students or fellow educators. Start working on your proposals now!!!

Two grants for up to \$1000 are available annually: one for formal educators (classrooms, K-16); and one for informal educators (museums, aquarium, zoo, science center, and 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](#). Read about projects that received MAMEA support in the past [here](#).

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.



Questions? Contact the Grants Committee Chair, Dawn Sherwood [dcsherwood@henrico.k12.va.us](mailto:dcsherwood@henrico.k12.va.us). Proposals are accepted throughout the year, but the **deadline for the 2021/22 cycle is September 15, 2022**. Grants awarded will be announced at the MAMEA conference in Fall 2022 and the funding period is 12 months – from November 2022 to October 2023, with no extensions.



Virginia Mini Conference Photos: The Ocean Literacy Workshop was hosted for K-12 Virginia teachers at the VA Aquarium on May 21st! Teachers explored lessons about zooplankton, climate change, etc. (Celia Cackowski)

## VA SEA Summer Lesson Plan Log: Highlighting Hands-On, Research Based Marine Science Activities for K-12 Classrooms

*Bethany Smith, Marine Education Specialist (bsmith@vims.edu)*

*Virginia Institute of Marine Science – Marine Advisory Program*



Graduate students in the Virginia Scientists & Educators Alliance (VA SEA) program (a program facilitated by educators at the Virginia Institute of Marine Science and Chesapeake Bay National Estuarine Research Reserve in Virginia) have created over 50 unique, hands-on lesson plans geared towards middle and high school audiences. These lesson plans provide real-world connections to classroom learning across a variety of science disciplines, and are easily scalable to meet the needs of your unique classroom. The lessons specifically note alignment with Virginia Standards of Learning (SOLs), however they are also more broadly applicable to other state standards and match well with the NGSS and Ocean Literacy Principles. In this summer edition of the VA SEA Lesson Plan Log, we highlight three lessons from our most recent VA SEA cohort that are sure to make your summer sizzle.

### **Shifting Sands: Coastal Dunes in Motion**

In this activity, designed by VIMS student Liz Davis, your students will use before and after dune profile graphics to determine how a sand dune has changed, and hypothesize about what forces could have caused the observed changes. Using their new knowledge of dune accretion and erosion, students then role play as scientific advisors to the town government, advising the town on ways to increase dune accretion and prevent dune erosion. Liz's lesson plan most closely addresses 5th grade science as well as earth science standards.

### **From the Subsurface to the Sky: Tracking Groundwater with Drones**

In this activity, designed by VIMS student Stephanie Wilson, your students will be exposed to one of the newest scientific applications of drone technology. Using drone collected radiometric (temperature) data from the York River. The data derived from these images can then be used by students to quantify how much groundwater is being discharged into the coastal zone. With an understanding of groundwater discharge, students are then able to use provided groundwater nutrient concentrations to calculate nutrient flux into the coastal ecosystem. Finally, students are tasked with hypothesizing about why groundwater discharge of nutrients is important to quantify, as well as what other things could be transported to the coastal zone via groundwater. Stephanie's lesson plan most closely addresses physical science and earth science standards.

### **Searching for Sea Scallops: The Role of Science in Fisheries Management**

In this activity, designed by VIMS student Kaitlyn Clark, your students will collect data on populations of sea scallops and then use those data to provide recommendations for sustainably managing the fishery in the next fishing year. Using data from her Ph.D. research, Kaitlyn has created hand-held scallop manipulatives (included with the lesson plan), that your students will measure, age, sex, and determine gonad area for. Using the data from multiple dredge tows across different harvest areas, students will role play fisheries managers and suggest management decisions for each harvest area based on the size, age and reproductive capacity of scallops within that harvest area. Kaitlyn's lesson plan can be used to address 7th grade life science standards, and she has also included optional extensions to scale the lesson up for high school biology.

Have you used any of the VA SEA resources in your classroom? Is there a specific topic / SOL you could really use a lesson for? Our team would love to hear from you! For complete lesson plans, including a background PowerPoint, student/teacher handouts and answer keys, please visit the VA SEA lesson plan collection at

[www.vims.edu/vasea](http://www.vims.edu/vasea).

## Educator Awards - Call for Nominations

*Rachel Riesbeck, Awards Committee Chair*

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.

