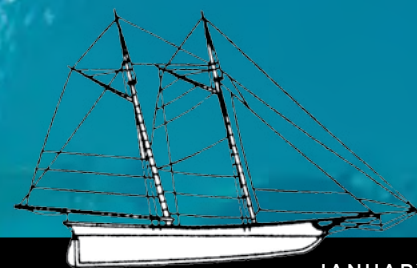


East Carolina University

# Stem to Stern



JANUARY  
2015  
VOLUME 31

*A Newsletter for our Maritime Studies Alumni and Friends*

PROGRAM IN MARITIME STUDIES | EAST CAROLINA UNIVERSITY | GREENVILLE NC

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# Stem to Stern

... a newsletter of East Carolina University's  
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Please visit the ECU Maritime Studies Web site at [www.ecu.edu/maritime](http://www.ecu.edu/maritime) for additional news and information about the program. A digital copy of this newsletter can be viewed on-line at <http://www.ecu.edu/maritime/publications>.

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## Thank you for your support!

This program would not be possible without the support of readers like you. Contributions made via *Stem to Stern* fund a scholarship that helps to cover the cost of research and education for students in the program. If you would like to donate, please use the enclosed envelope. Program graduates who donate \$50, and outside contributors who donate \$100 will receive the medallion pictured below in the mail. Once again, the Program in Maritime Studies is ever grateful for your support!

– Melissa Price



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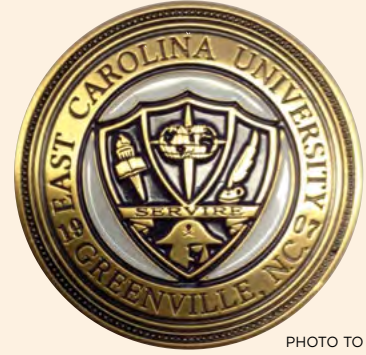


PHOTO TO SCALE

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## From the Editorial Staff:

What an exciting year this has been for students and faculty in the Program in Maritime Studies! This year's newsletter proves to be just as packed with achievements as last year's and some of the program's students have gone off to some exciting new jobs. Quite a few students interned overseas in the Mediterranean, France, and Sweden. This year's incoming class is a large one, with nineteen first-years joining the maritime family. The program also had a number of theses defended and our own staff archaeologist, Calvin Mires, defended his doctoral dissertation (Congratulations!).

Journey with us as we recount the exciting endeavors of individuals in the program! 🌊

– Melissa Price

When I visited ECU last fall, I was given a copy of *Stem to Stern* by Dr. Rodgers. I was thrilled to read about the variety of projects the students participated in the previous year. The range of students' interests and opportunities is truly incredible. I was extremely excited when I was informed I would be the assistant editor for the upcoming year. Please read on to explore what the Program in Maritime Studies has accomplished this past year. 🌊

– Katherine Clevenger

FRONT COVER: Maritime alumni Joshua Marano examines the area between frames on the Pillar Dollar wreck. (Photo: Charles Lawson, National Park Service)

BACK COVER: Caitlin Zant dives on the canaler *Floretta*. (Photo: Tamara Thomsen)

# *From the Quarterdeck:* **From the Quarterdeck:**

After three decades at ECU, I have been forced to agree with Henry A. Wallace, who said, "The only certainty in life is change." This is true on all levels and is readily apparent to anyone possessing a modicum of self-awareness. The Program is no exception, and it is interesting for me to contemplate what has transpired over each school year. In this endeavor, I have the advantage of perspective and can remember the shenanigans perpetrated by a tiny program surviving year-to-year and project-to-project, always reaching higher than was thought possible. Today's large international graduate program has me wondering how and when it all happened. *Stem to Stern*, initiated in 1985, reflects our changes. The newsletter began as a four-paged blue paper missive that read more like a family Christmas letter as opposed to today's informative journal that lists the activities of one of the largest graduate programs in Arts and Sciences, and one of the more prolific producers of professional archaeologists in the world.

As mentioned last year, the Program has solidified into a key player in the world of archaeology. I can only attribute this success to the concepts instilled by my progenitors: an easy-going, casual educational philosophy rooted in learning in a relaxed atmosphere. We also adhere to team concepts and often tackle the classroom as we would a field project, using teamwork and cooperation rather than competitiveness. This philosophy has not changed since our first class. Keeping up in the field is not only about

teaching philosophy, but also involves the adaptation of new hardware and software. This fall, I found myself flying our new Phantom Drone high over Mackinac Island to get a bird's eye, or perhaps more appropriately, a topmast view to better interpret the War of 1812 battlefield site located there. This technologically-produced perspective, from the air rather than underwater, points out a perfect example of how we can add to history. This drone pointed out the historical fact that in 1814, supporting ships in the bay could easily see what had transpired on the battlefield. From flying ROVs to our research vessel fleet, the program has progressed mightily in technical hardware and software to better promote our real objective: training students to design research and interpret archaeological sites through scientific data collection, analysis, inference, and common sense.

In this light, I have seen a perplexing trend emerge in underwater archaeology over the last few years. Gadgets have become more sophisticated, a good trend in the case of ROVs, cameras, CAD drawing systems, or remote sensing devices such as magnetometers and multi-beam sonar. The actual devices used to work underwater have also been upgraded over the years and new hardware such as re-breathers have shown promise in lengthening the time we can spend on site and the depth we can dive. I am not, however, a tech diver and will never be one. I am first and foremost an archaeologist who trains

new archaeologists. It is important to be competent in the water and technology certainly helps us to do so, but archaeology is the act of gathering, analyzing, and interpreting data. It involves asking and answering historical questions and should not be confused with, as some jokingly refer, "Taking Happy Snaps at 200 feet."

Another perplexing trend, especially for academic archaeologists, is the fact that there is less and less time each year devoted to research and professorial jobs are changing dramatically. Universities are increasingly under economic siege and the first defense in this siege is to devote more and more time explaining and assessing how important the profession is, creating less time for research.

Despite these obstacles, the Program still manages to realize feats of research and project planning that could not have been achieved before in the history of this program. Please enjoy reading about this summer's research exploits in various parts of the world, two diverse fall field projects in Key Largo, Florida and Mackinac Island, Michigan, and a wealth of other Program accomplishments. I also wish to thank all of you who donated to the Program; our goal of achieving a living Foundation Account is nearly there. And finally, thank you to all of the well-wishers and alums who sent me notes of greetings and encouragement throughout the year. You are a good bunch, no matter what anyone says! 🍷

– Dr. Bradley Rodgers

*If you would like to continue receiving Stem to Stern, please send in the enclosed pre-addressed, pre-paid envelope and let us know. All you have to do is insert a card with your name, address, and current professional position. If you want to send a donation to support the program, a specific project, or Stem to Stern, please feel free to do so. -Thank you*

# Maritimers on the Road: 2014 Conference

## SHA CONFERENCE -

## 47<sup>th</sup> Annual Conference on Historical and Underwater Archaeology

In January 2014, six ECU maritime students braved the frigid conditions of Québec City, Canada to attend the forty-seventh Society for Historical Archaeology (SHA) conference. The conference's theme of "Questions That

Count" resonated as Ryan Bradley, Kara Fox, Phil Hartmeyer, Kelci Martinsen, Jeneva Wright, and Caitlin Zant discussed their research, met with colleagues, and contemplated new opportunities and field projects. Some students were lucky enough to sit in on the Government Maritime Managers Forum, an eye-opening review of state and federal management interests, issues, and solutions, while others met with potential employers for internships or completed final preparations for their presentations.

Kelci and Ryan presented the paper

"A Bygone Boiler: But Does it Belong?," the investigation of a large disarticulated boiler found near the wreck site of *Monohansett* in the NOAA Thunder Bay National Marine Sanctuary. Their study, which sprang out of the ECU 2013 summer field school, explored the notion that despite its proximity to the wreck of *Monohansett*, the boiler might not be related. Their research included investigations into the history of another plausible parent ship and period boiler manufacturing.

Phil's presentation on "Lake Huron's Death Ship," *Pewabic*, described the first major mining boom in American history and the specialized craft that facilitated both copper industry and passenger transport on Michigan's Keweenaw Peninsula. *Pewabic* was one propeller that embodied the zeitgeist of the Great Lakes during and immediately after the Civil War. The paper detailed *Pewabic's* various identities both afloat and post-wrecking. It also contextualized the importance of passenger/package freight propellers in nineteenth-century Great Lakes history.

Caitlin's presentation focused on the development of the first self-unloading schooner-barge, *Adriatic*, and how this advancement in shipboard technology helped propel shipping into the twentieth-century. The innovative technological design of *Adriatic* adapted the vessel to the diverse demands of Great Lakes commerce. Highlighting the history of the vessel and the design of its steam powered self-unloading equipment, the presentation discussed how *Adriatic* played a vital role in the expansion of trade in the Great Lakes and served as a model for future designs in self-unloading technology.

All of the students benefited enormously from attending SHA. They were able to absorb information about fascinating projects and research designs from around the world, meet the professionals whose books and articles they cite, and enjoy the icy splendor of Old Québec City! We can't wait to see what SHA 2015 will bring! 🌨️

– Jeneva Wright



Château Frontenac located in downtown Québec City.

PHOTOS: RYAN BRADLEY

# Maritime Studies Association: Continuing Onwards and Upwards

As always, the Maritime Studies Association had a busy year. MSA exists to support students and assist in covering the expenses of attending conferences. The association also arranges social events for members and friends of the program and helps to send students to the SHA and SAA conferences each year, where some of the program's students present their research.

MSA activities began with the fall 2013 Tar River float, which gave participants respite from the Greenville heat and humidity. Later in the semester was the ever-popular Halloween party hosted at Dr. Rodger's house. Great job on the costumes everyone! Sea Biscuits and Bitters, held at the Topsy Teapot in late March, was a successful fundraising event. Always popular with the crowd, it allowed for those involved with the program to come together and recount their activities this past year. Thank you to all who came out to show your support of the Program in Maritime Studies!

March continued with MSA assisting in the organization of a lofting workshop attended by both students and faculty, which took place at the Roanoke Maritime Museum in Manteo, North Carolina. Craig Blackwell instructed students and faculty about the basics of drafting boat plans from measurements. Participants gained valuable experience of the early steps involved in boat construction.

A dendrochronology workshop held at Eller house in May was widely popular. MSA was able to host Dr. William Wright and Dr. Pearce Paul Creasman from University of Arizona's Laboratory of Tree-Ring Research. The first segment of the workshop consisted of a lecture via Skype from Dr. Creasman. The second segment involved a practical with Dr. Wright in which students and faculty participated in collecting samples from waterlogged timbers, which they then sent off for dating.

The annual "Blackout Party," in which students celebrated the completion of their



From left to right: Dr. Tim Runyan, Dr. Lawrence Babits, Dr. William Still, and Dr. Brad Rodgers at the annual Welcome Aboard party.

zero visibility blackout SCUBA dives, was greatly appreciated by students and faculty alike. MSA would like to thank Nicholas DeLong, Dylan McCusker, David Fictum, and Lucas Simonds for hosting the event at their home.

MSA was also able to create and purchase their very own scale cards. Thanks to Jim Pruitt for helping out with the design.

With the close of the 2014 spring semester, new officers and a new position to MSA emerged. The new position, Dive Liaison, provides assistance to incoming students concerning inquiries about purchasing or servicing dive gear, or any other general SCUBA diving questions.

Current officers for the 2014-2015 school year are as follows:

- President: Nicholas DeLong
- Vice President: Mateusz Polakowski
- Treasurer: Ivor Mollema
- Secretary: Thomas Lacey
- Historian: Melissa Price
- Dive Liaison: Hoyt Anderson

The fall 2014 Welcome Aboard party, held in Eller house, allowed for the mingling of students old and new and welcomed the nineteen first-year students to the program. It was a great success with many faculty and students in attendance. Thanks to Ryan Bradley, Jeremy Borrelli, and Nicholas DeLong for hosting the after party at their house. The fall Tar River float was a triumph

and the weather held out, allowing for participants to anchor and partake in jumping off a tree into the river.

Plans for the coming school year include hosting a variety of visiting speakers that cover topics such as ArcGIS and underwater archaeology off the coast of North Carolina. As usual, MSA will also send students to the Society for Historical Archaeology conference held in Seattle, Washington this year.

