

The *Kyrenia II*

An attempt in experimental archaeology

In the summer of 1981 after an attentive study and evaluation of what was up to then known on the *Ancient Ship of Kyrenia*, I decided to approach the excavator of this unique shipwreck, the late Professor Michael Katzev (fig. 4) and Mrs. Susan Womer Katzev, coordinator of the project.

So I started discussing the possibilities of obtaining their cooperation for the construction, in Perama, near Piraeus, of a full-scale replica of the *Ancient Ship of Kyrenia*. Before envisaging that proposal, I had repeatedly met with Mr. Manolis Psaros to ascertain the feasibility of such a project. Psaros is a leading boat-builder in Perama, whose ancestors had for generations built wooden crafts on the island of Symi.

I tried over lengthy discussions to assess if the project I had in mind was feasible and if Manolis Psaros was willing to embark on such a construction. His hesitations had to do mainly with the shell-first method of construction. After showing him the documentary film that narrated in detail the story of the discovery, the raising, the conservation and the final reassembly of the ancient hull, Manolis agreed, reluctantly at first, to give it a try. To my assurance that hulls were built differently in antiquity, that the planking came first and the frames later, Manolis's father, Mastro Georgis, a man in his late 80s, the most respected boat-builder in Greece, reacted by dismissing this possibility. As far as he was concerned, it was a crazy theory and his son should not endanger the family's reputation by attempting the impossible. And then what about this rocked keel? And the lack of



1. *The Kyrenia II is now a permanent exhibit at the 'Thalassa' Museum, Aghia Napa, Cyprus. Courtesy of Municipality of Aghia Napa.*

2. *On her long experimental voyages to Cyprus and back to Greece, the Kyrenia II encountered various weather conditions, from flat calm to nearly gale-force winds.*



caulking! Manolis's approach was more inquisitive: "If the archaeologists say that this is the way ships were built in antiquity, then I am ready to take on this challenge." Those were his words. What had decided me to propose a shell-first construction, something that had not been attempted up to then on a full scale for perhaps 1500 years, was the fact that the *Ancient Ship of Kyrenia* had preserved enough of its hull timber. Nearly the 75% of the hull, including the keel, extended parts of the planking and of the frames, as well as pieces of the stem and sternposts and other structural details had been preserved. The assembly followed the intricate method of mortise and tenon joints. Save the Roman ships of Nemi, which had unfortunately been destroyed at the end of the Second World War, there was no other hull of an ancient sea-going vessel so well preserved to compare with that of the *Ship of Kyrenia*.

The documentary film I had viewed, again and again, showed the attempt made by the American scholars to better understand the construction of the ship by building a full-scale mid-section of the hull and then trying to learn more about how such a ship would sail by constructing a much-reduced replica. This strengthened my belief that a 1/1 duplication would not only help better our understanding of the intricate and little investigated method of 'shell-first' construction, but could also result in obtaining a working replica, which would generate, in turn, a multifold program in experimental archaeology. Besides 'confirming' experimentally that a ship could be built shell-first, I hoped that we would benefit in our understanding of how an ancient ship, so unlike the traditional Aegean caïques in its structural details, steering mechanism, and rig, would perform with its square sail.

The *Kyrenia II* project presented various difficulties, not only on a technical level related to the construction itself, but also regarding its financing and other logistical considerations. What may have taken three or four months for the ancient shipwright to build necessitated nearly three years for Michalis Oikonomou, the master-builder, and his assistants. Going through my diary and notes, I see that I spent during the construction of that ship 307 days at Manolis Psaros's yard. The ship was finally launched in June 1984.

Old Mastro Georgis Psaros had predicted that the hull would sink because of the water that would infiltrate through the non-caulked seams. In his words, one could expect the planks of a small dinghy to swell and close tightly together but not those of a 50ft hull. Unfortunately, the old shipwright died a few months before the

launching and did not experience the near sinking of the hull. In fact, the water did rush through the openings in the strakes and seams and soon filled the hull up to the main wale. But a day later, after the water was pumped out, she remained high and dry because the wood had swelled and the seams had closed.

In 1984 and 1985, the ship undertook a round of sea trials, which were continued in September 1986 and in the spring of 1987 with two long experimental voyages to Cyprus and back to Piraeus, Greece (figs 2, 5). Selecting the crew and planning the itineraries for the voyages from Piraeus to Cyprus and back was a major responsibility. The discovery of the ancient ship and the construction



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3. The 'shell-first' technique of building a boat: Roman shipwright completing a boat. Frames are placed after the hull has been completed. Late 2nd c. AD funerary relief in the Archaeological Museum of Ravenna.

of the replica had made the *Kyrenia II* a mythical sea craft right from her launching. Every Greek champion sailor, not to mention those athletes who had won or participated in the Olympic Games, felt entitled to the supreme honor of being recruited as crew. Likewise every island of the Aegean, claiming a history of seamanship counted by millennia of years, considered that the *Kyrenia II* should call at least at one of its ports. The Aegean is scattered with hundreds of islands and the maritime route to Cyprus has since immemorial times seen gods and heroes steering ships.

