



NAUTICOS

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Use this sticker to mark your calendar for the DAKAR TV Documentary

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Meridian Passages



Ancient Ship Rebuilt *Nauticos Supports Reconstruction of 300 B.C. Sailing Ship Replica*

Imagine the world of the 4th century, B.C. Alexander the Great ascended to the throne of Macedonia in 336 B.C., and led Greek and Macedonian forces of conquest against King Darius of Persia and his army of a million men. Undaunted, Alexander marched to victory through Turkey, Iraq, and India, before establishing his new capital in Babylon. By the time of his death in 323 B.C., Greek civilization, economy, and trade had spread around the world, remaining virtually unchanged until the Industrial Revolution of the 19th century. The extent of known civilization would not expand until the voyages of the Portuguese and Spanish, in the late 15th century.

Against this backdrop, imagine the voyage of a 4th-century cargo ship, leaving the Turkish seaport of Samos with jars of wine, sailing south to Kos to load millstones, then on to the major shipping center of Rhodes. There,

many hundreds of clay amphorae, filled with grains, almonds, and the popular cheap wine of the island were stacked in tiers and secured for the long voyage to Crete. Leaving the harbor, where in a few years the famous Colossus of Rhodes would stand as one of the seven wonders of the ancient world, the crew set sail on a voyage that would last over two thousand years.

We don't know what happened. A storm, poor seamanship, or the advancing age of the worn and patched ship may have led to her demise; whatever the cause, sometime around 300 B.C., the ship and her cargo sank in shallow water, only a half mile from her destination of Kyrenia on the north coast of Cyprus.

Many centuries later, shipbuilders and archaeologists proposed to build a replica of the original ship to help us imagine what we might have



Kyrenia replica being built in the Cyprus Ship Yard

seen if we'd lived during the time of the Hellenic Empire. In March of 2002, Nauticos made the founding donation to build a replica of the Kyrenia Ship. Our contribution allowed the Kyrenia Nautical Club to begin construction and hold a keel-laying ceremony in Cyprus. During the days that followed this event, local organizations contributed over \$200,000 needed to complete the vessel.

This is actually the second time that the Kyrenia has been rebuilt. In 1985 construction was completed on the first replica ship. The first replica was constructed using materials as close to the original as possible, and ancient ship building methods were carefully employed. The ship was sailed around the world for various events including the 100-year celebration of the erecting of the Statue of Liberty in 1986. Sadly, it has since fallen into disrepair and has become unseaworthy.

The original ship, which sailed in the 4th century B.C., was found in 1967. A sponge diver, Andreas Kariolou, led Michael Katzev and his team from the University Museum of Pennsylvania to a shipwreck just off the coast of Kyrenia, Cyprus. Using metal detectors and magnetometers,

the group surveyed the site to find an ancient vessel and its cargo, well preserved in the sandy mud 110 feet from the surface.

During the summers of 1968 and 1969 a group of 50 underwater archaeologists documented the site, meticulously recording the position of each object. Then they carefully lifted pieces of the ship and its cargo to the surface. Since the ship was underwater for 2,300 years, the wood had undergone cellular breakdown. The timber was impregnated with polyethylene glycol to make it solid again and prevent shrinkage when it was removed from the water. After the ship was preserved, it was reassembled and placed on display in a gallery in Kyrenia. More than 400 wine amphorae were found in addition to perfectly preserved almonds.

The ancient ship is now at the Turkish Cypriot Museum in Northern Cyprus. Since the original name of the ship was lost, she was named "Kyrenia."

Nauticos has had a special interest in ancient vessels since the spring of 1999 when we made a wonderful discovery. During our search for the Israeli submarine DAKAR, lost deep in the Mediterranean between Crete

and Cyprus in 1968, we encountered a number of intriguing contacts.

Operations leader Tom Dettweiler was engaged in the search when he received a report about one of the targets. The words he heard from the engineer looking at the live video feed were, "It's not the DAKAR, it's just an old ship." That was all Tom needed to hear; he had enough experience in the Mediterranean to know that this could be something really special, and he

Nauticos is featured in the TV Special "Mystery of the DAKAR" November 29th at 8 EST on the National Geographic Channel

was right. Before leaving the site to resume the (ultimately successful) search for the DAKAR, several hours of video were obtained from what we now call our Ancient Wreck.

The Institute of Nautical Archaeology at Texas A&M later helped us to identify the origin of the ship and its significance. Resting at a depth of 10,000 feet, the "old ship" turned out to be 2,300 years old, was larger than the Kyrenia ship, and held a cargo of thousands of amphorae.

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A perfectly intact amphora 10,000 feet deep. Amphorae were designed with pointed ends so that they would nest together perfectly in the ship's hold.

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Nauticos News & Information

SURVEY PLANNER™

Nauticos recently completed an extensive update to SurveyPlanner™, a Windows-based application used for planning oceanographic search and survey operations. The software allows the user to define a set of survey parameters and objectives, and then calculate survey tracks and duration estimates. SurveyPlanner™ is a visually oriented tool that provides a Geographic Map Display as its primary user interface.

WEB STORE

If you have ever wanted one of those cool Nauticos shirts or a hat from one of the Ocean Discovery projects, now is your chance! Our web store is open on our website: www.nauticos.com. Orders can be placed using PayPal, or by calling us at 800-784-6336.

