BRINGING HISTORY TO THE SURFACE

NAUTICAL ARCHAEOLOGISTS STUDY THE SECRETS OF ANCIENT MARITIME SUPERHIGHWAYS

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The Museum of Underwater Archaeology within the castle at Bodrum, Turkey, exhibits the fruits of previous excavations by the Institute for Nautical Archaeology.
Through the Texas A&M University Nautical Archaeology Program, students and professors conduct inquiry with modern methods and scientific research. An annual summer underwater diving survey discovers shipwrecks strewn across the Mediterranean and identifies those best suited for underwater excavation.

In a 1993 dive off the coast of western Turkey in the turquoise Aegean Sea, Dr. Cemal Pulak ’87 examined a shipwreck’s cargo for future excavation. “As I descended to the seabed, I could see the cargo was in pairs exactly as it had been loaded by the crew in the hold.”

At Kizilburun, or Crimson Cape, Pulak surveyed eight sections of a single massive marble column, five feet wide, and a Doric capital. Twenty centuries had passed as green algae encased the cargo. The vessel found that summer at Kizilburun had never delivered its cargo of rough-cut marble to the waiting hands of workmen. Had it arrived to its destination, the 50-ton Kizilburun column would have stood 30 feet tall, but for now its sections would lay untouched for one more decade.

Pulak is a renowned underwater archaeologist and associate professor of anthropology at Texas A&M University. Since the 1970s, his pursuit has been the study of wooden sailing vessels, which enabled commerce in the Mediterranean for thousands of years. Pulak’s mentor, Dr. George Bass, as a graduate student at the University of Pennsylvania in 1960, was the first to excavate an ancient shipwreck located in its entirety from the seabed. That wreck, located at Cape Gelidonya in southern Turkey, set the standard for scientific underwater excavation and launched the academic field of nautical archaeology.

Bass and two colleagues, Dr. Frederick van Doorninck and J. Richard Steffy, established the Texas A&M University nautical archaeology program. Nautical archaeology is the
study of the remains of boats and ships and the cultures that relied on them. “The program focuses on the history of seafaring and maritime commerce; seafaring through the ages; maritime commerce, cargoes, and ports; and the techniques used to record, analyze and conserve the remains of these artifacts,” explains Pulak.

In 1973, Bass established the Institute of Nautical Archaeology, a nonprofit private research organization affiliated with the University’s program, enabling students and faculty to conduct underwater archaeological research. As the “Father of Underwater Archaeology,” Bass took care to mentor early graduate students so they would contribute to the development of this new discipline.

Beginning in 1984, Pulak worked 11 summers excavating the legendary shipwreck at Uluburun, which carried raw material and objects from throughout the ancient world. The Bronze Age vessel’s underwater excavation took 23,500 separate dives at a depth of up to 200 feet; the shipwreck was both one of the deepest and the longest excavated. As director of INA’s Uluburun excavation, Pulak, like Bass, has dedicated his career to the advancement of underwater archaeology.

In 2005, Pulak, a native of Turkey and now vice president of INA, was assisting the Istanbul Archaeology Museum with one of the largest archaeological excavation sites in the world. The Yenikapi site was found during the building of a transit center to link Asia with Europe. Yenikapi was the ancient trade harbor of Constantinople, now Istanbul. Known as the graveyard of ships, the site contained some 40 vessels discovered in a huge muddy construction pit. At Yenikapi, Pulak and an INA team, including several Texas A&M graduate students, were excavating eight Byzantine ship hulls.

Meanwhile, fellow Bass protégé Dr. Deborah Carlson was named Director of INA’s Kizilburun column shipwreck excavation, the site Pulak had surveyed in the summer of 1993. Carlson is also an associate professor in the nautical archaeology program and a classical archaeologist. At the College Station campus, she teaches courses in Greek and Roman archaeology, seafaring and Mediterranean pottery and Latin. INA archaeologists strive to
completely excavate every shipwreck they take on, a process that requires substantial commitment. “Sometimes it takes decades to see a project through excavation, conservation, and publication, which can be as taxing as it is rewarding,” says Carlson.

Like the Kizilburun shipwreck, Texas A&M University graduate student Kim Rash ’03 had also been waiting for a decade. Rash’s journey had begun in Mexia, Texas, where the road to commerce is a two-lane blacktop. As a girl, Egyptology, then archaeology of the classical world fascinated her. Rash’s curiosity was propelled to passion by a constant supply of library books and encouragement from her mother, a high school teacher. It was a fortuitous National Geographic TV special that revealed to Rash her academic future: underwater archaeology.

Over the years, when townspeople remarked on her pursuit, Rash said, “I would just smile.” But, behind that smile was stone confidence. She received a bachelor’s in maritime studies from Texas A&M at Galveston. Now she would join the INA team excavating at Kizilburun.