Thank you to members and officers, both new and old, for such a wonderfully successful year! 🍷

– Melissa Price

## Congratulations Dr. Calvin Mires!



PHOTO: JENNIFER JONES

The Program in Maritime Studies wishes to congratulate Dr. Calvin Mires, who recently defended his doctoral dissertation "The Value of Maritime Archaeological Heritage: An Exploratory Study of the Cultural Capital of Shipwrecks in the Graveyard of the Atlantic." Dr. Mires has been the staff archaeologist here at the program since 2006 but came to ECU in 2002 as a graduate student, receiving his MA in 2005. Thank you for all your hard work and contributions Dr. Mires!

## On the Job - RPM Nautical Foundation, Sicily and Albania

This summer I was lucky enough to join the RPM Nautical Foundation in their archaeological adventuring of the Mediterranean. I spent a total of two months surveying, excavating, diving, and studying with the RPM staff and their local affiliates. When I joined the R/V *Hercules* in Trapani, Sicily, the crew had already been working for over a month on the Egadi Islands Battle. This work seeks to survey the area amidst the Egadi Islands in order to study the remains of a battle that took place there in 241 B.C. The Battle of the Egadi Islands was the last naval engagement between the Romans and Carthaginians during the First Punic War and is the subject of my thesis research.

During my time on board *Hercules*, I was exposed to a variety of different archaeological techniques ranging from ROV operations, sonar, sampling, excavation, artifact recording, artifact illustration, and sector scanning. Twelve days into my expedition, I assisted in the recovery of a bronze ram (nicknamed Hamilcar Barca) and was able to process and record the ram for further conservation alongside



Mateusz and Jeff Royal examine a ram.

Dr. Jeffrey Royal. The ram remained on the research vessel for a few days while we recorded and studied it before turning it over to the *Soprintendenza del Mare* for storage, conservation, and public display.

My work with RPM focused on the documentation of the rams and their placement within the greater context of the battlefield site. This field season provided me with the valuable opportunity to work with the rams directly, as one of the first people to witness the resurfacing of a ram after almost 2,000 years. Nothing compares to the insight and perspective gained from hands-on study of artifacts.

Upon the completion of the Egadi Islands field season, the ship made its way through the Straights of Messina and across the Adriatic to Albania in order to conduct a series of surveys along the Ionian coast. When *Hercules* reached Albania, I disembarked and began a month of work with the

Albanian Coastal Survey, a joint project between RPM and the Albanian Centre for Marine Research. The project aims to explore and identify the submerged cultural resources of the largely undocumented Albanian coast.

A few days into the survey, the dive team found a Corinthian tile wreck thanks to local fishermen and divers. My dive partner, Lee Pape, and I were given the task of organizing a preliminary survey and submitting a report for this site, giving us the unique opportunity of learning how to conduct an archaeological survey. We set up perimeter buoys, conducted swim line searches, took hundreds of pictures, and had a great time diving the beautiful waters. After only five days of intensive surveying, we were able to produce a complete site report.

Thanks to the RPM Nautical Foundation, this summer was one of the most exciting and knowledgeable experiences of my life. Special thanks are due to Dr. Jeffrey Royal and George Robb, Jr. for making it possible for me to travel to the Mediterranean to join them on such exciting projects. 🐚

– Mateusz Polakowski



Mateusz measures tiles during a site survey.

PHOTO: LEE PAPE

PHOTO: RPM STAFF

## On the Job - Naval History and Heritage Command

Over summer 2014, Nicholas DeLong and James Pruitt were accepted as interns for the Naval History and Heritage Command, Underwater Archaeology Branch (NHHC-UAB). Selection for the program was based on the relevance of the students' theses topics to ongoing projects at UAB. The internship lasted seven weeks, allowing both students to sign on to long-term projects. DeLong's project involved conducting a material culture analysis of the artifacts recovered from the suspected USS *Scorpion* site, the topic of his thesis. Pruitt's long-term project involved geolocating Navy aircraft crash sites from the vague details found on aircraft crash cards. This was related to Pruitt's thesis research concerning submerged naval aircraft.

In addition to these long-term projects, the students also performed a myriad of other tasks such as testing and troubleshooting equipment and interpreting Sunken Military Craft Act (SMCA) policies. The two quickly discovered that NHHC-UAB was a dynamic work environment with typical days that not only included working on their main projects but also



Interns join Blair Atcheson to tow the magnetometer on the Patuxent River.

working on several shorter, time-sensitive projects. Researching Japanese submarines, preparing briefings for political meetings, and discussing survey methodology were some of the other tasks undertaken at UAB.

One highlight during the internship was participation in the 2014 Chesapeake Flotilla Survey. This survey was in collaboration with Dr. Scott Harris, a professor in the Department of Geology and Environmental Sciences at the College of Charleston, who was awarded an American Battlefield Protection Grant by the National Park Service. The objective was to conduct a non-intrusive remote sensing survey of the Patuxent River in Maryland

to determine potential changes in the river channel over the past two hundred years. This will ultimately provide clues to the locations of the remaining Barney's Chesapeake Flotilla, which was put in place during the War of 1812 to stall British advances in the Bay. The two students aided the survey preparation by finding and testing equipment, organizing gear, and inflating the small Zodiac boat. The students were eventually invited to join the survey team on

the river. Although the survey was geologic in nature, they gained useful experience with working on the boat, preparing and deploying remote sensing equipment (side-scan sonar, magnetometer, and sub-bottom profiler), and operating the logging software.

The internship was not only a first for the students but it was also new for NHHC-UAB—they were the first ECU Maritime Studies students to participate in the internship. By the end of the program, both students gained more than valuable experience and were able to make many professional contacts and friends. 🍷

— James Pruitt

## On the Job - The Economics of Cultural Heritage

How can one accurately place value on the attributes that make up our history and cultural landscape? This seems like a subjective idea. To many people it is easiest to understand the value of an object if a price tag is placed next to it, rather than understanding its significant historical or intrinsic value. Grappling with this notion, I was fortunate to intern this summer at the National Oceanic and Atmospheric

Administration (NOAA) Office of National Marine Sanctuaries, located in Silver Springs, MD. Working in the Socioeconomics Division, this question was posed with respect to the cultural resources located within the sanctuary system. The Office of National Marine Sanctuaries oversees fourteen marine areas, encompassing over 170,000 square miles of protected water. There are many cultural resources, such as shipwrecks,

located in these waters and attempting to protect and promote these resources are daily activities to a vast number of people. Understanding the value of these resources from an economic perspective is still a challenge.

Ideally, understanding the value of the cultural landscape of a region would in turn help promote public interaction with these resources. Increased

*continued on page 10...*

## *In the Field* - Summer Field School 2014

From May 27 through June 20, ECU's Maritime students conducted their summer field school in Washington, North Carolina. Led by Drs. David Stewart and Jennifer McKinnon, eleven graduate students recorded a submerged vessel in the mouth of Tranters Creek, a tributary of the Tar River. Dr. Calvin Myers, dive safety officer Mark Keusenkothen, and crew chiefs Chelsea Freeland, Will Sessorossi, and Jeneva Wright facilitated the project.

Students excavated and recorded a supposed nineteenth century schooner in zero visibility, coffee-like water. The project was assisted by the generosity of the Carolina Wind Yachting Center, who provided a boat slip and drafting area to record timbers, such as the ceiling planking. The typical workday included an early meet at Eller House, after which gear was packed and the participants drove the thirty minutes to nearby Washington. Students received hands-on experience with line searches, mapping timbers in zero visibility, and even made use of sledge hammers and pry bars underwater. The project was greeted with

an abundance of mud, requiring dredging and hand digging to expose parts of the wreck. The entire vessel was recorded with multiple plan views, detailed profiles, and goniometer readings.

Washington's maritime heritage and close proximity to Greenville make it an advantageous location for thesis work and field schools. Washington became a leading North Carolina port during and directly after the American Revolution. Connecting the Tar River region to the Pamlico Sound and Atlantic Ocean, the port constituted a vital link between portions of North Carolina's interior and markets in Philadelphia, New England, Europe, and the Caribbean. Watermen often carried naval stores, tobacco, and other agricultural products down the Tar River. Schooners, sloops, and brigantines waited near Washington's waterfront to carry these goods and timber products up the coast or down to the West Indies. In addition to trade, shipbuilding contributed to Washington's nineteenth century economy and culture. The port continued to thrive until the emergence of larger, deep-draught vessels that

could not enter North Carolina's shallow sounds.

Due to the location, this site has been studied numerous times in the past as a training ground for new Maritime students. Regardless, a complete site report, publication, or thesis has never come to fruition. This field season sought to change this and document the vessel in enough detail to become a thesis subject for Michele Panico. Currently a third year in the program, Michele, plans to use the information gathered during the field season to establish a reconstruction of the vessel. Along with reconstructing the vessel, Michele hopes to determine the origin of build and how the Tranters Creek remains fit into and contribute to local heritage.

The summer field session in Washington was a wonderful opportunity to learn about local history and the importance of schooners in the nineteenth century. Special thanks go to Carolina Wind Yachting Center for allowing ECU faculty and students to make use of their facilities and marina. 🐚

– Justin Edwards and Michele Panico



PHOTO: DR. CALVIN MYERS

Students conduct a line search in the Tar River to locate a schooner.



## *In the Field* - Fall Field School 2014

Students and faculty describe the fall field season in Biscayne Bay, Florida with one word: mosquitoes. Led by Dr. Jennifer McKinnon, Dr. Calvin Mires, and Dr. Lynn Harris, maritime students departed in early September to make the long journey to Elliott Key, which served as base of operations for the 2014 field project on the Pillar Dollar wreck. When one thinks of an island, pleasant images often come to mind of sunsets, beaches, and palm trees. Elliot Key certainly had all of those things, with one miniscule addition: mosquitoes. The number of bites, bugs, and bumps was exhausting but the daily trips to the wreck site were a welcome respite.

The Pillar Dollar wreck, which is estimated to be an eighteenth century Spanish vessel, lies in about twenty feet of crystal clear water in the southern boundaries of Biscayne National Park. Looted often by treasure hunters, this wreck received its name because of the specie that was found on it years ago.

Though it did not seem extensive at first, dredging operations revealed additional structure, such as frames, hull planking, and the garboard strake. The structure of the ship initially caused confusion because the keel listed to the north but the frames did not. It was only after we excavated



PHOTO: CHARLES LAWSON, NATIONAL PARK SERVICE

Students map the Pillar Dollar wreck.

completely around the keel that the orientation became clear. Due to time constraints, an area of about seven by six meters was excavated, more than enough to determine the ship's Iberian origins and collect data for a future reconstruction project for a student's thesis. Over the weeks, we mapped, photographed, and excavated the site and located artifacts such as concreted iron fasteners, ceramics, brick, and bone. We also conducted a transect survey over the adjacent reef to look for scattered artifacts. We noted spikes and bar shot, along with modern artifacts such as lobster traps and fishing poles.

Perhaps the best part about the field school was the opportunity to explore a mysterious wreck with an unknown historical background. The National Park Service staff that assisted us throughout the project were excited to watch as we uncovered more of the wreck than they had ever seen.

Overall, the project was a success, despite the tenacious mosquitoes. Students were able to meet fellow archaeologists, including some alumni from the program. Our extreme gratitude goes to the National Park Service for allowing us to camp on the island and for providing boats, a tank-filling station, and other general support for the duration of the program. Thank you also to Joshua Marano for captaining our boat and thanks to Jason Nunn, our ever helpful and patient dive safety officer, for keeping us safe and in a good mood. 🐛

– Melissa Price

## Theses Defended IN 2013/2014

**Daniel Brown**, "The Corolla Wreck Exposed: Historical, Archaeological Analysis of North Carolina's Oldest Shipwreck."

**Kathryn L. Cooper**, "The Infamous Convict Museum Ship *Success*: An Archaeological Investigation of Material Culture and Identity Formation Processes."

**Stephanie Gandulla**, "The Swedish Sailor's Table: A Study of *Vasa's* Wooden Tableware."

**Phil Hartmeyer**, "Passengers, Packages, and Copper: The Steamer *Pewabic*, Its Archaeology, Management, Material Culture, and the Development of the Keweenaw Peninsula."

**Whitney Petrey**, "Weapemeoc Shores: The Loss of Traditional Maritime Culture Among the Weapemeoc Indians."

**Stephen Sanchagrin**, "A View Through the Periscope: Advanced and Geospatial Visualization of Naval Battlefields."

**Laurel Seaborn**, "Seafaring Women: An Investigation of Material Culture for Potential Archaeological Diagnostics of Women on Nineteenth-Century Sailing Ships."

**Lucas Simonds**, "A Determination Worthy of a Better Cause: Naval Action At the Battle of Roanoke Island 7 February 1862."