Nominees should be individuals who:

- Have been a MAMEA member for at least one year
- Demonstrate a commitment to marine education
- Excel as educators
- Develop and use innovative marine education materials
- Share information with colleagues
- Promote marine education professionally



To see past recipients and to nominate an outstanding educator, check out the [Awards page](#). Nominations will be accepted through **September 15, 2022**. Winners will be announced at the MAMEA 2022 Annual Conference.



### Gulf Stream Chronicles: A Naturalist Explores Life in an Ocean River By David S. Lee (2015, The University of North Carolina Press)

Almost everyone has heard of the Gulf Stream, that significant leg of the North Atlantic Gyre. Marine educators know more about it than most folks; but Dave Lee has explored this oceanic river from above and below and within for decades. His knowledge of the Gulf Stream ecosystem is legendary, as is his nature writing.

During his tenure as the Curator of Birds at the North Carolina Museum of Natural Sciences, Dave studied the pelagic birds that use and depend on the Gulf Stream for many years. In addition, he wrote hundreds of nature and conservation articles for general readers, as well as for scholarly journals.

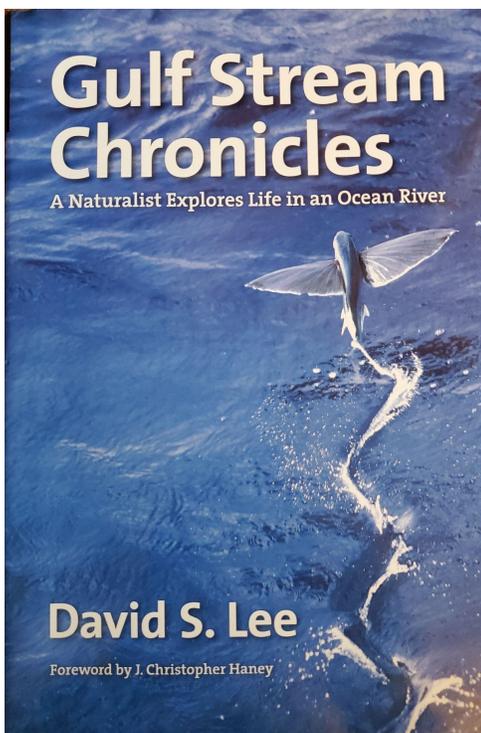
This book is divided into sections that look at the Gulf Stream and its occupants, both permanent and temporary, and the connections between them. While Part I focuses on the pelagic creatures that are found near or at the surface (Physalia, flying fish, ocean sunfish (my favorite), and tunas), the next section features pelagic birds that depend on the Gulf Stream for their livelihoods. Part 3 makes both expected and surprising connections between the land and the sea and between freshwater and salt, while part 4 delves into the deeper parts of the Gulf Stream, including the ocean bottom.

The appendix is extremely valuable with so much additional information, including common and scientific names for the main species mentioned in each chapter, as well as selected books and articles for further reading organized by chapter.

Unfortunately, Dave died before this book was published, but his wife Mary Kay Clark continued the process and brought his dream to reality. Reading this book, which is part travelogue, part textbook, and part history lesson, one learns so much about the seen and unseen parts of the Gulf Stream, that river of warm water that runs along the east coast of North America transporting heat northward from the tropics.

Read *Gulf Stream Chronicles*, and become one with all of the animals and plants that are part of that giant transportation system.

*Terri Kirby-Hathaway*





# Spyglass

**Focus On:**  
**Science by the Sea**  
*Beaufort, North Carolina*  
**Director - Miriam Sutton**



Science by the Sea® is a 501(c)3 organization providing educational support to Academic and General Audiences while assisting Research Institutions with broader impacts through Education, Communication, and Outreach. Science by the Sea® is a registered trademark. All rights reserved.

Science by the Sea® works under the mission statement for: Inspiring a Sense of Wonder in the World Around Us. The organization includes a strong social media presence (Facebook, Instagram, Twitter, YouTube) that is designed to encourage students and adult learners toward lifelong learning and stewardship for the environment and Earth.

Numerous Science lessons, activities, and projects have been published to the Science by the Sea® website and are catalogued by science divisions and concepts. Many activities focus on using real scientific data in the classroom. Using real data brings science to life for students and generates more interest in the concepts being explored in class. Answer keys for the published lessons are provided to educators upon request.

