



Quarterly Reporter

“Helping to preserve and protect South Carolina’s maritime heritage through research, education, and public outreach.”

January 2015

Volume 5, Issue 4

Things You Need to Know:

- 4th Quarter 2014 Reports Due by January 10, 2015
- MRD Wing Night Feb. 25th
- ASSC Conference Feb. 28th

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Ashley Deming Leaves MRD

By MRD

As you may have heard, Ashley Deming has traded her pluff mud Wellingtons for a pair of snowshoes. The former coordinator of public education & outreach and manager of the Maritime Research Division’s Charleston Field Office has left South Carolina and SCIAA to return home to Michigan. Ashley announced her departure in October, and her last day with the Division was December 31st.

Ashley is now working to advance the appreciation and awareness of the maritime legacy of the Wolverine State and the Great Lakes as Director of Education & Administration at the Michigan Maritime Museum in South Haven.

During her five-year tenure at the MRD and SCIAA, Ashley has reinvigorated our public education offerings with artifact identification workshops, underwater archaeology field training courses, presentations, and our outreach efforts with diver socials, annual oyster roast, quarterly newsletter, and volunteer opportunities.

The core mission of the Charleston Field Office



Farewell, Ashley! You will be missed.

is the management of the Hobby Diver License program, and through her endeavors, Ashley has helped create a partnership between members of the hobby diving community and the MRD. By opening more lines of communication and partnerships between these two groups, Ashley leaves behind a significant increase in participation with the licensing program and a much better relationship between these two groups. Through these efforts, Ashley has helped to advance the MRD mission to study and preserve the maritime archaeological

legacy in the rivers and coastal waters of South Carolina.

As Ashley moves on to new challenges, we wish her the best in her future endeavors. We have all enjoyed working with her, and we will miss her enthusiasm for all things maritime. While the MRD has lost a valuable member of the team, we now look forward to continuing the momentum that Ashley has created in our outreach and educational mission as we welcome aboard a new colleague to the Division in April or May.

Thank you for five great years, Ashley!



January Quarterly Reports

This is a reminder that your 4th quarter 2014 reports were due on January 10, 2015. These reports should cover all of the collecting you have done between October 1st and December 31st of 2014.

Artifact Reports

Your *artifact* reports should be filed online or may be sent to:

Artifact Report Forms
PO Box 12448
Charleston, SC 29422

You may also fax forms to: (843) 762-5831
 Email forms to us at: mrd@sc.edu

Fossil Reports

Your *fossil* report forms should be emailed to Dave Cicimurri at: dave.cicimurri@scmuseum.org

Or mail Fossil Reports to:
Curator of Natural History
301 Gervais St.
Columbia, SC 29201

Make sure that you file reports with both agencies even if you have not done any collecting. If you have not done any collecting, just tick the box that reads “No Recoveries Made This Quarter” and send it to the appropriate agency.

Repeated failures to report will result in license suspension, and we are unable to renew a license if there are missing reports.

If you have any questions regarding reports, please visit our website at:

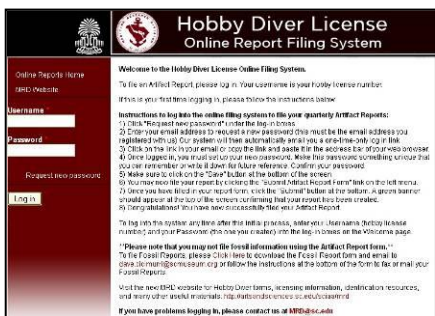
www.artsandsciences.sc.edu/sciaa/mrd
 Or give us a call at: (843) 762-6105. ■

Please file your artifact reports using our online system. You can submit forms online at:

src6.cas.sc.edu/sdamp

(Note: If this is the first time you are filing on this system, you will need to activate your account by following the directions on the home page).

All report forms can be found on our website at: www.artsandsciences.sc.edu/sciaa/mrd/forms Please use the current versions of the forms. We are longer accepting outdated versions.



Quarterly Reports due by January 10, 2014

Preserving Iron Artifacts

By Jimmy Armstrong, MRD Volunteer

How many times have you been diving and came upon an iron or steel artifact? If it was small and looked interesting, more than likely you considered recovering it and saving it. After carefully cleaning it and setting it up on display, you were horrified when it turned to orange dust a few weeks later.

There is a simple, safe, inexpensive method of preserving these artifacts called ‘Electrolysis.’ This past summer, Nate and

Ashley spent time explaining to me how easy it is to set up a small electrolysis tank and how to conserve iron or steel artifacts. The total cost is about \$40.00.

