

of the finds, but also provides a general discussion of how the site relates to other 'Umayyad Desert Castles'.

Part I contains a detailed description, not only of the extraordinary location of the site, but also a discussion of the history of exploration of the site. Amongst a series of illustrations (maps and aerial photographs) showing the immediate environment of the site there is also a previously unpublished photograph taken by Karl Schmidt of K. A. C. Creswell dressed in an immaculate suit and tie during his visit to the site in 1964. One of the important observations in this section is that the water resources at Jabal Says would have made the area a magnet for nomadic tribes operating in the general area.

Part 2, which forms the majority of the text (pp. 29–123), begins with an examination of the Arabic sources followed by a discussion of the Arabic rock cut inscriptions and coins found at the site. As on most sites ceramics are the predominant class of find, comprising a range of vessels including lamps, amphorae, jugs, flasks, bowls and basins. In addition to vessels there are ceramic roof tiles and sections of water pipe. Other classes of find include glassware, metalwork and stoneware (chlorite schist) and architectural fragments. The illustrations of the finds are generally of high quality, with plenty of space for each object, although it would be good to see a larger representation of the ring with pentagram (p. 407).

Part 3 provides a synthesis of the material presented in both volumes and gives a detailed discussion about how the chronology of the site was determined. The section on the regional context draws attention to parallels in the architecture of Jabal Says and a range of other Umayyad sites. The volume concludes with a discussion about how the site may have functioned in the late Byzantine to early Umayyad times and also explores why it was abandoned. Franziska Bloch suggests that the evolution of the site in Umayyad times was linked to the political organization of the time where the new Umayyad elite inherited and developed an older Christian centre in collaboration with the newly important Bedouin groups. It would be interesting to compare this site to other remote sites such as Qasr al-Hayr al Sharqi (Genequand 2006) or the less well known site of al-Risha in the Black Desert of Jordan which also has an earlier Byzantine Christian component which was further developed under the Umayyads (Helms *et al.* 1990).

In conclusion, the Deutsches Archäologisches Institut is to be commended for its perseverance in bringing the results of this project to final publication and also for presenting the report in such a useful

format. Also both authors are to be congratulated for taking up a project which had been so long delayed. It will be interesting to see how the publication of this site influences the debate on 'Desert Castles' and in particular the relationship between nomadism and power in the Umayyad state. In recent years the debate has moved away from the Umayyad palaces specifically located in remote desert environments to those located in the steppes, or even settled areas — this site, which is certainly located in a marginal environment may turn the focus back to the specifically Umayyad relationship between nomadic tribes and the caliphate based in Damascus.

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JENNIFER M. WEBB, and DAVID FRANKEL, with contributions by GEORGAKOPOULOU, Myrto, REHREN, Thilo, CONSTANTINO, George and PANAYIDES, Ioannis (2013) **Ambelikou Aletri. Metallurgy and Pottery Production in Middle Bronze Age Cyprus**. Studies in Mediterranean Archaeology Vol. CXXXVIII. Uppsala Åströms Förlag. ISBN: 978-91-7081-250-7. Pp. xx + 245; 205 figs, 14 tables. Hardback. €80,56.

This is the long-awaited final publication of a Cypriot Middle Bronze Age site, which, despite its exceptional importance, is not widely known. Ambelikou Aletri was excavated more than 70 years ago by Porphyrios Dikaios, the then acting Director of the Department of Antiquities of Cyprus. In 1942 Dikaios was informed that operations in a recently-opened underground copper mine at Ambelikou Aletri — located in the Skouriotissa-Mavrovouni mining region of north-west Cyprus which is home to the largest copper ore deposits on the island — brought to light some Red Polished ware pottery and stone tools, apparently the remains of ancient mining activity. A significant number of similar sherds was also collected in a nearby field from a contemporary settlement connected with the mine.

Work commenced at the site a few months later with the support of the mining company. Unlike other excavations undertaken by Dikaios this was not a long term project. Although he acknowledged the importance of Ambelikou and the evidence it provided for the earliest exploitation of Cypriot copper ore deposits, he never produced a final publication. Ambelikou was briefly mentioned in his report on developments in the archaeology of Cyprus between 1939 and 1945 (Dikaios 1945) and in another paper published the following year (Dikaios 1946). In 1984 Robert Merrillees took up the task of studying and publishing the material from the site, completing a lot of the groundwork and engaging a number of specialists to examine the material. He also undertook archival research and met and discussed the excavation with the original foreman, Mr Kakoullis Georgiou. He managed to publish a short paper where he presented the topography of the site, the history of the excavation and the material which was recovered in the galleries of the ancient mine (Merrillees 1984). In 2004 Merrillees gave all the information he had gathered to Anne Elizabeth Dunn-Vaturi, who continued the work and planned to produce the final monograph. But this effort did not come to fruition and the publication remained on hold. It was only when the dynamic duo of Jennifer Webb and David Frankel took over the project that the material left by Dikaios and his team, and the information compiled by Merrillees and Dunn-Vaturi, was finally combined with their own thorough study of the material culture. Webb and Frankel got to work in 2011 and managed to produce this high quality monograph in just two years!

