

IAMS invited to probe Cyprus metal secrets

A small team of archaeo-metallurgists, led by Professor Beno Rothenberg, is to undertake a preliminary survey in Cyprus next May for an IAMS project to explore for the earliest mines on the island.

The survey is to be carried out on an invitation from the Cyprus Department of Archaeology following an international conference on the island last February. Attending this conference on behalf of IAMS were Professors Rothenberg, Tylecote and Bachmann.

Cyprus is one of the world's traditional sources of copper, the metal having been produced there extensively for several thousands of years; it was the main attraction for successive waves of Egyptians, Assyrians, Phoenicians, Greeks, Persians and Romans. The island's copper was particularly important to the Roman Empire, the material being known as *aes cyprium* — "ore of Cyprus" — later corrupted to *cuprum*, from which comes the English name, copper.

Whilst a considerable amount of investigative work has been done on the Roman remains, which include vast slag heaps, there is little authentic knowledge of the island's metallurgy earlier than the Late Bronze Age though copper was being mined and smelted there on quite a large scale at least 5,000 years ago.

The IAMS team is expected to be on the island for about a week, and its prime concern at this stage will be to ascertain whether the methods of exploration which have proved so successful in Israel and southern Spain can be applied to Cyprus where, according to Professor Rothenberg, "the laws of nature can be quite different from anywhere else".

Tylecote team finds slags in Sardinia

Recent discovery of the first verifiable slag in Sardinia confirms that metal smelting and casting were carried on in antiquity on the island.

The slag, found with what was originally metallic tin, came to light during a survey of the mineral and metal resources of the island undertaken by Professor R.F. Tylecote, of IAMS; Professor Miriam Balmuth, an archaeologist of Tufts University, USA; and Professor R. Massoli-Novelli, a geologist of the University of Cagliari.

The main problem with the study of early metallurgy in Sardinia is one common in most of the Eastern Mediterranean, except Cyprus, that is to determine the degree to which the island used its own indigenous supply of minerals and how much was imported.

There is no doubt that by the Late Bronze Age the use of metals in Sardinia was of great as, or greater than, elsewhere, and there is evidence of import or trade by the existence on the island of ox-hide shaped copper ingots containing so-called "Cypro-Minoan" inscriptions common in the Aegean. This invites the question whether the supply of copper in the Late Bronze Age was inadequate to meet the needs of the community, or whether it was so great to provide a surplus for export in the form of an internationally-accepted ingot-type.

The recent investigation was carried out as part of a collaborative effort to define and treat the problems of the significance of metal technology and trade for

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