**Jessica Smeeks**, "Characterizing the Deceased Mariners of the Swedish Warship *Vasa*: An Analysis of Personal Possessions Found in Association with Human Remains."

## Economics

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public interaction and awareness leads to protection and conservation of the resources. To begin analysis of this idea, the “Graveyard of the Atlantic” region was used as the basis for my study. Prior to my involvement this summer, studies created by staff from NOAA National Marine Sanctuary and Monitor National Marine Sanctuary provided the basic information for my analysis. This information outlined the social and demographic structure of the “Graveyard of the Atlantic” as well as the rich cultural history of the region. This region included the entire coastline of North Carolina and parts of Virginia. My project was to attempt to merge the available information to create a means to understand the economic value of the cultural landscape that is available to residents and visitors in this region.

This was a complex and subjective topic. It entailed meeting with Office of Marine Sanctuaries staff to discuss the process and methodology used in assembling previous research. Using their input and my own feelings regarding cultural resources, I established a theoretical model to help evaluate the economic potential of the “Graveyard of the Atlantic.” The cultural landscape of this region is very diverse and tourists flock to this region year after year to experience a wide variety of resources, which exhibits increasing economic potential. This was reflected in my final analysis through the fact that the cultural resources in this region are world-renowned and provide opportunities for economic use.

Coinciding with my work, NOAA is in the process of asking for new nominations of areas to designate as sanctuaries. Currently, the boundaries of the Monitor National Marine Sanctuary are being considered for expansion and the information provided in my report

aids in offering an example of the positives of increased sanctuary boundaries. Boundary expansion is already taking place in the Thunder Bay National Marine Sanctuary, which has similar cultural resources. Increased NOAA protection and local involvement offered by an increased boundary could prove to be a positive economic endeavor for the “Graveyard of the Atlantic” region.

This was a great learning opportunity because the work on this project applies firsthand, practical use of our course of study at ECU. Economic evaluation of our cultural landscape, particularly in North Carolina, shows great potential for increased public use in a sustainable manner. Attempting to illustrate the value of our resources is not as easy as putting a dollar sign next to each one. Demonstrating that opportunities are available to the public for further resource engagement may arouse interest in the rich history this region offers. 🌊

– Will Sassorossi

## ECU Maritimers Receive Awards and Internships

Stem to Stern is pleased to announce news of the following awards and internships:

**Jeremy Borrelli**

Currituck County Maritime Heritage Fellowship  
(Outer Banks, NC)

**Ryan Bradley**

Currituck County Maritime Heritage Fellowship  
(Outer Banks, NC)

**Nicholas DeLong**

Internship at Naval History and Heritage Command  
(Washington, DC)

**Justin Edwards**

Lawrence F. Brewster Graduate Fellowship in History

**William Fleming**

Barbara and Matthew Landers Graduate Fellowship in History

**Kara Fox**

Internship with The National Park Service’s Submerged  
Resource Center

**Nathaniel King**

Richard C. Todd Phi Alpha Theta Scholarship  
William H. & Mary Q. Tuttle Scholarship in History

**Thomas Lacey**

Barbara and Matthew Landers Graduate Fellowship in History

**Ivor Mollema**

Internship with IZIKO Maritime Centre (Cape Town)

**Mateusz Polakowski**

Bodo Nischan Memorial Graduate Scholarship in History  
Internship with RPM Nautical Foundation (Sicily and Albania)

**Melissa Price**

Evelyn and Joseph Boyette Graduate Fellowship in History  
Paul Murray Graduate History Scholarship

**James Pruitt**

Admiral Ernest M. Eller Scholarship in Modern Naval History  
Internship at Naval History and Heritage Command  
(Washington, DC)

**Jeneva Wright**

Biscayne National Park Cultural Resource Internship (Florida)

# On the Job - Northern Outer Banks of Currituck County

PHOTOS: RYAN BRADLEY AND JEREMY BORRELLI



Ryan and Jeremy use a total station to record points.

Graduate maritime students Jeremy Borrelli and Ryan Bradley spent the summer of 2014 researching on the Outer Banks of North Carolina. The two second-year students received the annual Currituck County Maritime Heritage Fellowship. This joint initiative, made up of the UNC-Coastal Studies Institute, Whalehead Preservation Trust, and Outer Banks Conservationists, LLC, provides graduate students with an opportunity to conduct research in the Northern Outer Banks of Currituck County. This year, the fellows focused on locally constructed small craft housed in the Whalehead Preservation Trust's boat collection in Historic Corolla.

One of the vessels, a twenty-one foot long gas boat formerly owned by Earl Slick of Pine Island and Narrows Island Hunting Clubs, is the last concave tunnel boat built by locally renowned builder Pat O'Neil. The concave tunnel design has potential ties to the WWII Higgins Boat used most notably during the D-Day Invasion. The defining characteristic of this wooden craft is the unique tunnel hull shape that utilizes the twisting transition of the hull planks at amidships, which bend out and up, forming a tunnel that increases the efficiency of the engine and hull. This particular adaptation is properly suited for the shallow waters of the Currituck Sound, which range from a max of five or six feet to mere inches.

The second vessel recorded was the thirty-two foot shad boat once owned by Ambrose "Hambone" Twiford of Currituck County. This boat, built in 1906 by celebrated builder W. Otis Dough of Manteo, North Carolina, is one of the few remaining examples of a North Carolina Shad Boat. In 1986, the North Carolina General Assembly recognized the shad boat as the state's Official Historic Boat for its versatility, resilience, and design unique to North Carolina. This boat, like many built after the first decade of the 20th century, had an engine in place of a sailing rig.

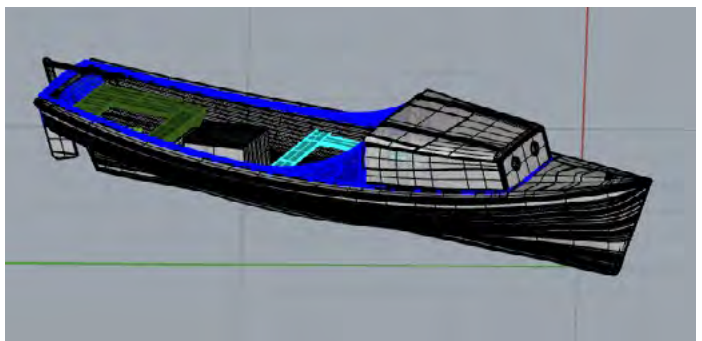
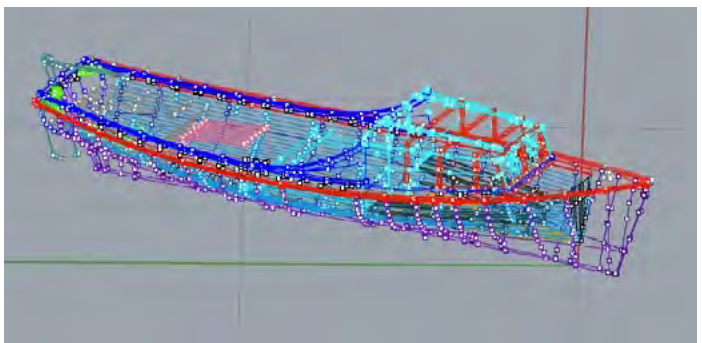
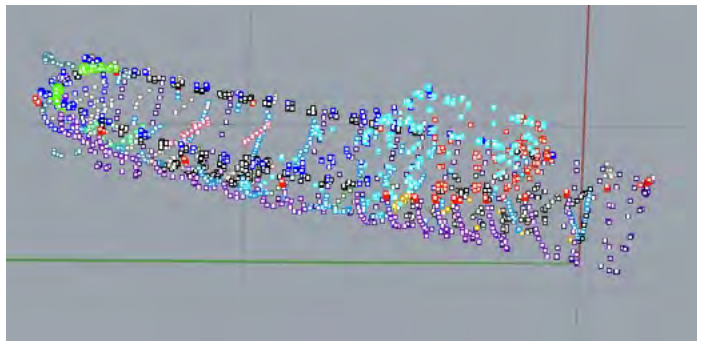
Both vessels are not seaworthy anymore but are fully restored for display purposes in the Currituck Heritage Park. The fresh paint and fiberglass patches made recording the vessels challenging. Despite these obstacles, the two fellows were able to digitally record both vessels using a total station. Once the numerous points were collected, they were exported to the Rhinoceros 3D computer program. It was in Rhino3D where the business of connecting the dots began. The dots were connected using lines and curves, surfaces were inserted between the curves, and finally the surfaces were rendered to recreate

the actual surface and textures of the boat. At long last, a vessel emerged. It took every bit of the eight weeks of the fellowship to complete the project.

In addition to fieldwork, the research fellows met with individuals who possessed invaluable information pertaining to the construction, design and use of these vernacular craft. They also spoke with the public on a regular basis as they carried out the field-recording portion of the project in full display of the visiting summer crowds.

A tremendous amount of coordination, organization, and enthusiasm went into this project from a number of contributing parties and the end product speaks of this. The completed models and reports will be used for future research, education, and outreach projects at Corolla. A special thanks goes out to some of the major players in making this summer and this program a veritable success. They include: Ann Sensibaugh, Ray Meiggs, Carl Ross, Travis Morris, Joe and Donna Stvartak, and all the employees of Whalehead, as well as Dr. Nancy White and Dr. Nathan Richards. 🐘

– Ryan Bradley and Jeremy Borrelli



A North Carolina shad boat as portrayed in the Rhino3D program.

## On the Job - South Africa

During ECU's study abroad program in South Africa, several members of the Program in Maritime Studies participated in archaeological surveys of *Bato* (1806) and *Brunswick* (1805). Both wrecks are located close to the shore at Simon's Town, South Africa. The surveys were completed during several days in July. *Bato* was a Dutch seventy-four-gun ship of the line and *Brunswick* was a British East Indiaman. Justin Edwards, Nathaniel King, Ivor Mollema, James Smailes, and Dr. Lynn Harris were key participants in the survey. Tara van Niekerk and Stephanie-Anne Barnardt of the South African Heritage Resource Agency (SAHRA) assisted the participants. Jaco Boshoff and Jake Harding of the IZIKO Maritime Centre provided assistance after the fieldwork was completed and Pisces Divers provided continuous support during the diving operations.

The faculty taught courses that covered the archaeology, history, and maritime cultural landscape of South Africa. The study abroad program began in Cape Town with visits to the Langa township, where participants toured the area and learned about the difficulties of life in post-apartheid South Africa. The next few days were spent touring

a number of museums such as the South African Maritime Museum, the Castle, the Springbok Rugby Experience, Robben Island, and the South African Parliament. After Cape Town, the group spent a few days at the Cape Point Nature Preserve where

of *Bato* by a Hungarian organization known as OCTOPUS. Most of these artifacts were not registered under the accession system developed by IZIKO. The entire *Bato* collection was photographed and archived and a selection of artifacts from the *Brunswick*

collection was also photographed and recorded. Students also engaged in historical research in Cape Town and Simon's Town. Contemporary newspapers provided extra information on the site formation of both *Bato* and *Brunswick*. In June 1806, American salvagers recovered *Brunswick's* cargo, *Bato's* rudder, and iron work from both wrecks. Information at the Simon's Town Museum provided insight about previous work completed on both wrecks. Research

at the National Archives branch in Cape Town revealed the arrival and departure dates of both ships and records at SAHRA documented a previous survey of *Bato*. After diving on the shipwrecks, participants rendezvoused with some undergraduates and drove five hours to Mosselbaai, where they were able to cage dive with great white sharks! They also toured the Dias Caravel Museum, which houses a replica of Bartolomeu Dias' caravel. The replica caravel sailed from Portugal to South Africa in the 1980s. From Mosselbaai, the group returned to Cape Town to bid farewell to the outstanding guide and return home to Greenville. After experiencing South Africa's amazing culture, participants were grateful for the opportunity to partake in a study abroad such as this. The study abroad was a great success for ECU and provided data for several conference papers and a thesis. Nathaniel King, Ivor Mollema, and Dr. Lynn Harris will present papers on the investigations at the Society for Historical Archaeology conference in January. 🐙

– Nathaniel King and Ivor Mollema



From left to right: Justin Edwards, William Cheek, James Smailes, Nathaniel King, Chris Deyncourt, Ivor Mollema, Dr. Lynn Harris, Dr. Ken Wilburn. Not pictured: Angie Carlson

they toured the Cape Point Lighthouse and surveyed *SS Thomas T. Tucker*, an American Liberty Ship that ran aground in 1942 while convoying to Suez, Egypt. Surveying the shipwreck was the first exposure for accompanying undergraduates, as well as Clive de Bruyne of Cape Town Tour Guide Company, to maritime archaeology.