In addition to the published lessons, Science by the Sea® also creates videos and Virtual Learning Blogs that are suitable for children and designed to address learning skills from K-12+ to general audiences. Science education videos are published to the Science by the Sea® [YouTube Channel](#) and allow for student access as a resource to support curriculum objectives and standards. The various blogs are posted under the "Summer Adventures" link on the website. One of the most recent additions to the website is "Science by the Sea Wonders", which introduces students (of all ages) to various species found in the marine environment.

Each Friday, Science by the Sea® publishes "Live Feed Friday" from Facebook and Instagram to highlight the beauty of our natural world and to encourage social media followers to get outside and experience the wonders of the environment in which they live.

Miriam adds, "Science by the Sea® originated as my classroom platform while I was teaching middle school science. When the expense of purchasing new science books became prohibitive, I moved my students to an online platform, Science by the Sea®, (years before the COVID crisis). All classroom resource materials (lab sheets, assignments, supplemental information, etc.) were posted and linked to my website and allowed students to gain access to valid scientific information necessary to address the curriculum standards. This platform also afforded me more opportunities for individualized instruction with less worry about the various distractions found across the Internet. When I retired, I filed for non-profit status and redirected the platform's focus to education and outreach for learners of all ages, including adults."



Photographing scientists in the field while working on their various research project

For more information contact Miriam Sutton, M.A., NBCT  
 mirsutton@gmail.com; sciencebythesea97@gmail.com  
[www.sciencebythesea.org](http://www.sciencebythesea.org)  
 #sciencebythesea



**NMEA IMPORTANT DATES:**

**June 8:** Last day to take advantage of the OCEANDECADE-MAMEA discount code off your NMEA membership fee

**July 9-13:** NMEA Annual Conference in NY and online

**July 11, 12:30-1:30pm:** MAMEA Chapter Meeting @ NMEA (virtual and in-person)

**CHARTING A COURSE TO NMEA 2022**

*Tami Lunsford, MAMEA Chapter Representative to NMEA*

**Register NOW** for the NMEA 2022 hybrid conference! There are four different registration options to ensure that everyone has a chance to join us for this long-awaited chance to network, share, learn, and socialize, both **in person** and online.

*Please note that NMEA membership is required for conference registration. Register before June 8th to take advantage of the special discount for NMEA membership only for MAMEA members by entering code OCEANDECADE-MAMEA when joining. There are also membership sponsorships available!*

Please see the conference website for more information on registration options and links. Registration rates range from \$100 for virtual registration, to \$135 for single-day in-person registration, to \$425 (in person life- without all events) or \$675 (in person full- with all events). Amazing field trips, guest tickets, and youth tickets are also available. You can also find:

- [Conference agenda](#)
- [Keynote speakers](#)
- [Special events](#)

There will be a MAMEA chapter meeting on July 11th, 12:30-1:30pm. We will share information and a Zoom link to those who want to join us virtually!

We have many amazing MAMEA educators presenting, so whether you attend virtually or in-person, check out the following presenters from the Mid-Atlantic Region:

**Delaware**

- Christopher Petrone - Delaware Sea Grant / Univ. of Delaware
- Tami Lunsford - Newark Charter High School
- David Christopher - Delaware Sea Grant

**Virginia**

- Sarah Nuss - Chesapeake Bay National Estuarine Research Reserve
- Lisa Lawrence - VIMS/VA Sea Grant
- Celia Cackowski - Virginia Institute of Marine Science

**Maryland**

- Alexandria Brake - National Oceanic & Atmospheric Administration, Marine Debris Program (Contracted through Lynker)
- Maddie Kennedy - National Sea Grant College Program
- Kathryn Burcham - PGCPs - William Schmidt Outdoor Education Center
- Andrew Walker - National Aquarium
- Joshua Brown - NOAA Sea Grant
- Symone Barkley - NOAA

**Washington, DC**

- Maggie Allen - NOAA's Office of Education
- Kristen Yarincik - Consortium for Ocean Leadership
- Sean Russell - EarthEcho International
- Andrea Sassard - NOAA Office of Education

**North Carolina**

- Lindsay Smith - Mooresville High School
- Sarah Schoedinger - NOAA Office of Education

**All presentation details are available on the NMEA 2022 website [Conference Agenda](#) page.**

## Call for MAMEA Board Nominations Open through June 10th

*Nominate a MAMEA Member Today (including yourself)*

### MAMEA is now accepting nominations for the 2022 MAMEA Board Elections.

The positions up for election this year are:

- President-Elect
- Secretary
- Maryland/DC Representative
- North Carolina Representative
- At-Large Representative

Position descriptions and responsibilities are available on the [MAMEA website](#), and elected members will take office at our Annual Conference at the end of October. All nominees must be current MAMEA members in good standing, and State Representatives must live and/or work in the State they represent.