The book, published in the revamped Studies in Mediterranean Archaeology series, consists of 11 chapters. The first narrates the history of the excavation and publication, clarifying issues regarding the name and location of Ambelikou *Aletri* and confirms that the site — since 1974 in the Turkish-occupied region of the island and therefore not under the effective control of the Republic of Cyprus and the Department of Antiquities — has fortunately not been destroyed by modern mining, as earlier stated by this reviewer (Kassianidou 2008). Chapter 2 (Constantinou, Panayides) on the geology and ore sources of Cyprus, and the region of Ambelikou in particular, is an important contribution and will surely become a key reference to the geology of the copper ore deposits of the island.

The next chapters (Webb, Frankel) focus on the excavated areas, including the mining galleries themselves. The authors describe, in detail, the architecture and stratigraphy in each of these areas, putting the

material culture into its archaeological context. Occupation at Ambelikou *Aletri* dates, according to radiocarbon dating and pottery typology, to the Middle Cypriot I to early Middle Cypriot II, corresponding to the late 20th and/or early 19th centuries BC. The text is accompanied by numerous photographs and digital versions of the excavation drawings, printed in colour to illustrate clearly the distribution of the finds. These chapters make it clear why Ambelikou is such an exceptional site: even 70 years after its excavation, it is the only mine which has provided unequivocal evidence for prehistoric exploitation of copper on Cyprus. In the associated settlement the excavations brought to light important metallurgical finds, such as the well-known crucible and a double-sided open clay mould. Webb and Frankel have also identified a blow pipe, one of the few known from the island. Ambelikou has also produced the earliest pottery kiln in Cyprus, part of a well preserved potter's workshop. Although Dikaios argued that there was a potter's workshop at Ambelikou, it is only the systematic analysis of the finds and architectural remains by the authors that enable us to understand the organization of the workshop and its importance. Because the building was destroyed by fire and the area not reoccupied after the destruction, everything was found *in situ*, including what is believed to have been the last load of the kiln. The load includes 39 cutaway-mouthed jugs of different sizes which were found scattered across the floor. The excavation also brought to light the only complete plank figurine to have been found in a settlement. It was discovered directly outside the entrance to the potter's workshop and according to the authors it may have been attached to the wall, or door, door-post or lintel.

The following three chapters are dedicated to the catalogues of the finds which are accompanied by good quality colour images and line drawings, with separate sections on the pottery, the groundstone assemblage and the small finds. The authors' experienced eyes and detailed knowledge of the material culture of this period, deriving from their own model excavations at Marki *Alonia* (Frankel and Webb 1996; 2006), enable them to present and discuss each of these categories of finds in great detail; and, more importantly, to pick out the marked differences in both the ceramic and the ground stone tool assemblage of the two excavated areas which were dedicated to different activities: Area 1 was dedicated to metallurgy and Area 2 to pottery production. The small finds include the complete plank figurine as well as the finds related to copper production (the crucible, blow pipe and double-sided open clay mould)

mentioned above. The discussion compares and contrasts the finds from Ambelikou with those from contemporary sites in Cyprus and abroad, providing the reader with the latest bibliography on these topics.

Two chapters are dedicated to the archaeometric study of the two most important groups of finds from the site, pottery and metallurgical remains. The first (Webb, Frankel) presents interesting results of the pXRF analysis of the pottery assemblage, which show that most of the pottery from Ambelikou was locally produced, but also that some types were imported from other parts of the island. Georgakopoulou and Rehren's contribution to the archaeometallurgy is rather brief as it only reconsiders the results of a previous study of samples from Ambelikou, collected and analyzed (but never published) by Sven Van Lokeren. All the samples turned out to be minerals rather than slag. No new analysis was undertaken so that even now the only available archaeometric data on the crucible from Ambelikou — a well-known artefact that has featured in numerous publications — is some semi-quantitative analysis published by Zwicker (1982). It would have been nice if the crucible had been included in the pXRF analysis, thereby confirming the presence of manganese in the slag incrustation on the interior surface of the crucible. This was reported by Zwicker, who argued that manganese was used as a flux in the smelting process. Similarly, chemical analysis of the single piece of slag found among the other finds from Ambelikou, could have easily detected any manganese and thus corroborated the suggestion. In reality only a small part of the metallurgical workshop was included within the limits of the excavated area. Quantities of slag are reported to have been visible on the surface between the two excavated areas, together with crucible fragments, indicating that the metallurgical workshop was much more extensive. Unfortunately no samples of slag were collected.

The final chapter puts the site and finds from Ambelikou *Aletri* in their wider archaeological and cultural context. The authors discuss issues such as landscape and resources, and try to understand the place of Ambelikou in the wider network of contemporary sites in this part of the island and on the north coast, where some of the most important sites

of this period are located (namely Lapithos, Vasilia, Vounous etc). The evidence for the metallurgical industry is marshalled for all the different stages of the *chaîne opératoire*, from mining to casting, followed by a compilation of the evidence for pottery production at Ambelikou (including a well drafted 3D reconstruction of the workshop). The assemblage from the workshop enabled the authors to investigate issues of scale, context and standardization of production. The section ends with a discussion of the nature of the site and of course its demise.

When one considers that all this synthetic work is based on the thorough study of 70 wooden trays full of finds brought to light 70 years ago, as well as on drawings, notes, correspondence and private interviews, it is a truly remarkable feat. The authors duly acknowledge that Robert Merrillees and Dunn-Vaturi did a lot of the groundwork and tried hard to bring the project to completion. We must, however, also acknowledge that it is through the hard and thorough work of Webb and Frankel that Ambelikou has been finally published, brought out of the shadows and introduced to a whole new generation of archaeologists. The monograph is a significant contribution to the field and it will surely soon become a widely used reference book.

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