



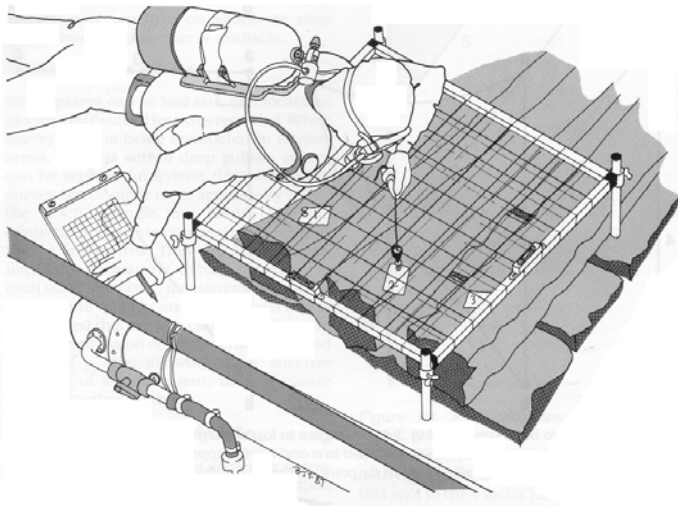
Introduction to LAMP's Scientific Diving Program

Thank you for expressing interest in participating in our archaeological diving program!

LAMP, or the Lighthouse Archaeological Maritime Program, is the research arm of the St. Augustine Lighthouse and Museum. LAMP was founded in 1999, and we have been searching for, diving on, and excavating historic shipwrecks and other maritime archaeological sites ever since.

What is Maritime Archaeology?

Archaeology is the scientific study of the human past through the investigation of artifacts, structures, and the remains of plants and animals. Archaeologists seek to better understand history and past human cultures and behavior. Maritime archaeology focuses on our maritime past, and explores historic and prehistoric relationships with the sea and inland waters. For thousands of years, humans have built boats and ships in order to fish, trade, explore, and wage war. For most of human existence ships were the only way to transport people, goods, and ideas over long distances. Ships allowed global exploration, the formation of colonial empires, and the development of the world economy that we all participate in today. Beneath the surface of our oceans, lakes, rivers, and wetlands lie evidence of these activities, in the form of sunken shipwrecks and locally-built workboats, and the remains of piers, wharves, collapsed lighthouses, and other such archaeological sites. The maritime archaeology of St. Augustine waters is particularly significant, as this is the oldest port city in the United States. For well over four centuries, ships voyaged to and from this colonial outpost every year. Hundreds of Spanish, French, English, American, and Confederate ships have been lost to the shifting sands and treacherous waters off our coast, and each is a unique time capsule allowing archaeologists an exceptional view of the past.



Maritime archaeology is a specialized science, and combines techniques developed by archaeologists, marine scientists, historians, anthropologists, geologists, forensic specialists, oceanographers, and naval architects. In addition, underwater archaeology requires strong diving skills, in order to safely and efficiently gather data underwater. Maritime archaeologists carefully record the precise location of every artifact on a shipwreck, just as forensic scientists do at a crime scene, in order to reconstruct the lifeways of the people who lived and worked on the ship, and the design and construction of the ship itself. All artifacts and other features such as ship timbers are drawn in detail and photographed. Archaeologists may excavate or “dig” the site using a hand-held underwater dredge which deposits the sediment through a screen, so that not even the smallest artifact is lost. Shipwreck excavations entail the recovery of large objects such as 15-foot long anchors, along with delicate ones such as fragments of sailcloth or paper, or the wings of insects once present belowdecks.

Samples are taken for laboratory analysis to determine species or substance identification, metallurgical composition, or radiocarbon dating. While underwater sediments tend to preserve artifacts remarkably well, all objects recovered from the sea floor must be meticulously treated in a laboratory or risk being destroyed as they dry out. A cannon, for example, takes years of electrolytic and chemical treatment to stabilize it so that it will remain in the condition of that recovered from a 1764 shipwreck on display in our museum. Compare this to the ones lining the side of the road across from the Castillo de San Marcos, which have rusted away so severely that they are barely recognizable as cannons at all. Archaeology is not treasure hunting—we seek knowledge of the past, not profits through the sale of artifacts. Many shipwreck sites in Florida

and elsewhere have been destroyed by treasure hunters blowing holes in the seafloor in order to find gold. The stories these wrecks might have told have been muted forever. Any artifacts that LAMP brings to the surface remain property of the State of Florida, and either go on display in our museum or go into storage where they can be accessed by other scholars or interested members of the public, or loaned to other museums for display elsewhere.

