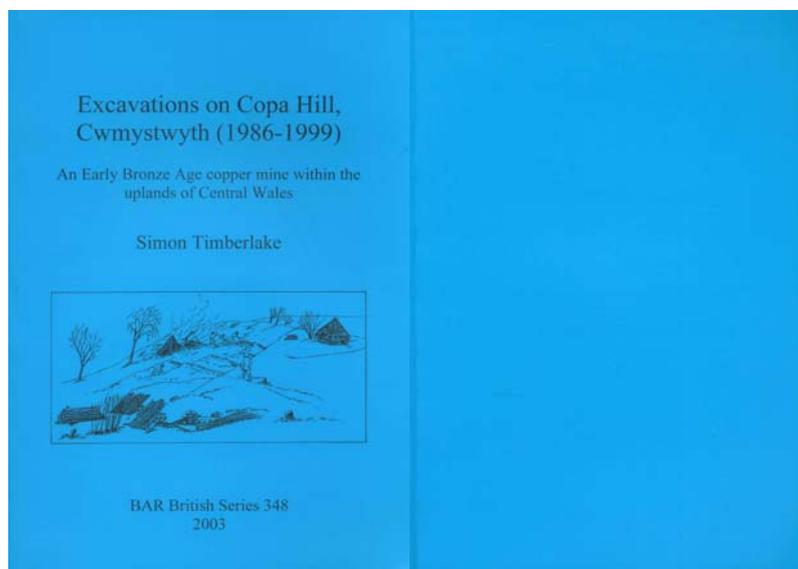


**Timberlake, S. 2003. Excavations on Copa Hill, Cwmystwyth (1986–1999). An Early Bronze Age copper mine within the uplands of Central Wales. – Oxford, Archaeopress (British Archaeological Reports British Series 348)**

Book review by L. Meurkens



From 1986 tot 1999 extensive excavations were carried out in an Early Bronze Age copper mine on Copa Hill, near Cwmystwyth in central Wales (UK). In this book a detailed account of the excavations and its results is presented. The excavations on Copa Hill were directed by the author, who is a trained geologist and chairman of the Early Mines Research Group in whose name the excavations could take place. The EMRG is composed of a small group of affiliated researchers and was founded with the specific aim of studying every facet of prehistoric mining and, more generally, metallurgy in the British Isles.

The mine at Copa Hill can be defined as a trench mine. Miners here exploited a vein of ore downwards, which has resulted in a deep trench-like feature with spoil tips in front and to the sides of the mine. Research at the mine has yielded a number of surprising results. In the first place the mine was apparently exploited from an early date onwards, possibly already around 2500 BC and definitely from about 2000 BC. Exploitation continued intermittently until about 1600 BC when increased flooding made working in the mine nearly impossible. The early start of mining at Copa Hill indicates that Britain was fully capable of producing its own copper early in the Bronze Age and was not entirely dependent on Irish metal as is usually thought. A second surprising aspects of the mining evidence at Copa Hill is the apparent, but small-scale, interest in lead ore, which can also be found at the site. At the time of exploitation, lead was still unknown as an alloying element for Bronze. This has lead Timberlake to interpret this early interest as being the result of some form of metallurgical experimentation with the different ores encountered at copper mines. A third important aspect of the excavations at Copa Hill is the discovery of the earliest known examples of so-called launders, *i.e.* pieces of mine drainage equipment, which survived under semi-waterlogged conditions in the lowest layers of the filled-in mine.

Timberlake is to be credited with his multi-disciplinary approach of the mining evidence. A wide range of specialist reports has been included in this monograph, which discuss, among others, the radiocarbon chronology (chapter 8), palaeo-environmental evidence (chapters 9–10), the assemblage of wooden, antler and stone artefacts recovered from the mine (chapters 11–14) as well as the character of the ores that were mined in prehistory (chapters 15–16). Contributions by Timberlake himself (chapters 2–7) include the geology, archaeology and (mining-) history of the Cwmystwyth area, the early discovery of prehistoric hammer-stones and a detailed account of the excavations themselves. In the final chapters (17–19) Timberlake summarises the results of the excavations concluding that copper exploitation was conducted on a seasonal basis, possibly as a secondary occupation of pastoralists from the coast or nearby lowlands.

The book contains excellent illustrations of the excavation plans and sections as well as the most important objects recovered from the mine. The book can be ranked among specialist literature and will mainly appeal to researchers working on prehistoric mining and metallurgy themselves. It is quite tough reading at times (a glossary of mining terms would have been useful for those less acquainted with this field of study) but well worth the effort.

The meticulous excavations, the wealth of data they have generated and the publication of this monograph have definitely earned Copa Hill a place among such well-known early copper mines as the Great Orme near Llandudno in North Wales (Dutton & Fasham, 1994) and the Irish sites of Mount Gabriel and Ross Island (O'Brien, 1994, 2004). Further research remains necessary however, both at mines themselves and in their wider surroundings. There is still no agreement, for instance, on the exact amount of metal produced from Bronze Age copper mines. A more difficult to achieve, but equally interesting aim is to place them in context instead of studying them in isolation. Can we say more about the location of the settlements and smelting sites, both generally not associated with mining sites? A start in this direction has been made with the publication of this book.

Timberlake, S., 2003. Excavations on Copa Hill, Cwmystwyth (1986–1999). An Early Bronze Age copper mine within the uplands of Central Wales. – Oxford, Archaeopress (British Archaeological Reports British Series 348). 127 pp. ISBN 1 84171 486 0. Price £29.00 (paperback)

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