Please send nominations to David Christopher at [dmschrist@udel.edu](mailto:dmschrist@udel.edu) by June 10, 2022.

### Honoring “The Shark Lady” Dr. Eugenie Clark

*Kathy Fuller, MASTHEAD Editor*

The U.S. Postal Service honored pioneering marine biologist Dr. Eugenie Clark (1922-2015) with the release of a new commemorative stamp. Affectionately known as the “Shark Lady,” Clark conducted many important studies that provided fascinating insights into shark biology and worked tirelessly to change public perception about sharks. ([USPS](#))

While many of us know Dr. Clark for her work with sharks at what is known today as Mote Marine Lab, but did you know that she has ties to the Mid-Atlantic region? Dr. Clark taught (marine) biology at the University of Maryland from 1968 until her retirement in 1992. According to a [tribute](#) from one of her former UMD colleagues, she was “a terp for life.” Any MAMEA members get to have her as your professor?

Dr. Clark has appeared as a keynote speaker at many conferences, but I was happy to speak with her at the 2010 NMEA Conference in Gatlinburg, TN. I have her book with her inscription “To Kathy who also loves to swim with sharks.” What an amazing woman, and what a legacy she has left us!



Dr. Eugenie Clark Stamp (USPS)



MASTHEAD Editor, Kathy Fuller with Dr. Eugenie Clark at NMEA 2010

**MAMEA 2022 Annual Conference Update**  
*Emily Boyd, MAMEA President-Elect*



Mark your calendars, and brush off your in-person social skills for this year's MAMEA Annual Conference on October 28<sup>th</sup> - 30<sup>th</sup>!

We are so excited to reunite with our members for our first in-person gathering since 2019! This year our annual conference will take place in [Pine Knoll Shores, NC](#)—a laid-back shoreline community abundant with beautiful beaches and friendly faces.

The conference will be based at the [Inn at Pine Knoll Shores](#)- a charming hotel that exclusively offers all oceanfront rooms to their guests! We will have a block of rooms reserved for MAMEA at a discounted rate of \$100 per night. Stay tuned for details on how to book your room.

This year's conference will feature several opportunities for networking with fellow educators, learning from local guest speakers about their research and projects, and lots of fun activities in between. This includes a Friday evening kickoff event at the [NC Aquarium at Pine Knoll Shores](#), where we can gather with friends/colleagues while surrounded by the beautiful aquatic creatures in the Aquarium's many exhibits. On Saturday evening, be sure to come dressed in your best marine-themed Halloween costume and enter your name to participate in a costume contest! All members are eligible to vote for their favorites, and winners will receive a special prize.

Finally, don't forget about the infamous MAMEA silent, bag, and live auctions on Saturday evening. **We are currently accepting item donations**—these could be a gift certificate, product, theme basket, service, etc. If you are interested in donating an item to place in our auction, please complete [THIS GOOGLE FORM](#). Questions about auction donations can be directed to Lauren Fauth at [lfauth@aqua.org](mailto:lfauth@aqua.org).

We hope to see you in October!

**FEATURING:**

- Friday evening event at the NC Aquarium with taco bar eats and insights from a local guest speaker
- All oceanfront hotel views
- Opportunities for networking, sharing resources & ideas with fellow educators
- A marine-themed Halloween costume contest!

Stay tuned for hotel and registration information

Questions? Contact Emily Boyd at [eboyd@aqua.org](mailto:eboyd@aqua.org)



We're finalizing many conference details right now, and will share them soon! If you are interested in helping to plan the conference or volunteering to help out, please reach out to Emily Boyd: [eboyd@aqua.org](mailto:eboyd@aqua.org).

**Scholarships Available to Attend the MAMEA Annual Conference**

*Paul Standish Conference Scholarships*

Each year Paul Standish Scholarships are available to MAMEA members interested in attending the MAMEA Annual Conference but are in need of financial assistance. These Scholarships cover up to \$300 of expenses directly related to participation in the conference and will be issued as a reimbursement after the conference upon submission of valid receipts. Applicants must have at least 6 months of membership in MAMEA prior to application or must have attended a MAMEA-sponsored state event by the time of application. Members may not receive a Paul Standish Scholarship in consecutive years.