The method uses a weak DC current in a mild electrolyte solution to clean the artifact and restore the undamaged part of it. That’s right; it replaces the metal in the artifact with sacrificial metal that you provide! The transformation occurs at the molecular level, so the artifact is undamaged.

How cool is that?! When the item is finished, there is an easy way to assure no more rusting or corrosion occurs by using the hot paraffin treatment method.

Using their instructions, I treated some fasteners and spikes, an old hoe, one and a half horseshoes, along with some other items. The horseshoes were from the Civil War period found in a local river where a skirmish took place.

There is a down side to this. Depending on

the size and shape of the artifact, it can take several weeks to process it. The other negative part is that it can be somewhat messy when you brush off the old sludge and corrosion.

For me, it is worth it to be able to find a neat artifact, preserve it, and be able to display it. If you would like more information on how to set up your own tank, contact Nate or myself and we can explain this simple process to you.

Have fun!

Upcoming Events

Wing Nights

SDAMP will kick off 2015 Wing Night on February 25th in Charleston from 6:30-9:00pm at Kickin' Chicken in West Ashley.

Wing Night is a free and open invitation event, so please bring friends, family, and artifacts and fossils to show or have identified. We hope you will join us!

Archaeology Conference

The 2015 Annual Conference on South Carolina Archaeology will be held February 28th in

Columbia, SC. This year's conference will center around the Yamasee War as we mark the war's 300th anniversary. There will also be a general paper session on South Carolina archaeology. Please submit abstracts for papers and posters by Jan. 31st to archaeologysocietysc@gmail.com

Stone Fleet Research

The Maritime Research Division will continue our offshore survey for the Charleston Harbor Stone Fleets in April and May. We

conducted one week of archival research in Washington DC last February and 6 weeks of fieldwork last Spring. We plan to begin four weeks of remote sensing and diving operations in April. This is an ongoing project, and volunteers may be needed. If you're interested in volunteering, contact us for more information.

Artifact Workshop

Due to staffing concerns, we will not host an Artifact Identification Workshop in the 1st Quarter of 2015. We

will welcome a new Education and Outreach Coordinator in the coming months and will make an announcement as soon as our next workshop is scheduled.

Please continue to read the *Quarterly Reporter*, emails, our website, and follow us on [Facebook](#) for information about upcoming events and volunteering opportunities.■

MRD News

It is important to us that our Hobby Divers are aware of the education and outreach we do throughout the year.

We hope to keep you updated on all that we are involved in so that you too will get involved.

Remember that we're on [Facebook!](#) Leave a message on our wall!

October 2014

- Logan Crouse, our fall intern from the College of Charleston, assisted with the conservation of two iron objects from the 2013 Black River Project.
- Ashley and Nate attended the first meeting of the Lowcountry Archaeological Consortium at the College of Charleston. 20 local archaeologists gathered to

discuss collaborative research projects and mutual goals. The group plans to meet again in January to continue the cooperative momentum into 2015.

November 2014

- SDAMP held our 4th Annual Oyster Roast. The roast was attended by 50 people and raised ~\$1000. For the full article, see page 4.
- The entire MRD staff attended the Southeastern Archaeological Conference Nov 10-13. Nate Fulmer and Jim Spirek presented during the Southeastern Maritime Symposium chaired by Ashley Deming.
- Ashley Deming, Nate Fulmer, Joe Beatty and MRD intern Logan Crouse set up an exhibit at the ASSC's Fall Field Day on

Saturday, Nov. 13.

- Nate Fulmer visited the CofC campus to discuss internship opportunities with Archaeology majors.
- A farewell brunch for Ashley Deming was held at Toast in downtown Charleston. Many friends and colleagues attended.

December 2014

- MRD attended the annual Dive Safety & Control Board meeting on December 10th.

Upcoming...

January 2015

- Quarter 4 2013 reports are due January 10th.
- Jim Spirek will present at the SHA 2015 Conference on Historical and Underwater Archaeology in Seattle, WA.

- Nate Fulmer will be a part of James Island Middle School's Meet a Scientist Day on Jan 20th.

February 2015

- Charleston Wing Night February 25th.
- ASSC Archaeology Conference February 28th.

March 2015

- The MRD Offices in Charleston and Columbia will be closed intermittently as we begin the first project of the 2015 field season. Check our [Facebook](#) page for dates and opportunities to volunteer with us.
- March Wing Night, location and date TBA. Stay tuned to your inbox for details.
- March 31st is the last day of Quarter 1 2015, make sure to file your reports by April 10th.