Maritime students then prepared to investigate *Bato* and *Brunswick*, with the majority of underwater work completed in three days. Divers on *Bato* mapped, photographed, and labeled visible frames, ceiling, and hull planking. Scantling measurements of each plank and frame were recorded, after which timber samples were collected. Several pieces of copper and an anchor were also documented. *Brunswick* was mapped and labeled, with special attention paid to the exposed iron knees. With the completion of fieldwork, the students began an artifact analysis of the sites. The IZIKO Maritime Centre stored the artifacts from previous projects, including an NAS investigation of *Brunswick* and a previous investigation



Ivor Mollema takes wood samples from shipwreck *Bato*.

## On the Job - Aquarius Reef Base, Florida

During the summer of 2014, seven maritime students, led by East Carolina University's dive safety officer Jason Nunn, had the opportunity to intern with Florida International University's Aquarius Reef Base, one of the world's only remaining underwater habitats. The National Oceanic and Atmospheric Administration (NOAA) established the Aquarius Reef Base in 1986, which is located in the Florida Keys National Marine Sanctuary, near Conch Reef. The University of North Carolina Wilmington led operations for Aquarius until 2013 when Florida International University gained management of the underwater habitat.

Students Greg Stratton, Tom Horn, Jeremy Borrelli, Ryan Bradley, Jim Pruitt, Ivor Mollema, and Nicholas DeLong participated as support divers for Fabian Cousteau's *Mission 31*. Cousteau, grandson of famous oceanographer and explorer Jacques-Yves Cousteau, and *Mission 31* planned to spend a record-setting thirty-one days underwater in an attempt to study the drastic effects of humans on marine life. *Mission 31* employed the expertise of scientists from Massachusetts Institute of Technology, Northeastern University, and Florida International University. ECU's maritime students provided assistance, alongside several U.S. Navy Divers and Aquarius staff members, for a wide variety of jobs and tasks, which included topside support for the habitat and its aquanauts. These tasks included conducting potting runs, cleaning of the external hull of the habitat, escorting VIP divers to and from the habitat, assembling underwater training structures, and supervising the HQ's topside monitoring station. Potting runs, which were one of the primary duties for the support divers, are essential to any operation because supplies, such as fresh water, food, and electronic gear, must be taken to and from the habitat inside large pressurized containers.

While the main objectives of the mission took place over a span of thirty-one days, this large-scale operation took years of planning and weeks of preparation to launch. Greg Stratton, a returning veteran of the Aquarius internship

program, began working at the habitat several weeks in advance to help set up for Cousteau's upcoming mission and remained there throughout the following lengthy operation. Tom Horn, another returning veteran of the Aquarius internship program, worked the duration of the mission and spent thirty-one rigorous days assisting the highly publicized venture.

The other students from ECU's maritime program assisted for shorter durations. Ryan Bradley and Jeremy Borrelli began working for the habitat at the start of *Mission 31* and remained there for twenty-one days while Nicholas DeLong, Ivor Mollema, and Jim Pruitt worked the remaining ten days.

East Carolina University's involvement with the Aquarius internship program was kick started in the summer of 2013 by Jason Nunn, a former staff member of Aquarius. The internship program provides an excellent opportunity for ECU students to gain valuable diving operation experience with a variety of organizations such as the US Navy,



PHOTO: TOM HORN

Ryan Bradley poses in front of the habitat.

NASA, and a range of scientific programs. These organizations have worked closely with Aquarius and FIU for a number of years. Due to the unique environment of the submerged habitat, Aquarius provides divers and scientists the ability to saturate, which allows them to conduct operations and studies underwater for an extended period of time, something standard diving equipment does not allow.

ECU plans to continue its beneficial relationship with Aquarius, which provides a unique and educational experience for students looking to pursue diving related careers. 🐠

– Nicholas DeLong



PHOTO: AQUARIUS STAFF

From left: Fabian Cousteau, Tom Horn, Ivor Mollema, Nicholas DeLong, Jason Nunn, Hoyt McCallany, Greg Stratton, James Pruitt

# On the Job - Submerged Resource Center

The blue waters and white sandy beaches of the Gulf Island National Seashore (GUIS) are home to a wide variety of marine life, environmental species, and cultural sites that are recreationally, historically, and intrinsically treasured. On April 20, 2010, this area, along with the rest of the Gulf coastline, became threatened by the effects of the catastrophic oil spill from the *Deepwater Horizon* oil rig explosion in the Gulf of Mexico. Four years later, evidence of the damage still lingers as remnants of the oil spill continue to wash ashore the beaches of the Gulf.

In response to the 2010 *Deepwater Horizon* oil spill, the Department of Interior has entered the Natural Resource Damage Assessment phase to evaluate the extent of long-term damage to resources caused by the spilled oil. The National Park Service's Submerged Resource Center (SRC) partnered with the GUIS in a study funded by British Petroleum to hunt for suspected oil accumulation. The project was intended to investigate potential areas of submerged oil mat (SOM) formation that are within the GUIS park boundaries.

So why, one might ask, is a team of underwater archaeologists looking for oil? The field of underwater archaeology is fundamentally multidisciplinary, requiring a combination of skills ranging from history to geology, from remote sensing to scuba sciences. Thus, underwater archaeologists and the SRC team are uniquely equipped with specialized equipment and skill sets that make them an invaluable multidisciplinary asset, and the perfect delegate for underwater resource management—both cultural and natural!

During the summer of 2014, East Carolina University's Kara Fox and University of Rhode Island's Jessica Glickman were invited to join the SRC team for a two-month long project. Fox and Glickman assisted the team by utilizing remote sensing and scuba diving capabilities

to gather data for characterizing the ocean bottom within the park waters. They were briefed on remote sensing survey equipment, processing software, diving proce-



SRC divers being deployed over a target.

dures, and boat protocol.

The GUIS project operations were split into two phases. The first phase utilized remote sensing capabilities, designed to find geological features such as deep sand waves, berms, or cultural materials that could trap or accumulate oil remnants. The interns were expected to assist with the acquisition, interpretation, and processing of remote



SRC intern Kara Fox examines an extracted sample in a plastic bag.

sensing datasets. This entailed gaining experience with various surveying software and the troubleshooting, handling, and deployment of remote sensing equipment. Additional duties included driving survey lines and operating SRC's research vessel, *Cal Cummings*.

Following the acquisition of remote

sensing datasets, the data was imported, processed, and added to an expanding sonar mosaic of the surveyed area. Once the survey was finished, the completed mosaic was analyzed and interpreted for potential patterns or features of interest. These features were identified and labeled for the second phase of the project: diver visual investigations. The diving operations involved scuba diving, snorkeling, and tow-boarding potential areas of oil accumulation that were identified within the sonar data. Dive teams would search each target site for signs of oil accumulation in the form of sand discoloration, dark materials, and irregularities of the ocean bottom. When potential samples were identified, divers recorded the time and location of their discovery, any additional notes about the samples themselves, and the context of their environment. The initial results of the project produced negative findings for oil accumulation. The project, however, accounted for limited visual investigations and conclusive findings have not yet been determined within the confines of the surveyed area or the rest of the park boundaries. Recent large SOM findings along GUIS beaches indicate that larger oil accumulations are likely present within the park boundaries.

While the project was unsuccessful at finding accumulated oil, it proved to be an invaluable experience for the interns. As underwater archaeology graduate students, both Fox and Glickman were given the unique opportunity to learn about remote sensing methodologies, boatmanship, and underwater sciences. The SRC often facilitates internships through individual parks, a summer-long internship through Our World Underwater Scholarship Society (OWUSS), and occasionally offers internships with the SRC team itself. Students who are interested in working with National Park Service submerged resources should ask their advisor to contact the SRC staff, and also keep an eye out for upcoming 2015 internship opportunities. 🐬

— Kara Fox

## In the Field - Rockly Bay, Tobago

My summer fieldwork was nothing less than an adventure. During the month of June, I returned to the southern Caribbean island of Tobago for the second time to take part in the survey and excavation of Rockly Bay, off the modern day port city of Scarborough. Dr. Kroum Batchvarov of the University of Connecticut, in conjunction with INA, leads the Rockly Bay Research Project. The goal of the survey was to find shipwrecks related to a naval battle in 1677 between the French and the Dutch. The Dutch successfully defended their assets on the island against the French fleet after a costly battle. Rockly Bay, now more commonly called the Port of Scarborough, is rich with cultural material from centuries of colonial history and locating the ships from this specific battle has proved somewhat challenging. A remote sensing survey conducted for the project in the spring and investigation of a number of the bigger targets revealed the location of numerous iron cannons concreted to a coral reef. This site was eventually determined to be a shipwreck and became the primary excavation this season.



Thomas Lacey takes photographs over the excavation trench.



Photos: Doug Ineats

Team members of Rockly Bay Research Project aboard M/V *Blu Spartan*.

The excavation was initially slow going, beginning with probing and scouting of other targets, construction and placement of moorings, and establishing the extremities of the shipwreck site. This allowed for the removal of any uncertainties about other targets, keeping our focus on the obvious shipwreck. Artifacts and the wreck's location in the bay have led Dr. Batchvarov to believe that the wreck is undoubtedly Dutch, and most likely the fifty-six-gun *Huis de Kruiningen*. Artifacts were eventually recovered for inspection and documentation and deposited back into an excavation trench at the end of the season.

One recording method used on the site was structure from motion (SFM). SFM is a three-dimensional mapping technique that is similar to creating photo mosaics. Three-dimensional models are constructed from sequences of photographs using a computer program, which compiles and stitches images to form a cloud of points. This point cloud can then be transformed into a mesh and given a texture. The scale of our models ranged from small concretions and artifacts to larger sections of the site.

Our rotating team, usually no more than eight people, used a newly constructed and sparsely decorated building inside the protection of the port as the base of operations. The

two-story building was equipped with bathrooms, showers, and a kitchen, with the overall goal to create the country's first conservation lab for underwater archaeology. The governments of Trinidad and Tobago funded the building, anticipating that it will be used both off-season and after the Rockly Bay Research Project is concluded.

Another facet of the project involved public outreach and politics. I was fortunate to meet the Dutch Ambassador to Trinidad and Tobago, as well as several other officials during a number of meetings and negotiations involving management of the project. I also met local politicians and the local historic trust. The highlight of this effort was a visit from local students and press in which we provided an introduction to the project and the new archaeology building that their government sponsored.

Overall, my experience with the project was amazing. The benefits of working with a small team allowed me to participate in different roles and work closely with each team member. Between the diving conditions, the number of finds, and the potential of the bay and the shipwreck, it will be fascinating to see what the next field season uncovers. I would like to thank Dr. Batchvarov for allowing me to participate this summer and I hope to rejoin him again next year. 🍀

– Thomas Lacey

## On the Job - Biscayne National Park, Florida

Coastal impacts of climate change are highly significant to the resource managers of Biscayne National Park. The prospect of preserving archaeological sites in the face of a changing global climate and its corresponding impacts to underwater and coastal regions is especially challenging. As a National Park Service and Geological Society of America Mosaics in Science intern, Jeneva Wright spent three months documenting and monitoring imperiled sites by surveying ongoing climate change impacts to shoreline and submerged archaeological remains.

Biscayne National Park offers a perfect opportunity to research archaeological sites and their vulnerabilities. Located south of Miami, Florida, the Park boundaries include many islands between Key Largo and Key Biscayne, the northern Florida Coral Reef tract, and the longest mangrove shoreline in the eastern United States. It holds a variety of prehistoric, colonial, and American historical sites and is home to a vast collection of shipwrecks, fitting for a predominately marine park.

These sites are endangered by accel-

erating sea level rise, increases in storm surge frequency and intensity, and shifting sediment dynamics and erosion. Shoreline sites could be swept away with increased tidal surges or outright inundation. The disruption of sand cover, seagrass protection, and increasing ocean acidification can threaten the stability of submerged

sites. This year's internship focused on the documentation of particularly high-risk sites and created modeling and planning options for Park managers seeking to manage the impacts of climate change to these non-renewable cultural resources.

The internship began with the successful completion of the Blue Card assessment, a diving and swimming exam required for all NPS diving personnel. Once certified as an NPS diver, Jeneva's next step was to complete condition assessments on archaeological sites. Sites are scheduled for these monitoring visits based on determined threats, both natural and human, and thus

Additionally, this project offered an opportunity to participate in two major site stabilization projects: the reburial of the HMS *Fowey* and monitoring inundation of a terrestrial prehistoric Tequesta Indian burial mound. A key product of Jeneva's internship was the compilation of a GIS overlay that presents visual planning data and confidence modeling for the inunda-



PHOTO: YASHEEN SHALLEY/NATIONAL PARK SERVICE

Jeneva works with Charlie Sproul of NPS SEAC.