More information about the Paul Standish and other [2022 Scholarship Opportunities](#) are coming soon.

## Regional Updates

### DELAWARE UPDATE

*Tami Lunsford, DE Representative*

#### **#75MinuteScience Teacher Professional Development Webinar: Using Robots to Explore the Ocean (Virtual)** **Thursday, June 9, 2022 - 3:30pm to 4:45pm**

On June 9, join Delaware Sea Grant and Dr. Art Trembanis as we learn how researchers at the University of Delaware are using robotics to explore the aquatic world. During this webinar, Dr. Trembanis will discuss several of the technologies used in ocean exploration, such as remote operated and autonomous vehicles. He will also highlight how these tools are used by researchers to expand our understanding of the ocean. Dr. Trembanis' presentation will be followed by examples of ocean exploration classroom activities and resources, presented by David Christopher, Marine Education Specialist for Delaware Sea Grant.

Dr. Trembanis is a professor in the School of Marine Science and Policy at the University of Delaware as well as Deputy Director of the Center for Autonomous and Robotic Systems (CARS) and the Director of the Coastal Sediments Hydrodynamics and Engineering Laboratory (CHEL). Click [here](#) to register.

#### **Ocean Exploration Teacher Professional Development** **June 30, 2022 – 8:30am to 5:00pm** **University of Delaware, Lewes Campus**



On June 30, join Delaware Sea Grant and the University of Delaware for a teacher professional development focusing on ocean exploration. In this one-day, hands-on workshop, participants will gain a background in marine science and ocean exploration, become familiar with marine science resources and activities, and engage in a research cruise with University of Delaware scientists.

This workshop is appropriate for teachers or education providers of students in grades 5 to 12. Participants will receive a \$100 stipend plus a one – year memberships to the Mid-Atlantic Marine Education Association and the National Marine Education Association. Lunch and refreshments will be provided.

For more information or to register, click [here](#).

This workshop is funded through a grant from the National Marine Sanctuaries Foundation.

#### **Mid-Atlantic Climate Change Education Convening (Virtual)** **July 26, 2022**

Join educators from throughout the Mid-Atlantic in a 1-day virtual convening focused on climate change education. Like the past conferences, this one-day event will bring together examples of education and outreach happening across our region focused on climate change action. Join a community of educators for an inspiring day of learning and looking to the future as we all share what needs to happen to move our region forward on climate change action.

This will be a virtual and free event on Tuesday, July 26, 2022. The exact times will be announced soon, but please put a hold on your calendar for 9am to 4pm EST on July 26. Space is limited. Reserve your spot by visiting [www.maccec.org/registration](http://www.maccec.org/registration).

#### **Horseshoe Crab Mating Season**

It is horseshoe crab mating season here in Delaware! Each May and June, millions of horseshoe crabs (*Limulus polyphemus*) come ashore to mate and lay eggs in the sand, and peak intensity of mating is during spring high tides. The new moon was May 30 and the full moon is June 14. High tides along Lewes are around 9-10 pm on all of those days. If you want to see enormous populations of mating horseshoe crabs, grab your red-filtered head lamp and a jacket, roll up your pants, and come visit! Be sure to let Delaware MAMEA members, especially your NMEA President, David Christopher, and Delaware and NMEA Rep, Tami Lunsford, know you are coming, so we can try to join you. You can learn more about the official Delaware population surveys [online](#).

## Regional Updates

### MARYLAND/DC UPDATE

Lauren Fauth, MD/DC Representative



#### National Aquarium

National Aquarium is hosting several Teacher Workshops throughout summer 2022. Visit the [website](#) to see what opportunities are available! To register please contact our Central Reservations department at 410-576-3833 or [reserve@aqua.org](mailto:reserve@aqua.org).

#### Irvine Nature Center - Awakening to Summer: A Nature Informed Mindfulness and Yoga Event Saturday, July 9th, 10:00-11:30am

Sponsored by CMHC and The Center for Nature Informed Therapy. Summer is a time for warmth and expansion, as plants and animals in our region are at their most productive. We too, can open up to the healing powers of the natural world by intentionally connecting to ourselves and others. Come join Mira and Phillip in a 1.5 hour event that invites the healing powers of nature to improve mental health and wellbeing through the practices of yoga and mindful walking. This event will include yoga/mindful movement and a guided, nature-informed mindfulness walk. It will conclude with a final sharing circle. No experience is needed. This is a donation-based event, with a sliding scale suggested donation of \$20-\$60. Bring a yoga mat and a water bottle. Age 16+ All are welcome.