So the crew was selected not only bearing in mind their great sailing experience but mainly because of their ability of going back in time and forgetting as much as possible, the innovations brought to navigation during the last 2300 years.

I remember that to the question: "how will you use the square sail?," the answer: "I will reef it and use it as a triangular sail" was sufficient to get the candidate disqualified. As to the course, I had to compromise and the voyage to Cyprus allowed for some ceremonial calls while the return itinerary with a full – Cypriot – crew, duplicated as close as possible a sea voyage of ancient times.

The construction, the lengthy sea trials and voyages of the *Kyrenia II* proved to be greatly beneficial for our better understanding of how a shell-first hull is built and how such a ship can sail with the use of a square sail, steered by two lateral oars.

It was proved, beyond any doubt, that a ship can be built by assembling first the planks of its hull and then, after the body is completed, to add the frames, as buttresses to the action of the sea.

This method of construction, present on every ship found in the Mediterranean from Prehistorical times until the Late Roman antiquity (fig. 3), results in a very sturdy construction. The *Kyrenia II* sailed very well under different directions of wind and conditions of the sea. The average speed varied from 2 to 6 knots. She has proved her seaworthiness, with a remarkable ability to sail into the wind.

It should however be stressed that, besides the scientific aspects of this project of "Archaeology by Experiment," the *Kyrenia II* project can be described as a multifold project, which was beneficial in various other fields.

Like most programs in experimental nautical archaeology, the *Kyrenia II* was an 'expensive' attempt, not so much in its financial cost – a lot of voluntary work was offered – but in that a multitude of people specialized in various skills invested enormous time and effort. The coordination of the construction and of the trial voyages involved an incredible amount of administrative work. The list of contributors range from the Minister of Culture of Greece, the late Melina Mercouri, to shipwrights, apprentices, caulkers, smiths, riggers, naval architects, archaeologists, historians, draftsmen, ship modelers, captains and sailors, plus a host of others – a list too long to enumerate in the limited space of an article.

4. Michael L. Katzev and J. Richard Steffy, the American scholars who collaborated in the *Kyrenia II* project, standing in front of the completed hull.



I will mention only that, to safely escort the ship and keep a detailed record of the voyage to and from Cyprus, the Hellenic Navy made available a minesweeper and the Merchant Marine Ministry a 195-ft three-mast for the stretch of Piraeus to Rhodes. From Rhodes to Paphos, Cyprus, *Kyrenia II* was escorted by a destroyer of the Hellenic Navy and, on her return voyage, she was again escorted by the same destroyer, the *Aegeon*, and a 165-ft tugboat, the *Hellas*, graciously placed at the disposal of the project by a Greek ship-owner.

Because this project owed so much to so many, I thought that it would be good that *Kyrenia II* benefit a variety of persons. Of course, the ship should primarily serve her original, scientific purpose: experimental nautical archaeology. Nonetheless, during the 17 years that followed the end of her experimental voyages, she was assigned other tasks, which will be briefly enumerated.

Her role as a goodwill ambassador, aiming to promote the idea of nautical archaeology by experiment, saw the ship transported on the decks of large merchant vessels across oceans and seas. *Kyrenia II* was exhibited at the Mystic Seaport Museum in Connecticut, in New York (fig. 6), Nara, the old Japanese capital, for the Silk Road Exhibition, Seville for the World Fair, Hamburg for its 700 years commemoration and ten different Greek towns.

Thirty years after her launch, the *Kyrenia II* deserved a 'retirement'. The high standards of my expectation for the construction of a modern museum were met by the D. Pierides Foundation and the Municipality of Aghia Napa, Cyprus (fig. 1). She is a permanent exhibit in the 'Thalassa' Museum that will be equipped with a specialized library and archives dedicated to marine archaeology with the establishment of a centre focused on the promotion of experimental nautical archaeology.

5. Sailing with a light breeze in the central Aegean.

6. New York, July 4, 1996. Against the silhouette of the skyscrapers, the *Kyrenia II* is ready to set sail and represent Greece at the great parade of ships for the Centennial of the Statue of Liberty celebrations. Courtesy of Melina Merkouri Foundation.



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