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PETROLOGY OF AMPHORAE

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Six small samples of Roman amphorae found in pre-Roman contexts, the majority of them of Dressel 1 type, were submitted for examination in thin section under the petrological microscope. The results are as follows:

1. Great Canfield Dressel 1 form. The small sample submitted is particularly distinctive in the hand-specimen as it appears to contain numerous inclusions of 'black sand'. Thin sectioning reveals grains of green and colourless augite scattered throughout the clay matrix, together with some sandstone feldspar, a little basaltic hornblende and fragments of volcanic rock. This sample falls into Peacock's (1971, 164) petrological Group 2 of Dressel 1 types, with an origin in Campania, more especially the area around Pompeii and Herculaneum (see also Peacock, 1977, 153). In Britain, the 'black sand' fabric of Dressel 1 amphorae is apparently restricted to the 1B type (Peacock, 1978).

2. Stebbing Dressel 1 form. Thin sectioning shows frequent inclusions of quartz, a few grains of augite, feldspar and volcanic glass. This sample fits into Peacock's Group 2, with an origin in southern Latium or Campania, or perhaps Etruria (Peacock, 1978).

3. Audley End Dressel 1B form. A thin section of this almost complete vessel shows frequent grains of quartz, a fair amount of augite, a little plagioclase feldspar, some fragments of volcanic rock and inclusions of limestone. An origin in the same Italian regions mentioned in connection with the Stebbing vessel is probable.

4. Walton-at-Stone intermediate Dressel 1A/1B form. The sample comes from the rim of a Dressel 1 amphora stamped ? V A M. The rim form of this vessel is not dissimilar to an example from Hengistbury Head intermediate between the Dressel 1A and 1B types (Peacock, 1971, fig. 37, no. 16), which may suggest a date shortly after the middle of the first century B.C. for the Walton-at-Stone assemblage. However, petrologically the two vessels are quite different: the Walton-at-Stone sample contains frequent quartz grains with flecks of mica and some feldspar, while the Hengistbury Head fabric has a 'pisolitic-type structure'. The Walton-at-Stone assemblage resembles Peacock's Group 3, for which a southern Italian source was tentatively suggested.

5. Little Hadham Dressel 1 form. The range of inclusions in this sample is similar to the fabric of the vessel from Walton-at-Stone.

6. Thaxted Pascual 1 form. This vessel is represented by a handle and spike. Both sherds are in a hard, rough, red (Munsell 10R 5/6) fabric, with large white inclusions of quartz, feldspar and fragments of granite scattered throughout. Thin sectioning confirms the visual identification, under the microscope frequent inclusions of quartz and orthoclase feldspar can be seen throughout the clay matrix, together with fragments of granite and a little mica.

Pascual 1 amphorae have recently been recognized in pre-Roman Britain (Williams, forthcoming), though the Thaxted example is the first from the eastern half of the country. Based on the Italian Dressel 1B form, the Pascual 1 type is characterized by a high vertical rim, cylindrical neck, ovoid body, straight rounded handles with a narrow longitudinal groove and a chunky conical spike (see Parker, 1971, figs. 21-23 for illustrations of the complete form). This form of amphorae is characteristic of the Catalan area of Spain, in particular the region around Barcelona. These amphorae

probably held wine, as the Layetanian area was praised by Martial as having a quality of wine second only to that of Campania (xiii, 118).

Pascual 1 types are present on the continent in contexts ranging from late Republican/early Augustan at Vieille -Toulouse to A.D. 79 at Pompeii, and may well go on later than this. In Britain, Pascual 1 sherds have recently been found in early first century levels at Ower, Dorset, and at Hengistbury Head (stratification details awaited), with smaller amounts at Bagendon, Gloucestershire and Knighton, Isle of Wight. The distribution thus appears to be predominantly central southern, with the exception of the single vessel from Thaxted. This latter vessel appears to have been found in association with a Dressel 1B type (see Rodwell, 1976 and also elsewhere in this paper), which would suggest a date in the early years of the first century A.D., in line with the finds from Ower.

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