*Instructors: Phillip McKnight, Certified Mindfulness Instructor, and Mira Tessman, MA, LCPC, RYT-500, C-IAYT*



#### Anita C. Leight Estuary Center

This center in Harford County has many outdoor and water-based programs throughout the summer months. Kayaking on Otter Point Creek is a great time! Check out their [event calendar](#) for dates and registration information.

#### Calvert Marine Museum - Fossil Field Experience

At 9 a.m., you will meet CMM educators at Cove Point Lighthouse. The program leader will teach a short lesson on local Miocene fossils and what to look for. From 9:30 a.m. to about 11:30 a.m., you will explore the beach and search for fossilized shell, bone, and shark teeth. After fossil collecting, you will work with the museum educator to identify any fossils you have found. The program ends at noon.

Several of the dates are already booked, so don't delay registering. Visit the Calvert Marine Museum [website](#) for more information!

#### Maryland Natural History Society - Opossum Shrimp- The Marvelous Mysids of Maryland Online Program: Thursday June 9, 7-8pm

What do you get when you cross a marsupial and a crustacean? Mysids, small shrimp-like animals, are a little known but ecologically important part of Chesapeake Bay's ecosystem. They are referred to as opossum shrimp due to the brood pouch present in the species' females which sets the order apart from other crustaceans, whose larvae are free-swimming. But there is more to the mysids than the pouch. Although small (adult size is about the width of a human fingernail), mysids dominate the diet of many juvenile fish, from bottom-dwelling fishes such as flounders and drums to fast swimming predators like rockfish and bluefish.

Dr. Ryan Woodland, Associate Professor at the University of Maryland Center for Environmental Science will introduce us to the main species of mysids in the Chesapeake Bay, provide details on their ecology, and present recent research findings abundance, reproduction and diet of two of the most abundant species of mysid in the Bay, *Neomysis americana*. Click [here](#) for more information and to register.

## Regional Updates

### Natural History Society of Maryland Shark Fest 2022 June 25, 2022; 10am-3pm 6908 Belair Rd., Baltimore, MD 21206



Our oceans are home to more than 1,000 species of shark. Join us for an annual educational and fun day to celebrate some of the most successful creatures in history. Visitors will be able to learn through hands-on activities that cover shark anatomy, evolution, morphology and ecology.

This is an event for all ages. The kid zone will feature a multitude of shark themed crafts, games and a chance to be a real life paleontologist and dig for shark teeth and bones! Guests will be able to see and feel shark skin, watch the birth of a ray, make a shark tooth necklace (extra fee).

This year, we asked you to choose one to serve as the Shark Fest Ambassador for 2022. You chose the largest fish in the world – the whale shark. Click [here](#) to learn more and register for an entry time.

### Smithsonian Environmental Research Center Advancing Equity in Urban Greenspace with Speaker: Atiya Wells, Backyard Basecamp Tuesday, June 21, 7pm ET (Virtual)



At our June Earth Optimism webinar, hear from Atiya Wells, founder of the nonprofit Backyard Basecamp in Baltimore City. Atiya will highlight the importance of equity in landscape design, creation and community cultivation. With their BLISS Meadows project, Backyard Basecamp has reclaimed 10 acres of vacant land in their neighborhood to be used for environmental education and community greenspace, and to help communities of color reconnect with nature. Click [here](#) to register.

### Smithsonian Museum of Natural History Ocean, Art, and Action with Skateboarding Icon and Environmentalist Peggy Oki June 8, 2022; 5-6pm (Virtual)

Join the National Museum of Natural History on World Ocean Day for a conversation with surfer, artist, and environmentalist Peggy Oki. Known around the world for her groundbreaking days skating and surfing as the only female member of the legendary Z-Boys, Peggy continues to inspire change in new ways today with her passion and commitment to protecting the ocean.

A tireless advocate for cetaceans through her Origami Whales Project, Peggy combines her love of the waves with her experience studying environmental biology and art to raise awareness about the plight of whales and dolphins.

Peggy will share more about her project and dedication to the ocean and join Adriel Luis, an artist and curator at Smithsonian’s Asian Pacific American Center, for a moderated Q&A. This program will be presented virtually via Zoom Webinar. A link will be emailed to all registrants. Click [here](#) to register.

