



Letter from the President

Dear SENE ME Members,

“Winter is coming!” For my fellow Game of Thrones fans, this quote means a lot more than just a change in the seasons. Unfortunately for many of us, this change of season means a change to more indoor activities. This doesn’t have to be depressing!

I love the changes that being in New England bring, not only is it a change in weather, but a whole new set of organisms make their way back. Winter also signals a chance to reconnect and regroup with yourself and your family. This evaluation of your time and relationships is important for growth.

This time of year is also a good time to reconnect with SENE ME. We want to continue to provide the resources you need to better educate about our oceans. We can only do that when we are aware of your needs. Please, reach out and let us know what you would like to see from our organization. SENE ME is also looking to grow, but before we can grow, we need to know what it is we want from the organization.

Don’t know how to get ahold of us? You can email SENE ME at senemeinfo@gmail.com, or if you would like to reach me directly you can email at mstrand@nessf.org.

I wish everyone a wonderful and fulfilling holiday season, and I look forward to hearing from you.

Thanks!

Megan Strand
SENE ME President



In this Edition:	
SENE ME Board/Nauplius Notations	2
Horseshoe Crab Walk - Save the Date .	3
NMEA 2020.....	3
Sound Notes from the Water Column ..	4
Aquaponics & Annual Meeting Pics ...	5-7
General Announcements.....	7-10
Election Results	10
Dates & Organizational Members.....	10

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2003 Mickey Weiss
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2010 Katrina Barrett

MARINE EDUCATOR OF THE YEAR

2005 Lance Arnold
2006 Matt Schardt
2010 Vicky Sawyer
2011 Joseph Hage
2012 MaryEllen Mateleska
2012 David Bednarz
2014 Michael O'Connor

Nauplius Notations

By Donna Dione, Editor

I'm assembling this newsletter as the first named winter storm hits. While we didn't have any hurricanes, it does seem 2019 has been filled with many intense storms (just ask the gullies in my driveway). While I don't have the chance to get to a beach as often as I like in the off seasons, any time I've been down to Hole in the Wall in Niantic or Meigs Point at Hammonasset, I've been finding what seems to be an increased number of offshore animals washed up on the shore. I'd be curious to know if it's just my timing or if some of you have also been finding the same phenomena this year. On one hand, it's exciting to have your students find animals at the beach they normally wouldn't, on the other hand, I think we all suspect these could become more and more regular occurrences with the changing climate. All the more reason for us to get out there and educate!!

SAVE THE DATE

Join SENEME for this annual spring phenomenon:

Horseshoe Crab Walk

Saturday, June 6, 2020

1:00-3:00 p.m.

Circle Beach/Grass Island, Guilford, CT

Horseshoe crabs come ashore to lay their eggs in May and June. Join environmental educator Julie Ainsworth to observe this natural phenomenon and learn more about these "living fossils" and their importance to the local ecosystem. We will be counting, measuring and tagging horseshoe crabs as part of the Project Limulus research program.

Watch your email this spring for more details and registration information for this family-friendly event!



JULY 13-17, 2020 • Honolulu, HI
NANA I KE KUMU - LOOK TO THE SOURCE

OCEANIA invites you to Honolulu, Hawai'i for NMEA July 13-17, 2020! Come and learn about the people, the culture, and the marine organisms of Hawai'i! NMEA Conference Sessions will take place July 14-16 in addition to dinner at the Waikiki Aquarium and dinner cruise. We invite you to come to Hawai'i early to see the sights and attend the International Marine Educators Conference, which will be held July 9-12, 2020. After NMEA, journey to Maui for a Communicating Ocean Sciences course, held July 18-22, 2020.

