

## THE TRANSPORTATION OF MAMMALS SHEDS LIGHT ON EARLY SEAFARING AND BOATS IN THE MEDITERRANEAN

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During the last 30 years, the origins of seafaring in the Mediterranean have been mainly investigated through the earliest presence of humans on the islands or else the circulation of obsidian. The appearance of new animal species on an island such as Cyprus, mostly due to overseas transportation by human beings, has also been taken into consideration. However, it has been underexploited. The boat-transportation of mammal populations and their sustainable establishment in the new territory – both restricted and isolated -- entails to numerous biological constraints, which include the time and the modalities of immobilisation of the animals, the minimal number of founder individuals and the intensity of gene flows coming from the mainland. Thus, in the absence of any early prehistoric wreck or representation of a boat in the Mediterranean, the transportation of animals makes it possible to estimate (with good degree of confidence) not only the times of the earliest seafaring and the distances that were involved but also such things as the durations of the trips, the speed of the boats, their loading capacity and even some general features of their structure (for example, connected with their ability to hide small stowaways). Furthermore, confronted with the experimental data, especially the Monoxylon 2 trip, as well as knowledge about traditional Mediterranean boats of a comparatively old age, these estimations make it possible to put forward reconstructions of what the earliest Mediterranean boats probably looked like.

This paper will illustrate this approach basing on the data recently accumulated in Cyprus, on the sites of Aetokremnos, Klimonas, Shillourokambos and Mylouthkia.

We recently demonstrated that late hunters-gatherers first successfully introduced wild boar to Cyprus in the time just before 9600 cal BC. May be at the same time, but anyways before 8700 cal BC, the early hunters-cultivators also introduced domestic dogs and probably commensal mice and cats. Subsequently, around 8500 cal BC, early domestic goat and cattle made their appearance in the early phases of Shillourokambos. New introductions continued to occur in the years around 8000 cal BC -- with the transportation of domestic sheep, the Persian fallow deer, red fox and perhaps pig in a now domesticated form. Then, while the introduction of new species temporarily stopped, there is evidence to suggest that new lineages of sheep, cattle and possibly pigs (again) were introduced from the mainland during the 8<sup>th</sup> millennium cal BC. The absence of morphological divergence of the Cypriot grey mouse during this period indicates intensive maritime exchange as well.

These observations indicate that seafaring was already frequent between the mainland and Cyprus at the beginning of the 10<sup>th</sup> millennium cal BC. In addition, the inference can be made on the basis of biological data that, about the middle of the 9<sup>th</sup> millennium, the frequency of the sea crossing between the continent and Cyprus took place at least twice each year and probably more often than that. In terms of their construction, the boats were probably included decks. By that time, the navigation techniques had become advanced enough to successfully transport early domestic goat and cattle over a distance of 70 km, which means that the trips probably lasted for only a couple of hours. This could only be achieved by sailing.

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