Jeneva surveys a site in Biscayne National Park.

erating sea level rise, increases in storm surge frequency and intensity, and shifting sediment dynamics and erosion. Shoreline sites could be swept away with increased tidal surges or outright inundation. The disruption of sand cover, seagrass protection, and increasing ocean acidification can threaten the stability of submerged

erating sea level rise, increases in storm surge frequency and intensity, and shifting sediment dynamics and erosion. Shoreline sites could be swept away with increased tidal surges or outright inundation. The disruption of sand cover, seagrass protection, and increasing ocean acidification can threaten the stability of submerged

accumulated for thirty years—essential information for determining changes in site exposure or deterioration.

Research into the geomorphology and past damage assessments of particularly vulnerable and historically significant sites assisted in building understanding for the sites' continued preservation.

the assessments, including detailed photography, written observations, and ongoing maintenance of the NPS Archeological Site Management Information System (ASMIS), provided baseline data on sites' conditions. Data on some sites has

tion of terrestrial sites, as well as reporting corresponding research on the impending impacts of climate change to Biscayne's resources. Additionally, she was able to participate in many of the other cultural resource projects at Biscayne National Park, such as working with archaeologists from the NPS Submerged Resources Center and Southeast Archeological Center.

This internship was an incredible learning opportunity. The development of practical skills such as GIS competency, terrestrial archaeological methods, and the operation of small watercraft in the open ocean were highly beneficial (and only occasionally terrifying). Moreover, practicing archaeology with some of the best professionals in the field was an invaluable opportunity to build professional abilities and to contribute to the protection and preservation of cultural heritage resources.



— Jeneva Wright



## On the Job - Parris Island Canoe and Exhibit Reconstruction

In June 2014, Dr. Lynn Harris and graduate students Sonia Valencia and Alyssa Reisner were involved in ending the long conservation and preservation journey of a canoe to be exhibited in South Carolina at the Parris Island Museum.

In 1988, Mr. James Cooler, a Beaufort, SC resident, first discovered the wooden canoe in the marsh along the shoreline of Parris Island, SC. Since 1915, the island has served as the site of a United States Marine Corps Recruit Depot (MCRD). The vessel was claimed as federal property and Marines from the depot recovered it. The canoe broke during recovery and continued to fragment while in storage. Beta Analytic identified the wood as eastern white pine and dated it to approximately 590 years old (AD 1300-1420). According to some archaeological sources, Native Americans may have produced the canoe during the Late Woodland period.

The canoe fragments were stored in various South Carolina repositories before being sent to Tidewater Atlantic Research in North Carolina, where they were conserved using polyethylene glycol. In 2011, the fragments were shipped to the Maryland Archaeological Conservation Laboratory for treatment in a freeze dryer and were then returned to South Carolina for eventual display in the Parris Island Museum. The museum houses exhibits that focus on maritime history and the history of the island from the Paleo-Indian period to the present. Recognizing the educational potential of this prospective exhibit, Dr. Stephen Wise (Parris Island Museum Director and Cultural Resource Manager) offered the opportunity to gain valuable museum work experience to the two Maritime Studies graduate students under the guidance of Dr. Harris. The Parris Island Historical and Museum Society funded the restoration and exhibition of this canoe.

Dr. Harris, Reisner, and Valencia first visited Parris Island in May 2013 to measure, photograph, document, draw, and digitize the canoe fragments. They noted possible tool and burn marks and recorded potential footprints on certain areas of the wood. Though many pieces were missing, the team documented eighteen canoe fragments and matched them based on shape, color, thickness, and wood grain pattern in order to recreate a best-fit structure of the original canoe. The three visited again for a week in December 2013, joined by volunteer Andy Holloway. They documented the canoe fragments in greater detail before stitching them together with plastic cable ties.

A third and final visit was made to Parris Island in June 2014 by Dr. Harris, her daughter Leigh Harris, Holloway, Reisner, and Valencia. After further documentation of the canoe, the students and volunteers assembled the canoe's display case in the Parris Island Museum. Once assembled, the vessel measured roughly six meters in length and eighty centimeters in beam at the preserved extremity. Using plastic netting and PVC pipes as a platform, the group carefully transported the assembled canoe to the museum. They used oyster shells, marsh grass, and sand in the display in order to cover the cable



PHOTO: GEORGE E. HIJAR (PAO, HISTORICAL & MUSEUM SOCIETY - PARRIS ISLAND)

Putting the finishing touches on the canoe display case.

ties and give the exhibit a more natural look. Before the final unveiling of the exhibit, Dr. Harris, Reisner, and Valencia presented at the MCRD to discuss the Program in Maritime Studies, cultural resource management aspects of preserving prehistoric and historic canoes, and the process of preserving the Parris Island canoe. Further information regarding the Parris Island canoe is being documented as a case study in Reisner's thesis. The canoe is now officially on display in the Parris Island Museum, where it will convey a greater understanding and appreciation of the culture from which it originated. 🐚

— Alyssa Reisner

## On the Job - Back to RPM

This past field season, I returned to the Adriatic Sea as a member of the RPM Nautical Foundation team and took part in their ongoing archaeological research aboard R/V *Hercules*. In recent years, conflicts along the eastern coast of the Adriatic Sea shifted focus away from the region's cultural heritage and in turn prevented archaeological research from being conducted. Now that these countries have begun to thrive once again, however, maritime archaeologists are able to conduct further research in order to close the gaps in this region's archaeological record. This is exactly the aim of the RPM Nautical Foundation.

I boarded R/V *Hercules* in Trapani, Sicily and was present for the 2014 season's final ROV missions on the site of the battle of the Egadi Islands. We then set sail for Saranda, Albania. The route we followed was very similar to the course ancient sailors followed. The voyage took us along the northern coast of Sicily, through the Straits of Messina and along the southern coast of Italy. Once we reached the eastern tip of Italy we crossed over to Saranda, Albania. It was exhilarating to retrace the steps of ancient maritime cultures and allowed me to better understand the difficulties the sailors encountered.

Once on the eastern coast of the Adriatic Sea, we began sector scan, AUV, and ROV operations. The AUV was used to survey large areas that had not previously been documented, as well as for mapping known sites. Data collected in previous seasons using a multibeam sonar system, as well as the newly collected data from the AUV, was then analyzed in order to identify potential targets. The sector scanner was used to document potential targets in order to determine whether the targets need to be investigated with the ROV. The sector scanner was also used to map known sites with poor visibility. The ROV was used for ground-truthing, determining whether a target was a site of interest or not, as well as for documenting sites. The ROV was equipped with four cameras and the extensive footage obtained from the

cameras was used to create photomosaics and 3D models of the sites.

This year's season I was given the responsibility of directing the sector scanner missions aboard the ship in addition to working on the AUV and ROV operations. This involved managing the operations on



PHOTO: LIZ SMITH  
Kelci Martinsen and Derek Smith ready to launch Ocean Serve AUV.

the bridge, on the deck, and in the lab. This leadership role was an amazing opportunity to gain more experience with sector scanning and it also allowed me to develop a greater sense of self-confidence in my leadership skills. I am extremely grateful for the opportunity to further develop my skills in addition to acquiring more data for thesis work.

Throughout my time aboard R/V *Hercules*, we were able to map sixteen known sites for which mapping had previously not been completed and we discovered two new shipwreck sites. The new sites comprised of Roman ships carrying cargoes of Lamboglia 2 style *amphorae*. Using the ROV, we retrieved one amphora for sampling purposes. It was amazing to experience being one of the first people in thousands of years to handle this amphora. Cameron, a colleague, and myself were tasked with the job to clean, document, and photograph the amphora. We spent multiple days chiseling thousands of years of biological material from the exterior of the amphora. Once the outside of the amphora was cleaned, it was time for the messiest portion to begin: cleaning the interior of the artifact. Since I had the smallest arms, it was my job to reach into the

amphora and gently extract artifacts, sediment, or any critters that had found a home inside the amphora. I was outfitted with a glove zip-tied at the wrist and my arm was triple saran-wrapped. Regardless, on my first reach in, I felt like Willie Scott reaching into the unknown to find an ancient lever. In the

end, we retrieved multiple amphora sherds, several river pebbles, and a bucket full of shells and other organisms. The razor clams on the interior neck of the amphora shredded my "armor" but I thankfully came away with only a few scrapes and fire worm bristles.

The journey back to Malta was a long one. Once we arrived it was straight back to work, this time assisting Hydrographic Geologic Informatics Survey Solutions with their Seafloor Exploration Training Course.

The course focused on seafloor surveying technologies and seafloor data processing but also emphasized the importance of collaboration between geophysics, oceanography, archaeology, and biology. It was very rewarding to be able to share my knowledge of sector scanning and ROV operations with such an enthusiastic group of students. Not only was I able to gain valuable teaching experience, but I also learned the ways by which sonar technologies used in different disciplines can be applied to my own archaeological work.

Overall, I am grateful to have been given the opportunities to take part in several exciting projects this summer in addition to gaining valuable knowledge and experience in the field. I would like to thank the RPM Nautical Foundation, the governments of Albania, Montenegro, and Croatia, Dr. Jeffrey Royal, George Robb Jr., Derek Smith, Cameron Hutchins, William Glatt, Graham Nickerson, Dr. Aaron Micallef, Dr. Giuseppe Di Grigoli, Loren Clark, Ily Ilgesias, as well as Kathryn and Gerry for making these opportunities possible and I look forward to working with them again on future projects. 🍷

— Kelci Martinsen



PHOTO: IVOR MOLLEMA

Mateusz and Dr. Rodgers record total station points for a bathymetric map.

## *In the Field* - War of 1812 on Mackinac Island

It is not often that we have a chance to conduct fieldwork in a tourist hot-spot. East Carolina's blackwater divers are used to secluded riverbeds and choppy offshore work on the Carolina coast. This fall, a lucky handful of students spent the beginning of fall in the mirror-like Lake Huron on Mackinac Island.

Students Mateusz Polakowski, Ivor Mollema, Nicholas DeLong, and crew chief Chelsea Freeland joined Dr. Brad Rodgers to survey areas of interest on the coast of the small island. The pre-disturbance survey was funded by an American Battlefield Protection Program Grant issued to the NPO Inland Seas Institute and had aims of identifying possible cultural heritage from the British Landing site, the location of invasion during the War of 1812. We found very little related to 1812, and most of the "artifacts" were modern. This sample includes quarters,

several pop tops from Coke cans, the occasional horseshoe, and various parts of snowmobiles that slipped through the ice during the winter. Nevertheless, we recorded the archaeological information, taking careful measurements with a Total Station recording system. We mapped the artifacts, the shoreline, major landmarks in the area, and bathymetric depths of the water. The data was then displayed with Rhinoceros 3D modeling software.

The most gratifying work was our public outreach component. Four snorkelers with metal detectors and survey equipment were enough to produce puzzled looks and questions from visitors. Talking to the public was satisfying, even though we were in wetsuits and on a tight schedule.

Living on Mackinac Island was an interesting experience for all. Thanks to the Mackinac State Park, we were able to stay

in hostel-style housing close to downtown. Our site, however, was a four-mile bike ride to the other side of the island. Luckily, we had a small field house close to the site, limiting the amount of gear we transported on a daily basis. The weekends were spent enjoying the island and visiting Fort Holmes and Fort Mackinac on the island, and Fort Michilimackinac on the mainland. The trip also included a jaunt down to NOAA's Thunder Bay National Marine Sanctuary to check out the museum and catch up with several ECU alumni.

The project was ultimately a success, though post-processing is still underway. We were able to experience Mackinac Island in such a way that the hordes of tourists do not regularly see: from under the cool, but calm, waters of Lake Huron.



– Chelsea Freeland

## On the Job - Ocracoke Island, North Carolina

For many students in the Program in Maritime Studies, summer equates a time for researching and collecting data for their thesis. In May 2014, Dr. Lynn Harris led students Hoyt Alexander, Bernard Howard, Adam Parker, Alyssa Reisner, and Sonia Valencia to Ocracoke Island to survey the possible locations of Revenue Service Cutters *Diligence III* and *Governor Williams*. Maritimers collaborated with William Thiesen (Coast Guard Historian), David Moore (Archaeologist, North Carolina Maritime Museum), the United States Coast Guard (USCG), and members of the non-profit group Surface Interval Diving Company (SIDCO).