Hobby Diver of the Quarter

This section of the newsletter is devoted to the hobby diver(s) who go above and beyond the call of duty. He/she has submitted excellent reports, been an exceptional volunteer, has gone out of their way to preserve cultural and/or natural heritage in the state, or has been a general inspiration to other licensees, the public, or us.

Each quarter we will pick a licensee that resembles one or more of

these noteworthy traits. Hopefully, it will be you! If you know of someone who fits some or all of these categories and would like to nominate them, please send us a brief email of who and why you think they should be Hobby Diver of the Quarter.

The honor of Hobby Diver of the Quarter for Quarter 4 2014 goes to diver Will Maples (#5435).

Will has only been a licensee since 2012, but he has made a consistent

effort to accurately report his finds to us each quarter. Will's reports are always on time and include many pictures from different angles for reference and descriptions of each artifact he recovered. Extra points go to him for promptly responding to our inquiries!

Although Will is relatively new to the program, he has been a model licensee who is eager to learn about the objects he finds. We look forward to working with Will more

in the future to preserve our amazing South Carolina natural and cultural heritage. Thank you, Will!



Profile shot of a 19th century button recently reported by Will.

4th Annual Oyster Roast

By Nate Fulmer, MRD

The MRD's 4th Annual Maritime Heritage Awareness Oyster Roast on Saturday, November 8th was another rousing success. Each year, we try our best to encourage our divers to participate in preserving the cultural heritage of South Carolina. And, if there is one thing we know about our divers, it's that they love to eat and have a good time! This year's roast was a stone's throw from the MRD's Charleston Field Office at Fort Johnson Marine Resources Center in Charleston.

It was a beautiful afternoon and evening down here, and a campfire fanned by light winds off the Charleston Harbor provided a perfect

background for camaraderie and conversation. About fifty attendees enjoyed a buffet of fresh local oysters, vegetarian chili, a variety of tasty trimmings and dessert catered by Dixieland Delights. Inside the pavilion, many attendees took in the photo slideshow and perused our artifact displays while listening to live bluegrass music. Huge thanks to Dolores Payne and her band for lending their talent to our cause, they really helped set the mood!

The silent auction featured many items that had more than a few folks involved in bidding wars. Special thanks to all of our dedicated sponsors for their generous additions to the auction!



2014 Maritime Heritage Awareness Oyster Roast

This year's roast raised nearly \$1000 to support our education and outreach programs. We appreciate every one of our sponsors, event volunteers and attendees, as this event would not have been possible

without the well-rounded support. Amazing job again, everyone! We are already looking forward to the 5th annual roast this Fall, it will be even bigger and better than the 4th. I hope to see you there!

If you would like to see some photos of the 4th annual roast, check out our [Facebook](#) page.

Stray Dogs Scattered Reminders of SC Timber Industry

By Nate Fulmer, MRD

When the first settlers arrived in Charleston in 1670, the southern colonies sported a vast longleaf pine forest that covered an estimated 90 million acres. Ancient cypresses and a variety of other arboreal giants also towered throughout the region. As settlers moved inland and outward from Charleston and into the colonial frontier, the timber industry followed and eventually changed the appearance of our state forever. Today, it is difficult to imagine just how enormous the forests once were, as only a few isolated stands remain.

As the forests fell, much of the resulting timber made at least a portion of its journey to mill or market by water, tethered together by log dogs. Hobby divers recover these relic tools of the timber industry frequently across the state and dogs are occasionally even found in-situ by individuals licensed to recover vintage submerged logs from state waterways. Today, ages after the virgin forests that made the early South Carolina timber industry possible vanished from the scene, some of these stray dogs are finding new life and are being adopted into museum exhibits and private collections.

Experienced divers recognize these orphaned objects immediately, although some more creative identifications have included everything



from hitching rings to tent stakes. Many variations of log dogs have been reported to us over the years, but the two most distinctive features of these tools include a small iron wedge or spike attached to an iron ring. The iron wedge of the dog was driven into a log, and chains ran through the rings, fixing logs together in order to surround and corral loose logs into a raft for secure downriver transport.

A classic example of a wrought iron log dog is pictured above. MRD volunteers recovered it during the 2013 Black River Project. It is currently undergoing conservation in the Charleston Field Office along with several other iron objects from that project. It will eventually join other artifacts already in our exhibit at the

Georgetown County Museum.

A nearly identical dog was recovered by Jimmy Armstrong and Catherine Sawyer not far from the same location and is also undergoing conservation in an electrolysis tank in Jimmy's garage. For more information on how he set up his tank, see his article about metal preservation on Page 3.