In 2006 Rash arrived at the INA institute, a dorm and research center on a hillside in Bodrum, Turkey, a facility that was inaugurated in 2000. Bodrum was known as Halicarnassus, and the man known as the father of history, Herodutus, was born here in 484 B.C.E. Once Ancient Greece, then part of the Roman Empire, held by Christian Crusaders and then the Ottoman Empire, it now belongs to Turkey.

The students wouldn’t enjoy the pretty hillside setting of the Institute for long. The 24-member team, with a doctor, a cook and crew, moved to a campsite at Kizilburun, taking everything they would need for the summer. They made camp on the rocks above the shipwreck, moving in the mornings to the excavation site, two minutes by INA catamaran. At 150 feet below the water’s surface, the deeper-than-normal excavation dives were 20 minutes followed by 20-minute stops on oxygen. Work was in short windows, with planning sessions before the day’s two dive session, for a total 40 dives a day. When the “lodos,” a dangerous wind from the south, whipped across the cape, work ceased. “Perhaps it was a similar storm 2,000 years ago at Kizilburun that had downed this vessel,” thought Carlson.

For the first month at Kizilburun, Rash moved right by a clue to the
vessel’s destination. In her sector was what she thought was a sand-covered boulder; instead, “I was surprised to find it had handles and a neck.” As she pushed away the sand, it was a moment of discovery—an amphora, a ceramic container used for transporting wine or oil. Rash was fulfilling her girlhood dream to unearth artifacts of the ancient world. Rash’s amphora and some of the dozen others provided an important clue; their shapes dated to the first-century B.C.E.

To determine the destination of the super-sized column at Kizilburun, Carlson considered what monumental buildings were under construction in the first century B.C.E. She had another clue; the Doric capital included in the cargo instantly narrowed her choices. “There were very few Doric temples being built at the time,” said Carlson.

On a hunch, she headed for the nearby ancient ruins at Claros with a tape measure to see if column remnants there might match the Kizilburun column. Carlson said, a grand gesture in the first century from a wealthy devotee of Apollo. For Carlson, chemical verification would have to wait.

The INA team spent four summers in the demanding underwater environment excavating the Kizilburun site: the amphorae, the crew’s iron tools and anchor, and the remains of the wooden hull. In 2009, two of the marble column segments were retrieved using an ocean tug boat. Then Carlson was able to conduct isotopic tests on the Kizilburun column and compare it with a sample of Marmara marble. Underwater, Carlson could see the distinct veining on the column and thought it had likely been shipped from the island of Marmara, then called Proconnesus and legendary for its bluish-white fine marble.

The testing revealed that when the Kizilburun ship went down it had already sailed 200 miles from Marmara. When it wrecked at Kizilburun, the Roman vessel was just 40 miles from its destination, Claros. “Because the Kizilburun column

“WHAT WAS REALLY POWERFUL AT CLAROS WAS THAT THE RUINS ARE SO WELL PRESERVED. TO FIND COLLAPSED COLUMNS WHICH MAY HAVE BEEN KNOCKED OVER, SAY, 1,500 YEARS AGO IN SITU WAS FANTASTIC.” -Dr. Deborah Carlson

cargo is poised to help date the construction at Claros, our excavation underscores how underwater archaeology impacts traditional land archaeology,” Carlson says.

According to INA, “the excavation can be considered only as the first stage of the whole project; during that process, detailed cataloging, mapping and recording is done. The conservation and study of objects and the hull comes next, consuming a considerable amount of time. The preparation for the publication is the final step, including drawings, library research and a lot of thinking.” The final report about INA shipwreck excavations are published by the Texas A&M University Press as monographs. “From excavation to publication, studying the history of an ancient shipwreck can be more than 30 years,” says Pulak, who is now completing the final report on the Uluburun excavation.

At the INA center, the wooden planks from the Yenikapi site are being slowly reconstituted in vats of waxy water supervised by doctoral students Rebecca Ingram and Michael Jones, who have studied their construction since 2005. After three summers of diving, this past year Rash worked as the head conservator; managing the INA lab while studying the Kizilburun shipwreck’s iron objects for her thesis. Rash likes the local Turkish food in Bodrum, but says she would give anything for a hamburger. She expects to graduate next year with a degree in anthropology, a concentration in nautical archaeology, and a certificate in conservation.

The two column sections from the Kizilburun shipwreck are now located in Bodrum. They are at the Museum of Underwater Archaeology inside the Bodrum castle, which was once a luxury way station for European knights headed to the Crusades. In the early 1600s, because of the development of underwater archaeology as a field of scientific study by Bass, the Turkish government established the Museum of Underwater Archaeology. The artifacts of INA-excavated shipwrecks including, those at Uluburun and at Gelidonya, are on display.

Every day, tourists from around the world visit the beach resort town of Bodrum. At the castle, they climb to the watchtower to view the luxury sailboats and yachts that cruise the Aegean Sea now only for pleasure. When they visit the museum inside the castle walls, because of nautical archaeology, they will see the artifacts of the many civilizations that transported goods throughout the Mediterranean when its seas were the superhighway of commerce.