HANDLING SYSTEM UPGRADES

The handling system for NOMAD has just completed its overhaul. The brake has been upgraded to a wet braking system. It will be tested soon

and will be fully operational to support our next mission.

NEW STAFF

We welcome several new people to the Nauticos team. Ashley Phagan is the new receptionist at the Hanover office. John Scibona and Kurt Keller are new analysts at our Navy site. George Harker will be our new Navigation Specialist. And Michael Malchiodi will be our new mechanical engineering technician. Welcome all!

WEST COAST OPERATIONS

This fall marks the official opening of the West Coast Office. Nauticos' staff who have worked at customers' sites for the last two years now have a space to call their own. With its combination of high bay and office space, the site is slated to become a West Coast center of ocean operations. The "BOTS" (miniature robotically operated vehicles) will be maintained and customized in this facility. Software development will also take place in

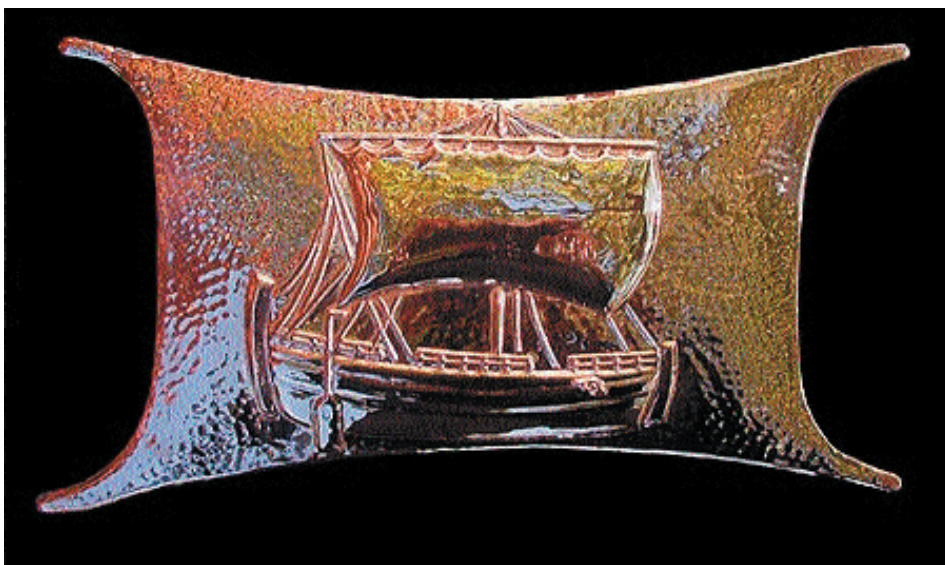
this office, which is located in Ventura, CA. Gary Bane manages West Coast Operations, while John Coombs is the Project Manager.

West Coast Office

**2259-A Portola Rd
Ventura, CA 93003
805-644-5003**



The West Coast Office with its high bay doors, ready for move-in day



Copper replica "talendon" engraved in Greek: "Dedicated to Nauticos for their contribution for the building of the Kyrenia. April 27, 2002". These artifacts were used as currency in ancient Greece.

(Ancient Ship continued)

This discovery is challenging the way historians think about ancient mariners and their trade routes. Advanced navigation skills and techniques would have been needed to sail long the long open water route between the classical trading centers of Rhodes and Alexandria.

The new Kryenia replica is intended to be an ambassador to the world and will appear at prominent events. It will sail into Greece for the 2004 Olympics with the Nauticos logo on its sail. We hope to generate enough interest and support for Nauticos to fund a return to the site of our historic shipwreck and continue another ancient voyage of discovery.

David & Lynn Jourdan





Julie Nelson

uring the four years that Julie Nelson has been at Nauticos she has worn a lot of hats. She came to us with a maritime law degree from Tulane University, a law degree from Indiana University, and years of experience working as a project manager for our Navy program office. Besides her legal background, she is an expert



in program management, contracts administration, and is a skilled negotiator.

Recently Julie had the opportunity to spend two months at sea on the Amelia Earhart Search Expedition. Nauticos encourages “cross training” as a way of improving teamwork and broadening the staff’s skills. As a member of the corporate team, she reveled in the opportunity to experience what it is like to work with the operations group.

And experience it she did – there wasn’t anything that Julie didn’t try! She changed the oil, filters, and hydraulic fluid in the diesel HPU (Hydraulic Power Unit) that powered the winch, earning the nickname “Diesel Queen.” She stood watches, handled lines during launch and recovery operations, resurrected old sonar skills, and participated in all facets of the deep ocean sonar search. She tried her hand at welding, operated the 2-ton crane, and stood watch on the bridge alongside the ship’s crew. She even volunteered to pose as an injured victim in a fire drill, while her blindfolded “rescuers” looked for her. (Blindfolds were worn to simulate smoky conditions.) She lit flares for emergency drills and took tons of digital pictures that she shared with everyone. Just for fun she even helped Scotty, the cook,



Julie tries welding while at sea.

make donuts one day!

In late summer, Julie was promoted to General Manager at Nauticos. In this position, she manages the day-to-day operations of the company allowing President Dave Jourdan the time to plan future operations and seek new investment for Ocean Discovery projects.

Julie lives in nearby Columbia, Maryland, with her husband, Gus Bernard. Together they are renovating a house and enjoy gardening, camping, and spending time with their friends.

Lynn Jourdan



Nauticos Web Store Now Open! www.nauticos.com

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