How you can get involved

LAMP is seeking the help of interested members of the public who share our interest in maritime history and feel that it is worth studying and protecting. If you are a certified diver and willing to share your time, we would like for you to be able to participate in our research and dive with our archaeologists. As underwater archaeology requires good diving skills and specialized skills, we will need proof of your diving experience, and will provide training in archaeological methods. Any scientific diving in the U.S. is regulated by national standards such as those of the American Academy of Underwater Sciences, and in order to run a safe diving operation we follow these guidelines which make certain requirements of anyone wishing to dive with us. These requirements include:

- Proof of basic scuba and all other diving certifications
- A basic swimming test in a pool
- An in-water review of basic scuba skills with a diving instructor
- A written test reviewing general scuba diving knowledge
- You must complete the following forms and return them to the LAMP Volunteer Coordinator:
 - *LAMP Scientific Diver Questionnaire and Diving Experience Resume* (so we will know more about you, your diving experience, and how to get in contact with you)
 - *Statement of Voluntary Consent General Release and Waiver of Liability* (stating that you understand diving has certain inherent risks, and that you are a voluntary participant in our diving projects. If you feel you don't remember all of the risks involved in diving from your basic scuba certification class, please discuss them with a LAMP diving instructor or your own diving instructor before signing this form)
 - *LAMP Scientific Diving Medical History Form* (this detailed questionnaire will identify any health problems that might prevent you from safely participating in scientific diving activities. It should be **completed by you and provided to your doctor** at your diving physical exam (see below)).
- You must undergo a diving physical exam with a doctor or your choice. You must bring three forms to the doctor for him/her to review and complete: 1. the *LAMP Scientific Diving Medical History Form* (see above) which you must complete before the exam, 2. the *Diving Medical Exam Overview for the Examining Physician* (for your doctor to read before the exam), and 3. the *Medical Evaluation of Fitness for Scuba Diving Report* (which your doctor will complete after your exam).
- To participate in diving activities, you must be enrolled in the DAN (Divers Alert Network) Diving Accident Insurance Master Plan, which will provide up to \$125,000 in medical expenses for decompression illness or other diving accidents for only \$35. Please visit www.diversalertnetwork.org/insurance/ to learn more about this non-profit dive safety organization and to sign up for coverage.
- Formal meeting with the LAMP Diving Officer to review the paperwork listed above, along with the LAMP diving standards and safety policies.

Once all of these requirements are met, you will be recognized as a Science Diver in Training. This means that you can participate on research dives as long as you are accompanied by an Active Science Diver. To achieve Active Science Diver status, you must complete the following:

- Perform 12 dives with an Active Science Diver
- Complete 100 hours of diving and archaeological training beyond your basic scuba certification. LAMP will host an ongoing series of seminars and workshops in which you may participate in order to pursue this goal. These are opportunities to learn the practical skills used by professional archaeologists—such as underwater mapping, excavation, artifact recovery and identification, etc.—along with specialized dive training and certification such as nitrox diving, rescue diving, CPR and First Aid, oxygen administration, drysuit diving, low visibility diving, deep diving, night diving, underwater communication equipment, etc. Training in other areas such as boat operation, archaeological laboratory procedures, and historical research/paleography will also count towards the 100 hour training requirement. Certain training that you may have undergone outside LAMP—such as advanced diving certifications or university coursework in archaeology—may also count towards this requirement, if approved by the LAMP Diving Safety Officer.

Once you have achieved Active Diver Status, you are a full-fledged scientific diver and will be qualified to dive on most LAMP projects. In addition, since you will have met nationally-recognized science diving standards, you will also be qualified to work with other diving scientists at universities and research institutes across the country, should you continue to volunteer or pursue a career in marine science.



LAMP diver inspects a cannon from an 1841 French shipwreck in Bermuda.

This may seem like a lot of requirements, and it is true that if you wish to participate in underwater archaeology you must be willing to devote some time and effort. It is also true that science diving is not recreational diving. Working underwater is different than visiting to watch fish and coral; it takes considerable diving skill and the ability to be comfortable in the water even in the face of adverse conditions. Diving on the shipwrecks in north Florida waters can entail very limited visibility, entanglement hazards, and strong currents. These conditions are made even more challenging when a diver is task-loaded and sent down to achieve specific goals which might entail using a hammer, clipboard and underwater paper, tape measure, and compass all on the same dive. These scenarios are the reasons why diving organization and safety standards are so important in science diving, which overall has an excellent safety record.

If you feel a bit rusty with your diving skills, this is a good opportunity to work with an instructor in a controlled environment, and to participate in training programs that will restore confidence in your diving skills. If you feel this kind of diving is not for you, but still wish to participate, there are many opportunities to work topside on our boats or in the laboratory.

But if you wish to take the plunge, you will find that despite its challenges, scientific diving is a very fun and rewarding experience. There are very few areas in the world where opportunities to dive alongside archaeologists exist. At LAMP we believe that the maritime heritage preserved in our waters belongs not just to archaeologists but to all of us, and we hope you are up to the challenge of diving into history!



Diving operations from LAMP's new research vessel, RV *Island Fever*, offshore St. Augustine.

For more information or to start the process of applying for LAMP's Scientific Diving Team, please contact our Volunteer Coordinator, Debe Thompson, at 904-829-0745 ext. 212 or dthompson@staugustinelighthouse.com