**JUNE PD AT MAEOE**

**MAEOE SUMMER INSTITUTE**  
Apply to attend the FREE 2022 MAEOE Summer Institute to learn how to implement Forest Literacy into your Elementary classroom.

- Tuesday, 6/21: 9 am - 12 pm (Virtual)
- Wednesday, 6/22: 10 am - 4 pm (In-Person at Sandy Point State Park: Annapolis, MD)
- Thursday, 6/23: 9 am - 12 pm (Virtual)

**INCENTIVES:**

- \$150 Stipend (for 3 days)
- PLT & MWEE Resources and Kit
- 1 MSDE Credit

Training is the same as the 2021 Summer Institute. This professional development is funded by the Maryland Green Schools act of 2019 State Appropriation.

INFO HERE: <https://cvent.me/WBE9la>

### Maryland Association of Environmental and Outdoor Educators Summer Institute Professional Development June 21-23, 2022 (Hybrid event)

This PD will help attendees implement forest literacy in your Elementary School. Attendees will receive a Project Learning Tree (PLT) and MWEE Resource and Learning Kit. \$150 stipend and MSDE credit available for attending all three days.

More information and to apply the MAEOE Summer Institute click [here](#).

## Regional Updates

### NORTH CAROLINA UPDATE

*Andy Gould and Amy Sauls, MASTHEAD Contributors*

#### NC Aquarium at Fort Fisher

**Saturday, July 16, 2022 9 am - 4 pm**

Join other K-8 classroom and non-formal educators as we explore activities in the newly released Project Learning Tree Explore Your Environment K-8 Activity Guide. Every participant will leave the workshop with a copy of this guide that includes 50 hands-on, multidisciplinary activities to connect children to nature and increase young people's awareness and knowledge about their environment. The activities in this resource are supported by a robust Next Generation Science Standards (NGSS) correlation guide.

This workshop counts toward NC Environmental Education Certification (Criteria I) and consists of six contact hours that may count toward CEUs for teachers.

The registration fee includes Aquarium admission, use of classroom space, and instruction. The PLT activity guides are provided free of charge to participants through support from the NC Forestry.

Help keep our seas plastic-free! Please bring a waste free lunch, a reusable water container, and a coffee cup. SharkBites will be open for on-site purchases.

Registration Fee: \$25; [Registration Link](#); For additional workshop information, call 910-772-0546. For assistance with registration, call 910-772-0542.



#### NC Aquariums: Aquarium Scholars Grants opening soon for 22-23 school year!

The Aquarium Scholars grant program provides access to North Carolina Title I eligible schools to connect with all three NC Aquariums and Jennette's Pier. Teachers can receive up to \$1,250 for field trips, and programs at the Aquarium, in your school, or virtually. Funding for grants is provided through generous donations to the North Carolina Aquarium Society. Grant applications will be opening soon. For more information on the program, and for updates on the next school years applications, please click [here](#).

#### Fort Fisher State Recreation Area: Storm Surge Protectors Workshop

**Saturday, Jul 16, 2022 9:30 AM to 12 PM**

Interested in scientific field research but don't know where to start? Join Storm Surge Protectors in assessing the conditions of our coastal wetlands! Storm Surge Protectors is a UNCW MarineQuest citizen science project that aims to collect a long-term data set to help determine the ecological condition of coastal wetlands in North Carolina. Community citizen scientists will learn background for the project and receive training in collecting wetland vegetation data. Trained citizen scientists will be asked to collect data once a month from one of our 3 research locations in Wrightsville Beach, Carolina Beach, and Fort Fisher.

Interested volunteers can be trained at any of our workshops being held at the Fort Fisher State Recreation Area Park Office located at 1000 Loggerhead Road, Kure Beach, NC.

This event and all resources are free! And you don't need a science background to join! This meeting will be in-person and includes in-field training at Fort Fisher. For more information about Storm Surge Protectors visit our [website](#).