SOUND NOTES FROM THE WATER COLUMN

By Joseph Hage

I poked the eye of the hermit crab who had been enticed by the smashed blue mussel in a pool of warm tidal water. The crab promptly shrunk from view into its host shell. A few seconds later, two stalked eyes peered out from under the periwinkle home, and a pair of antennae twitched furtively in the water. The allure of mussel meat swirling in the water was too tempting for the crab to resist. I watched the hungry crab scurry towards the bait; however, it was not my quarry. I waited as the hermit crab gorged on the succulent flesh of the exposed mussel. Soon, more hermit crabs succumbed to temptation. In what seemed to be forever, my patience was rewarded when a green crab cautiously sidled out from the rocky wreck of a breakwater. The dark brown and mottled green-colored crab towered over the hermits as it ripped the flesh from the shell. I waited until I thought the new crab was fully engaged in its free-found meal, and I plunged my hand into the water. A Benny's yellow plastic bucket with a white plastic handle became the new temporary holding tank for the hapless crab. When several crabs had been coaxed from their rocky lair and plopped into my bucket, I ran splashing through the tidal surge of Alewife Cove to my parents' blanket near lifeguard tower three of Ocean Beach. I was a small browned boy making a beeline from the water across the blinding white sand, swinging a bucket full of dizzy green crabs back to my parents for the perfunctory "oohs and aahs."

Alewife Cove provided hours of entertainment for my entire family. My first memories of beachgoing in New London, Connecticut—at Ocean Beach—always included a trip to "The Cove." New London's Ocean Beach and Waterford Beach were bisected by the tidally dominated estuary where the fresh headwaters were derived from the dammed Fenger Brook on the back side of apartments on Niles Hill Road. At the mouth, the powerful incoming and outgoing tidal currents were, at first, a barrier between the two beaches. As I became older, the once frightening but now inviting currents provided hours of entertainment. We grabbed our masks and snorkels from our family encampment and yelled over our collective shoulders: "Goin' to tha' Cove!" We padded barefoot through the marsh up the water's edge, sometimes as far as the Ridgewood bridge on the back side of Ocean Beach. We jumped into the warmth of an outgoing tide, facedown, masks in the swirling water. We gave ourselves to the powerful tidal draw down the Coves' sinewy course through the salt marshes. We drifted in our own "Lazy River" nature ride past the backside of the beaches unseen, and wholly ignored. Tumbling seaweeds travelled along with us. Occasionally, schools of mummichog, menhaden, alewife and silverside minnows would scatter from under our dead man floating forms of brown back, pack of ten-year-old family and friends. I couldn't imagine what that must have looked like, all face down, yelling in unison through our snorkels as we saw sea life swimming below.

As we grew, so did our ambitions, and we would continue our planktonic drift— but subversively now, under the ever whistle-blowing lifeguard's watch. Mostly we were caught, but if we were careful, we could elude the "scree" of the guard's whistle and follow the drift past the rock jetty, and swim to the Waterford side out to the rocky islands.

At ten years old, I bought a frog spear trident tip, found an old broken broom handle and affixed the spear to the tapered end, and rubber tubing to the other. I would swim out to the Shore, Middle and Cormorant rocky islands and hunt the crevices for blackfish, flounder and cunners. If I was lucky enough to spear one, I stuffed it into an old onion bag and brought it home so that my mother could show me how to clean the fish. I've never tasted anything better.

Junior High School in Waterford hosted the Oceanology club run by Dave Scott and John Scillieri. It was official: I was "hooked." I was surrounded by adults and like-minded students who all shared common experiences, and a love for all things marine. Since 1972, Project Oceanology provided the platform; Dave and John, the adult guidance; and Alewife Cove, the venue. Dave has since retired and unfortunately John passed. Their legacy lives on in the lives they influenced using the Cove as our classroom.

Alewife Cove has had several champions. John Scillieri headed a group for one in the past, and now a new concerned group has expressed an interest: "The Alewife Cove Conservancy." Their cause is just, and the salty slice of marsh mud heaven deserves all the support and preservation that we can provide. Their proposal to pull down the dam, and free the waters for the Cove's namesake alewife to spawn is a noble undertaking.

My children have since drifted past John Scillieri's memorial granite bench overlooking the Cove, face down in the water, squealing through their snorkels as they watch schools of fish scatter. Maybe, just maybe...my potential grandchildren will get their own yellow plastic buckets filled with dizzy green crabs and sore-eyed hermits at Alewife Cove.

Learn more at: www.alewifecove.org.