Revenue Service Cutters served as armed maritime law enforcement to protect coasts from smugglers. *Diligence III*, a schooner, was commissioned in 1803 (after its predecessors were retired) and most likely resembled other cutters used during the early 19th century. *Governor Williams*, a galley, was built in 1798 for the Navy Department and transferred to the U.S. Revenue Service in 1802 after the

Quasi-War with France. In 1806, the ships were assigned to conduct a survey of the coastline of North Carolina in an effort to make the area safer for shipping, but a September hurricane caused the cutters and numerous other vessels to wreck in Ocracoke Inlet.

The sites are significant because they represent an early attempt by the United States Government to improve shipping lanes. If positively identified, *Governor Williams* would be one of the first archaeologically documented galleys in the New World. In 2013, the North Carolina Maritime Museum conducted magnetometer surveys of the area and found targets of interest that were hypothesized to be the jettisoned guns from *Diligence III*.

During the 2014 field season, team members relocated the target sites and conducted handheld magnetometer surveys and line searches to delineate the site parameters. The team then used a dredge and jet probe to carefully expose the sites for further evaluation. Students recovered iron, wood, and brick artifacts that were

then stored in salt-water baths aboard the USCG cutter *Smilax* to await documentation. Each artifact was eventually measured, digitized, and photographed.

This collaborative project provided students the opportunity to gain valuable field experience that was related to maritime themes and intertwined with local history. Survey areas no deeper than four feet made diving unnecessary and allowed participants to make use of snorkel gear which was much lighter and easier to pack! Additionally, this project provided experience working alongside multiple stakeholders, each with various research and logistical goals. There is much work to be done on the sites and further research will allow positive identification of the sites and associated artifacts.

Thank you to Dr. William Thiesen, Coast Guard Historian, for including ECU in this initiative. 🙌

– Hoyt Alexander, Bernard Howard,  
Adam Parker, Alyssa Reisner, and  
Sonia Valencia



PHOTO: DR. LYNN HARRIS

Participants conduct a line search near areas of interest in Ocracoke Inlet.

# ECU attendees at the September 2014 Maritime Heritage Conference in Norfolk, VA



Photo: www.PhotoGraphic.com

Attendees: Front L to R: Deborah Marx, Dr. John Broadwater, Daniel Bera, Peter McCracken, Dr. Salvatore Mercogliano, Dr. Robert Browning, Dr. William Still, Dr. Raymond Ashley, Sorna Khakzad, Joyce Steinmetz, Sarah Watkins-Kenney, Dr. James Delgado. Back L to R: Nathaniel Howe, Dr. Timothy Runyan, Saxon Bisbee, Emily Powell, David Krop, Dr. Hans Van Tilburg, Dr. Amy Mitchell-Cook, Bruce Terrell, Dr. William Thiesen, Dr. Paul Fontenoy, Dr. Steve Workman, Frank Cantelas, Matthew Lawrence, Dr. John Jensen, Dr. Valerie Grussing, Douglas Jones. Missing from photo: Jeffery Bowdoin, Dr. Kelly Gleason, Joseph Hoyt, Dr. Kurt Knoerl.

## SPOTLIGHT ON MARITIMERS

- **Philip Hartmeyer:** Since graduating from ECU, Phil rejoined the crew at Thunder Bay as the Sanctuary's maritime archaeologist in residence. Researching, educating, protecting, and promoting Thunder Bay's cultural resources takes priority. This materializes in many ways through research, innovative partnerships, education, and developing local resource stewards. Each day is different and can include remote sensing, ROV deployments, community college instruction, mapping, National Register nominations, buoy maintenance, outreach material development, and administrative tasks.
- **Joshua Marano:** Joshua is a maritime archaeologist working at Biscayne National Park where he assists in the management of the park's 134 archaeological sites, runs the archaeological site-monitoring program, and manages the park's conservation lab. He leads an active public outreach program that specifically seeks to work with local non-profit organizations to organize lectures and tours to both disseminate recent archaeological findings and to develop an interest in archaeology and the protection of cultural heritage.
- **Allison Miller:** Allison had the privilege of spending the summer in Stockholm, Sweden. Under the guidance of Dr. Fred Hocker, she studied the archaeological context of the human remains from *Vasa*. She worked with the original finds records and examined the individual bones themselves. This included temporarily removing the individuals who were on display in the exhibit hall, which would draw an intrigued crowd of onlookers that always asked "Are they real?"
- **Lucas Simonds:** This summer, Lucas began an internship at UNESCO Headquarters in Paris that will last until December. He currently works in the Secretariat of the 2001 Convention on the Protection of Underwater Cultural Heritage. Among many things, the secretariat is working this year to raise awareness about the underwater cultural heritage of World War I, much of which is now, after 100 years, coming under the protection of the convention.
- **Caitlin Zant:** As a maritime archaeologist for the Wisconsin Historical Society, Caitlin manages and protects Wisconsin's shipwrecks and other submerged cultural resources. The previous three months have given Caitlin the opportunity to assist in two major field projects, help complete an NRHP nomination, return a salvaged rudder taken from a protected archaeological district, monitor wreck sites, and complete surveys of multiple recently uncovered shipwrecks in Lake Michigan.

# Ahoy Mates! Welcome to ECU

## New MA Students in the Program for Maritime Studies

**Elise Carroll**, from Greenville, North Carolina, grew up traveling to the Outer Banks and to ECU events. She received her Bachelor of Arts from the University of Mississippi, affectionately known as Ole Miss. Her interest in maritime studies stems from her general interest in history as a child and her open water certification, which she completed for her high school senior project. Her research interests mainly lie in Modern European history, specifically German history and World War II. During her free time she enjoys traveling, reading, and diving.

**Lauren Christian** graduated in 2010 from Saint Mary's University with a double major in History and honors Anthropology. Originally hailing from Halifax, Nova Scotia, she has worked across Canada in CRM archaeology prior to starting at ECU. Her study interests include the fighting Age of Sail in the Atlantic world as well as public engagement and education of maritime history and archaeology. In her free time, she enjoys hiking, running, being on the water, and traveling.

**Katherine (Katie) Clevenger** is from a cattle farm located in southwest Louisiana and attended Louisiana State University as an undergraduate. She received bachelor's degrees in Anthropology and History and a minor in Business Administration. She has experience with terrestrial archaeology in Peru and Macedonia and as an assistant for the Sanisera Field School's nautical archaeology programs in Spain and Italy. She is interested in how naval warfare and piracy affected trade in the ancient Mediterranean. In her spare time, Katie enjoys fishing, kayaking, hunting, and hiking with her dog.



The new first year students outside Eller House. First row: Sydney Swierenga, Sara Spatafore, Morgan Pierce, Elise Carroll, Allyson Ropp. Second row: James Kinsella, Victoria Kiefer, Bryan Scott Rose, Elizabeth Pratt, Lauren Christian, Emily Schwalbe, Edward Erhart. Third row: Patrick Merrigan, Katherine Clevenger, Kelsey Dwyer, Ian Hazel, Adewale Oyediran, Mitchell Freitas. Not pictured: Devin Urban.

PHOTO: KATHERINE CLEVENGER

**Kelsey Dwyer** is a bilingual graduate of Davidson College in Davidson, North Carolina who studied Anthropology and Hispanic Studies with a focus in archaeology. She has been a diver since a young age and is very excited to practice her passion and to be a part of the graduate program here at East Carolina University! She has previously conducted excavations in Croatia, Spain, Italy, and Ireland, as well as conducting ethnographic research throughout Nicaragua. Apart from being an avid fan of Game of Thrones, she enjoys playing the piano, painting, playing field hockey, and being near the water.

**Edward Erhart** is from a small town in the Upper Peninsula of Michigan. He received a bachelor's degree in History from Northern Michigan University, located on the shore of Lake Superior, and is particularly interested in social reactions to the introduction of dreadnoughts into the world's navies at the turn of the twentieth century. Outside of academia, he enjoys spending time with family, sampling foods from around the world, writing Wikipedia articles, and playing tennis.

**Mitchell Freitas**, while originally hailing from Camden, South Carolina, grew up in Ashburn, Virginia. He attended James

Madison University where he received a bachelor's degree in History along with a minor in Historical Archaeology and lettering as a fullback for the Dukes. His interests focus on American naval warfare as well as battlefield archaeology. In his spare time, Mitchell enjoys competing in lifting competitions and diving the Virgin Islands.

**Ian Hazel** is originally from the beautiful Eugene, Oregon. For his undergraduate, he attended Centre College in Danville, Kentucky and earned his Bachelor of Arts with a major in History and a minor in French. His research interests include the Royal Navy and the Napoleonic Wars, with special emphasis on impressment and its impact as a social and political issue. In his ever-decreasing free time, he enjoys films, books, watching football, hiking, craft beer, and whiskey.

**Victoria (Tori) Kiefer** is from a small town in Indiana. She received her undergraduate degree from Ball State University where she majored in Anthropology, focusing on Archaeology, and minored in Aquatics. During her time at Ball State University she was employed at the Applied Archaeology Laboratories. Her interests include maritime archaeology, trade, and material cultures in the Great Lakes. Tori likes to spend her free

time camping, kayaking, and enjoying time with family and friends.

**James M. Kinsella IV** was born in Leominster, MA but spent most of his life in Orlando, FL. He holds a B.S. in Criminal Justice and a B.A. in Anthropology from the University of Central Florida. James has studied abroad with UCF in the Bahamas and has experience in archaeological field work, side scan sonar, GIS, and scientific diving. In addition he has also completed two Maritime Archaeological field schools, one with the Lighthouse Archaeological & Maritime Program in St. Augustine, FL and the other with the Maritime Archaeological & Historical Society in Key Largo, FL. James is an active scuba diver and his research interests include both Irish and American Maritime History.

**Patrick Merrigan** was born in Bloomfield, NJ but grew up all over the U.S. as the son of a Coast Guard pilot. Attending Dickinson College in Carlisle, PA for his undergraduate studies, he received a bachelor's degree in Archaeology. During his study at Dickinson, Patrick contributed to archaeological research working as both a lab and research assistant. Although still undecided on a main topic of interest, he is most intrigued by nautical archaeology in the Caribbean and Mediterranean. Patrick also enjoys hunting, climbing, playing baseball, and boxing in his free time.

**Adewale Oyediran** is from Ede, a town in Osun State, southwestern Nigeria. He studied as an undergraduate at the University of Nigeria where he obtained a Bachelor of Arts degree in Archaeology and Tourism. He worked in Nigeria for some time before moving to the United States to continue his education. He is interested in researching the sea routes through which slaves were transported out of Africa to other parts of the world with much emphasis on the Americas. He enjoys research and loves playing/watching soccer.

**Morgan Pierce** is from a small town in southeastern Oklahoma, where she attended Southeastern Oklahoma State University. Morgan finished her undergraduate career as

an Honors Program graduate, and received a Bachelor of Arts in History with a minor in Spanish. She is interested in the maritime culture of Caribbean ports and Spanish and British vessels up to 1815. In her free time, Morgan enjoys reading fantasy novels, cooking Italian food, and going for walks.

**Elizabeth (Bettie) Pratt** originates from Maryland and attended Western Carolina University as an undergraduate. She received Bachelors of Science in History and Anthropology, as well as a minor in Leadership. She has worked on terrestrial archaeology digs in North Carolina and Italy, as well as interning for the Naval History and Heritage Command's Underwater Archaeology Branch at the Washington Naval Yard, Washington D.C. Her interests include the transition from sail to steam, the world wars, and technological advances in naval warfare. Outside of academia, she enjoys sailing, swimming, and traveling.

**Allyson Ropp** is from Chapel Hill, NC and attended University of North Carolina at Asheville as an undergraduate. There she received degrees in History and Classics. She has experience with terrestrial work in Italy and underwater work in Florida. She is interested in studying topics concerning the Golden Age of Piracy, including piracy in the Caribbean and North Carolina. In her spare time, she likes to play and watch sports and be near water.

**Bryan Scott Rose** is originally from Knoxville, TN and attended the University of Tennessee as an undergraduate. He received his B.A. in Anthropology with concentrations in Historic Archaeology and forensics and a minor in Geography. He served in the U.S. Army as a cannon crew member. He is interested in studying the maritime history and archaeology of the Caribbean from the 1500s to the late 1700s, especially as it relates to piracy and settlement. He enjoys being outdoors, hiking, sailing, and scuba diving.