Although the forests are gone, iron tools are some of the most prevalent tangible reminders of an important industry that, for better or worse, drove the evolution of the landscape statewide. If you've found a stray log dog or other relics of South Carolina's timber industry, we'd love to see pictures. Please feel free to share your dogs with the community on our [Facebook](#) page!

Feature Hobby Diver Articles

Each quarter we would love to feature one or two articles by you, the hobby diver. Your article can be about an artifact or fossil you found, your collection, your research, your experience with the program, a humorous

diving anecdote, or just something interesting that relates to South Carolina's past. Feel free to include images that can be used with your article.

You should submit your articles to SDAMP for review and editing. Once we have approved

your article, we will do our best to get it into the next issue of the *Quarterly Reporter*. If your article is accepted, we will contact you to let you know.

We want to hear from you, so get writing! Submit your articles to:

Did you know?

International Day of Forests is Saturday, March 21. Forest Day was started in 2013 to celebrate and raise awareness of the importance of all types of forests and trees outside forests for the benefit of current and future generations. Try to go out and enjoy a forest that day!

Conservation Corner

Conserving a Leather Shoe from Mars Bluff

By Johanna Rivera, HL Hunley Project, Warren Lasch Conservator Center, Clemson

During SCIAA's fieldwork at the Mars Bluff site on the PeeDee River in 2011, a waterlogged leather shoe was recovered. Though the shoe had no historical context, the construction suggests it dates to the late 19th century early 20th century.

Since waterlogged organic materials need to be treated using chemicals and freeze-dried, SCIAA archaeologists brought the shoe to the Warren Lasch Conservation center for a full conservation treatment.

The shoe was comprised of different materials such as leather, iron nails and cotton stitching. The iron nails from the sole showed corrosion that had stained the leather. Sections of the upper portions of the shoe had detached due to the stitching dissolving underwater.

The treatment was carried out with the help of visiting archaeologist Alejo Cordero, and first consisted of a desalination process. Though found in fresh water, salts will still be present and they'll need to be removed in order to avoid further corrosion of



Shoe before conservation. Note the upper sections are completely loose inside the shoe.

the iron. Deionized water was used for the desalination treatment.

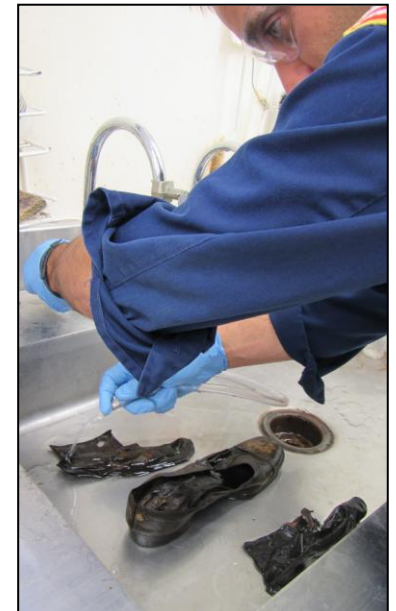
The water was changed at first every two weeks and then monthly to allow the removal of salts through osmosis. Once the desalination was done the shoe was cleaned mechanically using dental tools to remove any debris, sediment and corrosion products from the leather. During cleaning, the number 6 was uncovered on the heel.

After cleaning, the shoe was rinsed and submerged in a bath of Polyethylene Glycol (PEG). This waxy solution consolidated and provided additional strength to the leather while the water was being removed. Once the impregnation treatment

was complete, the shoe was weighted, formed into its final shape and placed in a freezer at -36 C. The cold temperature freezes both the water and the polyethylene glycol. Once completely frozen, the shoe was placed in the freeze dryer unit. The freeze drying process will remove the frozen water from the shoe in the form of vapor or sublimation rather than evaporation, avoiding shrinkage, cracking and damage to the leather. Since we were not able to treat the nails separately to prevent further corrosion, the shoe will have to be stored in a dry environment from now on.



A number 6 was uncovered in the heel of the shoe during cleaning.



Archaeologist Alejo Cordero rinsing the shoe after the PEG treatment.



This is the shoe and upper sections after conservation. A small piece of textile was also discovered inside the shoe, probably part of a

Paleontologists Panel

Here's to 2015!