"THE SCIENCE OF AQUAPONICS" & SENEME ANNUAL MEETING

By Donna Dione

On Thursday, November 7th, a small, but enthusiastic group of SENEME members gathered for the SENEME Annual Meeting. The evening started with the opportunity to learn about "THE SCIENCE OF AQUAPONICS" with Megan Strand and Nina Quaratella at New England Science & Sailing (NESS). The program gave educators a chance to think like students while working in teams to engineer a prototype aquaponics system. (Actually, what we really learned, is that us adults in attendance that night, overthink, so it took us much longer to accomplish tasks that the NESS students usually engineer fairly quickly!) It was a lot of fun to be aquaponics engineers for the evening, and I'm happy to report that all teams developed rudimentary systems for keeping fish and plants alive. It was also fascinating to see real aquaponics in action with the system NESS has built at their facility.



Megan Strand introduces participants to building an aquaponics system.



Amy Gollenberg (L.) and Nicki Rosenfeld attempt the siphon challenge.



Jeff Sack, Anuradha Poudel and Grace Jacobson (left to right) try a different siphoning approach.



George Wine, James Stuart and Kyle Swan (left to right) work on their aquaponics system.



**MYSTIC
AQUARIUM**

Family Overnight: January 17-18, 2020

How incredible it would be to come in after all the visitors have left for the night and explore Mystic Aquarium without the crowds? Mystic Aquarium has a wonderful night planned just for you, your family and a small number of “soon to be” new friends. Let’s explore our cool frogs, learn about amphibians in danger, create a really cool craft and even work on a scavenger hunt! Finish it off with a light evening snack and falling asleep next to your favorite indoor exhibit giving your family that perfect experience. <https://www.mysticaquarium.org/event/family-overnight-2/>

Northern Lights: Thursdays - Saturdays, Dec. 12, 2019 - Jan. 4, 2020

This December, Mystic Aquarium lights up during *Northern Lights* with *surprise character meet & greets, live ice carving demos, giveaway and more!* A sea of lights leads the way through a mesmerizing journey along the Aquarium’s outdoor pathways. See Arctic animals in a whole new light - quite literally - as you stroll to theatric music in search of hand-crafted lanterns that bring Arctic animals to life! <https://www.mysticaquarium.org/event/northern-lights/2019-12-07/>

New Maritime Aquarium Lab Seeks to Solve Secrets of the Horseshoe Crab

Written by Dave Sigworth



The Maritime Aquarium at Norwalk is inviting guests to follow along as it seeks insights into horseshoe crabs, a favored marine creature whose mystique and environmental importance make up for what it rather lacks in charm.

The Maritime Aquarium recently opened its new “Horseshoe Crab Culture Lab,” where staff will investigate the creatures’ physical processes, food preferences, breeding behaviors and more. A lab window lets Aquarium guests check out the work, especially following along as tiny young horseshoe crabs molt their exoskeletons to grow.

“I look at this exhibit and I see a perfect marriage of everything that The Maritime Aquarium does well: from our exhibits to our education programs to our conservation work in the field,” said Aquarium President Jason Patlis.

The lab was created thanks to a gift from Richard and Kim Alexander of Rowayton and their family’s Ballard Foundation.

More closely related to spiders than to crabs, horseshoe crabs (*Limulus polyphemus*) are readily recognizable for their domed brown bodies, pointed tail and “book gills” underneath. Their nine eyes and other light receptors aren’t obvious, and – as any beachcombing child on Long Island Sound knows – their pincers and tail are harmless.

Despite lacking a personality (and even a face), horseshoe crabs are among the most popular creatures on display at The Maritime Aquarium. “Citizen scientist” nights for placing census tags on horseshoe crabs at a Norwalk beach draw more participants than any other Aquarium volunteer field program. Perhaps it’s a special appreciation for an animal that has been crawling the oceans since before the dinosaurs, or for the unique properties in its blood that are critical in testing for bacterial contamination of medical devices.

Unfortunately, horseshoe crabs on the East Coast are listed as “vulnerable,” primarily because of overharvesting for research and for use by fishermen as whelk bait. Management plans are in place to try to stabilize populations.