**Emily Schwalbe** is from Concord, North Carolina. She attended Bates College in Lewiston, Maine, earning a B.A. in History, but decided to move back to North Carolina

after one too many brutal New England winters. She attributes her love of sixteenth and seventeenth century Atlantic World history to the many adventures with her family in St. Augustine, Florida as a child, and intends on pursuing that interest by studying early Spanish colonialism. In her free time, she enjoys running, reading historical fiction, and following Premier League soccer.

**Sara Spatafore** is from Aurora, Illinois, just outside of Chicago. She graduated cum laude with a bachelor's degree in Archaeology from the University of Evansville. She has worked and lived in a wide range of places including America, Hungary, Italy, and Spain. Her main interest is the relationship of the Etruscans with the sea and their neighbors particularly through trade, warfare, and piracy. In her free time, she enjoys exercising, exploring unfamiliar places, and writing.

**Sydney Swierenga** hails from Okemos, a small suburb of Lansing, Michigan. She attended the University of Michigan as an undergraduate and received a bachelor's degree in Anthropology and a minor in Music. She was a member of the Michigan Marching Band and of the Lambda chapter of the Honorary Music Sorority Tau Beta Sigma. She studied abroad in Western Australia, where she interned at the Shipwrecks Galleries Museum in Fremantle and attended two field schools in Esperance and Albany. She is interested in studying submarines and submerged aircraft from WWII in the Pacific. In her spare time, Sydney enjoys reading, playing the saxophone, swimming, skydiving, and scuba diving.

**Devin Urban** is from Chicago, Illinois. There he attended DePaul University for his undergraduate studies with a major in Philosophy and a minor in Archaeology. Devin's primary research interest is African Diaspora archaeology and history, an interest which peaked during his first field school on the island of San Salvador in the Bahamas. In his free time, Devin enjoys playing guitar and singing, listening to music, hiking, biking, fishing, and traveling.

# Where are our Maritimers now? - 2014

## A

**James Allan, (1987) PhD** – Lecturer, St Mary's College of California, Moraga, CA and Vice President, William Self Associates, Orinda, CA

**Evguenia Anichtchenko (2004)** – Historian, Alaska Office of History and Archaeology, Anchorage, AK

**Ray Ashley, (1996) PhD** – Executive Director, San Diego Maritime Museum and Professor of Public History, University of California at San Diego, CA

**Melissa Ashmore (2012)** –

**Paul Avery (1998)** – Auckland War Memorial Museum, Auckland, New Zealand

**Monica Ayhens (2009)** – PhD student, University of Alabama, Tuscaloosa, AL

## B

**David Baumer (1991)** – Virginia Beach, VA

**Dina Bazzill (2007)** – Principal Investigator, Environmental Corporation of America, Alpharetta, GA

**David Beard (1989)** – Director, Museum of the Gulf Coast, Port Arthur, TX

**Sam Belcher (2002)** – Medical Technologist (ASCP), Laboratory Supervisor, Central Baptist Hospital, PhD student, University of Kentucky, Lexington, KY

**Kathryn Bequette (1992)** – Director, Maritime Archaeology and Research, OELS, Westminster, CO; consultant with Denver Ocean Journey Aquarium

**Jemison Beshears (2001)** – Antique firearms specialist, Greg Martin Auctions, San Francisco, CA

**Jacob Betz (2004)** – PhD candidate, Department of History, University of Chicago, IL

**Saxon Bisbee (2012)** – Nautical Archaeologist in Residence, Northwest Seaport Maritime Heritage Center, Seattle, WA

**Samuel Blake (2006)** – Archaeologist, Southeastern Archaeological Research, Inc., Jacksonville, NC

**Jeffrey Bowdoin (2012)** – Curator, Naval History and Heritage Command, Washington, DC

**Matthew Brenckle (2004)** – Research Historian, USS *Constitution* Museum, Charlestown, MA

**John Bright (2012)** – Archaeologist, National Park Service's Submerged Resources Center, Denver, CO

**Dan Brown (2013)** – Adjunct Professor, Coastal Carolina University, Conway, SC

**Robert Browning (1980) PhD** – Historian, United States Coast Guard, Washington, DC

**Darryl Byrd (1998)** – Linthicum Heights, MD

## C

**Peter Campbell (2009)** – PhD candidate, University of Southampton, United Kingdom

**Frank Cantelas (1995)** – Maritime Archaeology Program Officer, NOAA Office of Ocean Exploration and Research, Silver Spring, MD

**Jodi Carpenter (2007)** – Environmental/Historical Preservation Specialist, FEMA, Nottingham, MD

**Chris Cartellone (2003)** – PhD student, Texas A&M University, College Station, TX

**Tane Casserley (2005)** – Maritime Archaeologist, NOAA's Thunder Bay National Marine Sanctuary, Alpena, MI

**Joe Cato (2003)** – Raleigh, NC

**Robert Church (2001)** – Senior Marine Archaeologist, C & C Technologies Survey Services, Inc., Lafayette, LA

**Brian T. Clayton (2005)** – Hydrographic Project Surveyor, Fugro Chance, Houston, TX

**Wendy Coble (1998)** – Head of WWII Research Division, Research and Analysis, Joint Personnel Accounting Command, Joint Base Pearl Harbor Hickam, HI

**Patrick Cole (1993)** – Writer, Barcelona, Spain

**Edwin Combs (1996) PhD** – Assistant Professor, Miles College, Birmingham, AL

**Michael Coogan (1996)** – Manager, Strategic Planning, Northrop Grumman IT, Herndon, VA

**Amy (Mitchell) Cook (1994) PhD** – Associate Professor and Chair, Department of History, University of West Florida, Pensacola, FL

**David Cooper (1998)** – Branch Chief, Cultural Resources, Apostle Island National Lakeshore, Bayfield, WI

**Diane Cooper (1995)** – Museum Technician, San Francisco Maritime National Historical Park and Curator, USS *Pampanito*, San Francisco, CA

**Kathryn L. Cooper (2014)** – **Annalies Corbin (1995) PhD** – President & CEO, PAST Foundation, Columbus, OH

**Lee Cox (1985)** – Director, Dolan Research, Inc., Newtown Square, PA

**Stephanie Croatt (2013)** – Curator, Battleship *Texas* State Historic Site, La Porte, TX

## D

**Michelle Damian (2010)** – PhD student, University of Southern California, Los Angeles, CA

**Claire Dappert (2005) PhD** – Historic Research Archaeologist, Illinois State Archaeological Survey, Prairie Research Institute, University of Illinois, Urbana-Champaign, IL

**James P. Delgado (1986) PhD** – Director, Maritime Heritage Program, Office of National Marine Sanctuaries, NOAA, Silver Spring, MD

**Alena Derby (2002)** – Pilates Instructor and Personal Trainer, Nantucket, MA

**Robert Dickens (1998)** – DVM, Cary, NC

**Stephen Dilk (2012)** – Contract Archaeologist, Colorado and Wyoming  
**Jeff DiPrizito (2001)** – High School teacher, Hudson, NH

**Brian Diveley (2008)** – Senior Archaeologist, CH2M HILL, Seattle, WA

**Tricia Dodds (2009)** – Associate State Archaeologist and State Parks Diver, California State Parks, Ocotillo Wells District, CA

**Wade Dudley (1998) PhD** – Teaching Professor, Department of History, East Carolina University, Greenville, NC

**Stan Duncan (1994)** – Regional Sales Consultant, NUS Consulting Group, Inc., Oak Ridge, TN

## E

**Scott Emory (2000)** – Cockeysville, MD



**Jeff Enright (1999)** – Maritime Principal Investigator/GIS Specialist, Southeastern Archaeological Research, Inc., Pensacola, FL

**Jenna (Watts) Enright (2000)** – Austin, TX

## F

**Kim (Eslinger) Faulk (2005)** – Project Manager – Marine Archaeology, GEMS – A Forum Energy Technologies Company, Houston, TX

**Sabrina S. Faber (1996)** – Chief of Party, Promoting Youth Civic Engagement

**Rita Folse Elliott (1988)** – Education Coordinator & Research Associate, The LAMAR Institute, Savannah, GA

**Patrick Fleming (1998)** – Raleigh, NC

**Richard Fontanez, MD (2001)** – Contract Archaeologist, Director of Instituto de Investigaciones Costaneras, and Hyperbaric Medicine Facilities, Medical Center, Puerto Rico

**Paul Fontenoy (1995) PhD** – Curator of Maritime Research and Technology, NC Maritime Museum, Beaufort, NC

**Chris E. Fonvielle, Jr. (1987) PhD** – Associate Professor, UNC-Wilmington, Wilmington, NC

**Kevin Foster (1991)** – Washington, DC

**Joe Friday (1988)** – Sergeant, Greenville Police Department, Greenville, NC

**Adam Friedman (2008)** – PhD Candidate, University of North Carolina, Chapel Hill, NC

**Don Froning (2007)** – Marine Corps Forces Pacific, Camp H. M. Smith, HI

## G

**Stephanie Gandulla (2014)** – Media and Outreach Coordinator, Thunder Bay National Marine Sanctuary, Alpena, MI

**Veronica Garrett (2008)** – Streetlight Records, Santa Cruz, CA

**Kate Goodall (2003)** – Chief Operating Officer, S&R Foundation, Washington, DC

**Amy (Rubenstein) Gottschamer (1995)** – Real estate broker, Santa Fe, NM, and Lawrence, KS

**Jeff Gray (1998)** – Superintendent, NOAA Thunder Bay National Marine Sanctuary, Alpena, MI

**Joe Greeley (2000)** – Site supervisor, *Maryland Dove*; Adjunct Professor of History, St. Mary's College of Maryland, St. Mary's City, MD

**Cathy (Fach) Green (2003)** – Special Projects Coordinator, Thunder Bay National Marine Sanctuary, Alpena, MI

**Russ Green (2002)** – Assistant Superintendent, NOAA Thunder Bay National Marine Sanctuary, Alpena, MI

**Jeffrey Groszkowski (2007)** – Firefighter/Apparatus Operator, New Hanover County Fire Services, Wilmington, NC

## H

**Richard Haiduven (2003)** – Contract Archaeologist, Miami, FL

**Stephen Hammack (2007)** – DPhil candidate, Institute of Archaeology/ St. Cross College, University of Oxford, UK

**Phil Hartmeyer (2014)** – Thunder Bay National Marine Sanctuary, Alpena, MI

**Lynn B. Harris (1988) PhD** – Assistant Professor, East Carolina University, Greenville, NC

**Margaret Harris (2004)** – Southern California

**Ryan Harris (2006)** – Nautical Archaeologist, Parks Canada, Ottawa, Ontario, Canada

**Heather Hatch (2006) PhD** – Collections Cataloger, University Art Galleries Department, Texas A&M University, College Station, TX

**Jeanette Hayman (2011)** – RPA, Archaeologist, Environmental Science Associates, Seattle, WA

**Theresa Hicks (2012)** – Operations Manager, Inland Seas Institute, Algoma, WI

**Robert Holcombe (1993)** – Retired, Naval Historian and Curator, Port Columbus Civil War Naval Center, Columbus, GA

**Joshua Howard (2004)** – Independent Researcher, Portland, OR

**Nathaniel Howe (2011)** – Nautical Archaeologist & Vessel Manager, *Arthur Foss* and Lightship No. 83, Northwest Seaport, Seattle, WA

**Joseph Hoyt (2008)** – Maritime Archaeologist, NOAA National Marine Sanctuaries, Newport News, VA

**Michael D. Hughes (2003)** – Project Manager, SAIC, Washington, DC

## J

**Claude V. Jackson (1991)** – Museum Curator, St. Louis, MO

**Tiffany (Pecoraro) James (2007)** – Vice President of Project Development and Government Relations, Magnum Energy, Salt Lake City, UT

**Brian Jaeschke (2003)** – Registrar, Mackinac Island State Park Commission, Mackinac Island, MI

**John O. Jensen (1992) PhD** – Lecturer in Maritime History, Sea Education Association, Woods Hole, MA

**Doug Jones (2007)** – Marine Archaeologist, Bureau of Ocean Energy Management (BOEM), New Orleans, LA

**Jennifer Jones (2012)** – PhD student, Coastal Resources Management, East Carolina University, Greenville, NC

**Rick Jones (1996)** – Building Contractor, Morehead City, NC

## K

**John Kennington (1995)** – Communications Officer, Campus Services, Georgia Institute of Technology, Atlanta, GA

**Kurt Knoerl (1994) PhD** – Managing Director, The Museum of Underwater Archaeology; Adjunct faculty, Northern Virginia Community College, Manassas, VA

