Amphoras and roof-tiles from Late Roman Cyprus: a compositional study of calcareous ceramics from Kalavasos-Kopetra

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In recent years techniques of compositional analysis have come to play an increasingly prominent rôle in provenance studies of archaeological ceramics and in exploring the related issues of ancient trade. One important setting for such investigations is the east Mediterranean, from Cilicia south along the Syro-Palestinian coast to Egypt. This geologically varied region saw the development of complex networks of ceramic production and exchange from prehistory to the Middle Ages. Centrally located and intersected by traditional shipping routes, Cyprus has come to occupy a special place in regional studies. Most previous research has focused on determining the origins of major classes of fine pottery exchanged between the island and the mainland, especially during the Bronze Age (Knapp and Cherry 1994; Bryan *et al.* 1997). Analysis of a broad range of ceramics from late antiquity reveals elements of continuity and transformation within regional patterns of ceramic exchange.

The site of Kalavasos-Kopetra offers an opportunity to explore these inter-related problems of ceramic ecology during the later Roman empire. Located in the lower Vasilikos river valley near the south coast of Cyprus, *c.*20 km east of Roman Amathus and modern Limassol, Kopetra was a small rural settlement that flourished briefly in the 6th and 7th c. Survey and excavation have identified an otherwise unattested settlement that stood atop a bluff ridge overlooking the Vasilikos river, *c.*4 km from the shore (Rautman and McClellan 1992; McClellan and Rautman 1994). Remains of pressing equipment and copper slag found at the site indicate that the local economy was based in large part on farming and mining, probably supplemented by seasonal herding. Despite its small size and limited resources, the Late Roman community built a number of houses and public structures, including at least three churches, extending over an area of *c.*4 ha. It also imported a variety of commodities, both comestible and durable, from across the Mediterranean. The ceramics constitute the clearest evidence of the nature of this economic activity, comprising both the objects of exchange (fine pottery for table use, roof-tiles) as well as its means (amphoras).

In an earlier study we examined 225 ceramic specimens from Kopetra and the Vasilikos valley using neutron activation analysis (NAA). Our objective was to define the parameters of Cypriot pottery production, and for this reason we generally excluded wares known to have originated off the island, for example, in N Africa, the Aegean region, Palestine, or Egypt. We identified three main compositional groups of Late Roman date: a Red Tile/Cypriot Red Slip group, a Yellow Tile/Amphora group, and a group known as Other Tile (Rautman *et al.* 1993, fig. 5). A fourth group of Late Bronze Age ceramics was associated with clays found adjacent to the White Slip II production site recently identified at Sanida-Moutti tou Ayiou Serkou (Todd and Pilides 1993). The Red Tile/Cypriot Red Slip group embraced a common type of Laconian-stye roof-tile in a red fabric together with the most important class of fine pottery produced on the island in Late Roman times; subsequent investigation has identified a probable area of manufacture in W Cyprus (Gomez *et al.* 1996). The Other Tile group contained mostly heavy storage jars (*pithoi*) and large roof-tiles in a coarse grained fabric that were manufactured in the environs of the Vasilikos valley (Rautman *et al.* 1993: 259-60). In contrast with these two groups, the Yellow Tile group members exhibit a strongly calcareous composition. The broad distinction between high-calcium/low-aluminum ("calcareous") and low-calcium/high-aluminum ("non-calcareous") ceramics has been observed in Bronze Age contexts as well and appears characteristic of Cypriot pottery-making traditions (Barlow and Idziak 1989). The Yellow Tile group was the largest and most varied of the initial groups. Its components included a class of yellow-fabric Corinthian-style roof-tiles, a kind of terracotta water pipe, a