To sign up for this workshop please email Riley Lewis, Coastal Resiliency Ambassador, at [MQcoastalresiliency@uncw.edu](mailto:MQcoastalresiliency@uncw.edu) or fill out [this](#) form. Parking fee: Free

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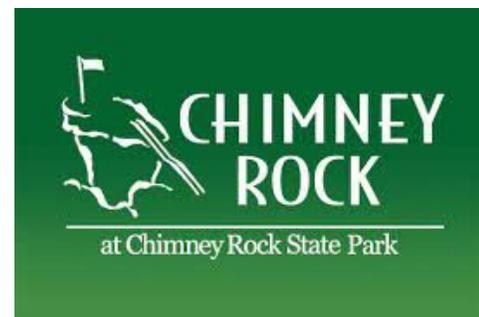
### Chimney Rock State Park: 14th Annual Flock to the Rock

Saturday & Sunday 10 AM - 3 PM from Sep 17, 2022 until Sep 18, 2022

Grab your binoculars and get ready for our annual feathered frenzy. This event was designed so birders of all skill sets can enjoy one of the country's fastest growing hobbies – bird watching! Live bird demos, guided walks, activities for kids and our annual hawk watch are just a few of the reasons this event is perfect for the whole family. Schedule to follow at

[www.chimneyrockpark.com](http://www.chimneyrockpark.com).

Admission: Included with Park admission



### NC Aquarium at Pine Knoll Shores - Family Paint Nights

June 22 Puffer Fish Night 6:30pm - 8:30pm

July 20th Mermaid Night 6:30pm - 8:30pm

Splash into an underwater world of art during Painting Under the Sea at N.C. Aquarium in Pine Knoll Shores. You'll make fin-tastic memories during this relaxing night of creating artwork. Instructors from Wine and Design on Wheels from Morehead City will provide all painting supplies and guide you every step of the way. Each night offers a different painting opportunity. Can't choose just one? Come to all! The only thing getting messy will be your paintbrush! There are a limited number of seats, so reserve your personal table under the sea and leave with your own unique treasure to gift or keep. Click [here](#) for more information and to register.

## VIRGINIA UPDATE

Tara Rudo, VA Representative

### VIMS - Marine Science Day

June 4, 2022

This free, family-friendly, event has something for everyone, including activities and demonstrations for kids, science talks, seafood cooking demonstrations, lab tours, exhibits, and lots of opportunities to interact with our scientists! With events and activities taking place on our campus in Gloucester Point, VA and online, you can join us from anywhere!



As one of the largest marine research and education centers in the United States, and a global leader in coastal and estuarine science, VIMS focuses on the challenges faced by coastal communities around the world. During Marine Science Day, you'll learn how our scientists are searching for answers to questions of global concern, such as ocean acidification and plastic pollution, and solving real-world problems with innovative solutions. *More information can be found at:* <https://www.vims.edu/public/msd/>

### Virginia Living Museum - Turtle Census

June 25, July 9 & 16

The Virginia Living Museum Education and Herpetology staff conduct a multi-year research project to monitor the population changes of freshwater turtles in a local watershed over time. Now you can take part in this activity and learn all about how turtle populations change and are affected by our local environment. Click [here](#) for more information.



## Member Benefits

**MAMEA Members receive the following benefits:**

- MASTHEAD quarterly newsletter
- Professional Development
  - Annual conference and mini events hosted in each of our states
- Funding
  - Scholarships to the annual conference
  - Grants for up to \$1,000 for marine-related classroom projects
- Recognition
  - Awards are given to members, honoring exemplary service as a Classroom Teacher or Informal Educator
- NMEA membership discount



Photo: Kathy Fuller

*More information and deadlines are available on the MAMEA website [www.mamea.org](http://www.mamea.org).*

### MAMEA Board Members

- Evan Beatty, President
- Emily (Peters) Boyd, President-Elect
- Lisa Tossey, Past President
- David Christopher, Secretary
- Jackie Takacs, Treasurer
- Tami Lunsford, Delaware Representative
- Lauren Fauth, Maryland/DC Representative
- Tara Rudo, Virginia Representative
- Brittany Pace, North Carolina Representative
- Dawn Sherwood, Member-at-Large
- Kathy Fuller, Member-at-Large

The MAMEA Board meets twice a year. More information and contact details can be found [here](#).



### MAMEA Committee Chairs

- Chris Petrone, Action Plan
- David Christopher, Archives
- Vacant, Auction
- Rachel Riesbeck, Awards
- Jackie Takacs, Conference Advisory
- Chris Petrone/Lisa Lawrence, Finance
- Dawn Sherwood, Grants
- Kathy Fuller, MASTHEAD
- Lisa Tossey, Mentoring
- Tami Lunsford, NMEA Representative
- Lisa Tossey, Nominating
- Lillie Reiter, Scholarship
- Lauren Fauth/Evan Beatty, Social Media
- David Christopher, Standing Rules
- Lisa Lawrence, Webkeeper