“This facility lets us dig down into what makes these animals tick early in life, and how we can apply that to their conservation in Long Island Sound,” said Dr. Dave Hudson, research scientist for the Aquarium.

In the new Culture Lab, tanks contain horseshoe crabs of various ages – from several 2-inch-long 2-year-old crabs to hundreds of 2019 hatchlings barely the size of peas. Water-quality measurements should reveal details about horseshoe crab respiration and metabolism, giving insights into growth rates and feeding patterns.

Eventually, light, water temperature and other variables will be adjusted in hopes of encouraging mature crabs to breed. Learning how to grow large numbers of horseshoe crabs in labs would eliminate medical companies' need to harvest them from the Sound and the Atlantic. While most horseshoe crabs are returned to the water, an estimated 30 percent do not survive.

Richard Alexander called the lab just a first phase of collaboration on horseshoe crabs between The Maritime Aquarium and the Ballard Foundation.

"It is the vision of this partnership to enrich our science and understanding of this amazing animal, as well as to identify sound biological and biomedical best practices, ultimately leading to the development of a sustainability medical-use model while also establishing a true horseshoe crab conservancy," Alexander said.

The Ballard Foundation was established in 2014 by Richard Ballard Alexander in memory of his grandmother, Helen Ballard Klugesheid. The Foundation's mission is to support programs and institutions that ensure global environmental sustainability/stewardship, enhance education and enrich the quality of life of all peoples. It has a particular focus on initiatives in the United States but will also assist organizations globally to enable them to achieve their full potential.



National Association for Interpretations (NAI) Northeast Conference at The Maritime Aquarium!

This full-day conference will provide engaging presentations and workshops for interpreters/naturalists of all levels. Session topics include accessibility, internships, working with young children, and multilingual signage, just to name a few.

When: March 11, 2020, 7 a.m. – 5 p.m.

Where: The Maritime Aquarium in Norwalk, CT

What: Professional development of interpretive skills and networking opportunities

Conference registration includes:

Continental Breakfast; Keynote Address; Access to all Concurrent Session & Workshops; Afternoon Coffee & Cookie Networking; IMAX Movie

Registration Pricing:

NAI Members: \$50; NAI Student Members: \$40; Non-Members: \$75

Add-on Experience: Winter Creature Cruise aboard the Aquarium's research vessel: \$35

Registration & Lodging Link:

[https://www.interpnet.com/NAI/nai/events/Registration Folder/regionalworkshop.aspx?EventKey=r1 2020](https://www.interpnet.com/NAI/nai/events/Registration%20Folder/regionalworkshop.aspx?EventKey=r1%2020)



Joint Annual Conference with the Connecticut Conference on Natural Resources
Monday, March 16, 2020, Storrs, CT

Visit <http://coeea.org/annual-conference/> for more details as they become available.

SENEME Election Results

Congratulations to the following re-elected Board Officers: Donna Dione, Membership Secretary, Amy Gollenberg, Recording Secretary and Valerie Cournoyer, Chapter Representative.

SENEME Dates to Remember

January 2020 - Board Meeting, Conference Call, 4:00-5:30 p.m. Date TBD
June 6, 2020 - Horseshoe Crab Walk, 1:00-3:00 p.m., Circle Beach, Guilford, CT
July 13-17, 2020 - NMEA Conference, Honolulu, HI

Please contact SENEME President, Megan Strand, at mstrand@nessf.org or Vice President, Donna Dione, at donnadione@comcast.net to confirm finalized event times and locations or to obtain the phone number for conference calls.



**THANK YOU TO OUR SENEME ORGANIZATIONAL MEMBERS
FOR THEIR SUPPORT!!**



**MYSTIC
AQUARIUM**



The Nautilus is the newsletter of the Southeastern New England Marine Educators Association Inc. (SENEME). Submissions including (but not limited to) articles, activities to share, student projects, pictures of SENEME members in action, recipes, and other organization's announcements are welcome for all issues. The opinions expressed by authors published in this newsletter do not necessarily reflect the views of SENEME and all its Board members. SENEME is not responsible for any typographical errors that may occur within this publication. Permission is granted by SENEME for readers to make copies of newsletter items for their own, non-commercial use.