**Nadine Kopp (2012)** – Project Archaeologist, Paterson Group, Ottawa, ON

**Mike Krivor (1998)** – Maritime Project Manager/Principal Investigator, Southeastern Archaeological Research, Inc., Pensacola, FL

**David Krop (2008)** – Director, *USS Monitor*, Mariners' Museum, Newport News, VA

## L

**Danielle LaFleur (2003)** – Historic Sites Curator, Lakeshore Museum Center, Muskegon, MI

**Marshall Lamm (2012)** – Curator, North Carolina Baseball Museum, Wilson, NC

**Matthew Lawrence (2003)** – Maritime Archaeologist, Stellwagen Bank National Marine Sanctuary, Scituate, MA

**Adam Lehman (2006)** – Whitsett, NC

**Amy Leuchtman (2011)** – Maritime Archaeologist, HDR, Inc., Ann Arbor, MI

**Jason Lowris (2000)** –

**Wayne Lusardi (1998)** – Michigan's State Maritime Archaeologist, Thunder Bay National Marine Sanctuary, Alpena, MI



**Morgan MacKenzie (2011)** – Consulting Maritime Archaeologist, Dewberry Engineering, Parsippany, NJ; Archaeologist, Dovetail Cultural Resource Group, Fredericksburg, VA

**Richard Mannesto (1993)** – Great Lakes Shipwreck Historical Society, Sault Ste. Marie, MI

**Joshua Marano (2012)** – Intern Archaeologist, Biscayne National Park, Miami, FL

**Eleftheria Mantzouka (2004)** – Montessori Teacher, Durham, NC

**Tom Marcinko (2000)** – South Carolina Department of Natural Resources, Charleston, SC

**Jacqueline Marcotte (2011)** – Maritime Archaeologist, Environmental Science Associates, Seattle, WA

**Amy Jo (Knowles) Marshall (1996)** – Library Director, The Craig Public Library, Craig, AK

**Timothy Marshall (1999)** – Tongass National Forest Heritage Program Manager, Tongass National Forest, Craig, AK

**Deborah Marx (2002)** – Maritime Archaeologist, Stellwagen Bank National Marine Sanctuary, Scituate, MA

**Roderick Mather, (1990) PhD** – Associate Professor, Department of Archaeological Oceanography, University of Rhode Island, Kingston, RI

**Christopher McCabe (2007)** – Deputy State Archaeologist, Georgia DNR, Coastal Underwater Archaeology Field Station, Savannah, GA

**Peter McCracken (1999)** – Co-Founder and Director, ShipIndex.org, Trumansburg, NY

**Phillip H. McGuinn (2000)** – Deputy Public Affairs Officer, U.S. Submarine Forces, Norfolk, VA; Naval Reserve Captain, U.S. Northern Command, Colorado Springs, CO

**Salvatore Mercogliano (1997) PhD** – Assistant Professor of History, Campbell University, Buies Creek, NC and Adjunct Professor of History, U.S. Merchant Marine Academy, King's Point, NY

**Ann Merriman (1996) PhD** – Nautical Archaeologist, Maritime Historian, Administrative Director, and Co-Founder, Maritime Heritage Minnesota, St. Paul, MN

**Keith Meverden (2005)** – Underwater Archaeologist, State Historical Society of Wisconsin, Madison, WI

**David Miller (2005)** – Instructor, Craven Community College, Havelock, NC

**Valerie (Rissel) Mims (2012)** – Marketing Coordinator, Craven Arts Council and Gallery, New Bern, NC

**Robert Minford (2012)** – GIS Analyst, Office of the Assessor of Real Estate, Richmond, VA

**Calvin Mires (2005) PhD** – Staff Archaeologist, East Carolina University, Greenville, NC

**Kimberly E. Monk (2003)** – PhD Research and Teaching Fellow, University of Bristol, England

**David Moore (1989)** – Curator of Nautical Archaeology, North Carolina Maritime Museum, Beaufort, NC

**James Moore (2003) PhD** – Marine Archaeologist, Bureau of Ocean Energy Management (BOEM), Herndon, VA

**R. Scott Moore (1992) PhD** – Professor and Chair, Department of History, Indiana University of Pennsylvania, Indiana, PA

**Shawn Holland Moore (1998)** – Director of Alumni Programs, East Carolina Alumni Association, East Carolina University, Greenville, NC

**Stuart Morgan (1985)** – Public Information Director, South Carolina Association of Counties, Columbia, SC

**Tyler Morra (2012)** –

**Jeff Morris (2000)** – Owner/Senior Scientist, Azulmar Research, LLC and Geomar Research, LLC, Port Republic, MD

**John W. (Billy Ray) Morris (1991)** – Director, Underwater Archaeology Branch, Kure Beach, NC



**Adrienne (Askins) Neidinger (2000)** – **Sam Newell (1987)** – Retired Pitt County Schools, Contract History Consultant, Greenville, NC

**Kevin Nichols (2002)** – Intelligence Research Specialist, Department of the Army; PhD student, Wayne State University, Detroit, MI



**Christopher Olson (1997)** – Nautical Archaeologist, Maritime Historian, Operations Director, and Co-Founder, Maritime Heritage Minnesota, St. Paul, MN

**Deirdre O'Regan (2001)** – Editor, *SEA HISTORY*; Vice President National Maritime Historical Society, Pocasset, MA



**Jason Paling (2003)** – PhD student, Department of Anthropology, State University at Albany, Albany, NY

**Harry Pecorelli III (2003)** – Stantec., Charleston, SC

**Martin Peebles (1996)** – ER Nurse, St. Petersburg, FL

**Whitney Petrey (2014)** –

**Jacqueline Piero (2004)** – “enjoying life,” Newark, DE

**Andrew Pietruszka (2005) PhD** – Forensic Archaeologist, Joint POW/MIA Accounting Command, Joint Base Pearl Harbor – Hickman, HI

**Mike Plakos (2003)** – Senior Technical Analyst, U.S. Navy, Washington, DC

**Larkin Post (2007)** – Gartley & Dorsky Engineering & Surveying, Camden, ME

**Sarah Milstead Post (2007)** – Program Manager, Maine Coast Heritage Trust, Rockport, ME

**Darren Poupore (2004)** – Chief Curator, Biltmore Estate, Asheville, NC

**Sami (Seeb) Powers (2007)** – National Park Service, Denver, CO

**Edward Prados (1993)** – Country Director, AMIDEAST, Aden/Sana'a, Yemen

**Franklin Price (2006)** – Senior Archaeologist, Florida Bureau of Archaeological Research, Tallahassee, FL



**Coral Rasmussen (1993)** – Cultural Resources Manager, Environmental Compliance and Protection Dept. Marine Corps Base Hawaii, Honolulu, HI

**John Ratcliffe (2012)** – Archaeologist, Paterson Group, Ottawa, ON

**Eric Ray (2009)** – Curator, Museum of the Coastal Bend, Victoria, TX

**James R. Reedy, Jr. (1987)** – Contract Archaeologist, Beaufort, NC

**Phillip Reid (1998)** – PhD student, Memorial University of Newfoundland, St. John's, NL/Wilmington, NC

**William A. Robie, Jr. (1993)** – Atlantic Beach, NC

**Todd Robinson (1998)** – International Baccalaureate Program History Instructor, James Island Charter High School, Charleston, SC

**Bradley Rodgers (1985) PhD** – Professor, Program in Maritime Studies, East Carolina University, Greenville, NC

**Jason Rogers (2004) PhD** – Senior Project Archaeologist, Northern Land Use Research, Inc., and Alaska Maritima, Anchorage, AK

**Flippo Ronca (2006)** – Nautical Archaeologist, Parks Canada, Ottawa, Ontario, Canada

**Matthew Russell (1995) PhD** – Archaeologist, William Self Associates, Inc., Orinda, CA

## S

**Stephen Sanchagrin (2014)** –

**John Schaefer (1994)** – Schoolteacher, Washington, NC; PhD student, UNC Chapel Hill

**James Schmidt (1991)** – Nautical Archaeologist, Naval Historical Center, Washington, DC

**Robert Schneller (1986) PhD** – Historian, Naval Historical Center, Washington DC

**Laura Kate Schnitzer (2012)** – Field Archaeologist, Southwest Archaeological Consultants, Inc., Albuquerque, NM

**Ralph Lee Scott (1979)** – Professor, Curator of Printed Books and Maps, Joyner Library, East Carolina University, Greenville, NC

**R. Laurel Seaborn (2014)** –

**Benjamin Siegel (2011)** – International Project Archaeologist and Cultural Heritage Consultant, Environmental Resource Management, Washington, DC

**Lucas S. Simonds (2014)** –

**Jessica Smeeks (2014)** –

**Joshua Smith (1997) PhD** – Professor and Department Head, Department of Humanities, U.S. Merchant Marine Academy, & Interim Director, American Merchant Marine Museum, Kings Point, NY

**Lindsay Smith (2010)** – Maritime & Project Archaeologist, SWCA Environmental Consultants, Houston, TX

**Jon Travis Snyder (2006)** – MFA student in ECU Program in Wood Design and Lutier, Greenville, NC

**Chris Southerly (2003)** – Chief Archaeologist & Diving Supervisor, NC Underwater Archaeology Branch, Kure Beach, NC

**Kathy A.W. Southerly (2006)** – Assistant Dive Safety Officer, NC Aquarium at Fort Fisher, Kure Beach, NC

**James Spirek (1993)** – State Underwater Archaeologist, SC Institute of Archaeology & Anthropology, Columbia, SC

**Joyce Steinmetz (2010)** – PhD student, Coastal Resources Management, East Carolina University, Greenville, NC

## T

**Bruce Terrell (1988)** – Chief Historian and Maritime Archaeologist, NOAA National Marine Sanctuaries Maritime Heritage Program, Silver Spring, MD

**William H. Thiesen (1993) PhD** – Atlantic Area Historian, United States Coast Guard, Portsmouth, VA

**Matthew Thompson (2010)** – Nautical Archaeologist, Thompson Maritime Consulting, LLC, Greenville, NC

**Bradley D. Thorson (1982)** –

**Hans Van Tilburg (1995) PhD** – Maritime Heritage Coordinator, Office of National Marine Sanctuaries, Program Pacific Islands Region, HI

**Ray Tubby (2000)** – Nautical Archaeologist, SEARCH, Inc., Pensacola, FL

**Lex Turner (1999)** – Psychiatric Nurse Practitioner - Vidant Medical Center, Greenville, NC

**Kenneth Tyndall (1988)** – New Bern, NC

## U

**Christopher Valvano (2007)** – PhD student, Michigan State University, Lansing, MI

## W

**John Wagner (2010)** – Park Ranger, Sylvan Lake State Park, Eagle, CO

**Daniel Warren (1998)** – Senior Marine Archaeologist and Houston Asst. Geosciences Manager, C & C Technologies Survey Services, Inc. Houston Office, Houston, TX

**Sarah Waters (1999)** – Education Coordinator, Thunder Bay National Marine Sanctuary, Alpena, MI

**Gordon P. Watts (1975) PhD** – Retired from ECU 2001, Director, Tidewater Atlantic Research and International Institute of Maritime Archaeology, Washington, NC

**Andrew Weir (2007)** – Cultural Resources Group, Jackson, MI

**Wilson West (1985) PhD** – Director, WestHall Heritage Research & Consulting, Toronto, Ontario, Canada

**Robert Westrick (2001)** – Senior Marine Archaeologist, C & C Technologies Survey Services, Inc., Lafayette, LA

**David Whipple (1993)** – Alexandria, VA

**Heather White (2004)** – Director of Library Project Development, Joyner Library, East Carolina University, Greenville, NC

**Scott Whitesides (2003)** – Archaeologist/Curator, Golden Spike National Historic Site, Brigham City, UT

**Elizabeth Whitfield (2005)** – Owner, TriBella Multisport, Denver, CO

**Kimberly Williams (2000)** – History Professor, Hillsborough Community College, Tampa, FL

**Stephen Williams (2004)** – Owner, PACC Consulting, LLC., Sanibel, FL

**Sarah Wolfe (2001)** – Exhibit Registrar, George Washington's Mount Vernon, Mount Vernon, VA

**Steve Workman (2002) PhD** – Associate Dean for Admissions and Administration, Virginia Tech Carilion School of Medicine, Roanoke, VA

**Elizabeth Wyllie (2012)** – Seattle, WA

## Y

**Wilson York (2007)** – High School History Teacher, Mt. Pisgah Christian School, Atlanta, GA

## MARITIME STUDIES GRADUATES!

Please let us know if your name is not on the list or if we need to update your current status.

*We would love to hear from you!*