By Dave Cicimurri Curator of Natural History, South Carolina State Museum

Happy New Year, hobby divers! All the best to everyone, and good luck on dives this year. As you might have read in the past newsletter, it was a very, very busy year for us here at the SC State Museum. We opened several new exhibits and capped off an 18 month-long expansion project with a grand re-opening. All of my efforts were focused on helping to design, fabricate, and install the new exhibits and help with smaller construction projects, my normal day-to-day job as the Natural History curator becoming secondary. For those few months during the summer, monitoring hobby diver reports became a low priority, and in addition to that, we had a “perfect

storm” of email problems as we upgraded our server hardware. Combine this with my limited time to check on dive reports and diver histories, my email and voice mailbox were overwhelmed. Unfortunately, this all resulted in delays in some folks getting dive licenses renewed.

I'm happy to say that we won't be going through another expansion project any time soon (although we're getting ready to start the planning process to re-vamp the entire natural history floor). In an effort to alleviate some of the email problems we continue to have, I am working with our IT staff to create a new email address specifically for hobby divers

to submit their quarterly reports via email. I hope to have this in place before the Spring newsletter comes out. I actually have two offices where I split my time, and I'm hoping that soon each office will have a voice mailbox. Additionally, we're still working to streamline the online fossil reporting process so that it's as easy as filing your artifact reports.

Keep filing your reports – I do read all of them and enter them into a database. If you submit by email, I typically do not reply with a message to let you know that I received your report. If you specifically ask, or use the “request receipt” option, you will hear back.

Otherwise, you will generally only get an email from me if you have a question about reporting, are looking for help with identifying your finds, or I have a question about a report you are filing. You can file reports as a .pdf via email, a hard copy in snail mail, or fax, but please don't try to send a photo of a report from your smart phone. When you fill out your report, be sure to include maps and photos. This will help me identify your specimens, but more importantly will help the SC State Museum learn more about the state's fossil resources and where they occur.

Thanks for your help, and I appreciate your patience.



Meet Finn! 25 years after the replica of the prehistoric species *Carcharodon megalodon* arrived at The South Carolina State Museum, the museum recently unveiled the name. Students at the S.C. School for the Deaf and Blind named the 43-foot-long giant shark that hangs from the ceiling on the second floor “Finn.” (photos courtesy of the SC State Museum)



The Maritime Research Division

The *Quarterly Reporter* is a quarterly newsletter of the Maritime Research Division of the South Carolina Institute of Archaeology and Anthropology at the University of South Carolina.

Nate Fulmer - Editor
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*Hobby Diver Licenses,
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General Information:*

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mrd@sc.edu

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MRD Columbia
1321 Pendleton St
Columbia, SC 29908

Letters to the Editors

If you have something that you would like to say about the program or have questions that you think others like yourself would like to have answered, look no further. This section of the newsletter is just for you. Send in your

questions, comments, and concerns and we will post them here. You can also send in comments responding to letters from other hobby divers. Ashley and Carl will respond to your comments and answer your questions for all to

read.

Just like your artifact report forms, you can email, fax, or send your letters to the MRD. We look forward to hearing from all of you. ■

Notes from the Editor

Happy 2015 everyone!

January 2nd marked my first anniversary with SCIAA, and I really appreciate the warm welcome from SCIAA staff and members of the hobby diver community over the last year. 2014 was one of the Charleston Field Office's busiest years ever, and I'm looking forward to continuing that momentum this year. Although we are temporarily down a staff member in the Charleston Field Office, we are still going to be extremely busy with projects, conferences and educational/volunteer opportunities. As we look forward to welcoming a new staffer, please be patient if you do not receive an immediate response to an inquiry. I promise that I will get back to you as soon as possible.

We spent a great deal of effort streamlining the licensing process over the past year, and I am pleased to report that average processing time for

new licenses is now down to days rather than weeks. If you plan to renew your license in the coming months, please make sure all of your artifact and fossil reports have been submitted *and* approved prior to applying for the renewal. We must receive confirmation from Dave at the State Museum that all fossil reports have been approved before we can issue a license renewal.

There will also be some more opportunities to get involved with us on several field projects this

year. If you are interested in volunteering, please make sure that you are up to date with your CPR/First Aid and O2 training. We also require that you have supplemental diving insurance (DAN). If you need some information on how to access the classes or obtain a DAN supplemental policy, I will be happy to help you.

Thanks for reading this edition, we really appreciate your efforts to help us preserve and protect SC's Maritime Heritage!



Nate Fulmer & Ashley Deming in front of an artifact display at the 4th annual Maritime Heritage Awareness Oyster Roast last November

Useful Website Links for Information

For more information

MRD: http://artsandsciences.sc.edu/sciaa/mrd/mrd_index.html

SCIAA: <http://artsandsciences.sc.edu/sciaa/>

SCIAA publication *Legacy*: <http://artsandsciences.sc.edu/sciaa/legacy.html>



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