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New project to solve metal mysteries of Iberia

Following the successful completion of a seven-year programme of investigation into the metallurgical history of the Huelva Province of Southern Spain, the Institute for Archaeo-Metallurgical Studies has begun a new project to cover the Iberian Pyrite Belt as a whole.

The main object of the project is to study the development of mining in this mineral-rich area from the beginning of metallurgy in the 4th-3rd millennium BC to medieval times, and to assess the significance of such development to the cultural, political and industrial evolution of the Iberian Peninsula, and the impact which it had on the rest of Western Europe and the Near East.

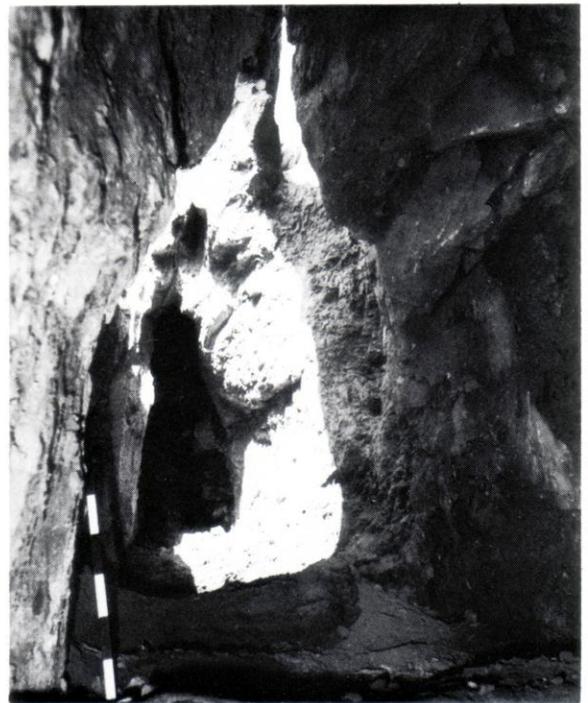
The Huelva project, which was proposed by the late Sir Val Duncan, chairman of Rio Tinto-Zinc and one of the founder-trustees of IAMS, produced a first picture of 5,000 years of mining and metal production (B. Rothenberg and A. Blanco Freijeiro, *Studies in Ancient Mining and Metallurgy in S.W. Spain*, London, 1982) and showed metal as a primary factor in major historical developments. In particular, it demonstrated the importance of metal as an incentive in 3rd millennium BC "megalithic" urbanization and in the colonization of Southern Iberia two thousand years later by metal-seeking Phoenicians, Greeks, and finally, Romans.

Decisive role

To gather the archaeo-metallurgical samples, to date them reliably and to assemble them in their various cultural and historical contexts, was a long and exacting task. But once the process and logistics were understood, at least in broad outline, the decisive role of metal in the history of Huelva became apparent.

However, to apply a similar research approach to the Iberian Pyrite Belt as a whole would have demanded very extensive research, many years of archaeological field work and considerable finance. A different strategy was therefore adopted.

Instead of the long route via archaeological survey and excavation, and to avoid the danger of



Inside a megalithic copper mine, 3rd millennium BC, in southern Spain

duplication of effort, it was decided to link up with other projects currently being pursued in areas of the country where ancient mining and metal-working centres are located.

For example, excavations are presently being undertaken by Spanish archaeologists, led by Professor Arribas of the University of Majorca, of settlements of metal-workers of the 4th-3rd millennium BC in the province of Almeria. The Spaniards have promised close co-operation with IAMS.

Other teams of archaeologists are already excavating Bronze Age sites in Southern Spain

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which are of fundamental importance to the understanding of the period, and they too have agreed to collaborate to the fullest.

Important Copper Age settlements and metal production sites are also under investigation in Portugal and the results of these examinations will be made available to IAMS.

The appearance in Iberia of arsenical copper in the Early Bronze Age and the dramatic increase in the use of this metal is one of the major puzzles to be examined by the IAMS investigators. The coming of tin-bronze – one of the enigmas of world history – its sources and methods of manufacture, distribution and trade, will be closely examined as Iberia was one of the major producers of tin in ancient times.

Rio Tinto

Rio Tinto, with 16 million tons of ancient smelting slag, was undoubtedly the largest and one of the earliest metal producers of the ancient world. It was a major source of metal for local inhabitants as well as for foreign trade from the Late Bronze Age to Late Roman times.

Systematic excavation of this huge production site of gold, silver, copper and iron was part of the Huelva project, and the work is still going on. With its well stratified and mostly undisturbed industrial remains, sometimes more than 20 metres deep, Rio Tinto offers further opportunities for archaeo-metallurgical research.

It is here that so many problems common to Western European metallurgy can be solved. The large collection of carefully excavated and identified samples offers unique material for scientific reconstruction of the ancient processes, the understanding of which is fundamental to the comprehension of metal's role in early history – and not without significance for the modern metallurgist.

Trustee appointed

A.J. Wilson, who has been closely associated with the work of IAMS since its inception in 1973, has been appointed to the board of trustees.

Arthur Wilson spent twenty years in Africa with the RST group of copper mining companies, of which he was a vice-president. For the past ten years he has been active in mining journalism and has written several books relating to the world of metals. He is a director of Cerro Metals (UK) Ltd, a Ring-dealing member of the London Metal Exchange.

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Silver metallurgy in Greece

In a recent article in *The Illustrated London News*, Paule Spitaels, co-director of Belgian excavations at Thorikos in southern Attica's Laurion hills, describes discoveries that show that silver, a major factor in Athens's rise to wealth and power in the 5th Century BC, was being exploited there as early as the 3rd millennium BC.

Additional copies of this Newsletter can be obtained from IAMS secretarial office, Institute of Archaeology, University of London, 31-34 Gordon Square, London WC1H 0PY. Telephone: 01-387 6052.

Edited and produced by A.J. Wilson

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